Digital Equipment Corporation
Maynard, Massachusetts

digital

PDP-15 Systems

Maintenance Manual
Engineering Drawings
Volume 2

DEC-15-H2BB-D

PDP-15
MAINTENANCE MANUAL
ENGINEERING DRAWINGS
VOLUME 2

DIGITAL EQUIPMENT CORPORATION • MAYNARD, MASSACHUSETTS

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The material in this manual is for information purposes and is subject to change without notice.

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ILLUSTRATIONS

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PDP-15
Engineering Drawings

INTRODUCTION

Volume 2 of the PDP-15 maintenance manual includes a set of engineering drawings for the basic processor and options.

ENGINEERING DRAWING ORGANIZATION

All PDP-15 systems, from the basic PDP-15/10 through the disk-oriented background/foreground PDP-15/40 system are organized into four main sections: central processor (CP), core memory, input/output (I/O) processor, and console. The designations of these sections are: KP15 Central Processor, MM15 Memory, KD15 I/O Processor and KC15 Console. Additional options that may be implemented in a system are: KE15 Extended Arithmetic Element, KA15 Automatic Priority Interrupt, KM15 Memory Protect, MP15 Memory Parity, KT15 Memory Protect/Relocate, KW15 Real Time Clock, and KF15 Power Fail. Each engineering drawing is assigned a coded drawing identification number that indicates the type of drawing, applicable section, and series.

For example, the drawing identification number D-FD-PDP-15-0-4 provides the following information:

D	"D" size (22 x 34 inches)
FD	Flow diagram (drawing type)
PDP-15	Pertains to overall PDP-15 system
0	Manufacturing variation
4	The fourth in a series of overall system flow diagrams.

As a second example, the drawing identification number D-BS-KP15-0-32 provides the following information:

D	"D" size
BS	Block schematic (Drawing type)
KP15	Pertains to KP15 Central Processor

NOTE

Throughout the text and block schematic prints, block schematic references are noted in short form. For example, "D-BS-KP15-0-32" is shortened to "KP32" and "D-BS-KE15-0-04" is shortened to "KE04".

The short form references are only for reader convenience. Use the complete drawing number to order a specific print.

Drawing Codes

The codes assigned to each type of engineering drawing are listed in the following chart.

Type Code	Definition	Type Code	Definition
AD	Assembly drawing	IC	Interface cabling diagram
AR	Arrangement drawing	ML	Master drawing list
BD	Block diagram	MU	Module utilization drawing
BS	Block schematic	PL	Parts list
CD	Cable diagram	SP	Specification
CL	Cable list	TD	Timing diagram
CP	Component list	UA	Unit assembly
CS	Circuit schematic	WD	Wiring diagram
FD	Flow diagram	WL	Wire list

Drawing Number Index

Table 1-1 is an index to the engineering drawing arranged by section and drawing number in alphanumeric order.

Signal Glossary

Table 1-2 is a signal glossary arranged in alphanumeric order. The signal glossary includes the short form block schematic print number (DRAWING) that shows how the signal is developed.

The ORIGIN column indicates the module location and output pin number for test purposes. The FUNCTION column provides a brief description of the purpose of the signal. The signal glossary is

not intended to be a complete list of signal mnemonics. Many of the mnemonics are self-explanatory and easily interpreted, once the reader is familiar with the signal mnemonic conventions which are described in the section titled SIGNAL NAMES.

LOGIC SYMBOLS

The logic modules used in the PDP-15 are primarily DEC M-series, which is the integrated circuit, positive logic series. The voltages used are:

Low (L) = 0V (0V — +0.4V)
High (H) = +3V (+2.4V — +3.6V)

For specific information on operating frequencies, loading etc., refer to the PDP-15 Module Manual. The logic symbology used is MIL-STD-806B. The gating symbols use small circles at the inputs of gates to indicate that a low signal activates the function. The absence of a circle indicates that a high signal activates the function. The presence or absence of a circle at the output of a gate indicates that the output is low (L) or high (H), respectively, when the gate has been activated (its output is true). An output is false if it is at a voltage different from that shown by the gate's polarity indicator (presence or absence of circle). Suffixes L or H indicate the low or high level of a signal when it is true or enabled.

Logic Gates

Boolean Functions are symbolized as follows:

Symbol	Function
*	Logic AND
+	Logical OR (inclusive)
-	Logical negation

The most commonly used g ating symbols are the NAND (Figures 1 and 2); NOR (Figures 3 and 4), and the inverter (Figures 5 and 6). Each figure shows both the symbol and a Boolean expression of the logical operation it performs.

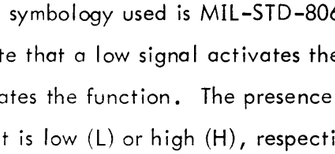


Figure 1 NAND Gate

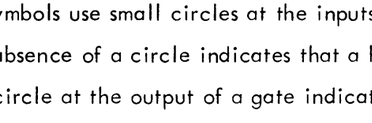


Figure 2 NAND Gate

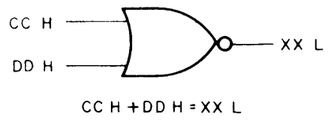


Figure 3 NOR Gate

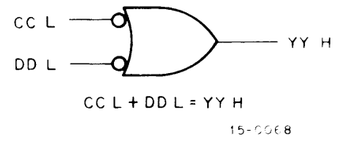


Figure 4 NOR Gate

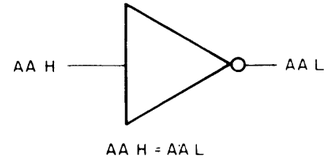


Figure 5 Inverter

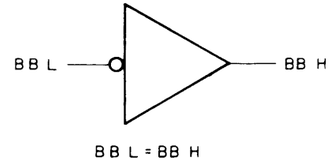


Figure 6 Inverter

Some of the logic gate symbols consist of combinations of basic logic functions, as shown in Figure 7. The logic functions of these gates can be determined by combining the basic logic functions.

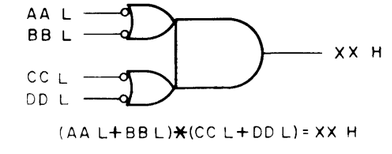


Figure 7 Combined Logic Functions

Flip-Flops

A major part of the work accomplished by the computer's logic is performed by flip-flops. Figures 8 through 10 illustrate the types of flip-flops used in the PDP-15 Systems.

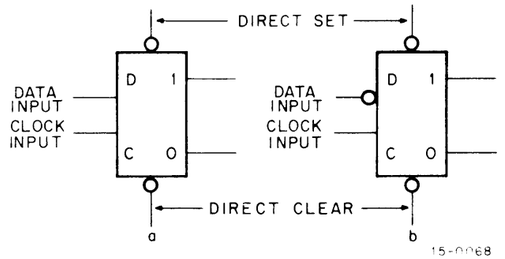


Figure 8 D Flip-Flop, Edge-Triggered

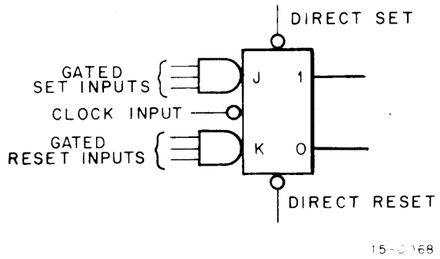


Figure 9 J-K Flip-Flop

The flip-flop in Figure 8a requires a high data input when clocked to set; the flip-flop in Figure 8b requires a low data input to be set. The D flip-flop will be drawn on the logic diagrams to agree with the voltage level of the data input necessary to set the flop.

Figure 9 shows the J-K flip-flop. The flop has direct set and reset inputs, and clock-gated set and reset inputs. If both gated inputs are high when the flop is clocked, the flop will complement.

The flip-flop in Figure 10a can be reset by either one of two inputs; the flip-flop in Figure 10b has the OR gate on its set side.

Variable Clock

The PDP-15 uses variable clocks to generate timing signals and control gating functions. Figure 11 shows a typical variable clock symbol.

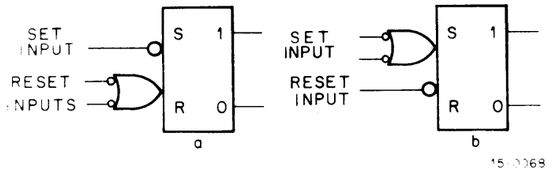


Figure 10 R-S Flip-Flop

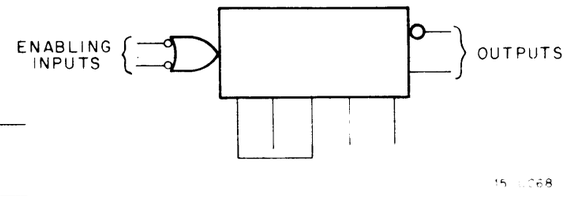


Figure 11 Variable Clock

Pulse Amplifier

The symbol for a typical pulse amplifier used in the PDP-15 is shown in Figure 12.

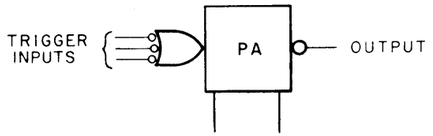


Figure 12 Pulse Amplifier

Miscellaneous Logic Symbols

Figures 13 through 15 show additional logic symbols that appear in the PDP-15 engineering drawing block schematics.

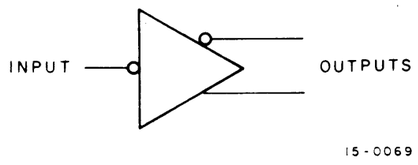


Figure 13 I/O Bus Receiver

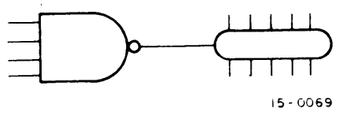


Figure 14 Delay

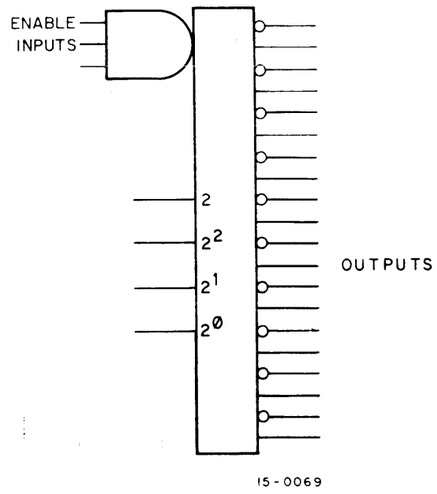


Figure 15 Binary to Octal Decimal Decoder

SYMBOL DESIGNATORS

Each logic symbol that appears on an engineering drawing block schematic contains designators that indicate the type of module used to perform the logic function, the physical location of the specific module used, and the electrical input and output pin connections that are used by that logic function.

The symbol designators used on the NAND gate shown in Figure 16 provide the following information:

M112	The NAND gate is provided by an M112 module.
L18	The module is installed in location L18.
P1,R1	Input logic signals are applied to pins P1 and R1 on the module.
S1	The output logic signal is available at pin S1 on the module.

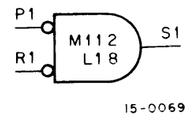


Figure 16 Gate Symbol Designators

In addition to the information listed above, flip-flop symbol designators include a name, such as READ, as shown in Figure 17.

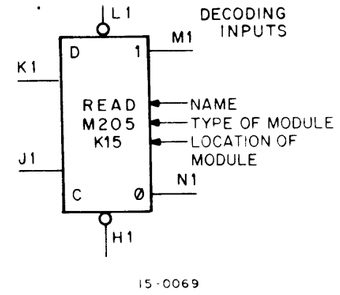


Figure 17 Flip-Flop Symbol Designators

SIGNAL NAMES

All signal mnemonics that appear on the block schematics include a prefix, signal mnemonic, and signal level indicators, as shown in Figure 18. The signal mnemonic provides the following information:

a. The prefix indicates the short form print number where the signal originated. KP32 indicates the signal is developed as shown on print 32 of the KP15 Central Processor section.

b. The signal mnemonic (RD RST) is usually an abbreviation of the complete signal name (read restart).

c. The signal level indicator (H or L) indicates whether the signal is active when high (+3V) or low (0V).

When the signal is developed by a flip-flop, a (1) or (0) is included to indicate the flip-flop state required to provide the active signal. For example, KP32 CP ACT(1)H will be high (+3V) when the CP ACT flip-flop shown on KP32 is set. The source of this signal is the true (1) output of the CP ACT flip-flop. The signal convention allows this same signal to be designated KP32 CP ACT(0)L when it is applied as an active input to a low input type of gate.

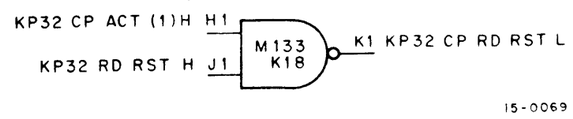


Figure 18 Typical Signal Names

Name Changes

If a flip-flop output is passed through an inverter (possibly for fan-out purposes) the signal name is changed to avoid confusion as to the signal origin. Refer to Figure 19. Logically, the KP66 IN STOP H signal is equivalent to KP64 IN STOP 02(0)L but a new name is assigned for identification purposes.

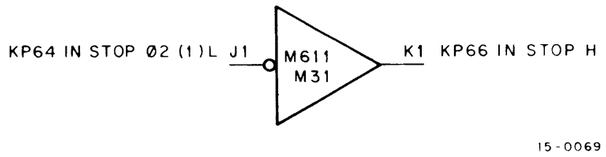


Figure 19 Signal Name Changes

Negated Signals

Negated signals are indicated by a dash that precedes the signal name. For example, when a signal called KP23 INC PC H is inverted, the output becomes — KP23 INC PC H. This convention is used when the signal is applied as an activating input to a high input gate. The signal is logically equivalent to KP23 INC PC L. The latter expression is used when the signal is applied as an activating input to a low input gate.

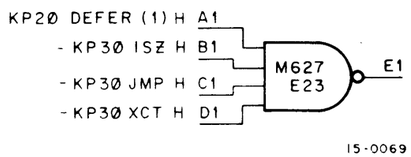


Figure 20 Negated Signals

An example of negated signals applied to a NAND gate is shown in Figure 20.

Disable Signals

Refer to Figure 21. A true output, logic 0, from gate A causes gate B to be disabled.

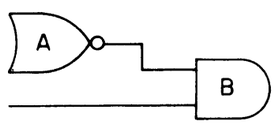


Figure 21 Disable Signal

Table 1-1
Drawing Number Index

Size (Original)	Type	Number	Title
E	UA	PDP15-0-0	PDP-15 Assembly
A	PL	PDP15-0-0	PDP-15 Assembly Parts List
D	DI	PDP15-0-1	Drawing Index List
D	AR	PDP15-0-2	System Configuration
D	IC	PDP15-0-3	Signal Wiring
D	IC	PDP15-0-14	Power Wiring
		KC15A Console Assembly	
E	IA	5408392-0-0	Switch Board
D	CS	5408392-0-1	Circuit Schematic
D	IA	5408394-0-0	Console Light Board
D	CS	5408394-0-1	Console Indicator Panel Circuit Schematic
		KP15 I/O and Central Processor	
D	MU	KP15-0-102	Module Utilization
D	BS	KP15-0-1	Register and Bus Bit 00
D	BS	KP15-0-2	Register and Bus Bit 01
D	BS	KP15-0-3	Register and Bus Bit 02
D	BS	KP15-0-4	Register and Bus Bit 03
D	BS	KP15-0-5	Register and Bus Bit 04
D	BS	KP15-0-6	Register and Bus Bit 05
D	BS	KP15-0-7	Register and Bus Bit 06
D	BS	KP15-0-8	Register and Bus Bit 07
D	BS	KP15-0-9	Register and Bus Bit 08
D	BS	KP15-0-10	Register and Bus Bit 09
D	BS	KP15-0-11	Register and Bus Bit 10
D	BS	KP15-0-12	Register and Bus Bit 11
D	BS	KP15-0-13	Register and Bus Bit 12
D	BS	KP15-0-14	Register and Bus Bit 13
D	BS	KP15-0-15	Register and Bus Bit 14
D	BS	KP15-0-16	Register and Bus Bit 15
D	BS	KP15-0-17	Register and Bus Bit 16

Table 1-1 (Cont)
Drawing Number Index

Size (Original)	Type	Number	Title
		KP15 I/O and Central Processor (Cont)	
D	BS	KP15-0-18	Register and Bus Bit 17
D	BS	KP15-0-19	Major Bus Control Logic
D	BS	KP15-0-20	Major State Generator
D	BS	KP15-0-21	Time State Generator
D	BS	KP15-0-22	Link and Link Control
D	BS	KP15-0-23	Skip Control
D	BS	KP15-0-24	Register Strobes
D	BS	KP15-0-25	Indicator Strobes
D	BS	KP15-0-26	Memory Mpx
D	BS	KP15-0-27	CP/Memory Interface Cables
D	BS	KP15-0-28	Operate Decoding
D	BS	KP15-0-29	Index Instruction Bus Control
D	BS	KP15-0-30	Major Instruction Decoding
D	BS	KP15-0-31	Instruction Register
D	BS	KP15-0-32	Memory Interface Control
D	BS	KP15-0-33	Detect X Mode and C Bus
D	BS	KP15-0-34	Console Interface
D	BS	KP15-0-35	Interrupt Control Logic
D	BS	KP15-0-38	I Bus 00-08, M1, M2, MQ
D	BS	KP15-0-39	I Bus 00-08, EAE, DSR
D	BS	KP15-0-40	I Bus 09-17, MQ, M1, M2
D	BS	KP15-0-41	I Bus 09-17, EAE, DSR
D	BS	KP15-0-42	I Bus 08, 10-17, SC
D	BS	KP15-0-43	I Bus 18-23, IR
D	BS	KP15-0-44	Console Control No. 1
D	BS	KP15-0-45	Console Control No. 2
D	BS	KP15-0-46	Miscellaneous Control Logic
D	BS	KP15-0-47	Memory Input Control
D	BS	KP15-0-48	Miscellaneous Logic
D	BS	KP15-0-49	CP Read In Logic
D	BS	KP15-0-50	Device Selector

Table 1-1 (Cont)
Drawing Number Index

Size (Original)	Type	Number	Title
		KP15 I/O and Central Processor (Cont)	
D	BS	KP15-0-51	I/O Control Sync
D	BS	KP15-0-52	I/O Bus Bits 09-17
D	BS	KP15-0-53	I/O Bus Bits 00-08
D	BS	KP15-0-55	IOT and Time Logic
D	BS	KP15-0-57	Power Fail and Real Time Clock
D	BS	KP15-0-58	Internal IOT Decoder
D	BS	KP15-0-59	MDL Drivers
D	BS	KP15-0-60	I Bus 00-08
D	BS	KP15-0-62	I Bus 09-17
D	BS	KP15-0-64	Teletype Receiver
D	BS	KP15-0-65	Teletype Transmitter
D	BS	KP15-0-66	Read In Logic
D	BS	KP15-0-68	I/O Address
D	BS	KP15-0-69	I/O Bus Cable
D	FD	KP15-0-70	KP15 Block Diagram and Print Key
D	FD	KP15-0-71	PDP-15 Address Calculation Flow Chart
D	FD	KP15-0-72	Indicator Bus Signal Chart
D	FD	KP15-0-73	Key Flow
D	FD	KP15-0-74	Interrupt Flow Graph
D	FD	KP15-0-75	Read In Flow
D	FD	KP15-0-76	Instruction Flow Chart
D	TD	KP15-0-77	API/PI Timing Diagram Bus Signals
D	TD	KP15-0-78	CP/Memory Timing
D	TD	KP15-0-79	CP Timing, Common Events
D	TD	KP15-0-80	IOT Instruction Timing Diagram
D	BS	KP15-0-81	Power Regulator and OK Bus
		KD15 Data Channel	
D	BS	KD15-0-01	DSR 00-05
D	BS	KD15-0-02	DSR 06-11
D	BS	KD15-0-03	DSR 12-17

Size (Original)	Type	Number	Title
		KD15 Data Channel (Cont)	
D	BS	KD15-0-04	I/O Buffer 00-08
D	BS	KD15-0-05	I/O Buffer 09-17
D	BS	KD15-0-06	Miscellaneous Data Channel Logic
D	TD	KD15-0-07	Single Cycle I/O Transfers, Detailed Timing
D	TD	KD15-0-08	Three-Cycle Data Channel In Transfer, Detailed Timing
D	TD	KD15-0-09	Increment MB Transfer, Detailed Timing
D	TD	KD15-0-10	Three-Cycle Data Channel Out Transfer, Detailed Timing
D	TD	KD15-0-11	Data Channel Input Timing Diagram, Bus Signals
D	TD	KD15-0-12	Data Channel Output Timing Diagram, Bus Signals
D	TD	KD15-0-13	Single Cycle Input Timing, Bus Signals
D	TD	KD15-0-14	Single Cycle Output Timing, Bus Signals
D	TD	KD15-0-15	Increment Memory Timing Diagram, Bus Signals
		KE15 Extended Arithmetic Element (EAE)	
D	BS	KE15-0-01	Bi-directional Shift Register 00-08 (MQ Reg.)
D	BS	KE15-0-02	Bi-directional Shift Register 09-17 (MQ Reg.)
D	BS	KE15-0-03	Step Counter and Control
D	BS	KE15-0-04	EAE Control M770
D	BS	KE15-0-05	IR Sign Divide Logic
D	FD	KE15-0-06	EAE Flow Diagram
D	FD	KE15-0-07	Data Flow Diagram
		MM15 Core Memory	
D	MU	MM15-0-26	Module Utilization
D	DI	MM15-0-25	MM15 Drawing Index
D	BS	MM15-0-01	Memory Control

Size (Original)	Type	Number	Title
		MM15 Core Memory (Cont)	
D	BS	MM15-0-02	Memory Control
D	BS	MM15-0-03	MA and MB Registers, 00-05
D	BS	MM15-0-04	MA and MB Registers, 06-11
D	BS	MM15-0-05	MA and MB Registers, 12-17
D	BS	MM15-0-06	X Axis, 0 to 4K
D	BS	MM15-0-07	Y Axis, 0 to 4K
D	BS	MM15-0-08	X Axis, 4 to 8K
D	BS	MM15-0-09	Y Axis, 4 to 8K
D	BS	MM15-0-10	Sense Amplifiers and Inhibit Drivers, 0-4K
D	BS	MM15-0-11	Sense Amplifiers and Inhibit Drivers, 0-4K
D	BS	MM15-0-12	Sense Amplifiers and Inhibit Drivers, 0-4K
D	BS	MM15-0-13	Sense Amplifiers and Inhibit Drivers, 4-8K
D	BS	MM15-0-14	Sense Amplifiers and Inhibit Drivers, 4-8K
D	BS	MM15-0-15	Sense Amplifiers and Inhibit Drivers, 4-8K
D	BS	MM15-0-16	Memory Bus Drivers
D	BS	MM15-0-17	Memory Bus Drivers
D	BS	MM15-0-18	Memory Bus Drivers
D	BS	MM15-0-19	I/O Memory Cables
D	BS	MM15-0-20	Memory Power Regulators
D	BS	MM15-0-21	Timing Diagram
D	BS	MM15-0-22	X Diode Matrix
D	BS	MM15-0-23	Y Diode Matrix
D	BS	MM15-0-24	Parity Bit
		Power Supplies	
D	CS	715-0-1	715 Power Supply Circuit Schematic
B	CS	5408408-0-1	Bulk Regulator Circuit Schematic
C	CS	716-0-1	716 Power Supply Circuit Schematic
D	CS	H721-0-1	H721 Power Supply Circuit Schematic
B	CS	734D-0-1	734D Power Supply Circuit Schematic
A	PL	734D-0-1	734D Power Supply Parts List

Table 1-1 (Cont)
Drawing Number Index

Size (Original)	Type	Number	Title
		Power Supplies (Cont)	
B	CS	799A-0-1	799A Power Supply Circuit Schematic
A	PL	799A-0-0	799A Power Supply Parts List
B	CS	841-B	841B Power Control Circuit Schematic
A	PL	841-B-0	841B Power Control Parts List
B	CS	853-F-1	853F Power Supply Circuit Schematic
A	PL	853-F-0	853F Power Supply Parts List
		BB15 Peripheral Expander	
D	DI	BB15-0-01	BB15 Drawing Index List
D	MU	BB15-0-04	Module Utilization List
		KA15 Automatic Priority Interrupt (API)	
D	BS	KA15-0-01	Requests
D	BS	KA15-0-02	Priority Levels 00-03
D	BS	KA15-0-03	Priority Levels 04-07
D	BS	KA15-0-04	API Control
D	BS	KA15-0-05	Test Request
D	BS	KA15-0-06	I/O Address Gating
D	BS	KA15-0-07	API Cables
D	BS	KA15-0-08	I/O Bus Receivers
D	BS	KA15-0-09	Miscellaneous Drivers
D	BS	KA15-0-10	I Bus Drivers
D	BS	KA15-0-11	I/O Bus Drivers
		KM15 Memory Protect Option	
D	BS	KM15-0-10	Control Logic
D	BS	KM15-0-11	IOT and Control
D	BS	KM15-0-12	P Mode Enable
D	BS	KM15-0-13	Boundary Register and Boundary Detection No. 1
D	BS	KM15-0-14	Boundary Register and Boundary Detection No. 2

Table 1-1 (Cont)
Drawing Number Index

Size (Original)	Type	Number	Title
		KM15 Memory Protect Option (Cont)	
D	BS	KM15-0-15	BB15 Jumper Card Configuration
		KT15 Memory Protect/Relocate Option	
D	BS	KT15-0-10	MDL Control
D	BS	KT15-0-11	Relocation Register
D	BS	KT15-0-12	Relocate MDL's
D	BS	KT15-0-13	I/O Bus or BR
D	BS	KT15-0-14	RA Buffers and MDL Terminators
D	BS	KT15-0-15	Relocation Address Register 01-06
D	BS	KT15-0-16	Relocation Address Register 07-09
		MP15 Memory Parity Option	
D	BS	MP15-0-10	Parity Control
D	BS	MP15-0-11	Parity Input Interface
D	BS	MP15-0-12	Parity Decoder and Parity Generator
D	BS	MP15-0-13	Parity Memory Bus Connections
		BA15 Peripheral Expander	
D	MU	BA15-0-7	Module Utilization
D	DI	BA15-0-08	BA15 Drawing Index List
D	IC	BA15-0-01	I/O Bus Interface
D	BS	BA15-0-02	BA15 Line Receivers
D	BS	BA15-0-03	BA15 Line Drivers
D	BS	BA15-0-04	I/O Mixer
D	BS	BA15-0-05	Multiplexer
D	IC	BA15-0-06	Indicator Cable
		PC15 High-Speed Paper Tape Reader and Punch	
D	BS	PC15-0-01	High Speed Punch Control
D	BS	PC15-0-02	High Speed Reader Control
D	BS	PC15-0-03	Reader Register

Table 1-1 (Cont)
Drawing Number Index

Size (Original)	Type	Number	Title
		LT15A Single TTY Interface	
D	BS	LT15-A-01	Teletype Control
D	BS	LT15-A-02	Teletype Receiver
D	BS	LT15-A-03	Teletype Transmitter
		VP15 Display Logic	
D	BS	VP15-0-1	Display D/A & Dev Sel
D	BS	VP15-0-2	Display Control BA15
D	IC	VP15-BL-1	Interconnection Diagram
		DW15A Positive-to-Negative Bus Converter	
D	BS	DW15-A-1	BI Direct I/O Bus
D	BS	DW15-A-2	BI Direct I/O Bus
D	BS	DW15-A-3	AP DCH RQ + BI BS CON
D	BS	DW15-A-4	API + DCH Enables
D	BS	DW15-A-5	API + DCH Grants
D	BS	DW15-A-6	I/O Addr 03-10
D	BS	DW15-A-7	I/O Addr 11-17
D	BS	DW15-A-8	One Way Signals
D	BS	DW15-A-9	Positive Input Cables
D	BS	DW15-A-10	Positive Bus Cables
D	BS	DW15-A-11	Negative Bus Cables
D	MU	DW15-A-12	Module Utilization

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
ADD-MEM	KD05	M17-L1	Adds contents of I/O bus to memory location specified by current address and overwrites new value into memory location.
ADD 1	KD04	N18-V2	Increment data storage register during word count and current address cycles in three cycle DCH Transfers and during increment memory breaks.
ADR ACK	MM02	A18-H2	Acknowledges memory address has been accepted and memory cycle has started. Refer to memory timing diagram MM21.
API CAL	KP31	N11-C1	Indicates CAL for Automatic Priority Interrupt.
API SYNC	KP51	N22-V2	Recognizes API request from API option and allows I/O Processor to synchronize with CPU during API break.
BAC-C 00-08, 09-17	KP19	F10-J2 F11-J2	Gates contents of buffered AC to C bus.
BACK-TO-BACK	KD06	M21-L1	Used for single cycle transfers to designate that two or more successive breaks will be made without returning control to CPU.
BANK MODE	KP46	M27-V1	Output of bank mode flop that selects memory bank or page mode of operation.
BANK 1 AVAIL	KP45	N25-E2	27.5 μs pulse active during last half of console time slot 3. Clocks active key input from console into associated key flop.
BUMP IOT	KP51	N20-K2	Used by I/O processor to reset IOT flop for any priority higher than IOT request.
BUS DONE	MM02	A20-J2	Set by MRLS ACK to release MDL. Shown on memory timing diagram MM21.
C-A BUS	KP19	F16-S1	Gates C bus to A bus.
-C-A BUS	KP19	F30-S1	Gates complemented C bus to A bus.
CA	KD04	N23-M1	Signal specifies current address portion of the DCH multicycle break is in progress.
CA DLYD	KD06	L31-N1	Used for internal timing during three cycle DCH transfer. Clears the I/O memory hold flop during current address cycle, causing an I/O memory request to be available.
CARRY	KP22	F02-S1	Carry sets link if L (0) and resets link if L (1).
CARRY 01 CARRY 02	KD03 KD02	H13-D1 H13-D1	Carry insert to more significant adder from previous 6-bit adder.
CDL 00 through 23	KP44 KP45		Buffered console data lines from I Bus.

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
CF PULSE	KP45	N24-M2	Clock signal for KEY ACTIVE flop. For START, DEPOSIT, EXAMINE, READ IN, CONT and EXECUTE non-repeat, clock signal is 27.5-μs pulse active during console time slot 4. For REPEAT, CONT, and EXECUTE, clock signal occurs at repeat clock frequency.
CLK IN	KP46	N28-D2	A 36-kHz signal, from clock oscillator, that is used to generate console timing.
CLK SYNC	KP51	N17-U1	Causes multiplexer to issue clock address (000008) on I/O address lines.
CLR IR 00-05	KP31	F31-J1	Clears IR register if FORCE FETCH, KEY ACTIVE, or PWR CLR occurs.
CONSOLE CK	KP45	N25-U2	Non-symmetrical 3-kHz output of console modulo 6 counter that drives console timing failure detector.
CONSOLE DLY 1	KP44	M26-K1	Provides 18-ms delay for console clock failure detection (for failure in ground state).
CONSOLE DLY 2	KP44	N26-K1	Provides 18-ms delay for console clock failure detection (for failure in +V state).
CONSOLE DLY 3	KP45	N25-H1	Connects R-C network to delay stage to provide 120 - 130 ms delay that prevents gating of more than one pulse for switch active input from console.
CONSOLE FAIL	KP46	N27-K2	Output of console failure detector that monitors operation of console timing. Inhibit timing outputs to console switch and indicator circuits if a failure occurs.
CONSOLE LOCKED	KP46	K03-L2	A ground level from console lock switch on 715 Power Supply that prevents program interruption at the console.
CONSOLE ONE	KP45	E22-01	Non-symmetrical 3-kHz square wave. Used with Console Zero and Console Two signals to generate strobes for console switch and indicator circuits.
CONSOLE TWO	KP45	E22-10	A 9-kHz symmetrical square wave used with Console Zero and Console One signals to generate strobes for console switch and indicator circuits.
CONSOLE ZERO	KP45	E22-04	Used with Console One and Console Two signals to generate strobes for console switch and indicator circuits.
CONTINUE	KP45	E08-05	Output of CONT ENABLE flop used to set KEY ACTIVE flop.

Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
CP ACT	KP26	K13-P1	Initiates CP memory cycle and inhibits I/O ACT until memory cycle is completed.
CP MEM REQ HOLD	KP32	K13-H1	Stores memory request until CP ACT can be set to initiate a CP M REQ.
CP MRLS	KP32	K15-M1	CP memory release; indicates CP done with memory.
CP WR ADR ACK	KP32	F12-J2	Acknowledges memory address during a CP initiated clear-write memory cycle.
DATA CYCLE	KD05	M17-P2	Used during data cycle of 3-cycle DCH transfer.
DATA IN	KD05	M17-S1	Generated during 3-cycle DCH transfer to indicate data transfer from device to memory.
DATA OFLO	KD05	M21-S1	Signal used by I/O device to indicate an incorrect sum has occured due to an overflow occuring during the third cycle of an add-to-memory operation.
DATA OUT	KD05	M17-V2	Generated during 3-cycle DCH transfer to indicate data transfer from memory to device.
DCH DONE	KD05	K31-K2	Indicates completion of a DCH transfer.
DCH EN IOP2	KD06	N18-L2	Used during 3-cycle data transfer to enable data onto I/O bus from device.
DCH OUT XFER	KD06	K18-V2	Indicates transfer of data from memory to device during 3-cycle DCH transfer and also causes IOP 4 to be generated.
DCH RESET	KD05	K31-N2	Is generated as a result of I/O Reset or Power Clear to initialize the DCH circuitry.
DCH REQ	KP69	N03-S2	A signal generated by an external device indicating a 3-cycle DCH transfer, an increment memory, or an add-to-memory. The signal is also used with SINC CYC REQ to indicate a single cycle transfer as indicated below: DCH RQ L / SING CYC REQ L / FUNCTION 0 / 0 / None 0 / 1 / Single cycle transfer (from memory to device) 1 / 0 / Multi-cycle transfer (in or out) 1 / 1 / Single cycle transfer (from device to memory)

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
DCH SYNC	KP51	N23-H2	Acknowledges receipt of request from control device by causing GRANT to be issued. The signal also causes the multiplexer to issue an I/O request to memory.
DCH WAIT	KD05	N12-N2	Causes I/O processor to wait until after DCH transfers from memory to device has been completed.
DEPOSIT	KP45	M25-M2	DEPOSIT flop output used to set KEY ACTIVE flop.
DISABLE SYNC	KD06	N32-M1	During DCH transfers, this signal allows time for I/O Processor to finish processing current DCH transfer and prevents I/O synchronizer from setting PI, API, or Clock flops.
DISPLAY STATUS	KP44	M26-M1	55-μs pulse active during console time slot 001. Gates I/O Bus 01, 02, and 08 through 17 and status of I/O devices to I Bus.
DS-C	KP19	F14-E1	Gates data switch buffer contents to the C bus during TS02 when DEPOSIT, NEXT, or EXEC key is pressed or OAS is executed.
DSR-I/O BUS	KD05	M21-P2	Data in DSR to be transferred to I/O Bus.
DSR - MDL	KD04	M20-L1	Data in DSR to be transferred to MDL.
DSR00 - DSR17	KD01 KD02 KD03		Data storage register bits 00 through 17.
DSR OVERFLOW	KD01	H13-D1	Carry out of most significant stage of DSR. Used to set word count overflow indicating completion of block transfer of data during 3-cycle DCH operation.
EAC	KP22	E08-R2	Enables ones complement end around carry when set by CARRY.
ENB CYCLE	KD05	M17-E1	Enables data cycle for three cycle DCH transfer and determines whether data is transferred to or from.
EN CA	KD06	L21-F1	Used to enable current address cycle of 3-cycle DCH transfer. This signal is inhibited during single cycle break, clock break or Increment MB.
END OF CP CYCLE	KP32	K16-L2	Indicates end of central processor memory cycle.
EN RD	KD04	N12-F2	Sets I/O WRITE flop indicating a transfer from an external device to memory.
EX SW	KP45	N25-E1	EXECUTE flop output used to set KEY ACTIVE flop.
EXAMINE	KP45	M25-U2	Output of EXAMINE flop used to set KEY ACTIVE flop.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
GRANT	KD06	M22-J2	Signal generated by I/O Processor to acknowledge receipt of request from external device.
HOLD MO	KP26	K15-J2	Prevents contents of MO register from being removed from MDL until a CP memory cycle is initiated.
INC CA	KP68	N10-P1	Used to inhibit incrementing current address during DCH transfer.
IN XFER CYCLE	KD05	M17-H2	Used to denote data transfer position of the DCH cycle.
INCR PC	KP23	F23-J1	Increments program counter during TS01 of EXECUTE when SKIP is set.
INH	MM02	A19-S1	Gates data from MB register to inhibit drivers during write half-cycle. Shown on memory timing diagram MM21.
INH PC COUNT	KP24	F32-S2	Inhibits program counter incrementation if an execute switches instruction is in progress, an interrupt has been acknowledged or key functions are in progress.
I BUS 00 through 23	KP46		Bi-directional data lines between console panel and central processor.
I/O ACT	KP26	K14-H1	Part of the Memory Synchronization for the I/O Processor.
I/O ADDR ACK	KD04	M31-M1	Derived from ADR ACK when I/O is enabled. Clears M REQ.
I/O ADDR 03-17	KP68		I/O Address bit 03 through bit 17.
I/O ADR 15, 16, 17	KD03 KD03 KD03	K19-C1 K19-F2 K19-N2	When bits 15, 16 and 17 are logic 1, the real time clock address of 000007 is developed.
I/O ADDRESS - DSR	KD04	K27-E1	Gates I/O address to DSR.
I/O BUF-DSR	KD05	M12-M1	Gates contents of I/O buffer to DSR.
I/O CYCLE REQ	KD04	L10-S2	Indicates that I/O Processor is requesting a memory cycle.
I/O DATA ACK	KD04	M20-E1	This signal is generated in the I/O Processor and is sent to memory indicating that the processor has received the data from memory during a read-write cycle.
I/O ENABLE	KP32	M13-C1	Enables I/O processor functions when power is on and I/O ACT is set.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
I/O M HOLD	KD04	M23-E1	Used during DCH transfers to temporarily store M REQ signal while the I/O Processor and memory are being synchronized.
I/O M REQ	KP26	K15-E1	Set to initiate an I/O memory request.
I/O MRLS	KD04	M20-H2	Signal generated by I/O processor during DCH transfers indicating that I/O processor is completed with current memory cycle and is releasing memory for additional requests.
I/O MRLS ACK	KD04	N18-T2	Response from memory that it has received the I/O MRLS signal.
IOP 1	KP51	N17-L1	Decoded from bit 17 of IOT instruction. This signal is used for skip instructions to test a device flag or other control function.
IOP 2	KP51	N17-H2	Decoded from bit 16 of IOT instruction. This signal is generally used to transfer data from an external device to the processor, to clear a device register, or for other control functions excluding skip sensing.
IOP 4	KP51	N17-E1	Decoded from bit 15 of IOT instruction. This signal is generally used to transfer data from the CPU to the device and cannot be used to transfer data from the device to the CPU or to determine a skip condition.
I/O RD RST	KP26	K18-F2	This signal is generated in memory and indicates to the I/O Processor that the information contained in the address, which was on the MDL when M REQ was issued, can now be read from the MDL.
I/O READ	KD04	M20-P2	Indicates that data is being read from memory to external device via the I/O Processor.
I/O RESET	KP45	E02-09	I/O RESET flop output used with STOP condition to clear major registers and control devices.
I/O WRITE	KD04	M20-S1	Indicates that data from external device is being written into memory.
IND A BUS	KP44	E01-08	55-μs pulse active during console time slot 001. Gates contents of accumulator to I Bus.
IND AC	KP44	E01-11	55-μs pulse active during console time slot 001. Gates contents of accumulator to I Bus.
IND B BUS	KP44	E16-06	55-μs pulse active during console time slot 001. Gates B Bus to I Bus.
IND C BUS	KP44	E16-08	55-μs pulse active during console time slot 001. Gates C Bus to I Bus.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
IND DSR	KP44	E07-11	55-μs pulse active during console time slot 001 for gating content of Data Storage Register to I Bus.
IND EAE	KP44	E07-03	55-μs pulse active during console time slot 001. Gates discrete bits of EAE control functions to I Bus.
IND I/O A	KP44	E13-08	55-μs pulse active during console time slot 001. Gates 15 bits of I/O address to I Bus 03 through 17.
IND IOB	KP44	E04-03	55-μs pulse active during console time slot 001 for gating I/O Bus to the I Bus.
IND LR	KP44	E10-11	55-μs pulse active during console time slot 001. Gates contents of Limit Register onto I Bus.
IND OA	KP44	E16-11	55-μs pulse active during console time slot 001. Gates contents of Memory Address Register in CP onto I Bus.
IND MDL	KP44	E07-08	55-μs pulse active during console time slot 001. Gates Memory data lines to I Bus.
IND MMA	KP44	E04-06	55-μs pulse active during console time slot 001. Gates content of Memory Address Register onto I Bus.
IND MMB	KP44	E04-08	55-μs pulse active during console time slot 001. Gates content of Memory Buffer Register (MMB) onto I Bus.
IND MO	KP44	E01-03	55-μs strobe active during console time slot 001. Gates contents of Memory Output Register onto I Bus.
IND MQ	KP44	E13-03	55-μs pulse active during console time slot 001. Gates contents of Multiplier Quotient Register to I Bus.
IND MST	KP44	E10-0	55-μs pulse active during console time slot 001. Gates memory status and states onto I Bus.
IND M1	KP44	E10-08	55-μs pulse active during console time slot 001. Gates CP group I discrete control signals to the I Bus.
IND M2	KP44	E07-06	55-μs pulse active during console time slot 001. Gates CP control discretes to I Bus.
INC PC	KP44	E16-03	55-μs pulse active during console time slot 001. Gates content Program Counter onto I Bus.
IND PL/SC	KP44	E13-11	55-μs pulse active during console time slot 001. Gates status of Priority Level flops and contents of Step Counter to I Bus.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
IND SHIFT BUS	KP44	E13-06	55-μs pulse active during console time slot 001. Gates CP Shift Bus to I Bus.
IND SUM BUS	KP44	E10-06	55-μs pulse active during console time slot 001. Gates Sum Bus to I Bus.
IND XR	KP44	E10-03	55-μs pulse active during console time slot 001. Gates contents of Index Register onto I Bus.
IR00-IR05	KP31	F09-E1, H2, L1, P2, S1, V2	Index register bits IR00-IR05 are loaded from MI00-MI05 during FETCH to store instruction op code.
JAM PC TO MO	KP23	J31-V1	Sets PC contents into MO register during TS01 of EXECUTE if SKIP is not set.
KEY ACT	KP34	F27-J2	Key active flow is set when console function keys are pressed.
KEY READ IN	KP45	E04-08	A level generated by READ-IN flop when READ IN key is on. Used to initiate paper tape read in to memory.
L BM UM-A	KP19	F14-T2	Gates status of link (L), bank mode (BM), and user mode bit (UM) to the A bus. Generated during TS02 (Fetch or Defer) of a group 4 instruction (JMS or CAL).
LD AC	KP24	H04-J2	Load accumulator bits AC00-AC17.
LR-C	KP19	F16-P2	Gates contents of limit register to C bus to test limit register or when XG ENAB LR is low.
LIKE SIGNS	KD06	N32-J2	Used to compare signs of data in I/O buffer (I/O BUF00) and data in memory (MDL 00). In add-to-memory cycle, this signal is used to set DATA OFLO.
MA HOLD	MM02	A18-E1	Set by START to prevent MA register contents from changing, once memory cycle has been initiated. Shown on memory timing diagram MM21.
MA LOAD	MM01	A15-L1	Strobes memory address from MDL to MA register. Refer to memory timing diagram MM21.
MB CLEAR	MM01	A15-S1	Clears MB register at start of memory cycle. Refer to memory timing diagram MM21.
MB LOAD	MM02	A15-J2	Strobes MDL data into MB register during write half-cycle. Shown on memory timing diagram MM21.
-MI-B 00-08	KP19	E07-N2	Gates complemented MI register bits MI00 through MI08 to the B bus.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
-MI-B 09-17	KP19	F14-F2	Gates complemented MI register bits MI09 through MI17 to the B bus.
-MP API RQ	MP10	B15-U2	Automatic priority interrupt request generated by parity error flag.
MPX	KP26	K14-A1	Establishes priority of I/O M REQ if DCH SYNC or CLK SYNC are set.
MQ-C	KP19	F08-V2	Gates contents of MQ register to C bus during EAE instruction.
MRD	KP26	K10-E2, H2	Generated by I/O Read or by START READ (if I/O ACT (0)). Selects read-restore memory cycle.
MRLS ACK	MM02	A18-V2	Acknowledges MRLS after WR EN flop is set. Shown on memory timing diagram MM21.
-MRLS DLY	MP10	A16-J2	Produces INH MRLS to delay memory release until parity is decoded and parity bit is generated.
MWR (memory write)	KP32	K10-K2, M2	Generated by I/O WRITE or by START WRITE if I/O ACT (0). Selects clear-write memory cycle.
NO SHIFT-D	KP19	F15-L1	No shift enabled to D bus. Occurs if current instruction is not an EAE, OPR SHIFT, SWH, or CLA instruction.
ONE CYCLE BK	KD06	M21-E1	This signal indicates a single cycle transfer whereby the external device maintains its own word count and current address.
OPR	KP28	E06-E1	Indicates operate instruction decoded from IR bits IR00-IR04.
OVERFLOW	KP22	F03-C1	Sets link when Sum Bus bit 00 is positive and AC00 and MI00 are same sign.
PAR ERR	MP10	B16-K2	Indicates parity error has been detected.
PC-A 01-02	KP19	J13-U1	Gates program counter bits PC01 and PC02 to the A bus.
PC-A 03-04	KP19	J30-J2	Gates program counter bits PC03 and PC04 to the A bus.
PC-A 05	KP19	E07-S1	Gates program counter bit PC05 to the A bus.
PC-A 06-17	KP19	F18-P2	Gates program counter bits PC06 through PC17 to the A bus.
PI SYNC	KP51	N22-S1	This signal indicates that the I/O Processor has recognized a Program Interrupt and allows the I/O processor to synchronize with the CP.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
PRE MRLS	KD06	N16-K2	Generated a short time after Read Restart. This signal is used to enable DSR-I/O BUS on transfers of data from memory to the device and also acknowledges when the I/O Processor has received the data.
RD CON	MM01	A18-R2	Set by MRD to control read-restore memory cycle. Refer to memory timing diagram MM21.
RD RST	MM02	A19-L1	Indicates data read from memory is available on MDL and the requesting processor can proceed. Shown on memory timing diagram MM21.
RD RST DLY	MP10	A14-F1	Produces INH RD RST to delay read restart until parity has been tested.
RDX	MM02	A19-H1	Generates read current in the selected X drive line. Shown on memory timing diagram MM21.
RDY	MM02	A19-E1	Generates read current in the selected Y drive line. Shown on memory timing diagram MM21.
REG MAINT STROBE	KP45	E21-06	55-μs pulse active during console time slot 001. Generated when REG GROUP switch is on. Combined with 12 register select inputs from I Bus to generate one of 12 I Bus gating strobes.
REG NORM STROBE	KP45	E21-08	55-μs pulse active during console time slot 001. Generated when REG GROUP switch is off. Combined with 12 register select inputs from I Bus to generate one of 12 I Bus gating strobes.
REPT VAR IN	KP46	N24-L2	Input from Repetitive Speed potentiometer on console switch panel that controls repetition rate of repeat clock.
REQ	MM01	A12-S1	Produced by M REQ to initiate a memory cycle. Refer to memory timing diagram MM21.
RESTART	KD06	M18-H1	Indicates completion of DCH transfer and clears out DCH and DCH SYNC flops.
RETURN DATA	KD04	L19-L2	Generated by the I/O Processor to indicate a transfer of data from the external device to memory.
RI RD RST	KP32	K30-E1	Re-starts central processor functions after data has been deposited by hardware read in.
RTL-D	KP19	F14-P1	Shifts D bus data left two places. Enabled by RTL during TS02 Fetch.
RTR-D	KP19	F14-L2	Shifts D bus data right two places. Enabled by RTR during TS02 Fetch.

Table 1-2 (Cont)
Signal Glossary

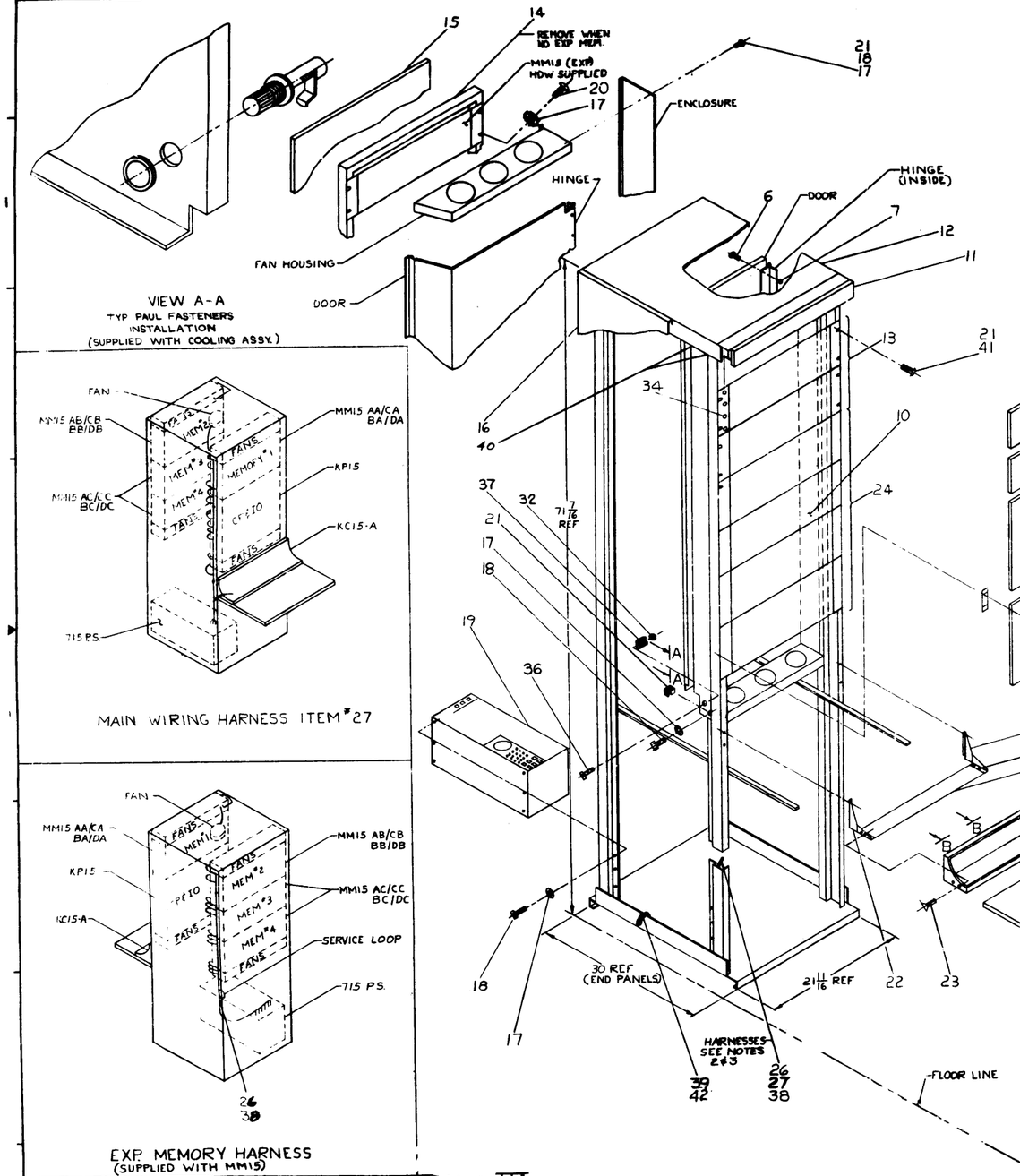
Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
SE (signs equal)	KP22	E08-N1	Indicates when MI and AC bits AC00 and MI00 (sign bits) are same sign. SE flop cleared when bits are opposite sign.
SET DSR-MDL	KD06	N15-F2	Enables contents of DSR to be placed on the MDL during DCH transfers.
SET FETCH	KP20	E22-F2	Enables the FETCH major state flop. Occurs if no other major state is enabled.
SET GRANT	KD06	K18-S2	Used to set the GRANT flop during single cycle back-to-back data transfers.
SING CYC DIR	KD06	M21-H2	This signal determines whether the single cycle transfer direction is to be an "in" transfer (from device to memory) or an "out" transfer (from memory to device). See note on KD06.
SING CYC IOP 4	KD06	M24-K2	Generated during single cycle, back-to-back from memory to the external device.
SING INST	KP46	M27-H2	Output of SING INST flop supplied to time state generator to implement a single instruction.
SING STEP	KP46	M27-L2	Output of SING STEP flop supplied to time state generator to permit the manual stepping of a program through major states of an instruction.
SING TIME	KP46	M27-E1	Output of SING TIME flop supplied to time state generator for manual stepping through time state of each major state.
SKIP	KP23	E08-U2	Causes PC to be incremented by one to skip next instruction.
START	KP45	M25-V2	Output of console START ENABLE flop used to set KEY ACTIVE flop.
START	MM01	A14-V2	Initiates a memory cycle when M REQ is received and no address has been acknowledged previously. Refer to memory timing diagram MM21.
START READ	KP32	F24-J2	Starts a read-restore memory cycle.
START WRITE	KP32	F30-E1	Starts a clear-write memory cycle.
STOP	KP45	M25-K2	STOP flop output terminates CP operation by resetting RUN flop.
STP TM CHAIN	KD05	M22-R2	Stops the I/O clock in Time 2 during memory data transfer. The I/O processor cannot generate IOP 4 until the next Time 1 signal occurs.
STROBE	MM02	C14	Produced by RD CON to gate sense amplifier outputs into MB register.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
STROBE ADDR	KD06	L21-K2	Strobes the address from the I/O Bus to the DSR during DCH transfers.
STROBE ONE	KP46	K32-V1	A 55-μs pulse active during console time slot 2. Gates memory input register, instruction register code and defer and index bits onto I Bus.
STROBE TWO	KP45	N25-K2	55-μs pulse active during console time slot 011. Gates Memory Input Register and Instruction Register contents onto I Bus.
STROBE ZERO	KP45	E18-06	55-μs pulse active during console time slot 000. Gates central processor status to I Bus.
START CA	KD04	L22-L1	Enables current address cycle during a 3-cycle DCH transfer.
STROBE DSR	KD04	M16-S1	Loads DSR with address or data for transfers to or from memory.
STROBE I/O BUF	KD05	M16-J2	Used for DCH transfers from device to memory to strobe the data from the I/O Bus into the I/O Buffer.
STROBE IOP2	KP51	M14-V2	Occurs 750-ns after beginning of IOP2 and is used to load AC from the device during DCH and IOT transfers.
STROBE MRLS	KD06	L18-C1	A signal used to set the MRLS flop in order to release memory for further requests.
STROBE IOP1	KP51	L06-S2	Occurs 750-ns after IOP1 and is used to set the skip flop during DCH and IOT transfers.
STROBE MRLS DLY	KD06	M18-H1	This signal is delayed from strobe MRLS and is used in back-to-back single cycle transfers to strobe the address into the DSR.
SWITCH INHIBIT	KP46	N27-R2	Output of console delay 3 that prevents a second clock pulse to key flops for switch active functions. During run condition, blocks clock signal to key flops.
SYNC	KP55	L23-N1	SYNC occurs at time 1 and is set on the I/O bus by the I/O processor to synchronize the device with the I/O processor.
TIME 1	KP55	N13-J2	250-ns pulse.
TIME 2	KP55	N13-F2	250-ns pulse starting at completion of TIME 1 pulse.
TIME 3	KP55	N13-K1	250-ns pulse starting at completion of TIME 2 pulse.

Table 1-2 (Cont)
Signal Glossary

Signal Mnemonic	Signal Origin		Signal Function
	Drawing	Module	
TIME 4	KP55	N13-M1	250-ns pulse starting at completion of TIME 3 pulse.
WC	KD04	M22-U2	This signal indicates the word count cycle in a 3-cycle DCH transfer.
WC ENABLE	KD04	M22-E1	Indicates entry to word count cycle while I/O processor is synchronizing to memory.
WC OVERFLOW	KD04	M23-J2	Indicates completion of block transfer of data; i.e., desired number of words have been transferred.
WR	MM02	A19-V2	Generates write current in X and Y drive lines. Shown on memory timing diagram MM21.
WR CON	MM01	A18-U1	Set by MWR to control clear-write memory cycle. Refer to memory timing diagram MM21.
WR DONE	MM02	A20-F1	Indicates end of write half-cycle. Shown on memory timing diagram MM21.
WR EN	MM02	A19-P2	Enables write half-cycle to begin 50-ns after RD RST. Shown on memory timing diagram MM21.
WRITE REQ			Signal on MDL indicating transfer of data from Processor to memory.
+1 WC	KP68	N10-L1	Used during word count cycle of 3-cycle DCH transfer to increment the word count each time a word is transferred.
XG ENAB AC	KP29	F18-E1	Enables AC for index register instructions PAX and PAL.
XG ENAB LR	KP29	F18-J2	Enables limit register for index register instructions PLA and PLX.
XG ENAB XR	KP29	F19-E1	Enables index register for index register instructions to PXA and PXL.
XOR-C	KP19	F16-J2	Used to exclusive-OR AC with memory buffer contents during TS02 of XOR, or TS01 of SAD.
XR-B 00-05	KP19	E11-D1	Gates index register bits XR00-XR05 to the B bus.
XR-B 06-17	KP19	M01-H1	Gates index register bits XR06-XR17 to the B bus.
3 CYCLE	KD06	N18-U1	Indicates 3 cycle DCH transfer and is used to clear GRANT flop when address is available.
+1 TO CA INH	KP69	N03-E1	Used during increment memory operation to inhibit incrementing the current address. Produces KP68 - INC CA.



VIEW A-A
TYP PAUL FASTENERS INSTALLATION
(SUPPLIED WITH COOLING ASSY.)

MAIN WIRING HARNESS ITEM #27

EXP. MEMORY HARNESS
(SUPPLIED WITH MM15)

LOCATION OF SPEED NUTS ITEM 21

LOCATE ALL NUTS BY COUNTING HOLES DOWN FROM TOP OF CAB FRAME SUPPORTS

FRONT HOLE NUMBERS				REAR HOLE NUMBERS
3	21	39	59	68 LEFT ONLY
7	25	43	65	80 LEFT ONLY
12	30	48	73	
16	34	52	75	

LEFT SIDE HOLE NUMBERS		RIGHT SIDE HOLE NUMBERS	
LEFT REAR	LEFT FRONT	RIGHT REAR	RIGHT FRONT
	2 53	70	2 53
	5 59	71	5 59
	8 62		8 62
70	70		23 70
71	71		38 71

MTG PANEL DOOR HOLE LOCATIONS
TO BE USED ONLY WITH EXTENDED MEMORY & REAR COOLING

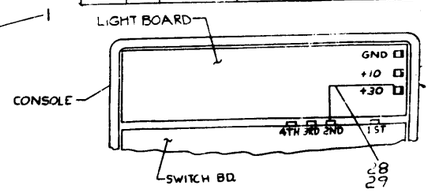
LEFT SIDE HOLE NUMBERS				RIGHT SIDE HOLE NUMBERS			
5	23	46	64	5	23	46	64
7	28	50		7	28	50	66
10	32	55		10	32	55	72
14	37	59		14	37	59	
19	41	62		19	41	62	

NOTES:

1. FOR DRAWING INDEX LIST REFER TO D-DI-PDP15-0-1.
2. HARNESSES TO BE ROUTED INSIDE OF CABINET CHANNELS
3. HARNESS TO BE SECURED USING ITEMS 26 & 38
4. REF DOCUMENTS REFER TO D-DC-M1950-0-0 & D-AR-PDP15-0-2
5. IF MAX NO. OF MEM UNITS ON THE REAR DOOR (9) IS NOT INCLUDED IN THE SYS. THE FOLLOWING PROCEDURE IS USED FOR UNUSED PWR CONNS:
   - A. UNUSED MATE N LOCK CONNS TO BE MATED WITH FEMALE MATE-N-LOCK AND SECURED TO COOLING ASSY HINGE SCREWS
   - B. UNUSED HEYCO TABS TO BE COVERED WITH SHRINK TUBING AND SECURED TO HARNESS WITH TIE-WRAPS.
   - C. FASTEN HARNESS AGAINST CORNER USING ITEMS 36 & 38.

MAIN WIRING & EXP MEM. HARNESS

PART NO.	COLOR	FROM/HARNESS LEAD NO.	TO SYSTEM LOCATION	REMARKS
7006425	–	P1	715 P/S - P1	
–	–	P2	715 P/S - P2	
–	–	P3	715 P/S - P3	
–	–	P4	715 P/S - P4	
–	–	P5	715 P/S - P5	
–	–	P6	715 P/S - P6	
–	–	P7	715 P/S - P7	
–	–	P8	715 P/S - P8	
–	WHT	75	TOP FAN ASSY	WHT HEYCO TAB
–	RED	76	TOP FAN ASSY	RED HEYCO TAB
–	–	P24	A1Ø1	GRN, BLK, BLK, RED
–	BLU	71	C1Ø1 TOP TAB	
–	RED	72	C1Ø1 BOT TAB	
–	YEL	73	D116 TOP TAB	
–	BLK	74	D116 BOT TAB	
–	–	P23	E1Ø1	RED, BLK, BLK, GRN
–	–	P22	H1Ø1	GRN, BLK, BLK, RED
–	–	P20	K1Ø3	YEL, BLK, BLK, GRN, RED
–	–	P21	K1Ø1	RED, BLK, BLK, GRN
–	RED	55	L1Ø3 TOP TAB	
–	BLK	56	L1Ø3 2ND TAB	
–	BLK	57	L1Ø3 3RD TAB	
–	GRY	58	L1Ø3 BOT TAB	
–	–	P19	M1Ø1	RED, BLK, BLK, GRN
–	WHT	44	BOT FAN ASSY.	WHT HEYCO TAB
–	RED	45	BOT FAN ASSY.	RED HEYCO TAB
–	BLU	81	CONSOLE SW BD.	1ST FROM RIGHT
–	GRAYMEL	82	CONSOLE SW BD.	3RD FROM RIGHT
–	GRAYMEL	83	CONSOLE SW BD	4TH FROM RIGHT
–	RED	84	CONSOLE +10V	
–	BLK	85	CONSOLE GND	
7006425	ORN	86	CONSOLE +30V	
7006401	–	99	715 P/S - P9	
–	–	P10	715 P/S - P10	
–	–	P11	715 P/S - P11	
–	–	P12	715 P/S - P12	
–	–	P13	715 P/S - P13	
–	–	P14	715 P/S - P14	
–	WHT	53	TOP FAN ASSY	WHT HEYCO TAB
–	RED	54	TOP FAN ASSY	RED HEYCO TAB
–	–	P18	A2Ø1	GRN, BLK, BLK, RED
–	RED	19	C2Ø1 BOT TAB	
–	BLU	50	C2Ø1 TOP TAB	
–	YEL	47	D216 TOP TAB	
–	BLK	48	D216 BOT TAB	
–	–	P17	A3Ø1	GRN, BLK, BLK, RED
–	RED	41	C3Ø1 BOT TAB	
–	BLU	42	C3Ø1 TOP TAB	
–	YEL	39	D216 TOP TAB	
–	BLK	40	D316 BOT TAB	
–	–	P16	A4Ø1	GRN, BLK, BLK, RED
–	RED	32	C4Ø1 BOT TAB	
–	BLU	31	C4Ø1 TOP TAB	
–	YEL	34	D416 TOP TAB	
–	BLK	33	D416 BOT TAB	
–	WHT	30	BOT FAN ASSY	WHT HEYCO TAB
7006401	RED	29	BOT FAN ASSY	RED HEYCO TAB
–	RED	–	CARAVEL FAN BD. W	—
–	WHT	–	*FRONT FAN ASSY	—



VIEW B-B

PDP15

EQUIPMENT CORPORATION

PDP15 ASSEMBLY

A-ML-PDP15 Ø

NONE

PDP15-0-

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY J. FLEMING	CHECKED J. MADDEN	SECTION
DATE 7/25/69	DATE	1
ENG W Burns	PROD	ISSUED SECT.
DATE 8/18/69	DATE	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION
1	D-UA-H95Ø-HA-Ø	SHORT DOOR ASSY (23-3/8)	1
2	D-UA-H95Ø-G-Ø	TABLE ASSY	1
3	E-UA-KC15A-Ø-Ø	CONSOLE ASSY KC15A	1
4	C-MD-7407280-0-0	BOTTOM PLATE (CONSOLE)	1
5	C-IA-7407093-2-0	BRACKET MTG CONSOLE R.H.	1
6	9006560	KEPS HEX NUT #6-32	10
7	9006021-1	SCR. PHL. HD. PAN #6-32 X 5/16 SST	8
8	D-UA-H95Ø-Q-Ø	H95Ø-Q 19 IN COVER PNL (10-1/2)	2
9	D-UA-H95Ø-P-Ø	H95Ø-P 19 IN COVER PNL (5-1/4)	2
10	A-PL-7006112-0-0	COOLING ASSY (LOGIC)	1
11	C-IA-7407384-0-0	PANEL LOGO PDP15	1
12	C-PL-7006501-4-0	BASIC CAB. ASSY. 19"	1
13	A-PL-MM15-Ø-Ø	MM15 (MEMORY)	1
14	D-AD-7006199-0-0	19"MTG PNL DR REWORK	1
15	D-UA-H95Ø-C-Ø	H95Ø-C 19 IN FULL LG DR (L.H.)	1
16	E-UA-H952-A-Ø	H952-A END PANEL	2
17	9007651	WASH EXT TOOTH #10	53
18	9006231	SCR HEX HD CAP #10-32 X 1/2 SST	19
19	E-UA-715-Ø-Ø	POWER SUPPLY 715	1
20	9006073-3	SCR PHL HD TRUSS #10-32 X 1/2 SST	31
21	9007786	NUT #C31758-1032-27 TINNERMAN	83
22	C-IA-7407093-1-0	BRACKET MTG CONSOLE L.H.	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
PDP15 ASSEMBLY	E-UA-PDP15-Ø-Ø	A	PL	PDP15-Ø-Ø	M	15-00085
	SHEET 1 OF 2	DIST.	6			

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY J. FLEMING	CHECKED J. MADDEN	SECTION
DATE 7/25/69	DATE	1
ENG W Burns	PROD	ISSUED SECT.
DATE 8/18/69	DATE 8/19/69	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION 3/8	QUANTITY / VARIATION
23	9006071-2	SCR PHL HD FLAT 10-32 X 3/8 SST	4
24	A-ML-KP15-Ø	KP15 I/O & CP	1
~~25~~	~~9007772-14~~	~~CLAMP CAB L TITE 2CL X 200X DAKOTA~~	~~1~~
26	9007032	TIE WRAP #SST-2-L (PANDUIT)	A/R
27	J-IA-7006425-0-0	HARNESS MAIN WIRING	1
28	9107370-33	WIRE #14 AWG STRD ORN	A/R
29	9007919	CONN #14 WIRE #50906 ARKLESS	2
~~30~~	~~9007089~~	~~CLAMP 3/4 HOLUB~~	~~6~~
~~31~~	~~9006008-3~~	~~PHL HD TRUSS 10-32 X 1-1/4 SST~~	~~2~~
32	9006565	NUT KEPS HEX 10-32 SST	4
33	9006990	STRAP, GROUND 740F-33-20	A/R
34	9007060	FASTENERS 1/2" DCT #48152	24
35	9007055	FASTENER 7/32" DCT #48150	1
36	9006233	SCR. HEX HD CAP # 10-32 X 3/4 SST	2
37	9007772-9	CLAMP CAB L TITE 2CL X 100 DAKOTA	2
38	9008264-0	TIE WRAP MOUNT (PANDUIT ABMS-A)	A/R
39	9008887	GROUND STRAP	A/R
40	9006070-1	SCR, PHL. HD. PAN # 10-32 X 5/16 SST.	2
41	9006074-2	SCR PHL HD FLAT 10-32 x 5/8 SST	24
42	91007646	TUBING (BLACK)	A/R

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
PDP15 ASSEMBLY	E-UA-PDP15-Ø-Ø	A	PL	PDP15-Ø-Ø	M	
	SHEET 2 OF 2	DIST.	6			

DEC FORM NO.
DRA 110

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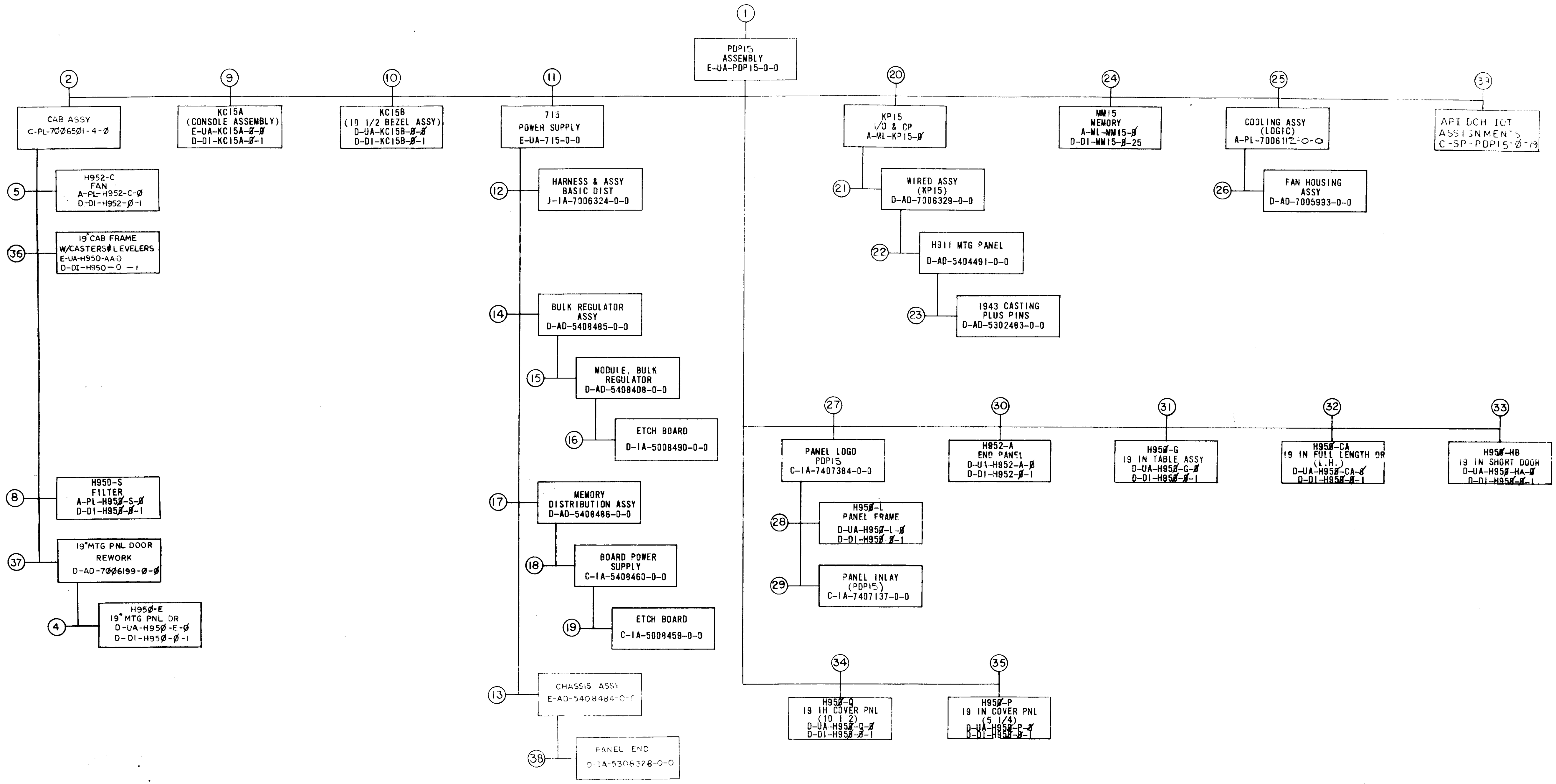


UNIT ASSY. NO. E-UA-PDP15 - Ø - Ø

REVISIONS: A 15-00020 10-24-69; B 15-00022 B. MINOR 10-30-69; D. O'CONNOR; 715-00014 O'CONNOR; D 15-00052 F. AUMANN; E 15-00060 MINOR; F KC15A-00007; B. MINOR; H; K 6-24-71; L 9-3-71; M

FIRST USED ON OPTION/MODEL: PDP15

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES: DECIMALS ±.005, FRACTIONS ±1/64, ANGLES ±0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN. J. T. Carey DATE 7-29-69
CHK'D. DATE 7/1/69
NEXT HIGHER ASSY A-ML-PDP15-Ø
SCALE NONE
SHEET 1 OF 3

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DRAWING INDEX LIST PDP15

SIZE D CODE DI NUMBER PDP15-Ø-1 REV M

DEC FORM NO DRD 300

MECHANICAL

FIND NO.	DESCRIPTION	PART NO	PROD	CUST	F/C
1.	PDP15 ASSEMBLY	E-UA-PDP15-Ø-Ø			
	PDP15 ASSEMBLY (PL)	A-PL-PDP15-Ø-Ø			
	HARNESS MAIN WIRING	J-IA-7006425-0-0			
	BOTTOM PLATE (CONSOLE)	C-MD-7407280-0-0			
	BRACKET, MTG,(CONSOLE)R.H.	C-IA-[illegible]			
	BRACKET, MTG,(CONSOLE)L.H.	C-IA-74070[illegible]-0			
	EQUIPMENT LAYOUT PDP15	D-AR-PDP15-0-2			
2	BASIC CAB ASSEMBLY 19"	C-PL-7006501-4-0			
4.	H95Ø-E 19 IN MTG PNL DR (LH)	D-UA-H95Ø-E-Ø			
	H95Ø-E 19 IN MTG PNL DR (LH)(PL)	A-PL-H95Ø-E-Ø			
	DWG INDEX H95Ø	D-DI-H95Ø-Ø-1			
5.	H952-C FAN	A-PL-H952-C-Ø			
	DWG INDEX H952	D-DI-H952-Ø-1			
8.	H95Ø-S FILTER	A-PL-H95Ø-S-Ø			
	DWG INDEX H95Ø	D-DI-H95Ø-Ø-1			
9.	KC15A (CONSOLE ASSEMBLY)	E-UA-KC15A-Ø-Ø			
	KC15A (CONSOLE ASSEMBLY)(PL)	A-PL-KC15A-Ø-Ø			
	DRAWING INDEX KC15A	D-DI-KC15A-Ø-1			
10.	KC15B (10-1/2 BEZEL ASSY)	D-UA-KC15B-Ø-Ø			
	KC15B (10-1/2 BEZEL ASSY)(PL)	A-PL-KC15B-Ø-Ø			
	DRAWING INDEX KC15B	D-DI-KC15B-Ø-1			
11.	715 POWER SUPPLY	E-UA-715-0-0			
	715 POWER SUPPLY (PL)	A-PL-715-0-0			
	SCREEN POWER SUPPLY	D-IA-5308464-0-0			
12.	HARNESS & ASSY BASIC DIST	J-IA-7006324-0-0			
	BRACKET BASIC DISTRIBUTION	D-IA-5308327-0-0			

MECHANICAL

FIND NO.	DESCRIPTION	PART NO	PROD	CUST	F/C
[illegible]	CHASSIS ASSY	E-AD-5408484-0-0			
	CHASSIS ASSY (PL)	A-PL-5[illegible]			
	SUPPORT CAPACITOR #1	D-IA-5308324-0-0			
	BRACKET CONNECTOR #2	D-IA-5308[illegible]-0-0			
	BRACKET CAPACITOR #3	D-IA-5308326-0-0			
	SUPPORT CAPACITOR #2	D-IA-5308325-0-0			
	BRACKET CONNECTOR #1	D-IA-5308237-0-0			
	CHASSIS POWER SUPPLY	E-IA-5308329-0-0			
	GUARD, SWITCH	B-MD-7408144-0-0			
14.	BULK REGULATOR ASSY	D-AD-5408485-0-0			
	BULK REGULATOR ASSY (PL)	A-PL-5408485-0-0			
	PANEL FRONT	C-MD-5308480-0-0			
	PANEL SIDE	C-MD-5308479-0-0			
	FAN BRACKET	D-MD-5308478-0-0			
	PANEL REAR	C-MD-5308481-0-0			
15.	MODULE BULK REGULATOR	D-AD-5408408-0-0			
	MODULE BULK REGULATOR (PL)	A-PL-5408408-0-0			
16.	ETCH BOARD	D-IA-5008409-0-0			
	PC LAYOUT	PC-5008409-0-0			
17.	MEMORY DISTRIBUTION ASSY	D-AD-5408486-0-0			
	MEMORY DISTRIBUTION ASSY (PL)	A-PL-5408486-0-0			
	PANEL POWER PACK CONTROL	E-IA-5308323-0-0			
	HARNESS MEMORY DIST	D-IA-7006113-0-0			
	BRACKET DISTRIBUTION MEMORY	D-IA-5308322-0-0			
18.	BOARD POWER SUPPLY	C-IA-5308460-0-0			
19	ETCH BOARD	C-IA-5008459-0-0			
	PRINTED CIRCUIT	PC-5008459-0-0			
20.	KP15 I\O & CP	A-ML-KP15-Ø			
21.	WIRED ASSY (KP15)	D-AD-7006329-0-0			
	WIRED ASSY (KP15)(PL)	A-PL-7006329-0-0			
	LOGIC FRAME DECALS	A-DC-7406371-0-0			
22.	H911 MTG PANEL	D-AD-5404491-0-0			
	H911 MTG PANEL	A-PL-5404491-0-0			
	288 PIN CONN BLOCK TYPE #H803	E-SC-1205348-0-0			
23.	1943 CASTING PLUS PINS	D-AD-5302483-0-0			
	1943 CASTING PLUS PINS (PL)	A-PL-5302498-0-0			
	1943 FRAME CASTING	E-MD-1202885-0-0			
24.	MM15 MEMORY	A-PL-MM15-Ø-Ø			
	DRAWING INDEX	D-DI-MM15-Ø-25			

MECHANICAL

FIND NO.	DESCRIPTION	PART NO	PROD	CUST	F/C
25.	COOLING ASSY (LOGIC)	A-PL-7006112-0-0			
	ENCLOSURE	D-MD-700[illegible]93-0-0			
	HINGE DOOR	C-MD-7406896-0-0			
	DOOR, LOGIC COOLING	D-IA-7406895-0-0			
26	FAN HOUSING ASSY	D-AD-7005993-0-0			
	FAN HOUSING ASSY (PL)	A-PL-7005993-0-0			
	FAN HOUSING	D-IA-7406892-0-0			
	DECAL, FAN HOUSING	A-DC-7407314-0-0			
27.	PANEL LOGO PDP15	C-IA-7407384-0-0			
28.	H95Ø-L PANEL FRAME	D-UA-H95Ø-L-Ø			
	H95Ø-L PANEL FRAME (PL)	A-PL-H95Ø-L-Ø			
29.	PANEL INLAY (PDP15)	C-IA-7407137-0-0			
	LOGO (BRITE NAVY)	C-SS-7407137-0-0			
	LOGO (BRITE COPEN BLUE)	C-SS-7407137-0-0			
30.	H952-A END PANEL	D-UA-H952-A-Ø			
31.	H95Ø-G 19 IN TABLE ASSY	D-UA-H95Ø-G-Ø			
	H95Ø-G 19 IN TABLE ASSY (PL)	A-PL-H95Ø-G-Ø			
32.	H95Ø-CA 19 IN FULL LG DR	D-UA-H95Ø-CA-Ø			
	H95Ø-CA 19 IN FULL LG DR (PL)	A-PL-H95Ø-CA-Ø			
33.	H95Ø-HA 19 IN SHORT DOORS	D-UA-H95Ø-HA-Ø			
	H95Ø-HA 19 IN SHORT DOORS (PL)	A-PL-H95Ø-HA-Ø			
34.	H95Ø-Q 19 IN COVER PNL (10-1/2)	D-UA-H95Ø-Q-Ø			
	H95Ø-Q 19 IN COVER PNL (PL)	A-PL-H95Ø-Q-Ø			
	DWG INDEX H95Ø	D-DI-H95Ø-Ø-1			
35.	H95Ø-P 19 IN COVER PNL (5-1/4)	D-UA-H95Ø-P-Ø			
	H95Ø-P 19 IN COVER PNL (PL)	A-PL-H95Ø-P-Ø			
	DWG INDEX H95Ø	D-DI-H95Ø-Ø-1			
36.	19"CAB FRAME W/CASTERS & LEVELERS	E-UA-H950-AA-0			
	DWG INDEX H950	D-DI-H950-0-1			
37.	19" MTG PNL DR REWORK	D-AD-7006199-0-0			
	19" MTG PNL DR REWORK (PL)	A-PL-7006199-0-0			
38	PANEL, END	D-IA-5308328-0-0			
	SILK SCREEN	A-SS-5308328-0-0			

ELECTRICAL

FIND NO	DESCRIPTION	PART NO	PROD	CUST	F/C
1	PDP15	A-ML-PDP15-Ø			
	PDP15 ASSEMBLY	E-UA-PDP15-Ø-Ø			
	PDP15 ASSEMBLY (PL)	A-PL-PDP15-Ø-Ø			
	EQUIPMENT LAYOUT PDP15	D-AR-PDP15-Ø-2			
	SIGNAL WIRING PDP15	D-IC-PDP15-Ø-3			
	READ IN FLOW	D-FD-PDP15-Ø-4			
	FLOW INTERRUPT GRAPH	D-FD-PDP15-Ø-5			
	ACCEPTANCE SPEC	A-SP-PDP15-Ø-7			
	SYSTEM SPEC	[illegible]-PDP15-Ø-12			
	CHECK OUT PROC	A-SP-PDP15-Ø-11			
	SIGNAL CHART IND BUS	[illegible]-FD-PDP15-Ø-13			
	KP15 MASTER LIST	A-ML-KP15-Ø			
	KE15 MASTER LIST	A-ML-KE15-Ø			
	POWER WIRING	D-IC-PDP15-Ø-14			
	HARDWARE ACCESSORY	A-PL-PDP15-Ø-15			
	TIMING ADJUSTMENTS	A-SP-PDP15-Ø-16			
	USABLE MODULE LIST	A-SP-PDP15-Ø-17			
	SPARE PARTS 15/10	A-PL-SP15-A-1			
	SPARE PARTS 15/20	A-PL-SP15-B-1			
	SPARE PARTS 15/30	A-PL-SP15-C-1			
	SPARE PARTS 15/40	A-PL-SP15-D-1			
	SPARE PARTS	A-ML-SP15-Ø			
	SPARE PARTS 15/35	A-PL-SP15-E-1			
	SPARE PARTS 15/50	A-PL-SP15-F-1			
9.	KC15A (CONSOLE ASSY)	A-ML-KC15A-Ø			
10.	KC15B(10-1/2 BEZEL ASSY)	A-ML-KC15B-Ø			
11.	715 POWER SUPPLY	E-UA-715-0-0			
	715 POWER SUPPLY	A-PL-715-0-0			
	CIRCUIT SCHEMATIC	D-CS-715-0-1			
13.	CHASSIS ASSY	E-AD-5408484-0-0			
	CHASSIS ASSY (PL)	A-PL-5408484-0-0			
15.	MODULE BULK REGULATOR	D-AD-5408408-0-0			
	MODULE BULK REGULATOR (PL)	A-PL-5408409-0-0			
	CIRCUIT SCHEMATIC	B-CS-5408409-0-1			
17.	MEMORY DISTRIBUTION ASSY	D-AD-5408496-0-0			
	MEMORY DISTRIBUTION ASSY (PL)	A-PL-5408486-0-0			
18.	BOARD POWER SUPPLY	C-IA-5408460-0-0			
	CIRCUIT SCHEMATIC	B-CS-5408460-0-0			
20.	KP15 IO & CP	A-ML-KP15-Ø			
	MODULE UTILIZATION	D-MU-KP15-Ø-1Ø2			
	WIRE LIST	K-WL-KP15-Ø-1Ø1			
	REG & BUS BIT	D-BS-KP15-Ø-1			
	REG & BUS BIT	D-BS-KP15-Ø-2			
	REG & BUS BIT	D-BS-KP15-Ø-3			
	REG & BUS BIT	D-BS-KP15-Ø-4			
	REG & BUS BIT	D-BS-KP15-Ø-5			
	REG & BUS BIT	D-BS-KP15-Ø-6			
	REG & BUS BIT	D-BS-KP15-Ø-7			
	REG & BUS BIT	D-BS-KP15-Ø-8			
	REG & BUS BIT	D-BS-KP15-Ø-9			
	REG & BUS BIT	D-BD-KP15-Ø-1Ø			
	REG & BUS BIT	D-BS-KP15-Ø-11			
	REG & BUS BIT	D-BS-KP15-Ø-12			
	REG & BUS BIT	D-BS-KP15-Ø-13			

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

REVISIONS: REV | CHANGE NO. | CHK

FIRST USED ON OPTION/MODEL: PDP15

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL / /

FINISH / /

DRN. [illegible] DATE 7-[illegible]
CHK'D. [illegible] DATE [illegible]
ENG. [illegible] DATE [illegible]
PROJ. ENG. [illegible] DATE 8/19/69
PROD. DATE

NEXT HIGHER ASSY: A-ML-PDP15-Ø

SCALE

SHEET 2 OF 3

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: DRAWING INDEX LIST PDP15

SIZE D | CODE DI | NUMBER PDP15-Ø-1 | REV M

DIST

DEC FORM NO. DPD 100

FIND NO.	DESCRIPTION	PART NO	DEPT USAGE PROD	CUST	F/C
20	REG & BUS BIT	D-BS-KP15-Ø-14			
	REG & BUS BIT	D-BS-KP15-Ø-15			
	REG & BUS BIT	D-BS-KP15-Ø-16			
	REG & BUS BIT	D-BS-KP15-Ø-17			
	REG & BUS BIT	D-BS-KP15-Ø-18			
	INSTRUCTION IMPLEMENTATION	D-BS-KP15-Ø-19			
	MAJOR STATE GENERATOR	D-BS-KP15-Ø-20			
	TIME STATE GENERATOR	D-BS-KP15-Ø-21			
	LINC - LINC CONTROL	D-BS-KP15-Ø-22			
	SKIP CONTROL	D-BS-KP15-Ø-23			
	REG STROBE CONTROL	D-BS-KP15-Ø-24			
	INDICATOR STROBES	D-BS-KP15-Ø-25			
	CARRY IN	D-BS-KP15-Ø-26			
	C/P MEMORY CABLE	D-BS-KP15-Ø-27			
	OPR DECODE	D-BS-KP15-Ø-28			
	INDEX GRP CONTROL	D-BS-KP15-Ø-29			
	MAJOR INST DECODING	D-BS-KP15-Ø-30			
	INSTR REGISTER	D-BS-KP15-Ø-31			
	MEMORY INTERFACE CONTROL	D-BS-KP15-Ø-32			
	DEC + X MODE BUS CONTROL	D-BS-KP15-Ø-33			
	CONSOLE INTERFACE	D-BS-KP15-Ø-34			
	CP-I/O INTERFACE	D-BS-KP15-Ø-35			
	I BUS Ø0-Ø8 M1, M2, MO	D-BS-KP15-Ø-38			
	I BUS Ø0-Ø8 EAE, DSR	D-BS-KP15-Ø-39			
	I BUS Ø9-17 MO, M1, M2	D-BS-KP15-Ø-40			
	I BUS Ø9-17 EAE, DSR	D-BS-KP15-Ø-41			
	I BUS 08-17 SC	D-BS-KP15-Ø-42			
	I BUS 18-23 IR	D-BS-KP15-Ø-43			
	CONSOLE CONTROL #1	D-BS-KP15-Ø-44			
	CONSOLE CONTROL #2	D-BS-KP15-Ø-45			
	MISC CONTROL LOGIC	D-BS-KP15-Ø-46			
	MEM IN CONTROL	D-BS-KP15-Ø-47			
	MISC LOGIC	D-BS-KP15-Ø-48			
	DEVICE SELECTOR (D18)	D-BS-KP15-Ø-50			
	I/O CONTROL SYNC (D11)	D-BS-KP15-Ø-51			
	I/O BUS (D12)	D-BS-KP15-Ø-52			
	I/O BUS (D13)	D-BS-KP15-Ø-53			
	TIME LOGIC (D16)	D-BS-KP15-Ø-55			
	POWER FAIL REAL TIME CLOCK OPTION (D20)	D-BS-KP15-Ø-57			
	INTERNAL IOT DECODER	D-BS-KP15-Ø-58			
	MDL DRIVERS	D-BS-KP15-Ø-59			
	I BUS Ø0-Ø8	D-BS-KP15-Ø-60			
	I BUS Ø9-17	D-BS-KP15-Ø-62			
	TEL REC	D-BS-KP15-Ø-64			
	TEL TRANS	D-BS-KP15-Ø-65			
	READ IN	D-BS-KP15-Ø-66			
	MISC TEL LOGIC	D-BS-KP15-Ø-67			
	A & REC	D-BS-KP15-Ø-68			
	IO ADDRESS BUS	D-BS-KP15-Ø-69			
	MODULE PARTS LIST	A-PL-KP15Ø-1Ø2			
24	MM15 MEMORY	A-ML-MM15-Ø			
	DRAWING INDEX LIST MM15	D-DI-MM15-Ø-25			
39	API, DCH, IOT ASSIGNMENTS	C-SP-PDP15-Ø-19			

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP15

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

		DATE
DRN.		
CHK'D.		
ENG.		
PROJ. ENG.		
PROD.		

NEXT HIGHER ASSY: A-ML-KP15-Ø

SCALE: NONE

SHEET 3 OF 3

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DRAWING INDEX LIST PDP15

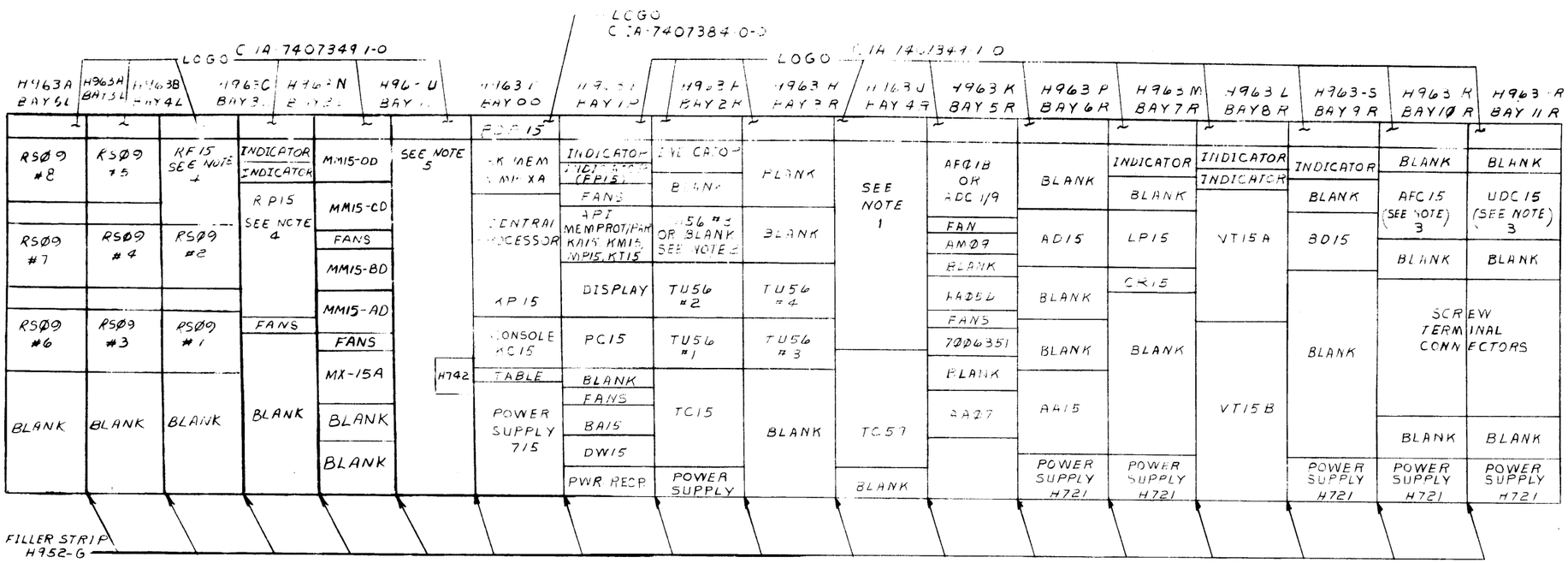
SIZE: D | CODE | NUMBER: DD1PDP15-Ø-1 | REV: M

DIST:

REVISIONS | REV | CHANGE NO. | CHK

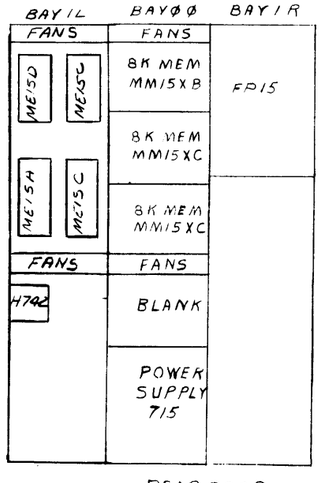
DEC FORM NO DRD 100

FRONT VIEW



NOTES:

1. OPTIONS LT19, DP09, CR03B, XY15 OR DP27 AND THE LB29 & DE02 ARE LOCATED IN AVAILABLE SPACE IN THE H963-J CAB ORDER OF PREFERENCE, IS TC59, LT19 DP27 ETC. PLACED IN THE ORDER LISTED ABOVE FROM BOTTOM TO TOP IN THE EVENT THAT ALL OPTIONS ARE INCLUDED A SECOND CAB IS REQUIRED.
2. IF FOUR TU56'S ARE ORDERED, TU56 #3 & #4 ARE INSTALLED IN SECOND CAB AS SHOWN.
3. AFC-15 & UDC-15 CABINETS COULD BE A MAX OF 11UDC AND 11AFC CABINETS EACH TO MEET THE REQUIRMENTS OF THE CUSTOMER.
4. IF EXTENSIVE MX15 SYSTEM INSTALLED DISK SYSTEM (RF15 AND/OR RP15) CABINETS MAY BE PHYSICALLY SEPARATED AND REPOSITIONED AT INSTALLATION TO MAINTAIN CABLE LENGTHS.
5. SEE A-SP-ME15-0 FOR H963U USAGE REQUIREMENTS



PEAR DOCR

STANDARD MODELS	
MODEL NO	OPTIONS INCLUDED
PDP15/10	MM15 AA (OR MM15 BA), ASR-33
	KC15 (A, B), KP15
PDP15/20	MM15 CA (OR MM15 DA), PC15, TC15 (OR TC02 & DW15A), KSR-35
	KC15 (A, B), KP15, KE15, 1 TU56 (OR 2 TU55)
PDP15/30	MM15CA (OR MM15DA), MM15CB (OR MM15 DA)
	PC15, TC15 (OR TC02 & DW15A),
	KE15, KA15, KM15, KW15, BA15, LT15, KSR-35
	KSR-33, KC15 (A, B) KP15, 2 TU56 (OR 3 TU55)
PDP15/40	(1) MM15CA (OR MM15DA), MM15CB (OR
	MM15DB), PC15, TC15 (OR TC02 & DW15A),
	KE15, KA15, KM15, KW15, BA15
	LT15A, RF15, 2 RS09, KSR-35, KSR-33
	KC15 (A, B) KP15, MM15CC (OR MM15DC) 1 TU56
	(OR 2 TU56)

CABINET CONFIGURATION INFORMATION	
CAB DES	MAX CONFIGURATION DRAWING NUMBER
H-963-A	7006709 (RS09)
B	7006702 (RF15)
C	7006820 (RP-15)
D	(MAIN PROCESSOR)
E	7006621 (PC15)
F	7006725 (TC-15)
H	7006725 (TC-15)
J	7006633 (TC59)
K	(AA05)
L	(VT15)
M	(LP15)
N	7006863 (MX-15)
P	(ANALOG SUBSYSTEM)
R	(AFC15 & UDC15)
S	(BD15)

REVISIONS				
CHK	CHANGE NO	REV		
	15-00019	M	RE-DRAWN AS VISED	AUMANN 7-1-71
	15-00082	N		AUMANN 7-1-71
	15-00086	P		AUMANN 8-27-71
	15-00089	R		SWANSON 10-7-72
	15-00091	S		SWANSON 10-26-73
	15-00092	T		F. DOLL 7-11-73

DEC FORM NO 12RD 1027A

FIRST USED ON OPTION/MOD: PDP15

QTY	DESCRIPTION	PART NO	ITEM NO

PARTS LIST

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS FRACTIONS ANGLES
.005 1/64 1°
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

		DATE
DRN	FLEMING	
CHK'D	FULLEN	
ENG	SWANSON	
PROJ ENG	FULLER	
PROD	LASKEY	

FIRST USED ON

SCALE

SHEET 1 OF 5

digital EQUIPMENT CORPORATION

TITLE: EQUIPMENT LAYOUT PDP15

SIZE D | CODE | NUMBER DAR PDP15-0-2 | REV T

DIST

DAR PDP15-0-2 T

LEGEND

POSITIVE BUS = 1 BC09B

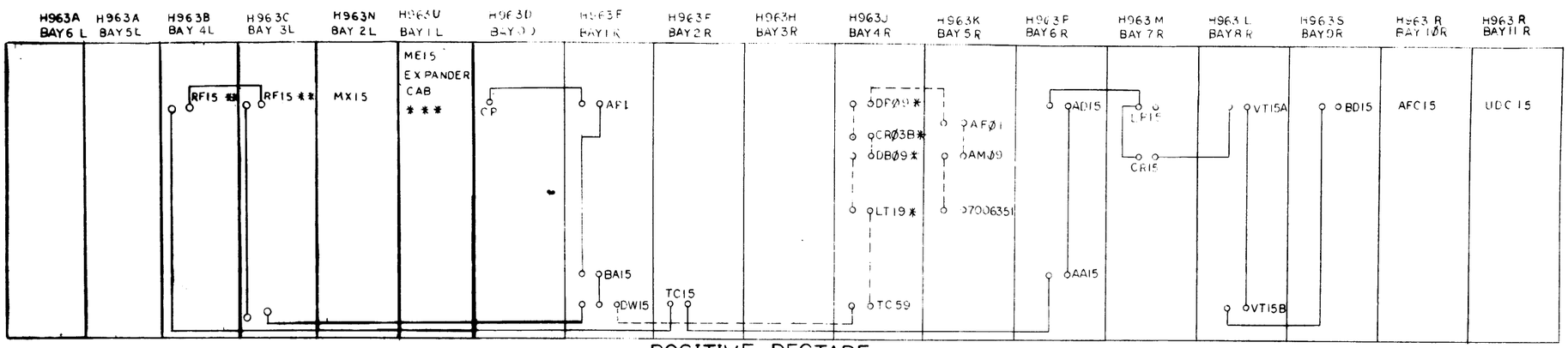
NEGATIVE BUS = 2 BC09A'S

NOTE:

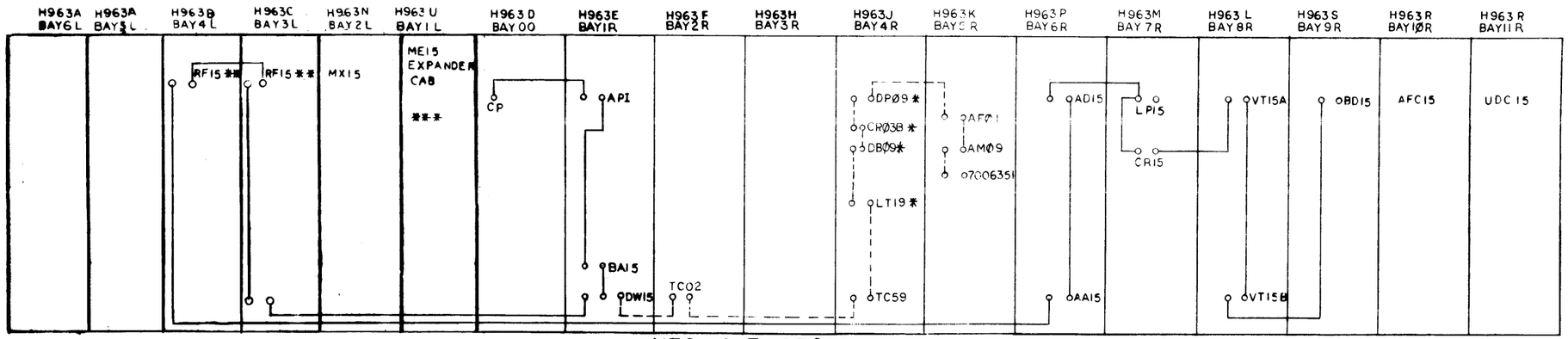
* SEE NOTE 1 PAGE 1 OF 5 THIS PRINT

** SEE NOTE 4 PAGE 1 OF 5 THIS PRINT

*** SEE NOTE 5 PAGE 1 OF 5 THIS PRINT



POSITIVE DECTAPE



NEGATIVE DECTAPE

INPUT/OUTPUT BUS ROUTING

REVISIONS	REV	CHANGE NO
DATE		

FIRST USED ON OPTION/MOD	QTY	DESCRIPTION	PART NO	ITEM NO
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30
FINAL SURFACE QUALITY / REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

NEXT HIGHER ASSY

DRN	KELLY	6/23/64
CHK'D	MADDEN	6/29/64
ENG	SWANSON	7/22/64
PROJ ENG	BUTLER	7/29/64
PROD	LASKEY	7/23/64

SCALE

SHEET 2 OF 5

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
EQUIPMENT LAYOUT
PDP15

SIZE	CODE	NUMBER	REV
D	AR	PDP15-0-2	T

DIST

NOTES: FOR POSITIVE OPTIONS.

1. FOR VT15 CABLES ONLY. THE LENGTHS SHOWN ASSUME THAT A TC02 WITH FOUR (4) OR LESS DECTAPES AND ONE HALF OF NEGATIVE LOGIC OPTIONS ARE INCLUDED IN THE SYSTEM. IF EITHER OF THESE ASSUMPTIONS ARE FALSE THE FOLLOWING ADJUSTMENTS MUST BE MADE.
   - A. SUBTRACT TWO (2) FEET FROM VT15 CABLE IF NO DECTAPE IS INCLUDED.
   - B. SUBTRACT TWO (2) FEET FROM VT15 CABLE IF NO NEGATIVE OPTIONS ARE INCLUDED.
   - C. ADD TWO (2) FEET IF TC02 WITH FIVE (5) OR MORE TU55's ARE INCLUDED.
   - D. ADD TWO (2) FEET FOR EACH ADDITIONAL NEGATIVE OPTION BAY.
2. FOR POSITIVE OPTIONS SINGLE BC09B CABLES ARE USED FOR OPTION INTERCONNECTIONS.
3. FROM THE FIRST OPTION IN SEQUENCE ON THE MATRIX, CONNECTION IS MADE TO THE PROCESSOR WITH THE SPECIFIED CABLE LENGTH.
4. IF TC15 IS INCLUDED THE SMALL MATRIX BELOW MAY BE USED TO DETERMINE CABLE LENGTHS. THIS MATRIX IS TO BE USED WITH THE LARGE MATRIX, ELIMINATING THE ROW TITLED 'VT15' AND SUBSTITUTING THE SMALL MATRIX WHERE APPLICABLE.

I/O CABLE (BC09) TO TC15 FROM: CP, BB, BA, DW, RP, RF

CABLE LENGTH →	5	5	3	3	7	7
IF BOTH RP15 & RF15 INCLUDED:					–	10
IF BB, BA OR DW INCLUDED:					–	10
IF BB, BA OR DW & RP & RF INCLUDED					–	12

CABLE FROM TC15 TO VT15 IS 7 FT.

NOTES: FOR NEGATIVE OPTIONS.

1. IT IS ASSUMED THAT A TC02 WITH NO MORE THAN FOUR (4) TU55's IS INCLUDED IN THE SYSTEM. THE TC02 IS CONNECTED TO THE DW15 WITH 3 FOOT CABLES, THE FIRST NEGATIVE OPTION IN CHART SEQUENCE CONNECTS TO TC02.
2. IF NO DECTAPE IS INCLUDED, FIRST OPTION IN CHART SEQUENCE CONNECTS DIRECTLY TO DW15. CABLE LENGTHS ARE UNCHANGED.
3. IF A TC02 WITH FIVE (5) OR MORE TU55's IS INCLUDED ADD TWO (2) FEET TO FIRST CABLE IN CHART SEQUENCE.
4. FOR NEGATIVE OPTIONS PAIRS OF BC09A CABLES ARE USED FOR OPTION INTER-CONNECTIONS.
5. YY15 AND/OR DR09 MAY BE INSTALLED IN PLACE OF LTI9, DB09, CR03B OR DP09. CABLE LENGTHS DO NOT CHANGE. (REF SHEET 1)

NOTES: GENERAL MATRIX INSTRUCTIONS

1. TO USE CABLE MATRICES, REFER TO POSITIVE OR NEGATIVE OPTION MATRIX. FIND SECTION IN MATRIX WHICH CORRESPONDS TO NUMBER OF POSITIVE OR NEGATIVE LOGIC OPTIONS IN SYSTEM.
2. AFTER LOCATING APPROPRIATE SECTION OF MATRIX FIND COLUMN WHICH DESCRIBES PARTICULAR SYSTEM UNDER CONSIDERATION. (THE PRESENCE OF A NUMBER IN THE MATRIX INDICATES THAT THE OPTION IS INCLUDED IN THE SYSTEM).
3. VERTICAL LISTING OF OPTIONS INDICATES INTER-CONNECTION SEQUENCE; CONNECT OPTIONS TOGETHER IN ASCENDING ORDER OF LISTING.
4. THE NUMBER IN THE MATRIX REPRESENTS THE LENGTH (IN FEET) OF I/O CABLE(S) REQUIRED TO CONNECT TO NEXT OPTION IN SEQUENCE.

OPTION	FIVE OPTIONS																						SIX OPTIONS							OPT. 7
TC59	3	3	3				3	3	3	3	3						3	3	3	3	3	3	3	3	3	3	3	3		
LTI9	3	3	3	5	5							5	5	5	5			3	3	3	3	3	3	3	3	3	3	3	5	
DB09	2	2	2	2	2	7	5	5	5	5			2							2	2	2	2	5		2	2	2		6
CR03B	2	2	2	2	2	2	2	2	2		7	3	2	2	2	7	3	3				2	2	2	3		2	2	2	2
DP09	2			2	2	2	2	2		3	2	2		2	2	2	2	2	3	3		2	2	2	2	3		2	2	2
AF01 *		10		10		10	10		10	10	10	10	10	10		10	10		10	10	12	10		10	10	10	10	10	10	10
AA05			7		7	5		7	5	5	5	5	5		7	5		7	5	5	5		7	5	5	5	5	5	5	

OPTION	ONE OPTION						TWO OPTIONS																							
BB15	5						5	5		5			5				5				5									
BA15		5					5		5		5			5								5								
DW15			5					5	2			5			5								5							
RP15				5						12	10	10				5								5						
RF15					5								12	10	10	5									5					
VT15						7											5	7	7	10	10					5				

OPTION	THREE OPTIONS																													
BB15	5	5	5		5	5		5			5	5		5			5													
BA15	5	5		5	5		5		5		5		5		5			5												
DW15	2		5	2		5	2			5		5	2			5			5											
RP15		10	10	10				12	10	10				12	10	10				5										
RF15					10	10	10	5	5	5							7	10	10	5										
VT15											7	7	7	12	12	12	12	12	12	12										

OPTION	FOUR OPTIONS																													
BB15	5	5	5	5			5	5	5			5	5		5															
BA15	5	5	5		5	5	5			5	5			5			5													
DW15	2	2		5	2	2		5	2			5	2			5														
RP15	10		10	10	10		10	10	10					10	10	10														
RF15		10	5	5	5					10	10	10	5	5	5															
VT15						7	12	12	12	12	12	12	15	15	15															

OPTION	FIVE OPTIONS						SIX OPT
BB15	5	5	5	5	5		5
BA15	5	5	5	5		5	5
DW15	2	2	2		5	2	2
RP15	10	10		10	10	10	10
RF15	5		10	5	5	5	5
VT15		12	12	15	15	15	15

POSITIVE LOGIC

OPTION	ONE OPTION						TWO OPTIONS																							
TC59	3						3	3		3			3				3	3												
LTI9		9					3		5		5			5					5	5										
DB09			7					5	2			7			7						7	7								
CR03B				7						7	3	2				7							7	7						
DP09					7								7	3	3	2									7	7				
AF01 *						15											15		15		12		10		10		15			
AA05D							12											15		15		10		8		8	5			

OPTION	THREE OPTIONS																													
TC59	3	3	3		3	3		3			3	3	3	3	3	3	3												3	
LTI9	3	3		5	3		5		5		3	3						5	5	5	5	5	5							5	
DB09	2		5	2		5	2			10			5	5				2	2					7	7	7	7			7	
CR03B		3	2	2				5	3	2					5	5				3	3			2	2			7	7		
DP09					3	3	3	2	2	2							5	5				3	3			3	3	2	2		7
AF01 *											15		12		10		10		12		10		10		10		10		15	15	12	10	10
AA05D												12		10		7		7		10		7		7		7		7	5	5	5	5	5

OPTION	FOUR OPTIONS																															
TC59	3	3	3	3		3	3	3	3	3	3						3	3	3	3							3	3	3	3		
LTI9	3	3	3		5	3	3	3	3	3		5	5	5	5		3				5	5	5								5	5	
DB09	2	2		5	2	2	2				2	2	2	2	7	7		5			2			7	7			5			5		7	7
CR03B	2		3	2	2			3	3		2	2			2	2			7			3		2		7	2	7			3	3	2
DP09		3	2	2	2					3	3			3	3	2	2			7			3		3	2	2	2	7	3	2	2	3
AF01 *						12		10		10		10		10		10		15	12	10	10	12	10	10	10	10	10		10	10	10		10	10
AA05D							10		7		7		7		7		7	5	5	5	5	5	5	5	5	5				7	5	5

* AF01 & ADC1/9 ARE IDENTICAL

NEGATIVE LOGIC

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

FIRST USED ON OPTION/MODEL: PDP 15

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP EDGES
MATERIAL
FINISH

DRWN L.G.Blanc DATE 12 DEC 67
CHKD. DATE 12-7-67
ENG. DATE
MFG. DATE 12/8/67
QA DATE 12/8/67
NEXT HIGHER ASSY
SCALE
SHEET 3 OF 5

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: EQUIPMENT LAYOUT PDP 15

SIZE | CODE: D | AR | NUMBER: PDP15-0-2 | REV: T
DIST.

REVISIONS: REV. | CHANGE NO. | DIR.

NOTE:

1. BC09B ASSEMBLY FORMS 1 POSITIVE I O BUS CABLE. 2 BC09A ASSEMBLIES FORM 1 NEGATIVE I O BUS CABLE. SEE PAGE 3 OF 5 THIS PRINT FOR CABLE LENGTHS (-T)
2. FOR USE OF TU55 TRANSPORT IN TC15 TU56 SYSTEM DATA CABLE IS FROM LAST TU56 TO FIRST TU55. COMMAND CABLE IS FORM TC15 TO FIRST TU55

FROM DEVICE	FROM LOCATION	TO DEVICE	TO LOCATION	CABLE NAME	CABLE #	CABLE TYPE	REMARKS
BB15	A32	IND PANEL	BOTTOM RIGHT	INDIC PANEL		FLEXPRINT	CABLES ARE PART
BB15	B32	IND PANEL	BOTTOM LEFT	INDIC PANEL		FLEXPRINT	OF INDICATOR PANEL
BB15	C32	IND PANEL	TOP RIGHT	INDIC PANEL		FLEXPRINT	(7006331-4) AS VIEWED
BA15	A29	IND PANEL	TOP LEFT	INDIC PANEL		FLEXPRINT	FROM REAR
RF15	EF02 03			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
RF15	EF04 05			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
RF15	C31	RS09	A24	CTRL & DATA	7005820-4	FLAT COAX	
RF15	C32	RS09	A25	CTRL & DATA	7005820-4	FLAT COAX	CONTROL
RF15	D31	RS09	B24	CTRL & DATA	7005820-4	FLAT COAX	TO
RF15	D32	RS09	B25	CTRL & DATA	7005829-4	FLAT COAX	DISK
RF15	C01	IND PANEL	TOP RIGHT	INDIC PANEL		FLEXPRINT	CABLES ARE PART
RF15	D01	IND PANEL	BOTTOM RIGHT	INDIC PANEL		FLEXPRINT	OF INDICATOR PANEL
RF15	E01	IND PANEL	TOP LEFT	INDIC PANEL		FLEXPRINT	(7006331-1) AS
RF15	F01	IND PANEL	BOTTOM LEFT	INDIC PANEL		FLEXPRINT	VIEWED FROM REAR
RS09	A26	RS09	A24	CTRL & DATA	7005820-L	FLAT COAX	DISK TO DISK
RS09	A27	RS09	A25	CTRL & DATA	7005820-L	FLAT COAX	L=2 FOR RS09-B -C
RS09	B26	RS09	B24	CTRL & DATA	7005820-L	FLAT COAX	L=4 FOR RS09-D
RS09	B27	RS09	B25	CTRL & DATA	7005820-L	FLAT COAX	
VT15A	HJ 29 30			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
VT15A	HJ 31 32			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
VT15A	BNC S	VT04	BNC S	X-Y VIDEO		COAX ASSEM	ASSEM. IS CONTROL
VT15A	BNC	BV04	BNC	Z VIDEO		COAX ASSEM	3 7006577-2 TO TERMINAL
VT15A	HJ 02 03	BV04	AB 06	DATA CTRL	7006641-3C		
VT15A	D01	IND PAN	TOP RIGHT	INDIC PANEL		FLEXPRINT	CABLES ARE PART.
VT15A	E01	IND PANEL	BOTTOM RIGHT	INDIC PANEL		FLEXPRINT	OF INDICATOR PANEL
VT15A	F01	IND PANEL	TOP LEFT	INDIC PANEL		FLEXPRINT	(7006331-2) AS
VT15A	H01	IND PANEL	BOTTOM LEFT	INDIC PANEL		FLEXPRINT	VIEWED FROM REAR
BV04	A11	VT04	BNC & AMPHENOL	CRT INTENSITY	7006686	BELDEN & COAX	Z VIDEO TO KRATOS DISPLAY
BV04	BNC	LIGHT PEN	PHONE JAX	LIGHT PEN	7006687	COAX	CABLE IS PART VT04
BV04	A24	LK35		KEYBOARD		RIBBON	OF LK35 GRAPHICS
BV04	B24	LT19E	TTY INPUT	KEYBOARD DATA	7006659	BELDON	OPTIONS
BV04	A12	PUSH BUTTONS		SWITCHES(W028)		RIBBON	CABLE IS
BV04	A13	PUSH BUTTONS		SWITCHES(K581)		RIBBON	PART OF SWITCH ASSEM 7006727
XY15	AB01 02			NEG I O BUS	BC09	COAX	SEE NOTE 1
XY15	AB03 04			NEG I O BUS	BC09	COAX	SEE NOTE 1
XY15	AB05 06			NEG I O BUS	BC09	COAX	SEE NOTE 1
XY15	AB07 08			NEG I O BUS	BC09	COAX	SEE NOTE 1
XY15	AB08	PLOTTER		DATA CNTRL	7005543		
DR09-A	AB01 02			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
DR09-A	AB03 04			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
DR09-A	AB05 06			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
DR09-A	AB07 08			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
DR09-A	A31			RELAYS			CUSTOMER CONNECTIONS
DR09-A	A32			RELAYS			VIA 2-W023 MODULES
7006351	AB01 02			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
7006351	AB03 04			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
7006351	AB05 06			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
7006351	AB07 08			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
7006351	H09	AA05D	A09	BUS INTERF	BC03E-9	FLEXPRINT	INTERFACE TO
7006351	J09	AA05D	B09	BUS INTERF	BC03E-9	FLEXPRINT	I O BUS THROUGH
7006351	H10	AA05D	A10	BUS INTERF	BC03E-9	FLEXPRINT	7006351
7006351	J10	AA05D	B10	BUS INTERF	BC03E-9	FLEXPRINT	
[illegible]	A27	AA07C	A29	DATA CONN	BC03B-4	FLAT COAX	
[illegible]	A28	AA07C	A31	DATA CONN	BC03B-4	FLAT COAX	D.A.C.
[illegible]	A29	AA07C	A32	DATA CONN	BC03B-4	FLAT COAX	EXPANSION
[illegible]	A30	AA07C	A30	DATA CONN	BC03B-4	FLAT COAX	
AF01B	CD 15/16			NEG I O BUS	BC09A-T	C OAX	SEE NOTE 1
AF01B	CD 17/18			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
AF01B	CD 19/20			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
AF01B	CD21/22			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC15	CD 01 02			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
TC15	CD 03 04			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
TC15	AB 21	TU56	AB10	DATA CABLE	7405152-1	MICRO DOT	TC15 TO TU56
TC15	A20	TU56	A06	COMMAND	BC02X-3	RIBBON	
TU56	AB11	TU56	AB10	DATA CABLE	7405152-1	MICRO DOT	TU56 TO TU56
TU56	A07	TU56	A06	COMMAND	BC02X-3	RIBBON	
AA15	AB 02 03			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
AA15	AB 04 05			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
AA15	B25	7006631		ANALOG OUT			CABLE PART OF ASSEM 7006631

FROM DEVICE	FROM LOCATION	TO DEVICE	TO LOCATION	CABLE NAME	CABLE #	CABLE TYPE	REMARKS
LP15F	AB02 03			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
LP15F	AB 04 05			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
LP15F	B32	L.P.		DATA CABLE	7006606	COAX	
LP15F	C30	INDIC PAN	TOP RIGHT	INDIC PANEL		FLEXPRINT	CABLES ARE PART
LP15F	C31	INDIC PAN	TOP LEFT	INDIC PANEL		FLEXPRINT	OF INDIC ASSEM
LP15F	C32	INDIC PAN	BOTTOM RIGHT	INDIC PANEL		FLEXPRINT	7006331-10 AS VIEWED FROM REAR
KP15	K02	TELETYPE		TTY		BELDEN	PART OF TTY ASSEMBLY (7006593 OR 7006594)
KP15	L02	CONSOLE		CONSOLE		FLEXPRINT	PART OF INDICATOR PANEL(7006388)
KP15 (PWR) SEQ	K03	PWR SUPPLY		PWR SEQ		PART OF PWR HARNESS (7006324)	PWR CONNECTORS
KP15 (RTC)	L03	PWR SUPPLY		RTC			TO REAR OF MODULES
KP15	H02	MM15A	C03	INDIC BUS	7006414-1	FLEXPRINT	TO BE USED IF
KP15	J02	MM15A	B03	MDL	7006907-YA	FLEXPRINT	BB15 NOT INCLUDED
KP15	J03	MM15A	B03	MDL	7006907-YA	FLEXPRINT	IN SYSTEM
KP15	MN 02 03			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
BB15	A04	KP15	H02	INDIC BUS	7006437-5	FLEXPRINT	
BB15	B02	KP15	J02	MDL	BC08A-5	FLEXPRINT	
BB15	B03	KP15	J03	MDL	BC08A-5	FLEXPRINT	TO BE USED IF
BB15	A02	MM15A	B02	MDL	BC08A-5	FLEXPRINT	BB15 INCLUDED
BB15	A03	MM15A	B03	MDL	BC08A-5	FLEXPRINT	IN SYSTEM
BB15	B04	MM15A	C02	INDIC BUS	7006437-6	FLEXPRINT	
BB15	B05	KP15	H03	API CONTROL	BC08A-5	FLEXPRINT	
BB15	CD 02 03			POS I O BUS	BC09B-T	COAX	
BB15	CD 04 05			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
MM15A	A02	MM15B	A02	MDL	BC08A-3	FLEXPRINT	
MM15A	A03	MM15B	A03	MDL	BC08A-3	FLEXPRINT	
MM15A	C02	MM15B	C02	INDIC BUS	7006414-2	FLEXPRINT	
MM15B	B02	MM15C	A02	MDL	7006907-0F	FLEXPRINT	
MM15B	B03	MM15C	A03	MDL	7006907-0F	FLEXPRINT	
MM15B	C03	MM15C	C03	INDIC BUS	7006414-1	FLEXPRINT	
MM15B	B02	MM15C	A02	MDL	7006907-0F	FLEXPRINT	
MM15C	B03	MM15C	A03	MDL	7006907-0F	FLEXPRINT	
MM15C	C02	MM15C	C02	INDIC BUS	7006414-1	FLEXPRINT	
BA15	B13	PC05	B10	PUNCH	BC08A-4	FLEXPRINT	
BA15	B28	PC05	B09	READER	BC08A-4	FLEXPRINT	
BA15	B27	TTY		TTY		BELDEN	PART OF TTY ASSEMBLY (7006594 OR 7906593)
BA15	B18	SCOPE		DISPLAY	7006786	ASSEMBLY	FOR VP15-A
					7005772	ASSEMBLY	FOR VP15-B
					7005772	ASSEMBLY	FOR VP15-C
BA15	AB 02 03			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
BA15	AB 04/05			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
DW15	AB 02/03			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
DW15	AB 04/05			POS I O BUS	BC09B-T	COAX	SEE NOTE 1
DW15	AB 25/26			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1 SYSTEM SOURCE
DW15	AB 27/28			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC02	EF 01/02			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC02	EF 03/04			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC02	EF 05/06			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC02	EF 07/08			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC02	CD25	TU55	AB03	HEAD DATA	7405152-1	ASSEMBLY	CONTROL TO
TC02	CD32	TU55	A05	COMMAND	7405151-1	ASSEMBLY	DECTAPE TRANSPORT
TC59	EF 01/02			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC59	EF 03/04			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC59	EF 05/06			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC59	EF 07 08			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1
TC59	A01	TU20	C04	READ DATA	7405556-8	COAX	
TC59	A02	TU20	C02	STATUS	7405556-8	COAX	CONTROL TO
TC59	A03	TU20	C05	DENSITY	7405556-8	COAX	MAGTAPE
TC59	B01	TU20	C01	WRITE DATA	7405536-8	COAX	TRANSPORT
TC59	B02	TU20	C03	COMMAND	7405556-8	COAX	
TU55	AB02	TU55	AB03	HEAD DATA	7405152-1	ASSEMBLY	DECTAPE TRANSPORT
TU55	A06	TU55	A05	COMMAND	7405151-1	ASSEMBLY	TO DECTAPE TRANSPORT
TU20	D04	TU20	C04	READ DATA	7405556-7	COAX	
TU20	D02	TU20	C02	STATUS	7405556-7	COAX	MAGTAPE TRANSPORT
TU20	D05	TU20	C05	DENSITY	7405556-7	COAX	TO
TU20	D01	TU20	C01	WRITE DATA	7405556-7	COAX	MAGTAPE TRANSPORT
TU20	D03	TU20	C03	COMMAND	7405556-7	COAX	
LT19D	CD 01 02			NEG I O BUS	BC09A-T	COAX	SEE NOTE 1

QTY	DESCRIPTION	PART NO	ITEM NO

PARTS LIST

FIRST USED ON OPTION/MOD: PDP-15

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ±.005 FRACTIONS ±1/64 ANGLES ±0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN: FLEMING
CHK'D: MALLEN
ENG: SWANSON
PROJ ENG: BUTLER
PROD: LASKEY
NEXT HIGHER ASSY

SCALE
SHEET 4 OF 5

digital EQUIPMENT CORPORATION

TITLE: EQUIPMENT LAYOUT PDP-15

SIZE: D CODE: AR NUMBER: PDP15-0-2 REV: T

DIST

REVISIONS: REV | CHANGE NO | CHK

FROM DEVICE	FROM LOCATION	TO DEVICE	TO LOCATION	CABLE NAME	CABLE #	CABLE TYPE	REMARKS
LT19D	CD Ø3 Ø4			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
LT19D	CD Ø5 Ø6			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
LT19D	CD Ø7 Ø8			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
LT19E (1)	D13	TTY(1)		TTY (1)		BELDEN	
LT19E (2)	D21	TTY (2)		TTY (2)		BELDEN	PART OF TTY ASSEMBLY
LT19E (3)	B02	TTY (3)		TTY (3)		BELDEN	(7006593)
LT19E (4)	B10	TTY (4)		TTY (4)		BELDEN	(OR)
LT19E (5)	B18	TTY (5)		TTY (5)		BELDEN	(7006594)
LT19F (1)	A25	DATA SET		DATA SET (1)	7005717	BELDEN	
LT19F (2)	A26	DATA SET		DATA SET (2)	7005717	BELDEN	ASSEMBLY
LT19F (3)	A27	DATA SET		DATA SET (3)	7005717	BELDEN	INCLUDES
LT19F (4)	A28	DATA SET		DATA SET (4)	7005717	BELDEN	DATA SET
LT19F (5)	A29	DATA SET		DATA SET (5)	7005717	BELDEN	CONNECTOR
DB99	AB Ø1 Ø2			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
DB99	AB Ø3 Ø4			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
DB99	CD Ø1 Ø2			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
DB99	CD Ø3 Ø4			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
DB99	AB 23/24	DB 88,89	AB 23 24	DATA CABLE	BC89A-_	COAX	L- LENGTH WILL DEPEND
DB99	CD 23/24	DB 88,89	CD 23 24	DATA CABLE	BC89A-_	COAX	ON DISTANCE BETWEEN SYSTEMS
CR03B	AB Ø1/Ø2			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
CR03B	AB Ø3/Ø4			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
CR03B	AB Ø5/Ø6			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
CR03B	AB Ø7/Ø8			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
CR03B	AB26	CARD READER		DATA CABLE	7005943	36 PAIR	
DP99A	AB Ø1/Ø2			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
DP99A	AB Ø3/Ø4			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
DP99A	AB Ø5/Ø6			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
DP99A	AB Ø7/Ø8			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
637	AB1	DP99A	B05	INTERFACE	7405553-28	FLEXPRINT	
637	AB2	DP99A	B10	INTERFACE	7405553-29	FLEXPRINT	DATA SET
637	B01	DP99A	B11	INTERFACE	7405552-30	FLEXPRINT	XMIT REC LOGIC
637	B02	DP99A	B12	INTERFACE	7405563-30	FLEXPRINT	TO INTERFACE
637	B03	DP99A	B13	INTERFACE	7405553-30	FLEXPRINT	
637	AB3	DATA SET		DATA/CTRL	7005639-1	BELDEN	
AD15	AB Ø1 Ø2			POS I/O BUS	BC89B-T	COAX	SEE NOTE 1
AD15	AB Ø3 Ø4			POS I/O BUS	BC89B-T	COAX	SEE NOTE 1
AD15	E14			ANALOG IN		RIBBON	CABLES ARE PART OF ASSEM
AD15	F 14			ANALOG IN		RIBBON	BCØIN-4 OR BCØIP-4
AD15	AB 14	AM81		MULTIPLEX	M935	FLEXPRINT	FOR EXPANSION OF INPUT CHANNEL
							MULTIPLEXER
AM89	AB Ø1/Ø2			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
AM89	AB Ø3/Ø4			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
AM89	AB Ø5/Ø6			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
AM89	AB Ø7/Ø8			NEG I/O BUS	BC89A-T	COAX	SEE NOTE 1
MX 15		MX OR BB15 MM15					SEE PRINT D-AD-7006863-0-0
MX15							
BD 15	AB Ø2/Ø3			POS I/O BUS	BC89B-T	COAX	SEE NOTE 1
BD 15	AB Ø4/Ø5			POS I/O BUS	BC89B-T	COAX	SEE NOTE 1
BD 15		AFC 15					SEE PRINT
BD 15		ADC 15					D-AR-BD15-0-21
TC 15	AB2T	TU55	AB82	DATA	7405152-1	ASSY	CONTROL TO
TC15	A27	TU55	A05	COMMAND	7405151-1	ASSY	TRANSPORT
TC02	C025	TU56	AB18	DATA	7405152-1	ASSY	CONTROL TO
TC02	C32	TU56	A06	COMMAND	7006223	ASSY	TRANSPORT
TU56	AB11	TU55	AB82	DATA	7405152-1	ASSY	TRANSPORT TO
TU56	A07	TU55	A05	COMMAND	7006224	ASSY	TRANSPORT (TC Ø2 CONTROLER)
TU56	AB11	TU55	AB82	DATA	7405152-1	ASSY	
TC15	A27	TU55	A05	COMMAND	7005151-1	ASSY	SEE NOTE 2
FP15	J05	IND PANEL	BOTTOM RIGHT	INDIC PANEL		FLEXPRINT	CABLES ARE PART
FP15	J06	IND PANEL	BOTTOM LEFT	INDIC PANEL		FLEXPRINT	OF INDICATOR PANEL
FP15	J03	IND PANEL	TOP RIGHT	INDIC PANEL		FLEXPRINT	(7006331-20)
FP15	J04	IND PANEL	TOP LEFT	INDIC PANEL		FLEXPRINT	AS VIEWED FROM REAR
FP15	H29	KP15	J02	MDL	BC08A-5	FLEXPRINT	
FP15	H30	KP15	J03	MDL	BC08A-5	FLEXPRINT	
FP15	H31	KP15	H29	API CONTROL	BC08A-5	FLEXPRINT	
FP15	J31	BB15	B05	API CONTROL	BC08A-3	FLEXPRINT	NECCESSARY ONLY IF API OPTION IS INSTALLED IN BB15

FROM DEVICE	FROM LOCATION	TO DEVICE	TO LOCATION	CABLE NAME	CABLE #	CABLE TYPE	REMARKS
FP15	J29	BB15	B02	MDL	BC08A-3	FLEXPRINT	IF BB15 IS PART
FP15	J30	BB15	B03	MDL	BC08A-3	FLEXPRINT	OF SYSTEM
FP15	J29	MM15A	B03	MDL	BC08A-3	FLEXPRINT	IF BB15 IS NOT
FP15	J30	MM15A	B02	MDL	BC08A-3	FLEXPRINT	PART OF SYSTEM
CR15	AEØ7/Ø8			POS I/O BUS	BC05E	COAX	
CR15	ABØ9/10			POS I/O BUS	BC05E	COAX	
CR15	AEØ1/02	CR15		DATA/CONTROL	7005594	COAX	
ME15	KP15 OR BB15 OR MM15 OR FP15						SEE PRINT A-SP-ME15-Ø

REVISIONS REV	CHANGE NO	CHK

DEC FORM NO DRD 107A

FIRST USED ON OPTION/MOD	QTY	DESCRIPTION	PART NO	ITEM NO
PDP-15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN	FLEMING	DATE 6-23-69
CHK'D	MAIDEN	DATE 6-30-69
ENG	SWANSON	DATE 7-22-69
PROJ ENG	BUTLER	DATE 7-25-69
PROD	LASKEY	DATE 7-24-69

NEXT HIGHER ASSY

SCALE

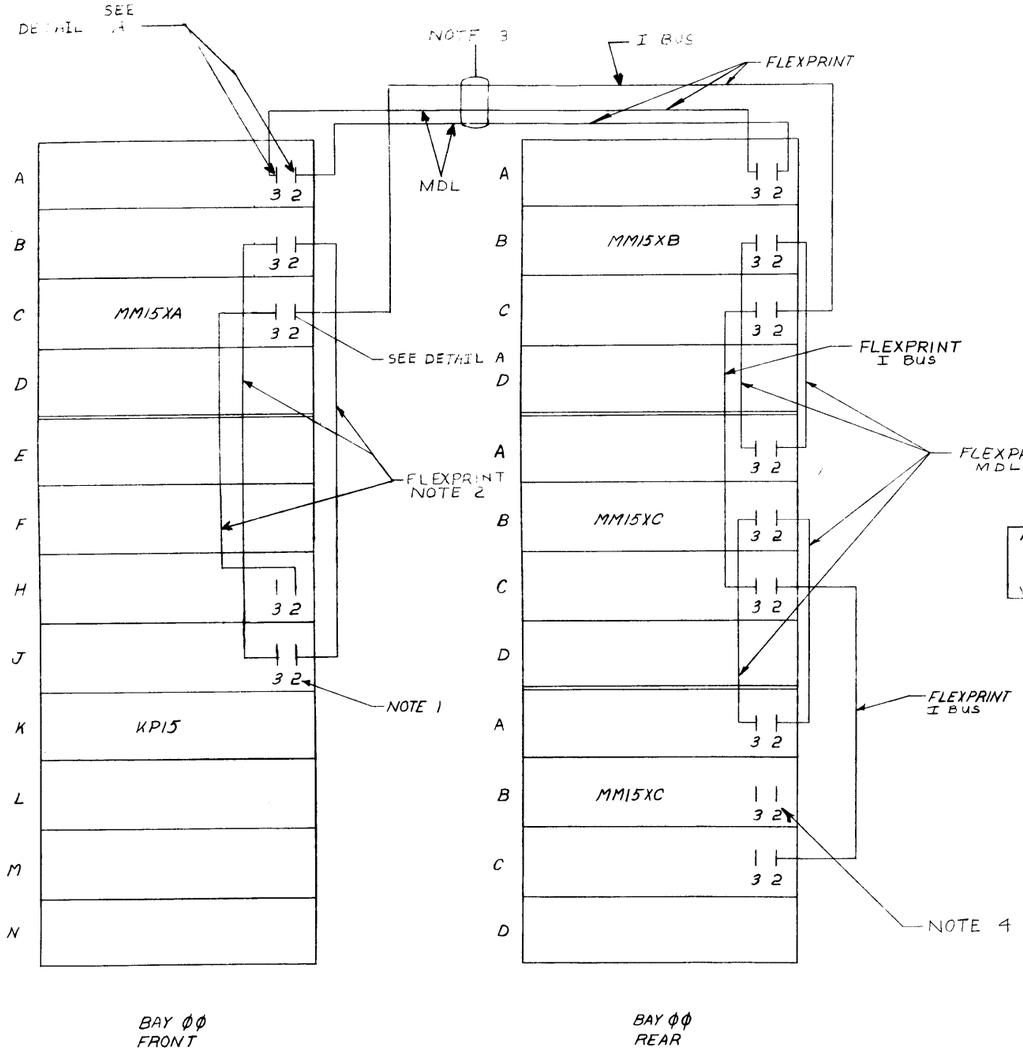
SHEET 3 OF 3

digital EQUIPMENT CORPORATION

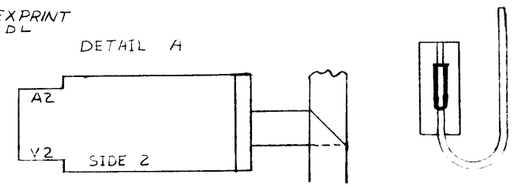
TITLE
EQUIPMENT LAYOUT PDP-15

SIZE	CODE	NUMBER	REV
D	DAR	PDP15-0-2	T

DIST



DETAIL A



WIRE TABLE

	CABLE PART NO.	MODULES	WIRE	LG	FROM OPTION	FROM SLOT	TO OPTION	TO SLOT
4K OR	7006414-1	M918/M918	FLEXPRINT	8'	KPI5	H2	MM15XA	C3
8K	70Ø69Ø7-YA	M943/M943	FLEXPRINT	13¼"	KPI5	J2	MM15XA	B2
SYS	70Ø69Ø7-YA	M943/M943	FLEXPRINT	13¼"	KPI5	J3	MM15XA	B3
ADD FOR	7006414-2	M918/M918	FLEXPRINT	6'	MM15XA	C3	MM15XB	C2
12K OR	BCØ8A-3	M9Ø3/M9Ø3	FLEXPRINT	3'	MM15XA	A2	MM15XB	A2
16K SYS	BCØ8A-3	M9Ø3/M9Ø3	FLEXPRINT	3'	MM15XA	A3	MM15XB	A3
ADD FOR	7006414-1	M918/M918	FLEXPRINT	8'	MM15XB	C3	MM15XC	C3
20K OR	70Ø69Ø7-ØE	M943/M943	FLEXPRINT	5¼"	MM15XB	B2	MM15XC	A2
24K SYS	70Ø69Ø7-ØE	M943/M943	FLEXPRINT	5¼"	MM15XB	B3	MM15XC	A3
ADD FOR	7ØØ6414-1	M918/M918	FLEXPRINT	8'	MM15XC	C2	MM15XC	C2
28K OR	7ØØ69Ø7-ØE	M943/M943	FLEXPRINT	5¼"	MM15XC	B2	MM15XC	A2
32K SYS	7ØØ69Ø7-ØE	M943/M943	FLEXPRINT	5¼"	MM15XC	B3	MM15XC	A3

NOTES:

1. NUMBERS INDICATE MODULE SLOTS.
2. IF BB15 IS IN SYSTEM, SEE PRINT D-IC-BB15-0-3
3. ROUTE I BUS AND MDL CABLES THROUGH TWO LENGTHS (A/R) OF "ZIPPER TUBING" (DEC 9107679)
4. TWO MSRA TERMINATORS ARE IN LAST MEMORY ON MDL LINES

REVISIONS	CHK	CHANGE NO.	REV.
REVISED & REDRAWN	Feb	15-00021	A
E. STRANGE	Oct	15-00076	B
LAVOIE	Nov	15-00077	C
AUMANN	Feb	15-00082	D
F. AUMANN	Jan	15-00090	E
AUMANN	Apr	15-00091	F
SWANSON	Feb	15-00092	H
F. DOLL			

FIRST USED ON OPTION/MODEL	PDP 15
DO NOT SCALE DRAWING	
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' FINAL SURFACE QUALITY ✓ REMOVE BURRS AND BREAK SHARP CORNERS	
MATERIAL	
FINISH	
DRN. D. FONTAINE	DATE 7-25-69
CHK'D. J. FLEMMING	DATE 7-29-69
ENG. E. STRANGE	DATE 8-5-69
PROJ. ENG. G. BUTLER	DATE 8-5-69
PROD. F. LASKEY	DATE 8-5-69
NEXT HIGHER ASSY A-ML-PDP15-0	
SCALE NONE	
SHEET 1 OF 1	

PARTS LIST

QTY.	DESCRIPTION	PART NO.	ITEM NO.

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: SIGNAL WIRING PDP 15

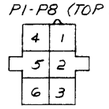
SIZE D | CODE IC | NUMBER PDP15-0-3 | REV H | DIST.

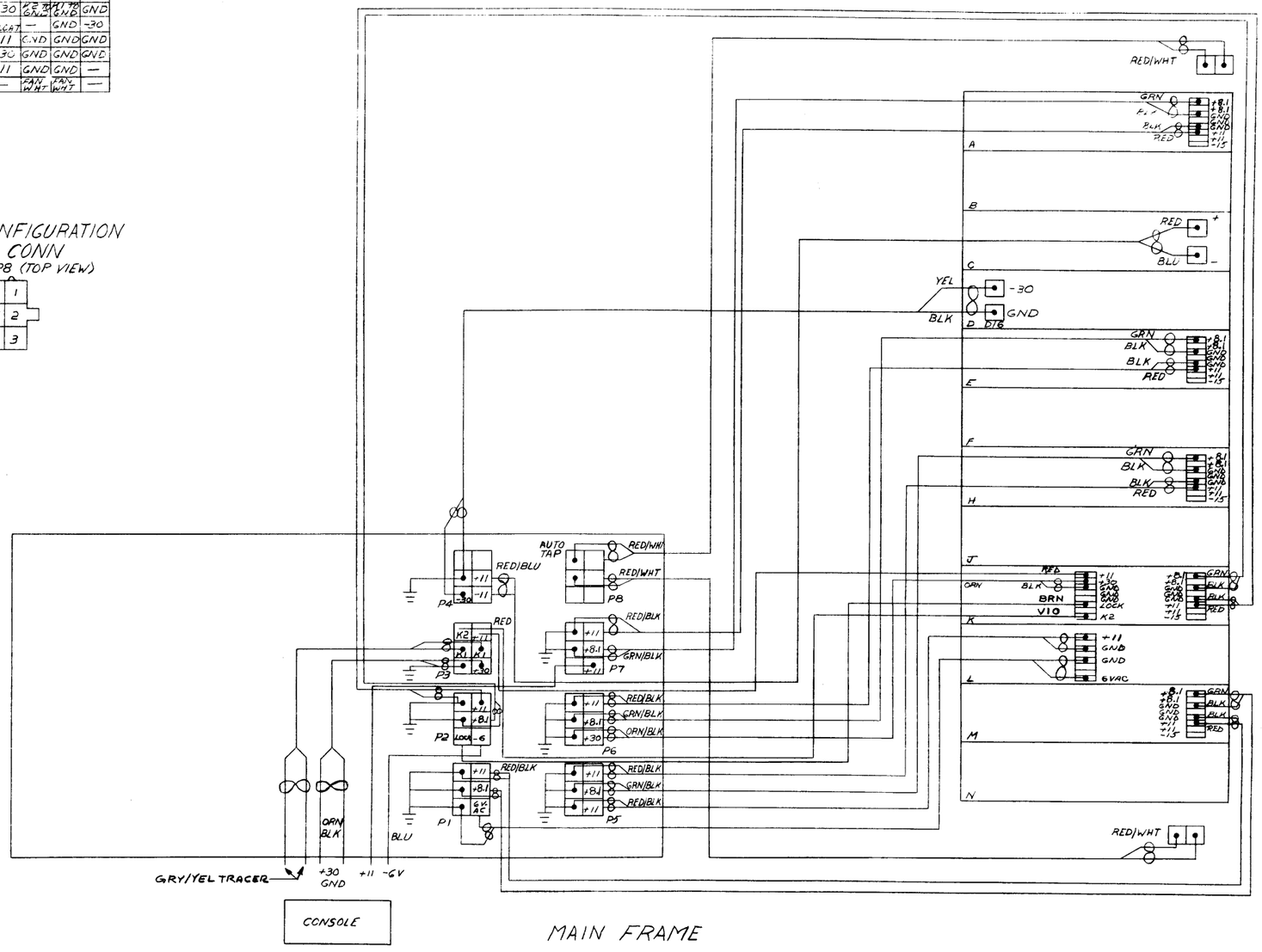
DEC FORM NO. DRD 100

WIRE TABLE

CONN	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6
P1	+11	+8.1	6VAC	GND	GND	GND
P2	+11	+8.1	-6	GND	GND	LOCK
P3	+11	6VAC	+30	PF FLAG	PF GND	GND
P4	—	FLOAT	FLOAT	—	GND	-30
P5	+11	+8.1	+11	GND	GND	GND
P6	+11	+8.1	+30	GND	GND	GND
P7	+11	+8.1	+11	GND	GND	—
P8	AC RED	AC RED	—	FAN WHT	FAN WHT	—

PIN CONFIGURATION FOR CONN P1-P8 (TOP VIEW)





MAIN FRAME

REVISIONS			
CHK	CHANGE NO.		REV
	15-00022	ORIGINATED	
R.P.	715-00014		A
	15-00078		B

FIRST USED ON OPT/MOD	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP-15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN. — DATE 10-24-69
CHK'D. — DATE 10-28-69
ENG. DOC — DATE 10/31/69
PROJ. ENG. — DATE 10/31/69
PROD. — DATE

NEXT HIGHER ASSY
A-ML-PDP15-0

SCALE NONE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
POWER WIRING
PDP-15

SIZE	CODE	NUMBER	REV
D	IC	PDP15-0-14	B

DIST.

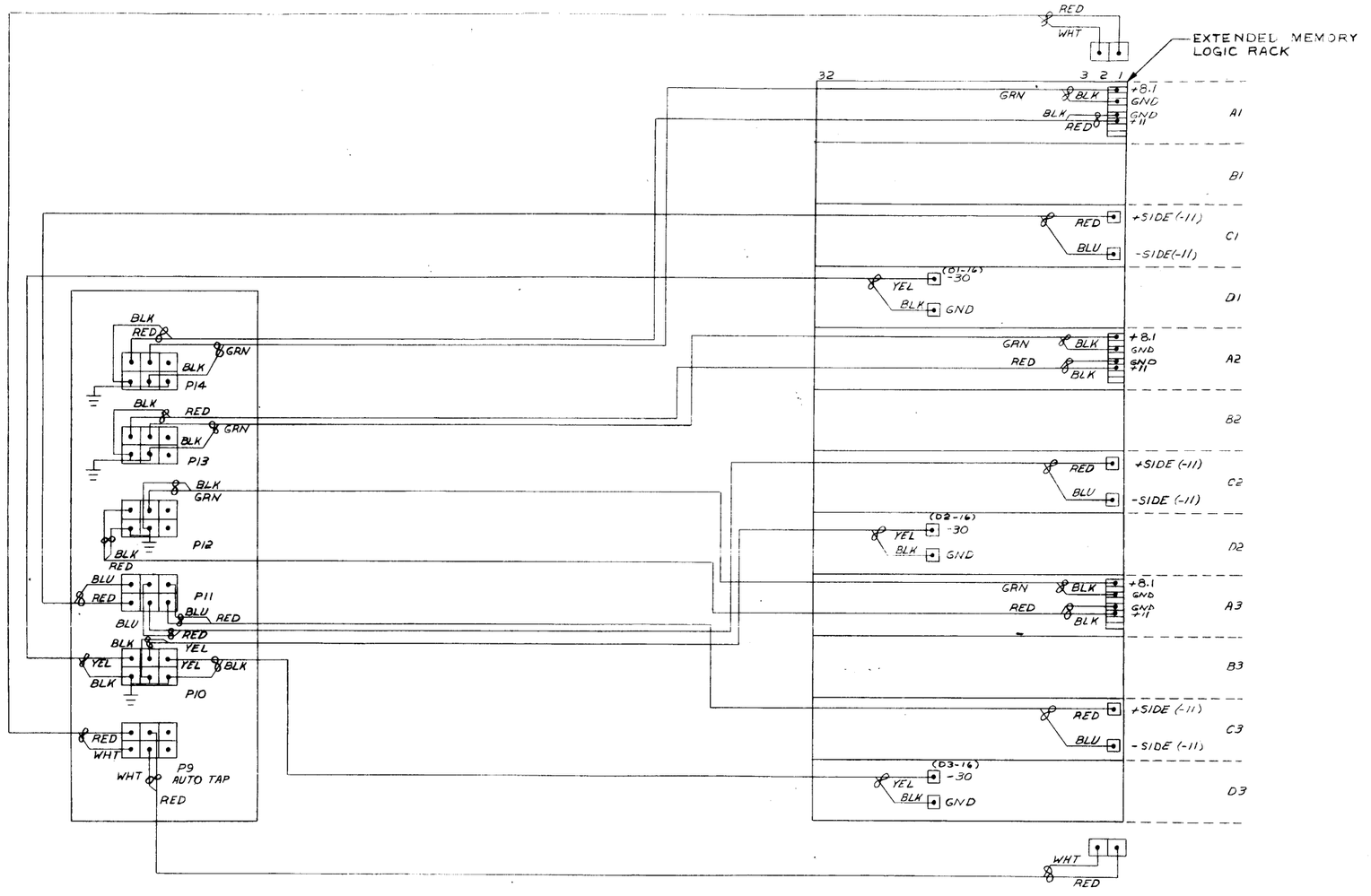
DEC FORM NO RO 102A

SIZE D | CODE IC | NUMBER PDP15-0-14 | REV B

PIN CONFIGURATION
FOR CONN 9-14
TOP VIEW

1	2	3
4	5	6

CONN	PIN 1	PIN 2	PIN 3	PIN 4	PIN 5	PIN 6
P9	AC HOT	FANS HOT	—	AC FANS NEUT	FAN NEUT	—
P10	-30	-30	-30	GND	GND	GND
P11	−FLOAT	−FLOAT	−FLOAT	+FLOAT	+FLOAT	+FLOAT
P12	+11	+8.1	—	GND	GND	—
P13	+11	+8.1	—	GND	GND	—
P14	+11	+8.1	—	GND	GND	—



EXTENDED MEMORY

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN. Peter Mirasso DATE 10-27-69
CHK'D. W Sutherland DATE 10-28-69
ENG. DATE 10/31/69
PROJ. ENG. DATE 11/1/69
PROD. DATE
FIRST USED ON
SCALE
SHEET 2 OF 2

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
POWER WIRING
PDP-15

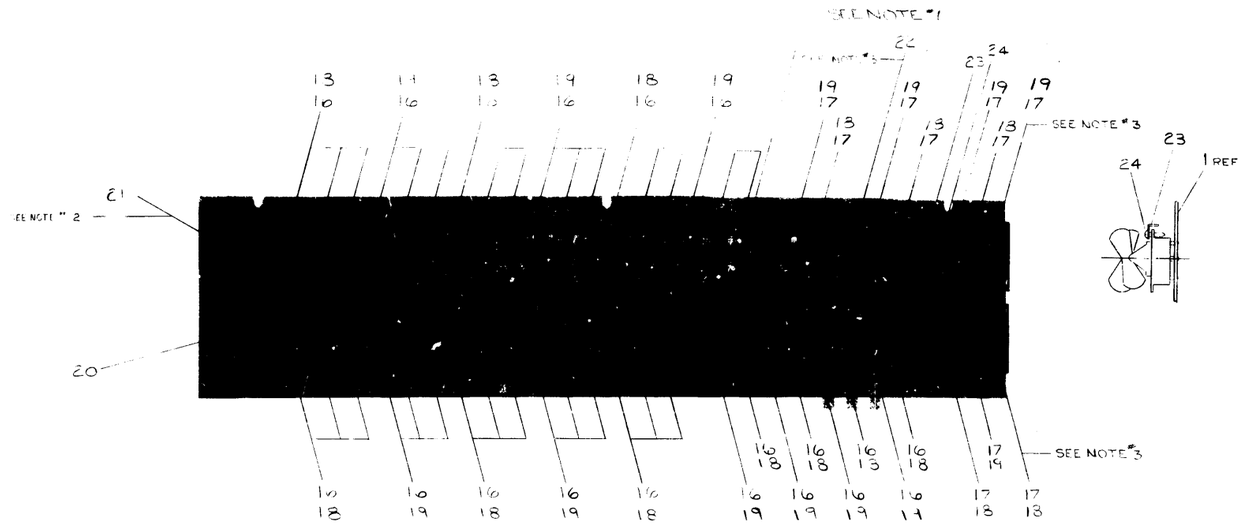
SIZE D | CODE IC | NUMBER PDP15-0-14 | REV. B
DIST.

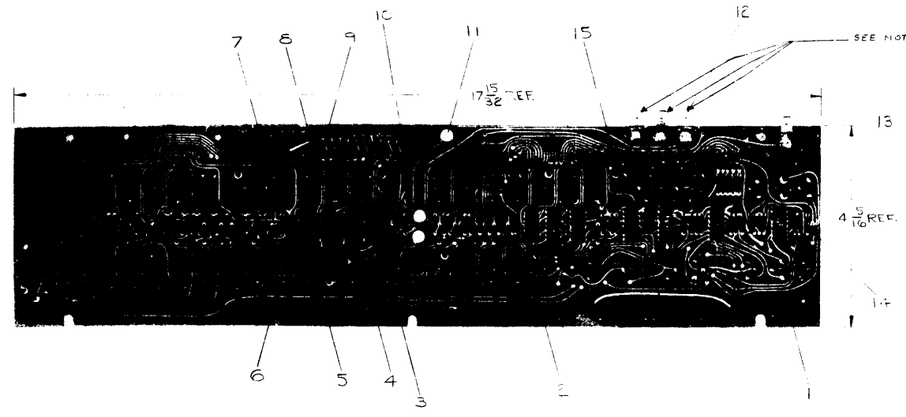
REVISIONS | REV. | CHANGE NO. | CHK

DEC FORM NO DRD 102A

NOTES:

1. * INDICATES POSITION OF WHT MARKER ON HANDLES.
2. DO NOT USE EXTERNAL TOOTH LOCK WASHER INCLUDED WITH ITEM #21
3. FOR USE IN KC15B, THE FOLLOWING CHANGES MUST BE MADE
   A) 2 RESISTORS (#22) SHOULD BE MOUNTED ON OPPOSITE SIDE OF BOARD
   B) POWER INPUT TABS (ITEM #12) SHOULD BE BENT 90° TOWARD COMPONENT SIDE OF BOARD.
   C) SWITCH BUTTONS (ITEM #18 & 19) SHOULD BE REPLACED WITH DEC PARTS 1205849-8 & 1205849-9 RESPECTIVELY





** SEE NOTE 3

3	DIODE D668	1102161		
REF	ASSY/DRILLING HOLE LAYOUT	F-AH-5408392-00		
REF	X-Y COORDINATE HOLE LOCATION	K-20-5408392-0-K		
REF	CIRCUIT SCHEMATIC	D-CS-5408392-01		
102	SCR AND SLT HD SH MET #6	9008281	24	
4	BRACKET PCB SUPPORT	7407423-0-023	23	
** 2	RES. 20 OHM 2 W 5%	1303520	22	
1	POT 12 POS 04-006-00-5	1209178	21	
1	POT (REWORK)	B-MD-3808805-002	20	
** 24	BUTTON ROCKER SW COPEN BLU	D-SC-1205383-4-019	19	
** 27	BUTTON ROCKER SW NAVY BLU	D-SC-1205383-3-018	18	C
.0	SWITCH RS-9-3-FB-PC	1205275	17	
41	SWITCH RS-50-FB-PC	1205941	16	
1	IC DEC74-3C	1905578	15	
48	DIODE D672	1105275	14	
15	RES. 1K 1/4 5%	1300365	13	
** 4	TAB 60145-1 AMP	90 07112	12	
3	TSTR. DEC 6531	1509338	11	K
3	RES 3K 1/4 5%	1300432	10	
5	DIODE D662	1100113	9	
4	RES 330 OHM 1/4 5%	1300295	8	
11	CAP. .01 MFD	1001610	7	
1	RES 750 OHM 1/4 5%	1301401	6	
6	IC DEC7400	1905575	5	
1	IC DEC7410	1905576	4	
3	IC DEC74151	1905590	3	
44	RES 30K 1/4 5%	1302394	2	
1	ETCH BOARD	E-IA-5008780-01	1	
QTY.	DESCRIPTION	PART NO.	ITEM	

PARTS LIST

ETCH REV C

KC15^

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0° 30'
FINISH ROUGH QUALITY 250 MICRO INCHES AND BREAK SHARP CORNERS
MATERIAL —
FINISH —

	NAME	DATE
DRAWN	D. O'CONNOR	12-5-69
CHECK		12-9-69
ENGR		12-10-69
PROJ		12-10-69
QUAL		12-10-69
MFG		12-10-69
NEXT ASSY		

IA 700-325 C

SCALE 1/1
SHEET 1 OF 1

EQUIPMENT CORPORATION
NEWTOWN, MASSACHUSETTS

TITLE
SWITCH BOARD

SIZE	NUMBER	REV.
E	IA 5408392 C C	K

DIST.

REVISIONS				
SYMBOL	DESCRIPTION	DATE	APPROVED	
K	ECO 5408392-00005	1-14-70	R.L. Beede	
J	ECO 5408392-00004	12-24-69	F.A. MANN	
H	ECO 5408392-00003	11-21-69	F.A. MANN	
G	ECO 5408392-00002	11-7-69	F.A. MANN	
F	ECO 5408392-00001	10-31-69	F.A. MANN	
E	ECO 5408392-00000	9-24-69	F.A. MANN	
D	IN 5408001	7-24-69	AVCIR	
C	ECO 5408392-00007	1-16-70	F.A. MANN	
B	ECO 5408392-00006	1-14-70	F.A. MANN	
A	ECO 5408392-00005	1-14-70	F.A. MANN	

UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 5%
RESISTORS ARE 30K
CAPACITORS ARE .01MFD, 100V, 20%
DIODES ARE D672
E6, E7, E8 ARE SN7401N
E4 IS SN7430N
E9 IS SN7410N
E10, E1, E2, E3, E5, E11 ARE SN7400N

PIN 7 ON EACH IC = GND
PIN 14 ON EACH IC = +5V

S53 IS POT. ON/OFF SWITCH # 5308805
S52 IS ROTARY SWITCH 1P 12 POS-04-006-00-0
REF ASSY DWG & PL E-1A-5408392-0-0

S1, S2, S3, S27 THRU S33 ARE RS-9-3-FB-PC
S4 THRU S26, S34 THRU S51 ARE RS-50-FB-PC

NOTE:
1. THE OTHER END OF THE FLEXPRINT CABLE IS CONNECTED TO AN M916 MODULE WHICH PROVIDES A DIODE CLAMP TO +5V FOR EACH LINE.

REVISIONS					
CHK	CHK NO	REV			
	00002	C			
	00003	D			
	00004	E			
	00005	H			
	00006	J			

B. J. HAILE 11/72
F. AUMANN 7/73
F. AUMANN 8/73

DRN E
CHK'D
ENGR
PROD

DATE 6/73
DATE 7/73
DATE 7/73
DATE

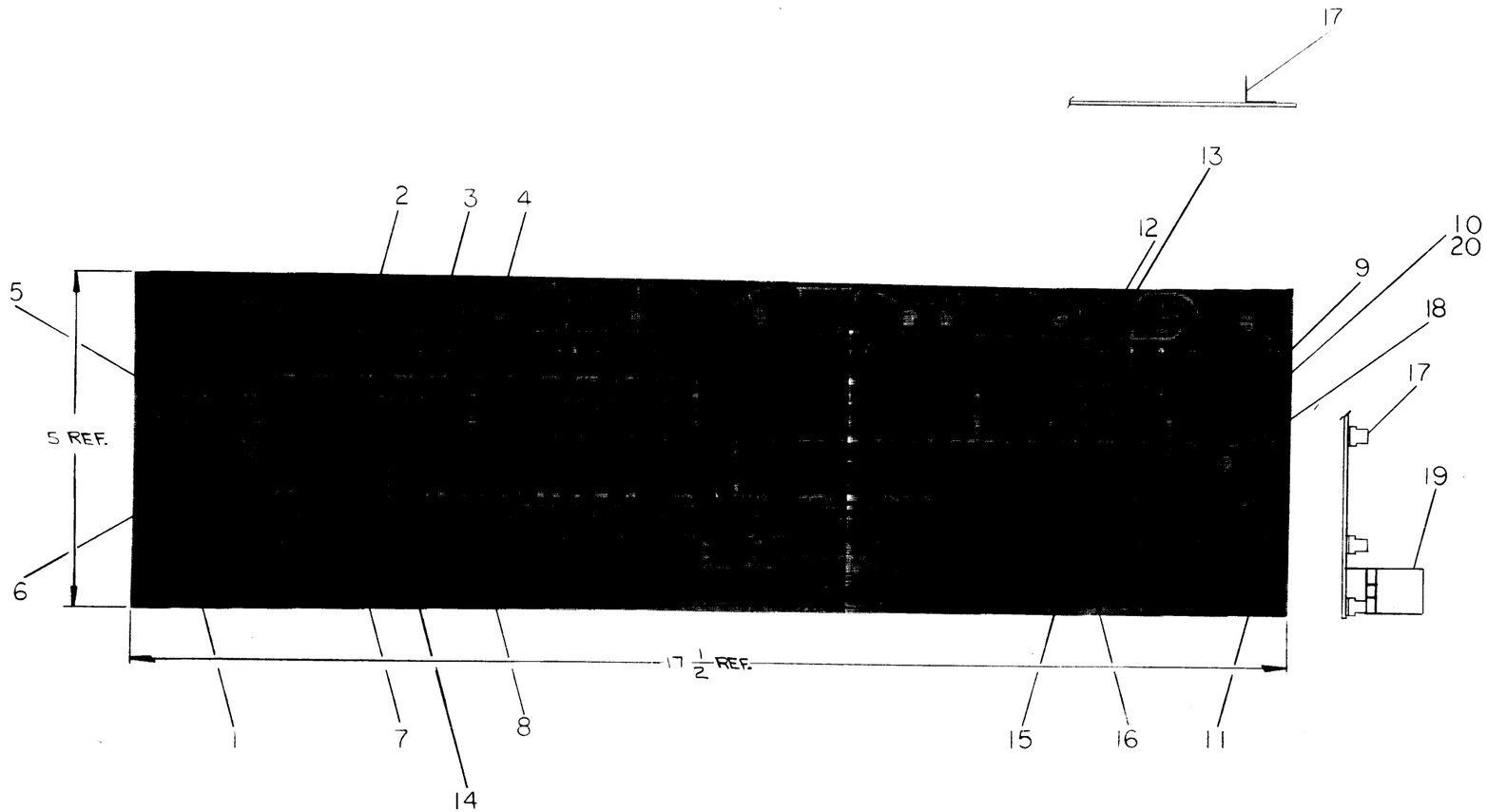
TRANSISTOR & DIODE CONVERSION CHART			
DEC	FIA	DEC	FIA
D662	IN645		
D672	IN3653		
D668	IN914		
DEC6531	NONE		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: PDP-15 CONSOLE SWITCH BOARD
SIZE D | CODE CS | NUMBER 5408392-01 | REV K
PRINTED CIRCUIT REV 8C

SIDE CODE D CS | NUMBER 5408392-0-1 | REV K

DEC FORM NO. DRD 101



REF	ASSY HOLE LAYOUT	J-AH-5408394-0-5	25
REF	X-Y COORD HOLE LOCATIONS	K-CO-5408394-0-4	24
REF	CIRCUIT SCHEMATIC	D-CS-5408394-0-1	23
			22
1	ETCHED CIRCUIT BOARD	5008393	21
140	SOCKET, MINIATURE SPRING	9007812	20
1	CONN 36 PIN	1209123	19
3	EYELET #GS4-7	9006732	18
3	TAB # 42117-1	9008219	17
1	RES. 12 OHM 10W	1305900	16
1	DIODE #IN4733	1110488	15
2	CAP. 20 MFD	1002839	14
2	RES. 750 OHM 1/4W 5%	1301401	13
2	RES. 330 OHM 1/4W 5%	1300295	12
36	RES. 1K 1/4W 5%	1300365	11
10	LAMP #2335	1209169	10
10	TRANS # 6531	1509338	9
15	CAP .01 MFD	1001610	8
6	IC #SN7401	1905590	7
2	IC # SN7400	1905575	6
1	IC #SN7410	1905576	5
12	TRANS # 2219A	1501881	4
24	CAP. .047MFD	1003053	3
6	IC # SN7440	1905579	2
			1
QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION MODEL
PDP15

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ±.005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN.	D. Fontaine	DATE 1-17-69
CHK'D	[illegible]	DATE 8/27/69
ENG.	[illegible]	DATE 8/7/69
PROJ ENG.	[illegible]	DATE 8/4/69
MFG	[illegible]	DATE 7/24/69

NEXT HIGHER ASSY
D-IA-7006388-0

SCALE NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
BOARD CONSOLE LIGHT

SIZE	CODE	NUMBER	REV.
D	IA	5408394-0-0	D

DIST.

REVISIONS			
CHK	CHANGE NO.	REV.	
[illegible]	15 00034	A	F. AUMANN 10/1/69
[illegible]	5408394-00001	B	F. AUMANN 10/1/69
[illegible]	5408394-00003	C	F. AUMANN 10/1/69
[illegible]	5408394-00004	D	F. AUMANN 10/1/69

DEC FORM NO. DPC

FIRST CODE D IA NUMBER 5408394-0-0 REV. D

SIZE D | CODE CS | NUMBER 5408394-0-1 | REV D

+5V

+30V

+3V

GND

+10V

R41 12 10W

C8 .01, C7 .01, C6 .01, C5 .01, C4 .01, C3 .01, C2 .01, C1 .01

C9 20 50V

C10 .01, C15 .01, C21 .01, C26 .01

C14 20 50V

C19 .01, C20 .01, C25 .01

R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36

E1, E2, E3, E4, E6, E8, E10, E12, E14, E15

C11 Q79, C12 Q75, C13 Q71, C16 Q80, C17 Q76, C18 Q72, C22 Q81, C23 Q77, C24 Q73, C27 Q82, C28 Q78, C29 Q74

C30, C31, C32, C33, C34, C35, C36, C37, C38, C39, C40, C41

I1 Q1 DCH ACTIVE
I2 Q2 PL Ø0
I3 Q3 PL Ø1
I4 Q4 PL Ø2
I5 Q5 PL Ø3
I6 Q6 PL Ø4
I7 Q7 LINK
I8 Q8 PL Ø5
I9 Q9 PL Ø6
I10 Q10 PL Ø7
I11 Q11 API ENABLE
I12 Q12 PI ACTIVE
I13 Q13 PI ENABLE
I14 Q14 INDEX MODE
I15 Q15 FETCH
I16 Q16 INC
I17 Q17 DEFER
I18 Q18 EAE
I19 Q19 EXECUTE
I20 Q20 TS1
I21 Q21 TS2
I22 Q22 TS3
I23 Q23 RUN
I24 Q24 POWER
I25 Q25 EXTD
I26 Q26 CLOCK
I27 Q27 ERROR
I28 Q28 PRTCT
I29 Q29 RØØ
I30 Q30 RØ1
I31 Q31 RØ2
I32 Q32 RØ3
I33 Q33 RØ4
I34 Q34 RØ5
I35 Q35 RØ6
I36 Q36 RØ7
I37 Q37 RØ8
I38 Q38 RØ9
I39 Q39 RIØ
I40 Q40 RI1
I41 Q41 RI2
I42 Q42 RI3
I43 Q43 RI4
I44 Q44 RI5
I45 Q45 RI6
I46 Q46 RI7
I47 Q47 IR ØØ
I48 Q48 IR Ø1
I49 Q49 IR Ø2
I50 Q50 IR Ø3
I51 Q51 OP DEFER
I52 Q52 OP INDEX
I53 Q53 MBØØ
I54 Q54 MBØ1
I55 Q55 MBØ2
I56 Q56 MBØ3
I57 Q57 MBØ4
I58 Q58 MBØ5
I59 Q59 MBØ6
I60 Q60 MBØ7
I61 Q61 MBØ8
I62 Q62 MBØ9
I63 Q63 MBI0
I64 Q64 MBI1
I65 Q65 MBI2
I66 Q66 MBI3
I67 Q67 MBI4
I68 Q68 MBI5
I69 Q69 MBI6
I70 Q70 MBI7

R37 330, R38 750, R39 330, R40 750

D1 1N4733 1.5V

M915 TYP CKT: 390, +5V

FLEXPRINT CONNECTOR #1
NOTE 1

FLEXPRINT CONNECTOR #2
NOTE 1

J1: A1 B1 C1 D1 E1 F1 H1 J1 K1 L1 M1 N1 P1 R1 S1 T1 U1 V1

A2 B2 C2 D2 E2 F2 H2 J2 K2 L2 M2 N2 P2 R2 S2 T2 U2 V2

ZERO
ONE
TWO

UNLESS OTHERWISE INDICATED:
PIN 7 ON EACH IC = GND
PIN 14 ON EACH IC = +5V
E1,E6,E8,E10,E12,E14 ARE DEC7440N
E2, IS DEC7410N
E3,E4 ARE DEC7400N
E5,E7,E9,E11,E13,E15 ARE DEC7401N
CAPACITORS ARE MFD, 100V
LIGHTS ARE #2335
RESISTORS ARE 1K, 1/4W, 5%
TRANSISTORS ARE DEC6531

Q71–Q 82 ARE 2N2219A
C11–C13, C16–C18, C22–C24, C27–C41 ARE .047 MFD 250V

NOTE 1:
THE OTHER END OF FLEXPRINT CABLE IS CONNECTED TO AN M915. THIS PROVIDES A PULL UP OF 390 OHMS TO +5V FOR EACH LINE.

REVISIONS

CHN	CHG NO.	REV
	00001	B
	00003	C
	00004	D

DRN		DATE 7-9-69
CHKD		DATE 9/8/69
ENGR		DATE 11/14/69
PROD		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
2N2219A	2N2219A		
DEC6531	NONE		
1N750	SAME		
1N4733	SAME		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: CONSOLE INDICATOR PANEL 5408394

SIZE D | CODE CS | NUMBER 5408394-0-1 | REV D

PRINTED CIRCUIT REV E

DEC FORM NO. DRD 101

REV. R | SIZE D | CODE MU | NUMBER KP15-0-10

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	M216	M133	M149	M161	M133	M111	M133	M205	M127	M133	M135	M611	M627	M627	M135	M133	M627	M611	M127	M77BT	M103	M611
USAGE	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
E	E1 KE 05 H2 KE 05 F1 KE 05 J2 KE 05 L1 KE 05 P2 KE 05 M1 KE 05 R2 KE 05 S1 KE 05 V2 KE 05 U1 KE 05 V1 KE 05	C1 KE 05 F2 KP 19 F1 KE 05 K2 KP 19 K1 KP 19 N2 KE 05 N1 KP 19 S2 KP 47 S1 KE 05 V2 KP 35	C1 F2 F1 K2 K1 KP 43 N2 KP 43 N1 KP 43 S2 S1 KP 43 V2 V1 KP 19 KP 43	DECODER KP 30	C1 KP 30 F2 KP 30 F1 KP 30 K2 KP 22 L1 KP 30 N2 KP 30 N1 KP 30 S2 KP 30 S1 KP 30 V2 KP 30 KP 30	B1 KP 59 D2 KP 23 E1 KP 28 F2 KP 22 H1 KP 30 J2 KP 30 K1 KP 48 L2 KP 22 M1 KE 05 N2 KP 30 P1 KP 47 R2 KP 30 S1 KP 30 T2 KP 30 V1 KP 30 V2 KP 30	C1 KP 47 F2 KP 22 F1 KP 48 K2 KP 28 K1 KP 24 N2 KP 19 N1 KP 24 S2 KP 22 S1 KP 22 V2 KP 30 KP 19	E1 KP 22 J2 KP 22 F1 KP 22 K2 KP 22 M1 KP 22 R2 KP 22 N1 KP 22 S2 KP 22 S1 KP 22 U2 KP 23 V2 KP 23	J2 P2 KP 47 V2 KP 22	C1 KP 24 F2 KP 24 F1 KP 48 K2 KP 24 K1 KP 29 N2 KP 29 N1 KP 24 S2 KP 30 S1 KP 29 V2 KP 28	D1 KP 47 H2 KP 30 J1 KP 19 M2 KP 30 N1 KP 30 S2 S1 KP 30 V2 U1 KP 30 V1 KP 23	B1 KP 34 F2 KP 19 E1 KP 22 J2 KP 28 H1 KP 22 L2 KP 31 K1 KP 28 R2 KP 22 M1 KP 19 T2 KP 22 P1 KP 31 V2 KP 19 S1 KP 22 U1 KP 28	E1 KP 22 J2 L1 KP 48 P2 KP 24 S1 KP 24 V2 KP 24 KP 19	E1 KP 24 J2 KP 24 L1 KP 48 P2 KP 24 S1 KP 24 V2 KP 24 KP 19	D1 KP 24 H2 KP 22 J1 KP 22 M2 KP 24 N1 KP 28 S2 KP 24 U1 KP 19 V1 KP 22	C1 KP 22 F2 KP 24 F1 KP 32 K2 KP 34 K1 KP 23 N2 KP 30 N1 KP 23 S2 KP 29 S1 KP 21 V2 KP 47	E1 KP 24 J2 L1 KP 24 P2 KP 24 S1 KP 24 V2 KP 24	B1 KP 21 F2 KP 23 E1 KP 48 J2 KP 29 H1 KP 48 L2 KP 20 K1 KP 33 R2 KP 21 M1 KP 33 T2 KP 19 P1 KP 19 V2 KP 28 S1 KP 31 V1 KP 48	J2 P2 KP 33 V2 KP 23	(UR) (G641)	C1 KP 20 F2 KP 20 F1 KP 20 K2 KP 20 K1 KP 20 N2 KP 34 N1 KP 48 S2 KP 20 S1 KP 20 V2 KP 34 KP 48	B1 KP 20 F2 KP 20 E1 KP 20 J2 KP 20 H1 KP 20 L2 KP 34 K1 KP 20 R2 KP 20 M1 KP 20 T2 KP 19 P1 KP 20 V2 KP 34 S1 KP 19 V1 KP 28 KP 21
USAGE	M133	M121	M129	M127	M627	M139	M139	M627	M206	M139	M139	M139	M139	M611	M627	M627	M627	M627	M627		M135	M129
F	C1 KP 02 F2 KP 48 F1 KP 02 K2 KE 05 K1 KP 02 N2 KP 22 N1 KP 03 S2 KP 03 S1 KP 03 V2 KP 26	E1 KP 22 J2 KP 30 L1 KP 22 P2 KP 30 S1 KP 22 V2 KP 48	B2 KP 22 C1 KP 22 L1 KP 23 R1 KP 30	J2 KP 30 P2 V2 KP 24	E1 KP 23 J2 KP 30 L1 KP 19 P2 KP 21 S1 KP 47 V2 KP 47	J2 KP 30 P2 V2 KP 30	J2 KP 22 P2 V2 KP 47	E1 KP 47 J2 KP 30 L1 KP 30 P2 S1 KP 30 V2 KP 19	E1 KP 31 H2 KP 31 F1 KP 31 J2 KP 31 L1 KP 31 P2 KP 31 M1 KP 31 R2 KP 31 S1 KP 31 T2 U1 KP 31 V2 KP 31 V1 KP 31	J2 KP 19 P2 KP 20 V2 KP 30	J2 KP 19 P2 KP 48 V2 KP 28	J2 KP 32 P2 V2 KP 29	J2 KP 47 P2 V2 KP 33	B1 KP 19 F2 KP 19 E1 KP 19 J2 H1 KP 19 L2 KP 19 K1 KP 19 R2 KP 22 M1 KP 19 T2 KP 19 P1 KP 19 S1 KP 29 V1 KP 30 V2 KP 19	E1 KP 47 J2 KP 48 L1 KP 19 P2 S1 KP 47 V2 KP 19	E1 KP 47 J2 KP 48 L1 KP 48 P2 S1 KP 19 V2 KP 19	E1 KP 47 J2 KP 48 L1 KP 19 P2 S1 KP 24 V2 KP 47	E1 KP 47 J2 KP 48 L1 KP 29 P2 S1 KP 29 V2 KP 29	E1 KP 47 J2 KP 48 L1 KP 29 P2 S1 KP 29 V2 KP 29	E1 KP 47 J2 KP 48 L1 KP 29 P2 S1 KP 29 V2 KP 29	E1 KP 47 J2 KP 48 L1 KP 29 P2 S1 KP 29 V2 KP 29		D1 KP 48 H2 KP 28 J1 KP 32 M2 KP 28 N1 KP 28 S2 KP 28 V1 RE 04 KP 28 R1 KP 21	B2 KP 48 C1 KP 23 L1 KP 21 R1

	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	M627	M135	M242	M242	M242	M242	M240	M775	M135	M133												
USAGE	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
F	E1 KP 20 J2 KP 20 L1 KP 31 P2 KP 48 S1 KP 24 V2 KP 20	D1 KP 20 H2 KP 24 J1 KP 20 M2 KP 29 N1 KP 20 S2 KP 47 U1 KP 19 V1 KE 05	A1 KP 20 J2 KP 20 H1 KP 20 P2 KP 20 P1 KP 20 U2 KP 20	A1 KP 21 J2 KP 21 H1 KP 20 P2 KP 20 P1 KP 21 U2 KP 21	A1 KP 21 J2 KP 21 H1 KP 20 P2 KP 20 P1 KP 21 U2 KP 21	A1 KP 21 J2 KP 21 H1 KP 21 P2 KP 20 P1 KP 21 U2 KP 21	E1 KP 55 H2 KP 22 F1 KP 55 J2 KP 22 L1 KP 48 P2 KE 05 M1 KP 48 R2 KE 05 S1 KP 21 V2 KD 06 U1 KP 21 V1 KP 05	HS CLK & TIME STATES KP 21	D1 KP 32 H2 KP 21 J1 KP 31 M2 KP 34 N1 KP 47 S2 KP 21 U1 KP 34 V1 KP 66	C1 KP 24 F2 KP 24 F1 KP 19 K2 KP 19 K1 KP 24 N2 KP 32 N1 KP 34 S2 KP 34 S1 KP 21 V2 KP 29												
USAGE	M135	M139	M133	M111	M205	M135	M133	M627	M149	M135												
F	D1 KP 29 H2 KP 33 J1 KP 23 M2 KP 34 N1 KP 47 S2 U1 KP 34 V1 KP 35 KP 34	J2 KP 32 P2 KP 33 V2 KP 34	C1 KP 34 F2 KP 34 F1 KP 32 K2 KP 35 K1 KP 33 N2 KP 22 N1 KP 28 S2 KP 34 S1 KP 22 V2 KP 29	B1 KP 33 D2 KP 34 E1 KP 31 F2 KP 30 H1 KP 32 J2 KP 34 K1 KP 31 L2 KP 34 M1 KP 34 N2 KP 34 P1 KP 34 R2 KP 24 S1 KP 29 T2 KP 35 U1 KP 31 V2 KP 31	E1 KP 33 J2 KP 34 F1 KP 33 K2 KP 34 M1 KP 34 R2 KP 34 N1 KP 34 S2 KP 34 J2 KP 34 V2 KP 34	D1 KP 20 H2 KP 32 J1 KP 34 M2 KP 34 N1 KP 48 S2 U1 KP 58 V1 KP 32 KP 28	C1 KP 47 F2 KP 31 F1 KE 04 K2 KP 35 K1 KP 28 N2 KP 32 N1 KP 28 S2 KP 47 S1 KP 23 V2 KP 48	E1 KP 32 J2 KP 20 L1 KP 24 P2 KP 32 S1 KP 19 V2 KP 21	C1 KP 42 F2 KP 42 F1 KP 42 K2 KP 42 K1 KP 42 N2 KP 42 N1 KP 42 S2 KP 42 S1 KP 42 V1 KP 49 KP 42	D1 KP 24 H2 J1 KP 32 KP 55 M2 N1 KP 28 KP 28 V1 KP 21 S2 U1 KP 23 KP 24												

REVISIONS										
CHN	CHANGE NO.	REV.								
	KP15-00062	F								
	KP15-00065	H								
	KP15-00074	K								
	KP15-00075	L								
	KP15-00076	M								
	KP15-00078	N								
	KP15-00082	R								

DEC FORM NO. 1970 2

FIRST USED ON OPTION / MODEL

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 | FRACTIONS ± 1/64 | ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE

NEXT HIGHER ASSY

SCALE

SHEET 1 OF 4

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
MODULE UTILIZATION

SIZE D | CODE MU | NUMBER KP15-0-10 | REV. R | DIST.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
M135	M901	M904	M627	M226	M226	M226	M226	M226	M226	M218 +	M227	M164	M226	M226	M226	M226	M226	M226	M219 +	M218	M227
USAGE 1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
D1 KE Ø5 / H2 KE Ø5	I BUS TO MEM KP 27	BB15 CONT CABLE KP 69	E1 KE Ø5 / J2 KP 24	REGISTERS & BUSES						EAE REG	AC & SHIFT BUS	A1 KP Ø2 / E2 KP Ø1				REGISTERS & BUSES			EAE STEP COUNTER	EAE REQ	AC & SHIFT BUS
J1 KE Ø5 / W2 KP 20			L1 KP 24 / P2 KP 24									B1 KP Ø1 / M2 KP Ø6									
N1 KE Ø5 / S2 KE Ø5			S1 KP 24 / V2 KP 24									C1 KP Ø4 / N2 KP Ø6									
U1 KE Ø5 / V1 KE Ø5												D1 KP Ø1 / P2 KP Ø6									
M133	M904	M904	M966									J1 KP Ø1 / U1 KP Ø6									
USAGE 1 2	1 2	1 2	1 2									L1 KP Ø6 / V1 KP Ø5									
C1 KE Ø5 / F2 KP 22	MDL CABLE KP 27	MDL CABLE KP 27	MDL TERM KP 27	KP Ø1	KP Ø2	KP Ø3	KP Ø4	KP Ø5	KP Ø6	KE Ø1	KP Ø1 → KP Ø9	W1 KP Ø1 / S1 KP Ø3	KP Ø7	KP Ø8	KP Ø9	KP 10	KP 11	KP 12	KE Ø3	KE Ø2	KP 10 → KP 18
F1 KE Ø5 / K2 KP 22												M135									
K1 KE Ø3 / N2 KE Ø3												1 2									
N1 KP 22 / S2 KP 22												D1 KP 26 / H2 KP 26									
S1 KE Ø3 / V2 KD Ø4												J1 KP 26 / M2 KP 26									
												N1 KP 26 / S2 KD Ø6									
												U1 KP 47									
												V1 KP 26									

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
M164	M226	M226	M226	M226	M226	M226	M627	M133	M205												
USAGE 1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
A1 KP Ø8 / E2 KP Ø7	REGISTERS & BUSES						E1 KP 34 / J2 KP 21	C1 KP 19 / F2 KP 33	E1 KP 35 / J2 KP 34												
B1 KP Ø7 / M2 KP 12								F1 KP 33 / K2 KP 22	F1 KP 35 / K2 KP 34												
C1 KP 10 / N2 KP 12								K1 KP 33 / N2 KP 66	R2 KP 35 / R2 KP 31												
D1 KP Ø7 / P2 KP 12							L1 KP 49 / P2 KP 32	N1 KP 32 / S2 KP 22	M1 KP 35 / S2 KP 31												
J1 KP Ø7 / P2 KP 12																					
L1 KP 12 / U1 KP 12																					
M1 KP Ø7 / V1 KP 11							S1 KP 32 / V2 KP 28	S1 KP 50 / V2 KP 58	N1 KP 35 / V2 KP 66												
S1 KP Ø9																					
M164							M627	M149	M135												
USAGE 1 2							1 2	1 2	1 2												
A1 KP 14 / E2 KP 13							E1 KP 34 / J2 KP 19	C1 KP 38 / F2 KP 38	D1 KP 28 / H2												
B1 KP 13 / M2 KP 18								F1 KP 38 / K2 KP 38	J1 KP 35 / M2 KP 48												
C1 KP 16 / N2 KP 18							L1 KP 32 / P2 KP 55	K1 KP 38 / N2 KP 38	N1 KP 64 /												
D1 KP 13 / P2 KP 18								N1 KP 38 / S2 KP 38	U1 KP 58 / S2 KP 35												
J1 KP 13 / P2 KP 18																					
L1 KP 18 / U1 KP 18																					
M1 KP 13 / V1 KP 17							S1 KP 34 / V2 KP 19	S1 KP 38 / V1 KP 48	V1 KP 58												
S1 KP 15	KP 13	KP 14	KP 15	KP 16	KP 17	KP 18															

+ EAE OPTION W770 IN EF20 REPLACED BY G614 IF EAE OPTION NOT INSTALLED

FIRST USED ON OPTION/MODEL

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

		DATE
DRN.	J. OSBORN	2/12/69
CHK'D.	L. HOHOS	2/14/69
ENG.	F. AUMANN	2/ /69
PROJ. ENG.	G. BUTLER	2/ /69
PROD.	MANUFACTURING	2/ /69

NEXT HIGHER ASSY

SCALE

SHEET 2 OF 4

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
MODULE UTILIZATION

SIZE CODE D MU NUMBER KP15-Ø-1Ø2 REV. R

DIST.

REVISIONS
LTR CHANGE NO.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
USAGE	M611	G858	G827	K303	M205	M113*	M621	M621	M621	M622	M149	M149	M242	M242	M285	M602	M133	M133	M133	M112	M115	M112
K	B1 KE 05 E1 KE 05 H1 KE 05 K1 KE 05 M1 KP 23 P1 KE 05 S1 KE 04 U1 KE 05	F2 KP 22 J2 KE 05 L2 KP 57 R2 KE 05 T2 KP 31 V2 KP 22	TTY CABLE CARD KP 64	PWR SEQUENCE KP 57 PWR SEQUENCE L2 U2 KP 46 D2 KP 57 E2 KP 57 K2 KP 57 L2 KP 57 R2 KP 57 S2 KP 57	E1 KP 57 F1 KP 57 M1 KP 57 N1 KP 57 J2 KP 66 K2 KP 66 R2 KD 06 S2 KD 06 U2 KE 05 V2 KE 05	C1 KP 57 F1 KP 57 K1 KP 57 N1 KP 57 S1 KP 57 F2 KP 57 K2 KP 57 N2 KP 57 S2 KP 57 V2 KP 57	E2 KP 59 H2 KP 59 K2 KP 59 M2 KP 59 P2 KP 59 S2 KP 59	E2 KP 59 H2 KP 59 K2 KP 59 M2 KP 59 P2 KP 59 S2 KP 59	E2 KP 59 H2 KP 59 K2 KP 59 M2 KP 59 P2 KP 59 S2 KP 59	D2 KP 26 E2 KP 26 H2 KP 26 K2 KP 26 M2 KP 26 P2 KP 26 S2 KP 26 V2 KP 26	C1 KP 38 F1 KP 38 K1 KP 38 N1 KP 38 S1 KP 38 V1 KP 66 F2 KP 38 K2 KP 38 N2 KP 38 S2 KP 38	C1 KP 39 F1 KP 39 K1 KP 39 N1 KP 39 S1 KP 39 V1 KP 22 F2 KP 39 K2 KP 39 N2 KP 39 S2 KP 39	A1 KP 26 H1 KP 32 P1 KP 26 V1 KP 26 J2 KP 26 P2 KP 32 V2 KP 26	A1 KP 26 H1 KP 26 P1 KP 55 V1 KP 55 J2 KP 26 P2 KP 26 V2 KP 26	E1 KP 26 F1 KP 26 M1 KP 32 N1 KP 32 J2 KP 26 K2 KP 26 R2 KP 34 S2 KP 34 U2 KE 05 V2 KE 05	F2 KP 32 L2	C1 KP 26 F1 KP 26 K1 KP 34 N1 KP 26 S1 KP 26 F2 KP 26 K2 KP 26 N2 KP 26 S2 KP 26 V2 KP 32	C1 KD 06 F1 KD 06 K1 KP 26 N1 KP 48 S1 KD 06 F2 KP 26 K2 KP 26 N2 KP 26 S2 KD 06 V2 KD 06	C1 KD 03 F1 KD 03 K1 KD 04 N1 KP 50 S1 KP 66 F2 KD 03 K2 KP 48 N2 KD 03 S2 KP 35 V2 KP 49	C1 KP 21 F1 KP 21 K1 KP 66 N1 KP 66 S1 KP 35 F2 KP 66 K2 KP 66 N2 KP 66 S2 KP 66 V2 KP 66	D1 KP 55 J1 KP 51 N1 KD 04 U1 KD 04 V1 KD 04 H2 KD 06 M2 KP 51 S2 KP 55	C1 KP 68 F1 KP 31 K1 KP 50 N1 KP 50 S1 KP 50 F2 KP 50 K2 KP 50 N2 KP 50 S2 KP 50 V2 KP 55
USAGE	M627	M915	M515 ▲	M205	M113 ▲	M112	M622	M966	M622	M113	M216	M216	M216	M214	M214	M214	M002	M112	M611	M602	M112	M113
L	E1 KE 05 L1 KE 05 S1 KE 05 J2 KE 05 P2 KE 05 V2 KE 05	CONSOLE LIGHT BOARD CABLE CARD KP 46	REAL TIME CLOCK KP 57	E1 KP 57 F1 KP 57 M1 KP 57 N1 KP 57 J2 KP 57 K2 KP 57 R2 KP 65 S2 KP 65 U2 KP 35 V2 KP 35	C1 KP 57 F1 KP 57 K1 KP 57 N1 KP 57 S1 KP 57 F2 KP 57 K2 KP 57 N2 KP 57 S2 V2	C1 KP 57 F1 KP 57 K1 KP 57 N1 KP 46 S1 KP 57 F2 KP 57 K2 KP 58 N2 KP 58 S2 KP 51 V2 KP 47	D2 KP 53 E2 KP 53 H2 KP 43 K2 KP 68 M2 KP 68 P2 KP 53 S2 KP 53 V2 KP 53	MDL TERM KP 27	D2 KP 66 E2 KP 66 H2 KP 66 K2 KP 66 M2 KP 66 P2 KP 66 S2 KP 66 V2 KP 66	C1 KP 57 F1 KP KD 05 K1 KD 05 N1 KD 04 S1 KD 04 F2 KD 05 K2 KD 04 N2 KD 06 S2 KD 04 V2 KP 47	E1 KD 04 F1 KD 04 L1 KD 04 M1 KD 04 S1 KD 04 U1 KD 04 H2 KD 04 J2 KD 04 P2 KD 04 R2 KD 04 V2 KD 04 V1 KD 04	E1 KD 04 F1 KD 04 L1 KD 04 M1 KD 04 S1 KD 05 U1 KD 05 H2 KD 04 J2 KD 04 P2 KD 05 R2 KD 05 V2 KD 05 V1 KD 05	E1 KD 05 F1 KD 05 L1 KD 05 M1 KD 05 S1 KD 05 U1 KD 05 H2 KD 04 J2 KD 05 P2 KD 05 R2 KD 05 V2 KD 05 V1 KD 05	KD Ø1	KD Ø2	KD Ø3	D2 KP 57 E2 KP 57 F2 KP 57 H2 KP 57 J2 KP 57 K2 KP 35 L2 KP 57 M2 KP 57 N2 KP 57 P2 KP 31 R2 KP 35 S2 KP 31 T2 KP 66 U2 KP 03 V2 KP 21	C1 KD 06 F1 KD 06 K1 KP 35 N1 KD 05 S1 KP 26 F2 KP 35 K2 KP 55 N2 KD 06 S2 KP 58 V2 KP 26	B1 KP 35 E1 KP 51 H1 KP 68 K1 KD 05 M1 KP 26 P1 KP 35 S1 KP 32 U1 KP 20 F2 KD 04 J2 KD 06 L2 KD 04 R2 KP 22 T2 KP 28 V2 KP 31	F2 KP 51 L2	C1 KD 04 F1 KD 06 K1 KP 55 N1 KP 49 S1 KP 65 S2 KP 24 F2 KD 06 K2 KD 06 N2 KD 06 V2 KP 59	C1 KD 06 F1 KD 06 K1 KD 06 N1 KD 04 S1 KP 35 V1 KP 46 F2 KD 06 K2 KD 06 N2 KP 23 S2 KP 55 V2 KD 05

	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
USAGE	M149	M149	M611	M133	M611	M149	M149	M627	M113	M149												
K	C1 KP 41 F1 KP 41 K1 KP 41 N1 KP 41 S1 KP 41 V1 KP 19 F2 KP 41 K2 KP 41 N2 KP 41 S2 KP 41 M112	C1 KP 40 F1 KP 40 K1 KP 40 N1 KP 40 S1 KP 40 V1 KP 31 F2 KP 40 K2 KP 40 N2 KP 40 S2 KP 40 M111	B1 KP 47 E1 KP 21 H1 KD 05 K1 KP 26 M1 KD 06 P1 KP 55 S1 KP 68 U1 KD 05 F2 KD 05 J2 KD 04 L2 KE 05 R2 KP 26 T2 KP 35 V2 KP 35 M113	C1 KP 55 F1 KP 55 K1 KP 50 N1 KP 31 S1 KD 06 F2 KD 04 K2 KP 50 N2 KP 58 S2 KP 66 V2 KP 66 M216	B1 KP 32 E1 KD 04 H1 KP 25 K1 KP 25 M1 KP 25 P1 KP 25 S1 KP 25 U1 KP 25 F2 KP 25 J2 KP 25 L2 KP 25 R2 KP 25 T2 KP 25 V2 KP 25 M602	C1 KP 60 F1 KP 60 K1 KP 60 N1 KP 60 S1 KP 60 V1 KP 46 F2 KP 60 K2 KP 60 N2 KP 60 S2 KP 60 M149	C1 KP 60 F1 KP 60 K1 KP 60 N1 KP 60 S1 KP 60 V1 KP 25 F2 KP 60 K2 KP 60 N2 KP 60 S2 KP 60 M149	E1 KP 32 L1 KP 49 J2 KP 35 P2 KP 34 V2 KP 26 M113	C1 KP 58 F1 KP 50 K1 KD 04 N1 KP 34 S1 KP 47 F2 KP 34 K2 KP 05 N2 KD 05 S2 KP 35 V2 KP 35 M113	C1 KP 40 F1 KP 40 K1 KP 40 N1 KP 40 S1 KP 40 V1 KP 46 F2 KP 40 K2 KP 40 N2 KP 40 S2 KP 40 M602										
USAGE	M112	M111	M113	M216	M602	M149	M149	M113	M113	M602												
L	C1 KP 51 F1 KP 66 K1 KP 66 N1 KP 66 S1 KP 35 K2 KP 35 N2 S2 KP 55 V2 KD 05	B1 KP 66 E1 KP 66 H1 KP 29 K1 KP 66 M1 KP 46 P1 KP 84 S1 KP 49 U1 KP 50 D2 KP 58 F2 KP 66 J2 KP 66 L2 KP 65 N2 KP 65 R2 KD 05 T2 KD 05 V2 KP 35	C1 KD 06 F1 KP 66 K1 KP 66 N1 KP 66 S1 KP 66 F2 KP 66 K2 KP 66 N2 KP 46 S2 KD 06 V2 KP 65	C1 KP 66 F1 KP 66 L1 KP 66 M1 KP 66 S1 KP 66 U1 KP 66 H2 KP 66 J2 KP 66 P2 KP 66 R2 KP 66 V2 KP 66 V1 KP 66	F2 KP 66 L2 KD 06	C1 KP 62 F1 KP 62 K1 KP 62 N1 KP 62 S1 KP 62 V1 KP 25 F2 KP 62 K2 KP 62 N2 KP 62 S2 KP 62	C1 KP 62 F1 KP 62 K1 KP 62 N1 KP 62 S1 KP 62 V1 KP 25 F2 KP 62 K2 KP 62 N2 KP 62 S2 KP 62	C1 KP 49 F1 KP 34 K1 KP 49 N1 KP 49 S1 KP 28 F2 KP 34 K2 KP 49 N2 K? 66 S2 KP 49 V2 KP 28	C1 KP 35 F1 KE 03 K1 KP 50 N1 KD 06 S1 KP 35 F2 KP 51 K2 KD 05 N2 KP 35 S2 KP 35 V2 K 84	F2 KP 55 L2 KP 32									

* POWER FAIL OPTION
▲ REAL TIME CLOCK OPTION
▽ IF NO I/O BUS CABLE INSTALLED, 4 M989 WILL BE M989S. SHOULD BE MOVED TO END OF BUS WHEN CABLE IS INSTALLED.

FIRST USED ON OPTION/MODEL

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

DRN.	J. OSBORN	DATE 10-12-67
CHK'D.	L. HOHOS	DATE 10-12-67
ENG.	F. AUMANN	DATE 10-13-67
PROJ. ENG.	G. BILLER	DATE
PROD.	RANTONUCCI	DATE
NEXT HIGHER ASSY		
SCALE		
SHEET 3 OF 7		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
MODULE UTILIZATION

SIZE D CODE DMU NUMBER KP15-0-102 REV R
DIST.

REVISIONS | REV. | CHANGE NO. | CHK

DEC FORM NO. ORD 112

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	M611	M912 ▽	M912 ▽	M910	M910	M621	M621	M621	M510	M510	M121	M112	M112	M112	M112	M627	M216	M311	M611	M216	M216	M205
USAGE	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
M	B1 KP 03 F2 KP 46 E1 KP 31 J2 H1 KP 47 KP 32 K1 KP 22 L2 KP 31 M1 KP 31 R2 KP 31 P1 KP 51 T2 KD 05 S1 KP 57 V2 U1 KP 32 KP 21	I/O BUS CABLE	I/O BUS CABLE	I/O BUS CABLE	I/O BUS CABLE	E2 KP 53 H2 KP 53 K2 KP 53 M2 KP 53 P2 KP 53 S2 KP 53	E2 KP 53 H2 KP 53 K2 KP 52 M2 KP 52 P2 KP 52 S2 KP 52	E2 KP 52 H2 KP 52 K2 KP 52 M2 KP 52 P2 KP 52 S2 KP 52	C1 KP 53 T2 H1 KP 53 K1 KP 53 KP 53 M1 KP 53 V2 P1 KP 53 S1 KP 53 KP 53	D1 KP 52 T2 H1 KP 52 K1 KP 52 KP 52 M1 KP 52 V2 P1 KP 52 S1 KP 52 KP 52	E1 KP 29 L1 KP 29 S1 KP 31 J2 KP 58 P2 KP 56 V2 KP 66	C1 KP 26 F2 KP 50 F1 KP 26 K2 KD 04 K1 KD 05 N2 KD 06 N1 KD 05 S2 KD 04 S1 KD 04 V2 KD 06	C1 KP 26 F2 KP 50 F1 KP 26 K2 KD 05 K1 KD 06 N2 KP 51 N1 KP 51 S2 KP 51 S1 KP 51 V2 KP 51	C1 KP 51 F2 KP 51 F1 KP 51 K2 KP 51 K1 KP 51 N2 KP 51 N1 KP 51 S2 KP 51 S1 KP 51 V2 KP 51	C1 KP 31 F2 KP 26 F1 KP 31 K2 K1 KE 05 N2 KP 66 N1 KP 66 S2 KP 34 S1 KP 66 V2 KP 22	E1 J2 L1 KP 50 P2 KP 66 S1 KD 05 V2 KP 31	E1 KD 05 H2 KD 05 F1 KD 05 J2 KD 05 L1 KD 05 P2 KD 05 M1 KD 05 R2 KD 05 S1 KD 05 V2 KD 05 U1 KD 05 V1 KD 05	H1 J2 KD 06 KD 06	B1 KP 29 F2 KP 34 E1 KP 29 J2 KD 05 H1 KP 58 L2 KP 50 K1 KP 34 R2 KP 47 M1 KP 55 T2 KP 66 P1 KP 50 V2 KD 06 S1 KP 50 U1 KP 32 KD 06	E1 KD 04 H2 KD 04 F1 KD 04 J2 KD 04 L1 KD 04 P2 KD 04 M1 KD 04 R2 KD 04 S1 KD 04 V2 U1 KD 04 V1	E1 KD 06 H2 KD 06 F1 KD 06 J2 KD 06 L1 KD 06 P2 KD 05 M1 KD 06 R2 KD 05 S1 KD 05 V2 KP 46 U1 KD 05 V1 KP 46	E1 KD 04 J2 KD 06 F1 K2 KD 06 M1 KD 04 R2 KD 05 N1 S2 KD 05 KD 05 J2 KD 04 U1 KD 05 V2 KD 04
	M133					M622	M522	M111	M627	M510	M112	M113	M611	M771	M606	M133	M216	M111	M119	M113	M401	M216
USAGE	1 2					1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
N	C1 31 F2 21 F1 21 K2 21 K1 21 N2 23 N1 32 S2 KP 31 S1 32 V2	KP 69 KP 69	KP 69 KP 69	KP 68 KP 68	I/O BUS TERM KP 68 KP 68	D2 KP 50 E3 KP 50 H2 KP 50 K2 KP 50 M2 KP 50 P2 KP 50 S2 KP 68 V2 KP 68	D2 KP 50 E2 KP 50 H2 KP 50 K2 KP 50 M2 KP 50 P2 KP 50 S2 KP 50 V2 KP 50	B1 KP 68 D2 KP 68 E1 KP 69 F2 KP 69 H1 KP 68 J2 KP 68 K1 KP 68 L2 KP 68 M1 KP 68 N2 KP 68 P1 KP 68 R2 KP 68 S1 KP 68 T2 KP 68 U1 KP 68 V2 KP 68	E1 J2 KP 35 KD 35 L1 P2 KD Ø4 KP 34 S1 V2 KP 20 KP 24	D1 KP 53 T2 H1 KP 52 K1 KP 68 KP 50 M1 KP 68 V2 P1 KP 68 S1 KP 50 KP 50	C1 KP 31 F2 KP 31 F1 K2 KP 31 K1 KP 66 N2 KP 31 N1 KP 31 S2 KD 05 S1 KP 57 V2 KP 46	C1 KP 51 F2 KD 04 F1 K2 K1 KD 04 N2 KD 05 N1 KD 06 S2 KD 03 S1 KP 57 V2 KD 05	B1 KP 53 F2 KP 55 E1 KP 55 J2 KP 55 H1 KD 06 K1 KP 55 L2 KP 55 M1 KP 55 R2 KP 50 N1 KP 55 T2 KP 50 P1 KP 50 V2 KP 50 S1 KP 50 U1 KP 50 KP 50	INT IOT DECODER KP 58	D2 L2 KP 55 KP 35 F2 N2 KD 06 KP 31 J2 R2 KP 66 KD 05	C1 KP 55 F2 KP 55 F1 KP 55 K2 KD 06 K1 KP 55 N2 KP 50 N1 KD 05 S2 KP 50 S1 V2 KP 50 KD 06	E1 KP 51 H2 KP 51 F1 KP 51 J2 KP 51 L1 KP 51 P2 KP 55 M1 KP 51 R2 KP 55 S1 KP 51 V2 KP 51 U1 KP 51 V1 KP 51	B1 KD 05 D2 KP 50 E1 KP 50 F2 KP 50 H1 KP 55 J2 KP 50 K1 KP 50 L2 KD 06 M1 KP 50 P1 KP 50 R2 KD 08 S1 KP 51 T2 KD 04 U1 KD 06 V2 KP 55 KP 58	J2 KP 50 P2 KP 50 V2 KP 58	C1 KP 50 F2 KP 53 F1 KP 51 K2 KP 51 K1 KP 51 N2 KP 51 N1 KP 51 S2 KP 51 S1 KP 20 V2 KP 51	D2 I/O CLK KP 51 E2	E1 H2 KP 51 F1 KP 51 J2 KP 51 L1 KP 51 P2 KP 51 M1 KP 51 R2 KP 51 S1 KP 51 V2 KP 51 U1 KP 51 V1 KP 51
	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	M205	M112	M773	M772	M216	M410	M707	M706	M611	M115												
USAGE	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
M	J2 KD 04 K2 KD 04 R2 KP 35 S2 KP 35 U2 KP 58 V2 KP 58	C1 KP 51 F2 KD 05 F1 KD 05 K2 KP 46 K1 KD 05 N2 KD 06 N1 KD 05 S2 KP 55 S1 V2 KP 04 KP 26	CONSOLE CONTROL #2 KP 45	CONSOLE CONTROL #1 KP 44	E1 KP 46 H2 KP 46 F1 KP 46 J2 KP 46 L1 KP 46 P2 KP 46 M1 KP 46 R2 KP 46 S1 KP 46 V2 KP 46 U1 KP 46 V1 KP 46	TTY CLOCK KP 64	TTY TRANS-MITTER KP 65	TTY RECIEVER KP 64	B1 KP 58 F2 KP 31 E1 KP 51 J2 H1 KP 55 KD 06 K1 KP 47 L2 KP 25 M1 KD 04 R2 KP 57 P1 KP 58 T2 KP 35 S1 KP 57 V2 U1 KP 24 KP 04	D1 KD 05 H2 J1 KD 05 KP 26 N1 KD 05 M2 U1 KP 51 KP 35 V1 S2 KD 04 KP 66												
	K216	M402			K303	M401			M103	W205												
USAGE	1 2	1 2			1 2	1 2			1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
N	E1 KP 51 H2 KP 51 F1 KP 51 J2 KP 51 L1 KD 04 P2 KP 51 M1 KD 04 R2 KP 51 S1 KP 51 V2 KP 51 U1 KP 51 V1 KP 51	D2 RPT. CLK. KP 46 E2			D2 KP 46 E2 KP 46 K2 KP 46 L2 KP 46 R2 KP 46 S2 KP 46	D2 CONSOLE CLK KP 46 E2			C1 KD 06 F2 KP 47 F1 KD 06 K2 KD 06 K1 KD 06 N2 KP 59 N1 KP 35 S2 KP 26 S1 KD 06 V2	C1 KD 06 F2 KD 05 F1 K2 KD 06 M1 KD 06 N2 KP 35 N1 S2 KP 55 KD 06 V2 KP 55											

▽ IF NO I/O BUS CABLE INSTALLED, 4 M989 WILL BE M989S SHOULD BE MOVED TO END OF BUS WHEN CABLE IS INSTALLED.

REVISIONS	REV.	CHANGE NO.	CHK

FIRST USED ON OPTION / MODEL

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

		DATE
DRN.	J.OSBORN	
CHK'D.	L. HICKOS	
ENG.	F.ZUMANN	
PROJ. ENG.	G.BUTLER	
PROD.	R.ANTONUCCIO	

NEXT HIGHER ASSY

SCALE

SHEET OF

digital EQUIPMENT CORPORATION

TITLE
MODULE UTILIZATION

SIZE D | CODE MU | NUMBER KP15-0-102 | REV R

DIST

DEC FORM NO. DRD 112

SIZE D | CODE MU | NUMBER KP15-0-102 | REV R

KP25 IND A BUS H HD1
-KP01 A BUS 00A2 H
7401N F01

KP25 IND SUM BUS H HB1
KP01 SUM BUS 00F2 H
7401N E01

KP25 IND SHIFT BUS H HC1
-KP01 SHIFT BUS 00D2 H
7401N E01

KP25 IND AC H JH1
KP01 BAC 00A1 H
7401N E08

KP25 IND C BUS H JU1
-KP01 C BUS 00C2 H
7401N E11

KP25 IND MEM H JP1
KP01 MI 00 (1)H
7401N E11

KP46 I BUS 00 L

KP25 IND B BUS H HA1
-KP01 B BUS 00B2 H
7401N E01 JM1

KP25 IND MQ H JE1
7401N E08

KP25 IND PC H JJ1
7401N E08

KP25 IND OA H JD1
7401N E08

KP25 IND XR H JN1
7401N F11

KP25 IND LR H JR2
7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MI

KP24 SET MQ L JD2

KP01 MQ 00L1 (1)H JE2
KP01 MQ00 7474N E09
KP24 LDMQ 05M2 H JB2
KP24 JAM PC-MQ H HH2
KP01 PC 00B1 (0)H
74H00N E03
(OUTPUT BUF TO MEMORY)

+3V H
KP01 PC 00B1 (1)H JL1
KP01 PC00 7474N E06
KP24 LDPC 0-4 H HP2
HM2
+3V H
(PROGRAM COUNTER)

+3V H
KP01 OA 00C1 (1)H
KP01 OA00 7474N E06
KP24 LD OA 07M2 H HN2
(MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP01 XR 00F1 (1)H
KP01 XR00 7474N E12
KP24 LDXR 09M2 H JP2
(INDEX REGISTER)

KP01 SHIFT BUS 00D2 L JT2
+3V H
KP01 LR 00G1 (1)H
KP01 LR00 7474N E12
KP24 LDLR 08M2 H JS2
(LIMIT REGISTER)

KP01 BAC 00A1 H
KP19 BAC-C 00-08 H HV2

KP01 DS 00 (1)H
KP19 DS-C 11M2 H JH2

KP53 IOB 00J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2

KP01 MI 00 (0)H
KP01 BAC 00A1 H
KP19 XOR-C 13M2 H JU2

74H53N E10
HN1 KP01 C BUS 00C2 L

HB2
74H00N E03

KP19 C-A BUS 00M1 H HH1
KP01 C BUS 00C2 H

KP19 -C-A 0-12 14-17 H HM1

KP47 XR-A 00-02 H HF2
KP01 XR 00F1 (1)H

KP19 L BM UM-A H HL1
KP22 L (1) B H HK1
+3V H

KP01 A BUS 00A2 L
74H53N E02
HJ1
KP01 B BUS 00B2 L

KP07 AC06 A1 (1)H HP1
KP19 SL6-A 12M1 H HR1

HV1
KP19 I/O ADD-A 13M1 H JA1

HS1
KP45 CDL 01 H

KP01 OA 00C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1

KP19 SC-C 14M2 H JL2 JM2

KP01 LR 00G1 (1)H
KP19 LR-C 02M2 H JV2

KP19 MQ-C 16M2 H JK2
KE01 MQ 00D1 (1)H JS1

KP01 AC00 A1 (0)H
KP19 XOR-C 13M2 H
KP01 MI 00 (1)H

74H53N E13

KP01 AC00 A1 (1)L JV1
+3V H
74H00N E03
JK1 KP01 BAC 00A1 H

KP47 MI-B 00-02 H HJ2
KP01 MI 00 (1)H

KP01 MI 00 (0)H
KP19 -MI-B 00-08 H HS2

KP01 XR 00F1 (1)H
KP47 XR-B 00-2 H HT2

KP19 AND-B 03M2 H HR2
KP01 BAC 00A1 H
KP01 MI 00 (1)H

74H53N E07
HL2 KP01 B BUS 00B2 L

+3V H
D 1
KP01 DS00 7474N E09
C 0
KP45 CDL 01 H JC1
KP25 LDAC SW H JF2
JF1 KP01 DS 00 (1)H
+3V H

REGISTER MODULE
M226
H05
J05

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H13

D2 E1
Σ
00
B1 E2 M1 D1 J1

KP01 SUM BUS 00F2 H
KP01 NCA BIT 00 L
KP01 SCA BIT 00 L
KP01 CA BIT 00 L
KP01 SNCA BIT 00 L

KP01 MDL 00I2 H
+3V H
74H00N E03
HE2

74H50N E04
HF1 KP01 MI 00 (0)H
+3V H

74H50N E04
HK2 KP01 MI 00 (1)H
+3V H
KP27 MDL 00 L HD2
KP32 LD MI H HE1

KP19 DIVSHIFT-D 00 M1 H HH1
KP02 SUM BUS 01F2 H HH2

KP19 MULSHIFT-D 01M1 H HL1
KP22 L+CARRY H HM2

KP02 AC01 A1 (1)H
KP19 RAL-D 02M1 H HJ1

KP22 L (1) B H HL2
KP19 RAR-D 03M1 H HM1
+3V H

KP19 RTL-D 04M1 H HD2
KP03 SUM BUS 02F2 H HA1

KP19 RTR-D 05M1 H HF2
KP18 SUM BUS 17F2 H HE2

KP19 NO SHIFT-D 06M1 H HB1
KP01 SUM BUS 00F2 H HF1

+3V H
KP19 SW-D 07M1 H HD1
KP10 AC09 A1 (1)H HE1

74H53N E04
HJ2

74H53N E01

+3V H
KP01 SHIFT BUS 00D2 L
KP01 AC00 A1 (1)H HS1
D 1
KP01 AC00 7474N E07
KP24 LD AC 04M2 H HN1
C 0
HR1
+3V H
KP01 AC00 A1 (0)H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	D
	S GOLDSBY 7-14-70	
	F AUMANN 7-22-70	
GH	KP15-00016	E
	K WALSH 12/11/70	
	F AUMANN 12/11/70	
GH	KP15-00052	F
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	H

REVISIONS		
CHK	CHANGE NO.	REV
	KP15-00032	J
	F. DOLL	

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D N.RHEAULT	DATE 11-7-69		
ENG. F.AUMANN	DATE 11-7-69	TITLE REG & BUS BIT 00	
PROJ. ENG. G.BUTLER	DATE 11-7-69		
PROD. F.LASKEY	DATE 11-7-69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-01	REV. J
SHEET 1 OF 1		DIST.	

KP25 IND A BUS H HD1 — 7401N E01
-KP02 A BUS Ø1A2 H
KP25 IND SUM BUS H HB1 — 7401N E08
KP02 SUM BUS Ø1F2 H
KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP02 SHIFT BUS Ø1D2 H
KP25 IND AC H JH1 — 7401N E05
KP02 BAC Ø1A1 H
KP25 IND C BUS H JU1 — 7401N E11
-KP02 C BUS Ø1C2 H
KP25 IND MEM H JP1 — 7401N E11
KP02 MI Ø1 (1)H
KP46 I BUS Ø1 L
KP25 IND B BUS H HA1 — 7401N E01 — JM1
-KP02 B BUS Ø1B2 H
KP25 IND MQ H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
KP25 IND OA H JD1 — 7401N E08
KP25 IND XR H JN1 — 7401N E11
KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ Ø0-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP24 LDMQ Ø5M2 H JB2 — KP02 MQØ1 7474N E09 — JE2 KP02 MQ Ø1L1 (1)H
KP24 JAM PC-MQ H HH2 — 74H00N E03
KP02 PC Ø1B1 (Ø)H
(OUTPUT BUF TO MEMORY)

+3V H
KP24 LDPC Ø-4 H HP2 — KP02 PCØ1 7474N E06 — JL1 KP02 PC Ø1B1 (1)H
+3V H
(PROGRAM COUNTER)

+3V H
KP24 LD OA Ø7M2 H HN2 — KP02 OAØ1 7474N E06 — KP02 OA Ø1C1 (1)H
(MEMORY ADDRESS REG)

+3V H
KP24 LDXR Ø9M2 H JP2 — KP02 XRØ1 7474N E12 — JR1 KP02 XR Ø1F1 (1)H
(INDEX REGISTER)

+3V H
KP02 SHIFT BUS Ø1D2 L JT2
KP24 LDLR Ø8M2 H JS2 — KP02 LRØ1 7474N E12 — KP02 LR Ø1G1 (1)H
(LIMIT REGISTER)

KP02 BAC Ø1A1 H
KP19 BAC-C Ø0-Ø8 H HV2
KD02 DS Ø1 (1)H
KP19 DS-C 11M2 H JH2
KP53 IOB Ø1J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP02 MI Ø1 (Ø)H
KP02 BAC Ø1A1 H
KP19 XOR-C 13M2 H JU2
KP19 SC-C 14M2 JL2 JM2
KP02 LR Ø1G1 (1)H
KP19 LR-C Ø2M2 JV2
KP19 MQ-C 16M2 H JK2
KE01 MQ Ø1D1 (1)H JS1
KP02 AC01 A1 (Ø)H
KP19 XOR-C 13M2 H
KP02 MI Ø1 (1)H
74H53N E13 — HN1 KP02 C BUS Ø1C2 L

HB2 — 74H00N E03
KP19 C-A BUS Ø8M1 H HH1
KP02 C BUS Ø1C2 H
KP19 -C-A Ø-12 14-17 H HM1
KP47 XR-A Ø0-Ø2 H HF2
KP02 XR Ø1F1 (1)H
KP02 PC01 MIX H HL1
KP47 PC-A Ø1-Ø2 H HK1
+3V H
KP08 AC07 A1 (1)H HP1
KP19 SL6-A 12M1 H HR1
KP19 I/O ADD-A 13M1 H HV1 JA1
KP45 CDL Ø2 H HS1
KP02 OA Ø1C1 (1)H
+3V H
KP19 OA-A 1-4 H HU1
74H53N E05

KP02 A BUS Ø1A2 L
74H53N E02 — HJ1
KP02 B BUS Ø1B2 L F2
Σ H2 A1 — KP02 SUM BUS Ø1F2 H
Ø1

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H13

KP47 MI-B Ø0-Ø2 H HJ2
KP02 MI Ø1 (1)H
KP02 MI (Ø) (1)H
KP19 -MI-B Ø0-Ø8 H HS2
KP02 XR Ø1F1 (1)H
KP47 XR-B Ø0-Ø2 H HT2
KP19 AND-B Ø3M2 H HR2
KP02 BAC Ø1A1 H
KP02 MI Ø1 (1)H
74H53N E07 — HL2 KP02 B BUS Ø1B2 L

-KP30 GRP4*TS02*(F+D) H A1 — M133 F01 — C1
KP02 PC01 B1 (1)H B1
D1
KP58 Ø9 MODE H H1 — M133 F01 — F1 KP02 PC01 MIX H
KP19 L BM UM-A H J1 — K1 E1

KP02 AC01 A1 (1)L JV1 — 74H00N E03 — JK1 KP02 BAC Ø1A1 H
+3V H

+3V H
KP45 CDL Ø2 H JC1 — KP02 DSØ1 7474N E09 — JF1 KP02 DS Ø1 (1)H
KP25 LDAC SW H JF2
+3V H

REGISTER MODULE
M226
H06
J06

+3V H — 74H00N E03 — HE2 KP02 MDL Ø1I2 H
+3V H — 74H50N E04 — HF1 KP02 MI Ø1 (Ø)H
+3V H — 74H50N E04 — HK2 KP02 MI Ø1 (1)H
KP27 MDL Ø1 L HD2
KP32 LD MI H HE1

KP03 SUM BUS Ø2F2 H
KP19 RTVSHIFT-D Ø0M1 H
KP19 MULSHIFT-D Ø1M1 H
KP05 SUM BUS Ø0 H
KP03 AC02 A1 (1)H
KP19 RAL-D Ø2M1 H
+3V H
KP19 RAR-D Ø3M1 H
KP01 AC00 A1 (1)H
KP04 SUM BUS Ø3F2 H
KP19 RTL-D H
KP19 RTR-D Ø5M1 H
KP22 L (1)H
KP02 SUM BUS Ø1 H
KP19 NO SHIFT-D Ø6M1 H
KP19 SW-D H
KP11 AC12 A' (1)H HC1
+3V H
74H53N E02 — HR2
74H53N E05

KP02 SHIFT BUS Ø1D2 L
+3V H — KP02 AC01 A1 (1)H
KP24 LD AC Ø4M2 H
KP02 AC01 A1 (Ø)H
KP02 AC01 7474N E07 — HN2 — HP2

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	D
S GOLDSBY 7/15/70		
F AUMANN 7/22/70		
LH	KP15-00056	E
S GOLDSBY 5/1/71		
F AUMANN 5/27/71		
	KP15-00056	F

REVISIONS		
CHK	CHANGE NO.	REV
[illegible]	[illegible]	H

DRN M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N.RHEAULT	DATE 11-7-69	TITLE REG & BUS BIT Ø1
ENG. F.AUMANN	DATE 11-7-69	
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D · CODE BS · NUMBER KP15-0-02 · REV. H
SCALE		
SHEET 1 OF 1		DIST.

KP25 IND A BUS H HD1 — KP03 A BUS 02A2 H — 7401N E01
KP25 IND SUM BUS H HB1 — KP03 SUM BUS 02 H — 7401N E01
KP25 IND SHIFT BUS H HC1 — -KP03 SHIFT BUS 02D2 H — 7401N E01
KP25 IND AC H JH1 — KP03 BAC 02A1 H — 7401N E08
KP25 IND C BUS H JU1 — -KP03 C BUS 02C2 H — 7401N E11
KP25 IND MEM H JP1 — KP03 MI 02 (1)H — 7401N E11

KP46 I BUS 02 L

KP25 IND B BUS H HA1 — -KP03 B BUS 02B2 H — 7401N E01 — JM1
KP25 IND MQ H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
KP25 IND OA H JD1 — 7401N E08
KP25 IND XR H JN1 — 7401N E11
KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP03 MQ 02L1 (1)H JE2 — KP03 MQ02 7474N E09 — KP24 LDMQ 05M2 H JB2
KP03 PC 02B1 (1)H JL1 — KP03 PCØ2 7474N E06 — KP24 LDPC 0-4 H HP2 — HM2
KP03 OA 02C1 (1)H — KP03 OAØ2 7474N E06 — KP24 LD OA 07M2 H HN2
KP03 XR 02F1 (1)H — KP03 XRØ2 7474N E12 — KP24 LDXR 09M2 H JP2 — +3V K31V1 H JN2 — JR1
KP03 LR 02G1 (1)H — KP03 LRØ2 7474N E12 — KP24 LDLR 08M2 H JS2 — +3V H — JT2 KP03 SHIFT BUS 02D2 L

KP24 JAM PC-MO H HH2 — KP03 PC 02B1 (Ø)H — 74HØØN EØ3

(OUTPUT BUF TO MEMORY)
(PROGRAM COUNTER)
(MEMORY ADDRESS REG)
(INDEX REGISTER)
(LIMIT REGISTER)

KP03 BAC 02A1 H
KP19 BAC-C ØØ-Ø8 H HV2
KP03 DS Ø2 (1)H
KP19 DS-C 11M2 H JH2
KPS3 IOB 02J1 H
KP19 I/O BUS-C 12M2 H HU2 JJ2
KP03 MI Ø2 (Ø)H
KP03 BAC 02A1 H
KP19 XOR-C 13M2 H JU2
KP19 SC-C 14M2 H JL2 JM2
KP03 LR 02G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE01 MQ 02D1 (1)H JS1
KP03 AC02 A1 (Ø)H
KP19 XOR-C 13M2 H
KP03 MI 02 (1)H
74H53N E10 — HN1 KP03 C BUS 02C2 L

HB2 — 74HØØN EØ3
KP19 C-A BUS ØBM1 H HH1
KP03 C BUS 02C2 H
KP19 -C-A Ø-12 14-17 H HM1
KP47 XRA-ØØ-Ø2 H HF2
KP03 XR 02F1 (1)H
KP03 PC02 MIX H HL1
KP47 PC-A Ø1-Ø2 H HK1
+3V H
KP09 AC0Ø A1 (1)H HP1
KP19 SL6-A 12M1 H HR1
HV1
KP19 I/O ADD-A 13M1 H JA1
HS1
KP45 CDL 18 H
KP03 OA 02C1 (1)H
+3V H
KP19 OA-A 1-4 H HU1
74H53N EØ5 — HL2 KP03 B BUS 02B2 L

KP03 A BUS 02A2 L
74H53N E02 — HJ1 KP03 B BUS 02B2 L

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H13

K2 — Σ — S1 — KP03 SUM BUS 02F2 H
J2 — Ø2

KP47 MI-B ØØ-Ø2 H HJ2
KP03 MI 02 (1)H
KP03 MI 02 (Ø)H
KP19 -MI-B ØØ-Ø8 H HS2
KP03 XR 02F1 (1)H
KP47 XR-B ØØ-Ø2 H HT2
KP19 AND-B Ø3M2 H HR2
KP03 BAC ØA1 H
KP03 MI 02 (1)H
74H53N E07 — HL2 KP03 B BUS 02B2 L

KP03 AC02 A1 (1)L JV1
+3V H
74HØØN EØ3 — JK1 KP03 BAC 02A1 H

+3V H
KP45 CDL 18 H JC1
KP25 LDAC SW H JF2
KP03 DS Ø3 (1)H JF1
KP03 DS02 7474N E09
+3V H

REGISTER MODUE
M226
H07
J07

-KP30 GR 4*TS02*(F+D) H L1
KP03 PC02 B1 (1)H M1
M133 FØ1 — N1

P2
R2
M133 FØ1 — S2 KP03 PC02 MIX H

KP03 USER MODE B (Ø)L P1
KP19 L BM UM -A H R1
M133 FØ1 — S1

A1
M611 MØ1 — B1
MØØ2 L17 U2
KP69 USER MODE (Ø)H

+3V H
74HØØN EØ3 — HE2 KP03 MDL 02I2 H
74H5ØN EØ4 — HF1 KP03 MI 02 (Ø)H
+3V H
+3V H
74H5ØN EØ4 — HK2 KP03 MI 02 (1)H
KP27 MDL 02 L HD2
KP32 LD MI H HE1

KP04 SUM BUS 03F2 H
KP19 DIVSHIFT-D ØØM1 H
KP19 MULSHIFT-D Ø1M1 H
KP02 SUM BUS 01F2 H
KP04 AC03 A1 (1)H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP02 AC01 A1 (1)H
KP05 SUM BUS 04F2 H
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP01 SUM BUS 00F2 H
KP03 SUM BUS 02F2 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D H
KP12 AC11 A1 (1)H HK1
+3V H
74H53N E05 — HV1
74H53N E06

KP03 SHIFT BUS 02D2 L
+3V H
KP03 AC02 A1 (1)H HT2
KP24 LD AC 04M2 H
KP03 AC02 7474N E12 — HS2
+3V H
KP03 AC02 A1 (Ø)H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H12
J12

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV
LH	KP15-00038	E			
	S GOLDSBY 7/14/70				
	F AUMANN 7/22/70				
JH	KP15-00052	F			
	S GOLDSBY 3/1/71				
	F AUMANN 3/2/71				
	KP15-00033	H			

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE REG & BUS BIT 02
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KP15-Ø-03 REV. J
SCALE		
SHEET 1 OF 1		DIST.

KP25 INC A BUS H HC1 — 7401N E01
-KP04 A BUS 03A2 H

KP25 IND SUM BUS H HB1 — 7401N E01
KP04 SUM BUS 00F2 H

KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP04 SHIFT BUS 03D2 H

KP25 IND AC H JH1 — 7401N E08
KP04 BAC 03A1 H

KP25 IND C BUS H JU1 — 7401N E11
-KP04 C BUS 03C2 H

KP25 IND MEM H JP1 — 7401N E11
KP04 MI 03 (1)H

KP46 I BUS 03 L

KP25 IND B BUS H HA1 — 7401N E01 — JM1
-KD04 B BUS 03B2 H

KP25 IND MQ H JE1 — 7401N E08

KP25 IND PC H JJ1 — 7401N E08

KP25 IND OA H JD1 — 7401N E08

KP25 IND XR H JN1 — 7401N E11

KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2

KP04 MQ 03L1 (1)H JE2 — KP04 MQ03 7474N E09 — KP24 LDMQ 05M2 H JB2

KP04 PC 03B1 (1)H JL1 — KP04 PC03 7474N E06 — KP24 LDPC 0-4 H HP2 — HM2

KP04 OA 03C1 (1)H — KP04 OA03 7474N E06 — KP24 LD OA 07M2 H HN2

KP04 XR 03F1 (1)H — KP04 XR03 7474N E12 — KP24 LDXR 09M2 H JP2 — JR1

KP04 SHIFT BUS 03D2 L JT2

KP04 LR 03G1 (1)H — KP04 LR03 7474N E12 — KP24 LDLR 08M2 H JS2

+3V H

KP24 JAM PC-MQ H HH2
KP04 PC 03B1 (0)H — 74H00N E03 — (OUTPUT BUF TO MEMORY)

+3V H — (PROGRAM COUNTER)

(MEMORY ADDRESS REG)

+3V K31V1 H JN2 — (INDEX REGISTER)

(LIMIT REGISTER)

KP04 MDL 03I2 H

+3V H — 74H00N E03 — HE2

74H50N E04 — HF1 KP04 MI 03 (0)H
+3V

74H50N E04 — HK2 KP04 MI 03 (1)H
+3V

KP27 MDL 03 L HD2
KP32 LD MI H HE1

KP04 BAC 03A1 H
KP19 BAC-C 00-08 H HV2

KP04 DS 03 (1)H
KP19 DS-C 11M2 H JH2

KP53 IOB 03J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2

KP04 MI 03 (0)H
KP04 BAC 03A1 H
KP19 XOR-C 13M2 H JU2

KP19 SC-C 14M2 H JL2 JM2

KP04 LR 03G1 (1)H
KP19 LR-C 02M2 H JV2

KP19 MQ-C 16M2 H JK2
KE01 MQ 03D1 (1)H JS1

KP04 AC03 A1 (0)H
KP19 XOR-C 13M2 H
KP04 MI 03 (1)H

74H53N E10 — HN1 KP04 C BUS 03C2 L

HB2 — 74H00N E03

KP19 C-A BUS 08M1 H HH1
KP04 C BUS 03 C2 H

KP19 -C-A 0-12 14-17 H HM1

KP47 XR-A 03-05 H HF2
KP04 XR 03F1 H

KP19 PC-A 03-04 H HL1
KP04 PC 03B1 (1)H HK1
+3V H

KP10 AC09 A1 (1)H HP1
KP19 SL6-A 12M1 H HR1

KP68 I/O A 03E2 H HV1
KP19 I/O ADD-A 13M1 H JA1

KP19 ADR SW-A 14M1 H HS1
KP45 CDL 03 H

KP04 OA 03C1 (1)H
+3V H
KP19 OA-A 1-4 H HU1

74H53N E02 — HJ1 KP04 B BUS 03B2 L

74H53N E13

74H53N E06

KP04 A BUS 03A2 L

R2 — Σ — C1 — KP04 SUM BUS 03F2 H
L2 — 03

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H13

KP04 AC03 A1 (1)L JV1
+3V H — 74H00N E03 — JK1 KP04 BAC 03A1 H

KP47 MI-B 03-04 H HJ2
KP04 MI 03 (1)H

KP04 MI 03 (0)H
KP19 -MI-B 00-08 H HS2

KP04 XR 03F1 (1)H
KP47 XR-B 03-05 15M2 H HT2

KP19 AND-B 03M2 H HR2
KP04 BAC 03A1 H
KP04 MI 03 (1)H

74H53N E07 — HL2 KP04 B BUS 03B2 L

+3V H

KP45 CDL 03 H JC1
KP25 LDAC SW H JF2 — KP04 DS03 7474N E09 — JF1 KP04 DS 03 (1)H

+3V H

REGISTER MODULE
M226
H08
J08

KP19 DIVSHIFT-D 00M1 H
KP05 SUM BUS 04F2 H

KP19 MULSHIFT-D 01M1 H
KP03 SUM BUS 02F2 H

KP05 AC04 A1 (1)H
KP19 RAL-D 02M1 H

+3V H
KP19 RAR-D 03M1 H
KP03 AC02 A1 (1)H

KP06 SUM BUS 05F2 H JB1
KP19 RTL-D 04M1 H

KP19 RTR-D 05M1 H
KP02 SUM BUS 01F2 H

KP04 SUM BUS 03F2 H
KP19 NO SHIFT-D 06M1 H

KP19 SW-D 07M1 H
KP13 AC12 A1 (1)H HU1
+3V L21U1 H

74H53N E08 — JD2 — KP24 LD AC 04M2 H

74H53N E09

+3V H — KP04 SHIFT BUS 03D2 L — KP04 AC03 A1 (1)H HV2

KP04 AC03 A1 (1)H — KP04 AC03 7474N E12 — HU2 KP04 AC03 A1 (0)H

+3V H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	C
	S GOLDSBY 7/17/70	
	F AUMANN 7/22/70	
GH	KP15-00052	D
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00058	E

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE: REG & BUS BIT 03
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON: KP15		SIZE D · CODE 85 · NUMBER KP15-0-09 · REV. E
SCALE		
SHEET 1 OF 1		DIST.

KP25 IND A BUS H HD1 — 7401N E01 — JM1
-KP05 A BUS Ø4A2 H
KP25 IND SUM BUS H HB1 — 7401N E01
KP05 SUM BUS Ø4E2 H
KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP05 SHIFT BUS Ø4D2 H
KP25 IND AC H JH1 — 7401N E08
KP05 BAC Ø4A1 H
KP25 IND C BUS H JU1 — 7401N E11
-KP05 C BUS Ø4C2 H
KP25 IND MEM H JP1 — 7401N E11
KP05 MI Ø4 (1)H
KP46 I BUS Ø4 L

KP25 IND B BUS H HA1 — 7401N E01
-KP05 B BUS Ø4B2 H
KP25 IND MQ H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
KP25 IND OA H JD1 — 7401N E08
KP25 IND XR H JN1 — 7401N E11
KP25 IND LR H JR2 — 7401N E11

NOTE: SET MQ PRESETS MQ Ø0-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP24 LDMQ Ø5M2 H JB2 — KP05 MQØ4 7474N EØ9 — JE2 KP05 MQ Ø4L1 (1)H
KP24 JAM PC-MQ H HH2 — 74H00N EØ3
KP05 PC Ø4B1 (Ø)H
(OUTPUT BUF TO MEMORY)

+3V H — HM2
KP24 LDPC Ø-4 H HP2 — KP05 PCØ4 7474N EØ6 — JL1 KP05 PC Ø4B1 (1)H
+3V H
(PROGRAM COUNTER)

+3V H
KP24 LD OA Ø7M2 H HN2 — KP05 OAØ4 7474N EØ6 — KP05 OA C1 (1)H
(MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP24 LDXR Ø9M2 H JP2 — KP05 XRØ4 7474N E12 — KP05 XR Ø4F1 (1)H — JR1
(INDEX REGISTER)

+3V H
KP24 LDLR Ø8M2 H JS2 — KP05 LRØ4 7474N E12 — KP05 LR Ø4G1 (1)H
KP05 SHIFT BUS Ø4D2 L JT2
(LIMIT REGISTER)

KP05 BAC Ø4A1 H
KP19 BAC-C ØØ-Ø8 H HV2
KP05 DSØ4 (1)H
KP19 DS-C 11M2 H JH2
KP53 IOB Ø4J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP05 MI Ø4 (Ø)H
KP05 BAC Ø4A1 H
KP19 XOR-C 13M2 H JU2
74H53N E10 — HN1 KP05 C BUS Ø4C2 L

HB2 — 74H00N EØ3
KP19 C-A BUS Ø8M1 H HH1
KP05 C BUS Ø4C2 H
KP19 -C-A Ø-12 14-17 H HM1
KP47 XR-A Ø3-Ø5 H HF2
KP05 XR Ø4F1 (1)H
KP19 PC-A Ø3-Ø4 H HL1
KP05 PC Ø4B1 (1)H HK1
+3V H

KP05 A BUS Ø4A2 L
74H53N EØ2 — HJ1 — T2 — Σ Ø4 — V1 — KP05 SUM BUS Ø4F2 H
S2
KP05 B BUS Ø4B2 L

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H13

KP19 SC-C 14M2 JL2 — JM2
KP05 LR Ø4G1 (1)H
KP19 LR-C ØØM2 H JV2
KP19 MQ-C 16M2 H JK2
KEØ1 MQ Ø4D1 (1)H JS1
KP05 AC04 A1 (Ø)H
KP19 XOR-C 13M2 H
KP05 MI Ø4 (1)H
74H53N E13

KP11 AC1Ø A1 (1)H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A Ø4E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL Ø4 H
KP05 OA Ø4C1 (1)H
+3V H
KP19 OA-A BUS 1-4 H HU1
74H53N E06

KP05 AC04 A1 (1)L JV1
+3V H
74H00N EØ3 — JK1 KP05 BAC Ø4A1 H

KP47 MI-B Ø3-Ø4 H HJ2
KP05 MI Ø4 (1)H
KP05 MI Ø4 (Ø)H
KP19 -MI-B ØØ-Ø8 H HS2
KP05 XR Ø4F1 (1)H
KP47 XR-B Ø3-Ø5 H HT2
KP19 AND-B Ø3M2 H HR2
KP05 BAC Ø4A1 H
KP05 MI Ø4 (1)H
74H53N EØ7 — HL2 KP05 B BUS Ø4B2 L

+3V H
KP44 CDL Ø4 H JC1
KP25 LDAC SW H JF2
KP05 DSØ4 7474N EØ9 — JF1
+3V H

REGISTER MODULE
M226
HØ9
JØ9

KP05 MDL Ø4I2 H
+3V H — 74H00N EØ3 — HE2
74H50N EØ4 — HF1 KP05 MI Ø4 (Ø)H
+3V H
+3V H
74H50N EØ4 — HK2 KP05 MI Ø4 (1)H
KP27 MDL Ø4 L HD2
KP32 LD MI H HE1

KP19 DIVSHIFT-D ØØM1 H
KP06 SUM BUS Ø5F2 H
KP19 MULSHIFT-D Ø1M1 H
KP04 SUM BUS Ø3F2 H
KP06 AC05 A1 (1)H
KP19 RAL-D Ø2M1 H
+3V H
KP19 RAR-D Ø3M1 H
KP04 AC03 A1 (1)H
74H53N E10 — JD1
KP05 SHIFT BUS Ø4D2 L
KP24 LD AC Ø4M2 H
KP07 SUM BUS Ø6F2 H JE1
KP19 RTL-D Ø4M1 H
KP19 RTR-D Ø5M1 H
KP03 SUM BUS Ø2F2 H
KP05 SUM BUS Ø4F2 H JH1
KP19 NO SHIFT-D Ø6M1 H
KP19 SW-D Ø7M1 H
KP14 AC13 A1 (1)H JA1
+3V H
74H53N E11

+3V H
KP05 AC04 A1 (Ø)H
KP05 AC04 7474N E15 — JH2
JJ2
+3V H
KP05 AC04 A1 (1)H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	C
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	D
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	E
	H. Ba 6/22/71	
	F Aumann 6/24/71	

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE: REG & BUS BIT Ø4
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KP15		SIZE D · CODE BS · NUMBER KP15-Ø-Ø5 · REV. E
SCALE		DIST.
SHEET 1 OF 1		

KP25 IND A BUS H HD1 7401N E01
KP05 A BUS 05A2 H
KP25 IND SUM BUS H HB1 7401N E01
KP06 SUM BUS 05 H
KP25 IND SHIFT BUS H HG1 7401N E01
-KP06 SHIFT BUS 05 H
KP25 IND AC H JH1 7401N E08
KP06 BAC 01 H
KP25 IND C BUS H JU1 7401N E11
-KP06 C BUS 05C2 H
KP25 IND MEM H JP1 7401N E11
KP06 MI 05 (1 H
KP46 I BUS 05 L
KP25 IND B BUS H HA1 7401N E01 JM1
-KP06 B BUS 05B2 H
KP25 IND MQ H JE1 7401N E08
KP25 IND PC H JJ1 7401N E08
KP25 IND OA H JD1 7401N E08
KP25 IND XR H JN1 7401N E11
KP25 IND LR H JR2 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP24 LDMQ 05M2 H JB2
D 1 KP06 MQ05 7474N E09 C 0
JE2 KP06 MQ 05L1 (1 H
(OUTPUT BUF TO MEMORY)

+3V H
KP24 LDPC 05 H HP2
HM2 KP06 PC05 7474N E06 JL1 KP06 PC 05B1 (1 H
(PROGRAM COUNTER)

+3V H
KP24 LD OA 07M2 H HN2
KP06 OA05 7474N E06
KP06 OA 05C1 (1 H
(MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP24 LDXR 09M2 H JP2
KP06 XR05 7474N E12 JR1
KP06 XR 05F1 (1 H
KP06 SHIFT BUS 05D2 L JT2
(INDEX REGISTER)

+3V H
KP24 LDLR 08M2 H JS2
KP06 LR05 7474N E12 C 0
KP06 LR 05G1 (1 H
(LIMIT REGISTER)

KP24 JAM PC-MQ H HH2
KP06 PC 05B1 (0 H
74H00N E03

KP06 BAC 05A1 H
KP19 BAC-C 00-08 H HV2
KP06 DS 05 (1 H
KP19 DS-C 11M2 H JH2
KP53 IOB 05J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP06 MI 05 (0 H
KP06 BAC 05A1 H
KP19 XOR-C 13M2 H JU2
KP19 SC-C 14M2 H JL2 JM2
KP06 LR 05G1 (1 H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE01 MQ 05D1 (1 H JS1
KP06 AC05 A1 (0 H
KP19 XOR-C 13M2 H
KP06 MI 05 (1 H
74H53N E13 HN1 KP06 C BUS 05C2 L

HB2 74H00N E03
KP19 C-A BUS 00M1 H HH1
KP06 C BUS 05C2 H
KP19 -C-A 0-12 14-17 H HM1
KP47 XR-A 03-05 H HF2
KP06 XR 05F1 (1 H
KP19 PC-A 05 H HL1
KP06 PC 05B1 (1 H HK1
+3V H
74H53N E02 HJ1 KP06 B BUS 05B2 L

KP06 A BUS 05A2 L
KP12 AC11 A1 (1 H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 05E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL 05 H
KP06 OA 05C1 (1 H
+3V H
KP19 OA-A 5 H HU1
74H53N E06

KP06 AC05 A1 (1 L JV1
+3V H
74H00N E03 JK1 KP06 BAC 05A1 H

KP47 MI-B 05 H HJ2
KP06 MI 05 (1 H
KP06 MI 05 (0 H
KP19 -MI-B 00-08 H HS2
KP06 XR 05F1 (1 H
KP47 XR-B 03-05 H HT2
KP19 AND-B 03M2 H HR2
KP06 BAC 05A1 H
KP06 MI 05 (1 H
74H53N E07 HL2 KP06 B BUS 05B2 L

+3V H
KP44 CDL 05 H JC1
KP25 LDAC SW H JF2
D 1 KP06 DS05 7474N E09 C 0
JF1 KP06 DS 05 (1 H

REGISTER MODULE
M226
H10
J10

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H13

V2 U2 C IN C OUT 05 U1 L1 M2 P2 N2
KP06 SUM BUS 05F2 H
KP07 NCA BIT 06 L
KP07 SCA BIT 06 L
KP07 CA BIT 06 L
KP07 SNCA BIT 06 L

+3V H
KP06 MDL 05I2 H
74H00N E03 HE2
74H50N E04 HF1 KP06 MI 05 (0 H
+3V H
74H50N E04 HK2 KP06 MI 05 (1 H
KP27 MDL 05 L HD2
KP32 LD MI H HE1

KP19 DIVSHIFT-D 00M1 H
KP05 SUM BUS 06F2 H
KP19 MULSHIFT-D 01M1 H
KP05 SUM BUS 04F2 H
KP07 AC06 A1 (1 H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP05 AC04 A1 (1 H
KP08 SUM BUS 07F2 H
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP04 SUM BUS 03F2 H JU2
KP06 SUM BUS 05 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D 07M1 H
KP15 AC14 A1 (1 H JF1
+3V H
74H53N E13 JC1
74H53N E14

KP06 SHIFT BUS 05D2 L
+3V H
KP06 AC05 A1 (1 H
D 1 KP06 AC05 7474N E15 C 0 JE2 JF2
KP24 LD AC 04M2 H
+3V H
KP06 AC05 A1 (0 H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN
M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	C
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GW	KP15-00052	D
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	E
	N. Cook 6/22/71	
	F Aumann 6/22/71	

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. H COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE REG & BUS BIT 05
PROJ. ENG. C BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KP15-0-06 REV. E
SCALE		DIST.
SHEET 1 OF 1		

KP25 IND A BUS H HD1 — 7401N E01
-KP07 A BUS 06A2 H
KP25 IND SUM BUS H HB1 — 7401N E01
KP07 SUM BUS 06F2 H
KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP07 SHIFT BUS 06D2 H
KP25 IND AC H JH1 — 7401N E08
KP07 BAC 06A1 H
KP25 IND C BUS H JU1 — 7401N E11
-KP07 C BUS 06C2 H
KP25 IND MEM H JP1 — 7401N E11
KP07 MI 06 (1)H
KP46 I BUS 06 L
KP25 IND B H HA1 — 7401N E01 — JM1
-KP07 B BUS 06B2 H
KP25 IND MQ H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
KP25 IND OA H JD1 — 7401N E08
KP25 IND XR H JN1 — 7401N E11
KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ J0-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP24 LDMQ 05M2 H JB2
KP07 MQ 06L1 (1)H JE2
KP07 MQ 06 — KP07 MQ06 7474N E09
KP24 JAM PC-MQ H HH2
KP07 PC 06B1 (0)H
74H00N E03
(OUTPUT BUF TO MEMORY)

+3V H
KP24 LDPC 06-17M2 H HP2
KP07 PC 06B1 (1)H JL1
KP07 PC — KP07 PC06 7474N E06
+3V H
(PROGRAM COUNTER)

+3V H
KP24 LD OA 07M2 H HN2
KP07 OA 06 C1 (1)H
KP07 OA — KP07 OA06 7474N E06
(MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP24 LDXR 09M2 H JP2
KP07 XR 06F1 (1)H
KP07 XR — KP07 XR06 7474N E12 — JR1
(INDEX REGISTER)

+3V H
KP24 LDLR 08M2 H JS2
KP07 SHIFT BUS 06D2 L JT2
KP07 LR 06G1 (1)H
KP07 LR — KP07 LR06 7474N E12
(LIMIT REGISTER)

KP07 BAC 06A1 H
KP19 BAC-C 00-08 H HV2
KP07 DS06 (1)H
KP19 DS-C 11M2 H JH2
-KP53 IOB 06J1 1
KP19 I/O BUS-C 12M2 H HU2 JJ2
KP07 MI 07 (0)H
KP07 BAC 06A2 H
KP19 X0R-C 13M2 H JU2
KP19 SC-C 14M2 JL2 JM2
KP07 LR 06G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE01 MQ 06D1 (1)H JS1
KP07 AC06 A1 (0)H
KP19 XOR-C 13M H
KP07 MI 06 (1)H
74H53N E13

HB2 — 74H00N E03
KP19 C-A BUS 08M1 H HH1
KP07 C BUS 06C2 H
KP19 -C-A 0-12 14-17 H HM1
HN1 KP07 C BUS 06C2 L
KP47 XR-A 06-17 H HF2
KP07 XR 06F1 (1)H
KP19 PC-A 06-17 11M1 H HL1
KP07 PC 06B1 (1)H HK1
+3V H
74H53N E02

KP07 A BUS 06A2 L HJ1
KP07 B BUS 06B2 L E1
D2 E2 M1 D1 J1 B1
C IN C OUT 06
KP07 SUM BUS 06F2 H
KP07 NCA BIT 06 L
KP07 SCA BIT 06 L
KP07 CA BIT 06 L
KP07 SCNA BIT 06 L

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H23

KP13 AC12 A1 (1)H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 06E2 H HV1
I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL 06 H
KP07 OA 06C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1
74H53N E06

KP07 AC06 A1 (1)L JV1
+3V H
74H00N E03 — JK1 KP07 BAC 06A1 H

+3V H
KP44 CDL 06 H JC1
KP25 LDAC SW H JF2
KP07 DS — KP07 DS06 7474N E09 — JF1 KP07 DS 06 (1)H
+3V H

REGISTER MODULE
M226
H14
J14

KP47 MI-B 06-08 H HJ2
KP07 MI 06 (1)H
-KP07 MI 06 (1)H
KP19 -MI-B 00-08 H HS2
KP07 XR 06F1 (1)H
KP47 XR-B 06-17 15M2 H HT2
KP19 AND-B 03M2 H HR2
KP07 BAC 06A1 H
KP07 MI 06 (0)H
74H53N E07 — HL2 KP07 B BUS 06B2 L

+3V H
KP07 MDL 06I2 H HE2
74H00N E03
74H50N E04 — HF1 KP07 MI 06 (0)H
74H50N E04 — HK2 KP07 MI 06 (1)H
KP27 MDL 06 L HD2
KP32 LD MI H HE1

KP19 DIVSHIFT-D 00M1 H
KP08 SUM BUS 07F2 H
KP19 MULSHIFT-D 01M1 H
KP06 SUM BUS 05F2 H
KP08 AC07 A1 (1)H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP06 AC05 A1 (1)H
KP19 SUM BUS 08F2 H
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP19 SUM BUS 04F2 H
KP07 SUM BUS 06F2 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D 07M1 H
KP19 AC1S A1 (1)H JJ1
+3V H
74H53N E16 — JK1
74H53N E17

+3V H
KP07 SHIFT BUS 06D2 L
KP24 LD AC 04M2 H
KP07 AC06 — KP07 AC06 7474N E18 — JK2 JL2
KP07 AC06 A1 (1)H
KP07 AC06 A1 (0)H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	D
	F Aumann 6/24/71	

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE: REG & BUS BIT 06
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON: KP15		
SCALE		SIZE D; CODE BS; NUMBER KP15-0-07; REV. D
SHEET 1 OF 1		DIST.

KP25 IND A BUS H — HD1 — 7401N E01
-KP08 A BUS 07A2 H

KP25 IND SUM BUS H — HB1 — 7401N E01
KP08 SUM BUS 07F2 H

KP25 IND SHIFT BUS H — HC1 — 7401N E01
-KP08 SHIFT BUS 07D2 H

KP25 IND AC H — JH1 — 7401N E08
KP08 BAC 07A1 H

KP25 IND C BUS H — JU1 — 7401N E11
-KP08 C BUS 07C2 H

KP25 IND MEM H — JP1 — 7401N E11
KP08 MI 07 (1)H

KP46 I BUS 07 L

KP25 IND B BUS H — HA1 — 7401N E01 — JM1
-KP08 B BUS 07B2 H

KP25 IND MQ H — JE1 — 7401N E08

KP25 IND PC H — JJ1 — 7401N E08

KP25 IND OA H — JD1 — 7401N E08

KP25 IND XR H — JN1 — 7401N E11

KP25 IND LR H — JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L — JD2

KP24 LDMQ 05M2 H — JB2 — KP08 MQ07 7474N E09 — JE2 — KP08 MQ 07L1 (1)H

KP24 JAM PC-MQ H — HH2
KP08 PC 07B1 (0)H — 74H00N E03

(OUTPUT BUF TO MEMORY)

+3V H — HM2 — KP08 PC07 7474N E06 — JL1 — KP08 PC 07B1 (1)H

KP24 LDPC 06-17M2 H — HP2

+3V H
(PROGRAM COUNTER)

+3V H — KP08 OA07 7474N E08 — KP08 OA 07C1 (1)H

KP24 LD OA 07M2 H — HN2

(MEMORY ADDRESS REG)

+3V K31V1 H — JN2 — KP08 XR07 7474N E12 — KP08 XR 07F1 (1)H

KP24 LDXR 09M2 H — JP2 — JK1

(INDEX REGISTER)

+3V H — KP08 LR07 7474N E12 — KP08 LR 07G1 (1)H

KP08 SHIFT BUS 07D2 L — JT2

KP24 LDLR 08M2 H — JS2

(LIMIT REGISTER)

KP08 BAC 07A1 H
KP19 BAC-C 00-08 H — HV2

KP08 DS 07 (1)H
KP19 DS-C 11M2 H — JH2

KP53 IOB 07J1 H — HU2
KP09 MDL 08I2 H — JJ2

KP08 MI 07 (0)H
KP08 BAC 07A1 H
KP19 XOR-C 13M2 H — JU2

74H53N E10 — HN1 — KP08 C BUS 07C2 L

HB2 — 74H00N E03

KP19 C-A BUS 08M1 H — HH1
KP08 C BUS 07C2 H

KP19 -C-A 0-12 14-17 H — HM1

KP47 XR-A 06-17 H — HF2
KP08 XR 07F1 (1)H

KP19 PC-A 06-17 11M1 H — HL1
KP08 PC 07B1 (1)H — HK1
+3V H

74H53N E02 — HJ1 — KP08 A BUS 07A2 L

KP08 B BUS 07B2 L — F2

H2 — Σ — A1 — KP08 SUM BUS 07F2 H
07

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H23

KP14 AC13 A1 (1)H — HP1
KP19 SL6-A 12M1 H — HR1

KP68 I/O A 07E2 H — HV1
KP19 I/O ADD-A 13M1 H — JA1

KP19 ADR SW-A 14M1 H — HS1
KP44 CDL 07 H

KP08 OA 07C1 (1)H
+3V H
KP19 OA-A 15M1 H — HU1

74H53N E06

KP19 SC-C 14M2 H — JL2 — JM2

KP08 LR 07G1 (1)H
KP19 LR-C 02M2 H — JV2

KP19 MQ-C 16M2 H — JK2
KE01 MQ 07D1 (1)H — JS1

KP08 AC07 A1 (0)H
KP19 XOR-C 13M2 H
KP08 MI 07 (1)H

74H53N E13

KP08 AC07 A1 (1)L — JV1
+3V H — 74H00N E03 — JK1 KP08 BAC 07A1 H

KP47 MI-B 06-08 H — HJ2
KP08 MI 07 (1)H

KP08 MI 07 (0)H
KP19 -MI-B 00-06 H — HS2

KP08 XR 07F1 (1)H
KP47 XR-B 06-17 1SM2 H — HT2

KP19 AND-B 03M2 H — HR2
KP08 BAC 07A1 H
KP08 MI 07 (1)H

74H53N E07 — HL2 KP08 B BUS 07B2 L

+3V H — D 1 KP08 DS07 7474N E09 — JF1 KP08 DS 07 (1)H

KP44 CDL 07 H — JC1

KP25 LDAC SW H — JF2

C 0

+3V H

REGISTER MODULE
M226
H15
J15

+3V H — 74H00N E03 — HE2 — KP08 MDL 07I2 H

74H50N E04 — HF1 KP08 MI 07 (0)H

+3V H

74H50N E04 — HK2 KP08 MI 07 (1)H

KP27 MDL 07 L — HD2
KP32 LD MI H — HE1

KP19 DIVSHIFT-D 00M1 H
KP09 SUM BUS 08F2 H

KP19 MULSHIFT-D 01M1 H
KP07 SUM BUS 06F2 H

KP09 AC08 A1 (1)H
KP19 RAL-D 02M1 H

+3V H
KP19 RAR-D 03M1 H
KP01 AC06 A1 (1)H

74H53N E19 — JM1 — KP08 AC07 7474N E18 — JN2 KP08 AC07 A1 (1)H

KP08 SHIFT BUS 07D2 L

KP24 LD AC 04M2 H

+3V H — JM2 — KP08 AC07 A1 (0)H

KP10 SUM BUS 09F2 H — JL1
KP19 RTL-D 04M1 H

KP19 RTR-D 05M1 H
KP06 SUM BUS 05F2 H

KP08 SUM BUS 07F2 H
KP19 NO SHIFT-D 06M1 H

74H53N E20

KP19 SW-D 07M1 H
KP17 AC16 A1 (1)H — JP1
+3V H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	D

DRN J FASSHAUER	DATE 10/7/68	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D R COOK	DATE 10/7/68	
ENG F AUMANN	DATE 10/7/68	TITLE REG&BUS BIT 07
PROJ ENG G BUTLER	DATE 10/7/68	
PROD T LASKEY	DATE 10/7/68	
FIRST USED ON KP15		SIZE D / CODE 85 / NUMBER KP15-0-08 / REV. D
SCALE		
SHEET 1 OF 1		DIST.

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

(OUTPUT BUF TO MEMORY)
(PROGRAM COUNTER)
(MEMORY ADDRESS REG)
(INDEX REGISTER)
(LIMIT REGISTER)

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H23

REGISTER MODULE
M226
H16
J16

AC SHIFTER MODULE
1 BIT OF 9 SHOWN
M227
H12
J12

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	D

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE: REG & BUS BIT 08
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON: KP15		SIZE D / CODE BS / NUMBER KP15-0-09 / REV. D
SCALE		DIST.
SHEET 1 OF 1		

NOTE: SET MO PRSETS MO 00-17 TO ALL 1'S
JAM PC-MO CAUSES ZEROS
TRANSFER OF PC TO MO

(OUTPUT BUF TO MEMORY)
(PROGRAM COUNTER)
(MEMORY ADDRESS REG)
(INDEX REGISTER)
(LIMIT REGISTER)

ADDER MODULE 1 BIT OF 6 SHOWN
M164
H23

REGISTER MODULE
M226
H17
J17

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
	KP15-00052	C

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE REG & BUS BIT 09
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KP15		SIZE D / CODE 65 / NUMBER KP15-0-10 / REV. C
SCALE		
SHEET 1 OF 1		DIST.

KP25 IND A BUS H HD1 — 7401N E01 — -KP11 A BUS 10A2 H

KP25 IND SUM BUS H HB1 — 7401N E01 — KP11 SUM BUS 10F2 H

KP25 IND SHIFT BUS H HC1 — 7401N E01 — -KP11 SHIFT BUS 10D2 H

KP25 IND AC H JH1 — 7401N E08 — KP11 BAC 10A1 H

KP25 IND C BUS H JN1 — 7401N E11 — -KP11 C BUS 10C2 H

KP25 IND MEM H JP1 — 7401N E11 — KP11 MI 10 (1)H

KP46 I BUS 10 L

KP25 IND B BUS H HA1 — 7401N E01 — JM1 — -KP11 B BUS 10B2 H

KP25 IND MQ H JE1 — 7401N E08

KP25 IND PC H JJ1 — 7401N E08

KP25 IND OA H JD1 — 7401N E08

KP25 IND XR H JN1 — 7401N E11

KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2

KP11 MQ10 7474N E09 — JE2 KP11 MQ 10L1 (1)H — KP24 LDMQ 05M2 H JB2

KP11 PC10 7474N E06 — +3V H — JL1 KP11 PC 10B1 (1)H — KP24 LDPC 06-17M2 H HP2 — HM2

KP11 OA10 7474N E06 — +3V H — KP11 OA 10C1 (1)H — KP24 LD OA 07M2 H HN2

+3V K31V1 H JN2 — KP11 XR10 7474N E12 — KP11 XR 10F1 (1)H — KP24 LDXR 09M2 H JP2 — JR1

KP11 SHIFT BUS 10D2 L JT2 — +3V H — KP11 LR10 7474N E12 — KP11 LR 10G1 (1)H — KP24 LDLR 08M2 H JS2

KP24 JAM PC-MQ H HH2 — 74H00N E03 — KP11 PC 10B1 (0)H

(OUTPUT BUF TO MEMORY)

+3V H

(PROGRAM COUNTER)

(MEMORY ADDRESS REG)

(INDEX REGISTER)

(LIMIT REGISTER)

KP11 BAC 10A1 H
KP19 BAC-C 09-17 H HV2

KP11 DS 10 (1)H
KP19 DS-C 11M2 H JH2

KP52 IOB 10J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2

KP11 MI 10 (0)H
KP11 BAC 10A1 H
KP19 XOR-C 13M2 H JU2

KP19 SC-C 14M2 JL2 JM2

KP11 LR 10G1 (1)H
KP19 LR-C 02M2 H JV2

KP19 MQ-C 16M2 H JK2
KE02 MQ 10D1 (1)H JS1

KP11 AC10 A1 (0)H
KP19 XOR-C 13M2 H
KP11 MI 10 (1)H

74H53N E13 — HN1 KP11 SUM BUS 10C2 L

74H00N E03 — HB2

KP19 C-A BUS 08M1 H HH1
KP11 C BUS 10C2 H

KP19 -C-A 0-12 14-17 H HM1

KP47 XR-A 06-17 H HF2
KP11 XR 10F1 (1)H

KP19 PC-A 06-17 11M1 H HL1
KP11 PC 10B1 (1)H HK1
+3V H

KP17 AC16 A1 (1)H HP1
KP19 SL6-A 12M1 H HR1

KP68 I/O A 10E2 H HV1
KP19 I/O ADD-A 13M1 H JA1

KP19 ADR SW-A 14M1 H HS1
KP44 CDL 10 H

KP10 OA 10C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1

74H53N E02 — HJ1 KP11 A BUS 10A2 L

KP11 B BUS 10B2 L S2

Σ 10 — T2 — V1 KP11 SUM BUS 10F2 H

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H23

KP11 AC10 A1 (1)L JV1

74H00N E03 — JK1 KP11 BAC 10A1 H

+3V H

+3V H

KP44 CDL 10 H JC1

KP11 DS10 7474N E09 — JF1 KP11 DS 10 (1)H

KP25 LDAC SW H JF2

+3V H

REGISTER MODULE
M226
H18
J18

KP47 MI-B 09-17 H HJ2
KP11 MI 10 (1)H

KP11 MI 10 (0)H
KP19 -MI-B 09-17 H HS2

KP11 XR 10F1 H
KP47 XR-B 06-17 15M2 H HT2

KP19 AND-B 03M2 H HR2
KP11 BAC 10A1 H
KP10 MI 10 (1)H

74H53N E07 — HL2 KP11 B BUS 10B2 L

+3V H

KP11 MDL 10I2 H

74H00N E03 — HE2

74H50N E04 — HF1 KP11 MI 10 (0)H

74H50N E04 — HK2 KP11 MI 10 (1)H

KP27 MDL 10 L HD2
KP32 LD MI H HE1

KP12 SUM BUS 11F2 H
KP19 DIVSHIFT-D 00M1 H

KP19 MULSHIFT-D 01M1 H
KP12 SUM BUS 09F2 H

KP12 AC11 A1 (1)H
KP19 RAL-D 02M1 H

+3V H
KP19 RAR-D 03M1 H
KP10 AC09 A1 (1)H

KP13 SUM BUS 12F2 H
KP19 RTL-D 04M1 H

KP19 RTR-D 05M1 H
KP09 SUM BUS 08F2 H

KP11 SUM BUS 10F2 H
KP19 NO SHIFT-D 06M1 H

KP02 AC01 A1 (1)H HC1
KP19 SW-D 07M1 H
+3V H

74H53N E02 — HR2 KP11 SHIFT BUS 10D2 L

+3V H

KP11 AC10 A1 (1)H HN2

KP11 AC10 7474N E07 — KP24 LD AC 04M2 H

HP2 KP11 AC10 A1 (0)H

+3V H

74H53N E03

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	D
	N. Cook 6/24/71	
	F Aumann 6/24/71	

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE: REG & BUS BIT 10
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON: KP15		
SCALE		SIZE D · CODE BS · NUMBER KP15-0-11 · REV. D
SHEET 1 OF 1		DIST.

KP25 IND A BUS H HD1 — 7401N E01
-KP12 A BUS 11A2 H
KP25 IND SUM BUS H HB1 — 7401N E01
KP12 SUM BUS 11F2 H
KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP12 SHIFT BUS 11D2 H
KP25 IND AC H JH1 — 7401N E08
KP12 BAC 11A1 H
KP25 IND C BUS H JU1 — 7401N E11
-KP12 C BUS 11C2 H
KP25 IND MEM H JP1 — 7401N E11
KP12 MI 11 (1)H

KP46 I BUS 11 L

KP25 IND B BUS H HA1 — 7401N E01 — JM1
-KP12 B BUS 11B2 H
KP25 IND MQ H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
KP25 IND OA H JD1 — 7401N E08
KP25 IND XR H JN1 — 7401N E11
KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP12 MQ 11L1 (1)H JE2 — KP12 MQ M011 7474N E09 — JB2 KP24 LDMQ 05M2 H
(OUTPUT BUF TO MEMORY)

+3V H HM2
KP12 PC 11B1 (1)H JL1 — KP12 PC11 7474N E06 — HP2 KP24 LDPC 06-17M2 H
+3V H
(PROGRAM COUNTER)

+3V H
KP12 OA 11C1 (1)H HN2 — KP12 OA11 7474N E06 — KP24 LD OA 07M2 H
(MEMORY ADDRESS REG)

+3V H JN2
KP12 XR 11F1 (1)H
KP12 XR11 7474N E12 — JP2 KP24 LDXR 09M2 H — JR1
(INDEX REGISTER)

KP12 SHIFT BUS 11D2 L
+3V H
KP12 LR 11G1 (1)H JR2
KP12 LR11 7474N E12 — JS2 KP24 LDLR 08M2 H — JT2
(LIMIT REGISTER)

KP24 JAM PC-MO H HH2
KP12 PC 11B1 (0)H — 74H00N E03

KP12 BAC 11A1 H
KP19 BAC-C 09-17 H HV2
KP12 DS 11 (1)H
KP19 DS-C 11M2 H JH2
KP52 IOB 11J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP12 MI 11 (0)H
KP12 BAC 11A1 H
KP19 XOR-C 13M2 H JU2
JL2
KP19 SC-C 14M2 H JM2
KP12 LR 11G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE02 MQ 11D1 (1)H JS1
KP12 MI 11 (1)H
KP19 XOR-C 13M2 H
KP12 MI 10 (1)H
74H53N E10 — HN1 KP12 C BUS 11C2 L
74H53N E13

HB2
74H00N E03
KP19 C-A BUS 08M1 H HH1
KP12 C BUS 11C2 H
KP19 -C-A 0-12 14-17 H HM1
KP47 XR-A 06-17 H HF2
KP12 XR 11F1 (1)H
KP19 PC-A 06-17 11M1 H HL1
KP12 PC 11B1 (1)H HK1
+3V H
KP18 AC17 A1 (1)H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 11E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL 11 H
KP12 OA 11C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1
74H53N E02 — HJ1 KP12 B BUS 11B2 L
74H53N E05

KP12 A BUS 11A2 L
KP12 B BUS 11B2 L
V2 U2 Σ 11 U1 L1 M2 P2 N2
KP12 SUM BUS 11F2 H
KP13 NCA BIT 12 L
KP13 SCA BIT 12 L
KP13 CA BIT 12 L
KP13 SNCA BIT 12 L

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
H23

KP12 AC11 A1 (1)L JV1
+3V H
74H00N E03 — JK1 KP12 BAC 11A1 H

+3V H
KP44 CDL 11 H JC1
KP25 LDAC SW H JF2
KP12 DS11 7474N E09 — JF1 KP12 DS 11 (1)H
+3V H

KP47 MI-B 09-17 H HJ2
KP12 MI 11 (1)H
KP12 MI 11 (0)H
KP19 -MI-B 09-17 H HS2
KP12 XR 11F1 (1)H
KP47 XR-B 06-17 15M2 H HT2
KP19 AND-B 03M2 H HR2
KP12 BAC 11A1 H
KP12 MI 11 (1)H
74H53N E07 — HL2 KP12 B BUS 11B2 L

REGISTER MODULE
M226
H19
J19

+3V H
74H00N E03 — HE2
KP12 MDL 11I2 H
74H50N E04 — HF1 KP12 MI 11 (0)H
+3V H
74H50N E04 — HK2 KP12 MI 11 (1)H
KP27 MDL 11 L HD2
KP32 LD MI H HE1

KP13 SUM BUS 12F2 H
KP19 RIVSHIFT-D 00M1 H
KP19 MULSHIFT-D 01M1 H
KP11 SUM BUS 10F2 H
KP13 AC12 A1 (1)H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP11 AC10 A1 (1)H
KP19 SUM BUS 13F2 H
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP10 SUM BUS 09F2 H
KP15 SUM BUS 11F2 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D 07M1 H
KP03 AC02 A1 (1)H HK1
+3V H
74H53N E05 — HV1
74H53N E06

KP12 SHIFT BUS 11D2 L
KP24 LD AC 04M2 H
+3V H
KP12 AC11 A1 (1)H HT2
KP12 AC11 7474N E12 — HS2
+3V H
KP12 AC11 A1 (0)H

AC SHIFTER MODULE
1 BIT OF 5 SHOWN

M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00008	B
	S GOLDSBY 7/15/72	
	F AUMANN 7/28/72	
GH	KP15-00[illegible]	C
	S GOLDSBY [illegible]	
	F AUMANN 2/2/73	
	KP15-00[illegible]	D

DRN. J FASSHAUER	DATE 10/7/68	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/68	
ENG. F AUMANN	DATE 10/7/68	TITLE REG & BUS BIT 11
PROJ. ENG. G BUTLER	DATE 10/7/68	
PROD. F LASKEY	DATE 10/7/68	
FIRST USED ON KP15		SIZE D | CODE BS | NUMBER KP15-0-12 | REV. D
SCALE		DIST.
SHEET 1 OF 1		

KP25 IND A BUS H HD1 — 7401N E01
-KP13 A BUS 12A2 H
KP46 I BUS 12 L

KP25 IND SUM BUS H HB1 — 7401N E01
KP13 SUM BUS 12F2 H

KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP13 SHIFT BUS 12D2 H

KP25 IND AC H JH1 — 7401N E08
KP12 BAC 11A1 H

KP25 IND C BUS H JU1 — 7401N E11
-KP13 C BUS 12C2 H

KP25 IND MEM H JP1 — 7401N E11
KP13 MI 12 (1)H

KP25 IND B BUS H HA1 — 7401N E01 — JM1
-KP13 B BUS 1232 H

KP25 IND MQ H JE1 — 7401N E08

KP25 IND PC H JJ1 — 7401N E08

KP25 IND OA H JD1 — 7401N E08

KP25 IND XR H JN1 — 7401N E11

KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP13 MQ12 7474N E09 — JE2 KP13 MQ 12L1 (1)H
KP24 LDMQ 05M2 H JB2
KP24 JAM PC-MQ H HH2 — 74H00N E03
KP13 PC 12B1 (0)H
(OUTPUT BUF TO MEMORY)

+3V H
KP13 PC12 7474N E06 — JL1 KP13 PC 12B1 (1) H
HM2
KP24 LDPC 06-17M2 H HP2
+3V H
(PROGRAM COUNTER)

+3V H
KP13 OA12 7474N E06 — KP13 OA 12C1 (1)H
KP24 LD OA 07M2 H HN2
(MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP13 XR12 7474N E12 — KP13 XR 12F1 (1)H
KP24 LDXR 09M2 H JP2 — JR1
(INDEX REGISTER)

+3V H
KP13 LR12 7474N E12 — KP13 LR 12G1 (1)H
KP13 SHIFT BUS 12D2 L JT2
KP24 LDLR 08M2 H JS2
(LIMIT REGISTER)

KP13 BAC 12A1 H
KP19 BAC-C 09-17 H HV2
KP13 DS 12 (1)H
KP19 DS-C 11M2 H JH2
KP52 IOB 12J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP13 MI 12 (0)H
KP13 BAC 12A1 H
KP19 XOR-C 13M2 H JU2
74H53N E10 — HN1 KP13 C BUS 12C2 L

HB2 — 74H00N E03
KP19 C-A BUS 08M1 H HH1
KP13 C BUS 12C2 H
KP19 -C-A 0-12 14-17 H HM1

KE03 SC 12E1 (1)H JL2
KP19 SC-C 14M2 JM2
KP13 LR 12G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE02 MQ 12D1 (1)H JS1
KP13 AC12 A1 (0)H
KP19 XOR-C 13M2 H
KP13 MI 12 (1)H
74H53N E13

KP13 AC12 A1 (1)L JV1
+3V H
74H00N E03 — JK1 KP13 BAC 12A1 H

+3V H
KP44 CDL 12 H JC1
KP25 LDAC SW H F2
KP13 DS12 7474N E09 — JF1 KP13 DS 12 (1)H
REGISTER MODULE
M226
H24
J24

KP13 A BUS 12A2 L
KP13 B BUS 12B2 L
ADDER MODULE 1 BIT
OF 6 SHOWN
M164
J23

KP47 XR-A 06-17 H HF2
KP13 XR 12F1 (1)H
KP19 PC-A 06-17 11M1 H HL1
KP13 PC 12B1 (1)H HK1
+3V H
74H53N E02 — HJ1

KP66 TT DATA 02 H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 12E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL 12 H
KP13 OA 02C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1
74H53N E06

KP47 MI-B 09-17 H HJ2
KP13 MI 12 (1)H
KP13 MI 12 (0)H
KP19 -MI-B 09-17 H HS2
KP13 XR 12F1 (1)H
KP47 XR-B 06-17 15M2 H HT2
KP19 AND-B 03M2 H HR2
KP13 BAC 12A1 H
KP13 MI 12 (1)H
74H53N E07 — HL2 KP13 B BUS 12B2 L

Σ 12
D2 E1
B1 E2 M1 D1 J1
KP13 SUM BUS 12F2 H
KP13 NCA BIT 12 L
KP13 SCA BIT 12 L
KP13 CA BIT 12 L
KP13 SNCA BIT 12 L

+3V H
KP13 MDL 12I2 H
74H00N E03
HE2
74H50N E04 — HF1 KP13 MI 12 (0)H
+3V H
+3V H
74H50N E04 — HK2 KP13 MI 12 (1)H
KP27 MDL 12 L HD2
KP32 LD MI H HE1

KP19 DIVSHIFT-D 00M1 H
KP14 SUM BUS 13F2 H
KP19 MULSHIFT-D 01M1 H
KP12 SUM BUS 11F2 H
KP14 AC13 A1 (1)H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP12 AC11 A1 (1)H
74H53N E08 — JD2
KP15 SUM BUS 14F2 H JB1
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP11 SUM BUS 10F2 H
KP13 SUM BUS 12F2 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D 07M1 H
+3V H
KP04 AC03 A1 (1)H HU1
74H53N E09

KP13 SHIFT BUS 12D2 L
KP24 LD AC 04M2 H
KP12 AC 7474N E12 — HV2 KP13 AC12 A1 (1)H
HU2 KP13 AC12 A1 (0)H
+3V H
+3V H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN
M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	D
	F Aumann 6/4/71	

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE: REG & BUS BIT 12
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON: KP15		SIZE D · CODE BS · NUMBER KP15-0-13 · REV. D
SCALE		
SHEET 1 OF 1		DIST.

NOTE SET MQ PRESETS MQ ØØ-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

(OUTPUT BUF TO MEMORY)
(PROGRAM COUNTER)
(MEMORY ADDRESS REG)
(INDEX REGISTER)
(LIMIT REGISTER)

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
J23

AC SHIFTER MODULE
1 BIT OF 9 SHOWN
M227
H22
J22

REGISTER MODULE
M226
H25
J25

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-ØØØ38	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-ØØØ52	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-ØØØ5Ø	D

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE REG & BUS BIT 17
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KP15		SIZE D CODE GS NUMBER KP15-Ø-11 REV. D
SCALE		DIST.
SHEET 1 OF 1		

KP25 IND A BUS H HD1
KP15 A BUS 14A2 H
7401N E01
KP25 IND SUM BUS H HB1
KP15 SUM BUS 14F2 H
7401N E01
KP25 IND SHIFT BUS H HC1
-KP15 SHIFT BUS 14D2 H
7401N E01
KP25 IND AC H JH1
KP15 BAC 14A1 H
7401N E08
KP25 IND C BUS H JU1
-KP15 C BUS 14C2 H
7401N E11
KP25 IND MEM H JP1
KP15 MI 14 (1)H
7401N E11

KP46 I BUS 14 L

KP25 IND B BUS H HA1
-KP15 B BUS 14B2 H
7401N E01 JM1
KP25 IND MQ H JE1
7401N E08
KP25 IND PC H JJ1
7401N E08
KP25 IND OA H JD1
7401N E08
KP25 IND XR H JN1
7401N E11
KP25 IND LR H JR2
7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP15 MQ 14L1 (1)H JE2
KP15 MQ14 7474N E09
KP24 LDMQ 05M2 H JB2
KP24 JAM PC-MQ H HH2
KP15 PC 14B1 (0)H
74H00N E03
(OUTPUT BUF TO MEMORY)

+3V H
KP15 PC 14B1 (1)H JL1
KP15 PC14 7474N E06
KP24 LDPC 06-17M2 H HP2
HM2
+3V H
(PROGRAM COUNTER)

+3V H
KP15 OA 14C1 (1)H
KP15 OA14 7474N E06
KP24 LD OA 07M2 H HN2
(MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP15 XR 14F1 (1)H
KP15 XR14 7474N E12
KP24 LDXR 09M2 H JP2
JR1
(INDEX REGISTER)

+3V H
KP15 LR 14F1 (1)H
KP15 SHIFT BUS 14D2 L JT2
KP15 LR14 7474N E12
KP24 LDLR 08M2 H JS2
(LIMIT REGISTER)

KP15 BAC 14A1 H
KP19 BAC-C 09-17 H HV2
KP15 DS 14 (1)H
KP19 DS-C 11M2 H JH2
KP52 IOB 14J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP15 MI 14 (0)H
KP15 BAC 14A1 H
KP19 XOR-C 13M2 H JU2
74H53N E10
HN1 KP15 C BUS 14C2 L
HB2
74H00N E03
KP19 C-A BUS 08M1 H HH1
KP15 C BUS 14C2 H
KP19 -C-A 0-12 14-17 H HM1
KP47 XR-A 06-17 H HF2
KP15 XR 14F1 (1)H
KP19 PC-A 06-17 11M1 H HL1
KP15 PC 14B1 (1)H HK1
+3V H
74H53N E02
HJ1
KP15 B BUS 14B2 L

KP15 A BUS 14A2 L
K2
Σ
14
J2
S1
KP15 SUM BUS 14F2 H
ADDER MODULE 1 BIT
OF 6 SHOWN
M164
J23

KE03 SC 14E1 (1)H JL2
KP19 SC-C 14M2 JM2
KP15 LR 14G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE02 MQ 14D1 (1)H JS1
KP15 AC14 A1 (0)H
KP19 XOR-C 13M2 H
KP15 MI 14 (1)H
74H53N E13
KP66 TT DATA 04 H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 14E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR-A SW 14M1 H HS1
KP44 CDL 14 H
KP15 OA 14C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1
74H53N E05

KP15 AC14 A1 (1)L JV1
+3V H
74H00N E03 JK1 KP15 BAC 14A1 H

KP47 MI-B 09-17 H HJ2
KP15 MI 14 (1)H
KP15 MI 14 (0)H
KP19 -MI-B 09-17 H HS2
KP15 XR 14F1 (1)H
KP47 XR B 06-17 15M2 H HT2
KP19 AND-B 03M2 H HR2
KP15 BAC 14A1 H
KP15 MI 14 (1)H
74H53N E07
HL2 KP15 B BUS 14B2 L

+3V H
KP44 CDL 14 H JC1
KP25 LDAC SW H JF2
KP15 DS14 7474N E09
JF1 KP15 DS 14 (1)H
+3V H

REGISTER MODULE
M226
H26
J26

+3V H
74H00N E03 HE2
KP15 MDL 14I2 H
74H50N E04 HF1 KP15 MI 14 (0)H
+3V H
+3V H
74H50N E04 HK2 KP15 MI 14 (1)H
KP27 MDL 14 L HD2
KP32 LD MI H HE1

KP16 SUM BUS 15F2 H JE1
KP19 DIVSHIFT-D 00M1 H
KP19 MULSHIFT-D 01M1 H
KP14 SUM BUS 13F2 H
KP16 AC15 A1 (1)H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP14 AC13 A1 (1)H
74H53N E13 JC1
KP15 SHIFT BUS 14D2 L
KP15 LD AC 04M2 H
+3V H
KP15 AC14 A1 (1)H JE2
KP15 AC14 7474N E15
JF2
+3V H
KP15 AC14 A1 (0)H

KP17 SUM BUS 16F2 H
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP13 SUM BUS 12F2 H JU2
KP15 SUM BUS 14F2 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D 07M1 H
KP06 AC05 A1 (1)H JF1
+3V H
74H53N E14

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	C

LX

DRN. L FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. R COOK	DATE 10/7/69	TITLE REG & BUS BIT 14
PROJ. ENG. F AUMANN	DATE 10/7/69	
PROD. G BUTLER	DATE 10/7/69	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KP15-0-15 REV. D
SCALE		
SHEET 1 OF 1		DIST.

KP25 IND A BUS H HD1 — 7401N E01
-KP16 A BUS 15A2 H
KP46 I BUS 15 L
KP25 IND B BUS H HA1 — 7401N E01 — JM1
-KP16 B BUS 15B2 H

NOTE SET MO PRESETS MO 00-17 TO ALL 1'S
JAM PC-MO CAUSES ZEROS
TRANSFER OF PC TO MO

KP24 SET MO L JD2
KP24 LDMO 05M2 H JB2
KP16 MO15 7474N E09 — JE2 KP16 MO 15L1 81)H
KP24 JAM PC-MO H HH2
KP16 PC 15B1 (0)H
74H00N E03
(OUTPUT BUF TO MEMORY)

KP25 IND MO H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
+3V H
KP24 LDPC 06-17M2 H HP2
KP16 PC15 7474N E06 — JL1 KP16 PC 15B1 (1)H
+3V H
(PROGRAM COUNTER)

KP25 IND OA H JD1 — 7401N E08
+3V H
KP24 LD OA 07M2 H HN2
KP16 OA15 7474N E06 — KP16 OA 15C1 (1)H
(MEMORY ADDRESS REG)

KP25 IND XR H JN1 — 7401N E11
+3V K31V1 H JN2
KP24 LDXR 09M2 H JP2
KP16 XR15 7474N E12 — KP16 XR 15F1 (1)H
JR1
(INDEX REGISTER)

KP25 IND C BUS H JU1 — 7401N E11
-KP16 C BUS 15C2 H
KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP16 SHIFT BUS 15D2 H
KP25 IND AC H JH1 — 7401N E08
KP16 BAC 15A1 H
KP25 IND MEM H JP1 — 7401N E11
KP16 MI 15 (1)H
KP25 IND LR H JR2 — 7401N E11
KP16 SHIFT BUS 15D2 L JT2
KP24 LDLR 08M2 H JS2
KP16 LR15 7474N E12 — KP16 LR 15G1 (1)H
(LIMIT REGISTER)

KP16 MDL 15I2 H
+3V H — 74H00N E03 — HE2
74H50N E04 — HF1 KP16 MI 15 (0)H
74H50N E04 — HK2 KP16 MI 15 (1)H
KP27 MDL 15 L HD2
KP32 LD MI H HE1

KP16 BAC 15A1 H
KP19 BAC-C 09-17 H HV2
KP16 DS 15 (1)H
KP19 DS-C 11M2 H JH2
KP52 IOB 15J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP16 MI 15 (0)H
KP16 BAC 15A1 H
KP19 XOR-C 13M2 H JU2
KE03 SC 15E1 (1)H JL2
KP19 SC-C 14M2 H JM2
KP16 LR 15G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE02 MQ 15D1 (1)H JS1
KP16 AC15 A1 (0)H
KP19 XOR-C 13M2 H
KP16 MI 15 (1)H
74H53N E10 — HN1 KP16 C BUS 15C2 L
HB2 — 74H00N E03
KP19 C-A BUS 08M1 H HH1
KP16 C BUS 15C2 H
KP19 -C-A 0-12 14-17 H HM1
KP47 XR-A 06-17 H HF2
KP16 XR 15F1 (1)H
KP19 PC-A 06-17 11M1 H HL1
KP16 PC 15B1 (1)H HK1
+3V H
KP66 TT DATA 05 H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 15E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL 15 H
KP16 OA 15C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1
74H53N E02 — HJ1 KP16 A BUS 15A2 L
KP16 B BUS 15B2 L
74H53N E05

KP16 AC15 A1 (1)L JV1
+3V H
74H00N E03 — JK1 KP16 BAC 15A1 H

+3V H
KP44 CDL 15 H JC1
KP25 LDAC SW H JF2
KP16 DS15 7474N E09 — JF1 KP16 DS 15 (1)H
REGISTER MODULE
M226
H27
J27

KP47 MI-B 09-17 H HJ2
KP16 MI 15 (1)H
KP16 MI 15 (0)H
KP19 -MI-B 09-17 H HS2
KP16 XR 15F1 (1)H
KP47 XR-B 06-17 15M2 H HT2
KP19 AND-B 03M2 H HR2
KP16 BAC 15A1 H
KP16 MI 15 (1)H
74H53N E07 — HL2 KP16 B BUS 15B2 L

Σ 15 — C1 KP16 SUM BUS 15F2 H
ADDER MODULE 1 BIT OF 6 SHOWN
M164
J23

KP17 SUM BUS 16F2 H
KP19 DIVSHIFT-D 00M1 H
KP19 MULSHIFT-D 01M1 H
KP15 SUM BUS 14F2 H
KP17 AC16 A1 (1)H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP15 AC14 A1 (1)H
KP19 SUM BUS 17 H
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP14 SUM BUS 13F2 H
KP16 SUM BUS 15F2 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D 07M1 H
KP07 AC06 A1 (1)H JJ1
+3V H
74H53N E16 — IK1 KP16 SHIFT BUS 15D2 L
74H53N E17
+3V H
KP24 LD AC 04M2 H
KP16 AC15 7474N E18 — JK2 KP16 AC15 A1 (1)H
JL2 KP16 AC15 A1 (0)H
+3V H
AC SHIFTER MODULE
1 BIT OF 9 SHOWN
M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	C
	S GOLDSBY 5/17/71	
	F AUMANN 5/27/	
	KP15-00056	D

DRN J FASSHAUER	DATE 10/7/68	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D R COOK	DATE 10/7/68	
ENG F AUMANN	DATE 10/7/68	TITLE REG & BUS BIT 15
PROJ. ENG G BUTLER	DATE 10/7/68	
PROD F EASKEY	DATE 10/7/68	
FIRST USED ON KP15		SIZE D | CODE BS | NUMBER KP15-0-16 | REV. D
SCALE		
SHEET 1 OF 1		DIST.

KP2 IND A BUS H HD1 — 7401N E01
-KP17 A BUS 16A2 H
KP46 I BUS 16 L
KP25 IND SUM BUS H HB1 — 7401N E01
KP17 SUM BUS 16F2 H
KP25 IND SHIFT BUS H HC1 — 7401N E01
-KP17 SHIFT BUS 16D2 H
KP25 IND AC H JH1 — 7401N E08
KP17 BAC 16A1 H
KP25 IND C BUS H JU1 — 7401N E11
-KP17 C BUS 16C2 H
KP25 IND MEM H JP1 — 7401N E11
KP17 MI 16 (1)H
KP25 IND B BUS H HA1 — 7401N E01 JM1
-KP17 B BUS 16B2 H
KP25 IND MQ H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
KP25 IND OA H JD1 — 7401N E08
KP25 IND XR H JN1 — 7401N E11
KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TP MQ

KP24 SET MQ L JD2
KP17 MQ 16L1 (1)H JE2 — KP17 MQ16 7474N E09 — KP24 LDMQ 05M2 H JB2
KP24 JAM PC-MQ H HH2 — 74H00N E03
KP17 PC 16B1 (0)H
(OUTPUT BUF TO MEMORY)

+3V H
KP17 PC 16B1 (1)H JL1 — KP17 PC16 7474N E06 — KP24 LDPC 06-17M2 H HP2 — HM2
+3V H
(PROGRAM COUNTER)

+3V H
KP17 OA 16C1 (1)H — KP17 OA16 7474N E06 — KP24 LD OA 07M2 H HN2
(MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP17 XR 16F1 (1)H — KP17 XR16 7474N E12 — KP24 LDXR 09M2 H JP2 — JR1
(INDEX REGISTER)

+3V H
KP17 SHIFT BUS 16D2 L JT2
KP17 LR 16G1 (1)H — KP17LR16 7474N E12 — KP24 LDLR 08M2 H JS2
(LIMIT REGISTER)

KP17 BAC 16A1 H
KP19 BAC-C 09-17 H HV2
KP17 DS 16 (1)H
KP19 DS-C 11M2 H JH2
KP52 IB 16J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP17 MI 16 (0)H
KP17 BAC 16A1 H
KP19 XOR-C 13M2 H JU2
KE03 SC 16E1 (1)H JL2
KP19 SC-C 14M2 JM2
KP17 LR 16G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 06M2 H JK2
KE02 MQ 16D1 (1)H JS1
KP17 AC16 A1 (0)H
KP19 XOR-C 13M2 H
KP17 MI 16 (1)H
74H53N E10 — HN1 KP17 C BUS 16C2 L
74H53N E13

HB2 — 74H00N E03
KP19 C-A BUS 08M1 H HH1
KP17 C BUS 16C2 H
KP19 -C-A 00-12 H 01-17 H HM1
KP47 XR-A 06-17 H HF2
KP17 XR 16F1 (1)H
KP19 PC-A 06-17 11M1 H HL1
KP17 PC 16B1 (1)H HK1
+3V H
KP66 TT DATA 06 H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 16E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL 16 H
KP17 OA 16C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1
74H53N E02 — HJ1
74H53N E05

KP17 A BUS 16A2 L
KP17 B BUS 16B2 L S2
KP17 SUM BUS 16F2 H V1
Σ T2 S2 16
ADDER MODULE 1 BIT
OF 6 SHOWN
M164
J23

KP17 AC16 A1 (1)L JV1
+3V H
74H00N E03 — JK1 KP17 BAC 16A1 H

+3V H
KP44 CDL 16 H JC1
KP25 LDAC SW H JF2
KP17 DS16 7474N E09 — JF1 KP17 DS 16 (1)H
+3V H

KP47 MI-B 09-17 H HJ2
KP17 MI 16 (1)H
KP17 MI 16 (0)H
KP19 -MI-B 09-17 H HS2
KP17 XR 16F1 (1)H
KP47 XR-B 06-17 15M2 H HT2
KP19 AND-B 03M2 H HR2
KP17 BAC 16A1 H
KP17 MI 16 (1)H
74H53N E07 — HL2 KP17 B BUS 16B2 L

REGISTER MODULE
M226
H28
J28

+3V H
74H00N E03 — HE2
KP17 MDL 16I2 H
+3V H
74H50N E04 — HF1 KP17 MI 16 (0)H
+3V H
KP27 MDL 16 L HD2
KP32 LD MI H HE1
74H50N E04 — HK2 KP17 MI 16 (1)H

KP18 SUM BUS 17F2 H
KP19 DIVSHIFT-D 00M1 H
KP19 MULSHIFT-D 01M1 H
KP16 SUM BUS 15F2 H
KP18 AC17 A1 (1)H
KP19 RAL-D 02M1 H
+3V H
KP19 RAR-D 03M1 H
KP16 AC15 A1 (1)H
KP22 L (1)H JL1
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP15 SUM BUS 14F2 H
KP17 SUM BUS 16F2 H
KP19 NO SHIFT-D 06M1 H
KP19 SW-D 07M1 H
KP08 AC07 A1 (1)H JP1
+3V H
74H53N E19 — JM1
74H53N E20

+3V H
KP17 SHIFT BUS 16D2 L
KP17 AC16 A1 (1)H JN2
KP24 LD AC 04M2 H
KP17 AC16 7474N E18 — JM2
+3V H
KP17 AC16 A1 (0)H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN

M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
SH	KP15-00052	C
	S GOLDSBY 9/1/71	
	F AUMANN 9/2/71	
	KP15-00056	D

DRN J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHKD R COOK	DATE 10/7/69	
ENG F AUMANN	DATE 10/7/69	TITLE REG & BUS BIT 16
PROJ. ENG G BUTLER	DATE 10/7/69	
PROD F CASKEY	DATE 10/7/69	
FIRST USED ON KF15		SIZE D CODE BS NUMBER KP15-0-17 REV. D
SCALE		
SHEET 1 OF		DIST

KP25 IND A BUS H HD1 — 7401N E01 — KP18 A BUS 17A2 H
KP25 IND SUM BUS H HB1 — 7401N E01 — KP18 SUM BUS 17F2 H
KP25 IND SHIFT BUS H HC1 — 7401N E01 — -KP18 SHIFT BUS 17D2 H
KP25 IND AC H JH1 — 7401N — KP18 BAC 17A1 H
KP25 IND C BUS H JU1 — 7401N E11 — -KP18 C BUS 17C2 H
KP25 IND MEM H JP1 — 7401N E11 — KP18 MI 17 (1)H

KP46 I BUS 17 L

KP25 IND B BUS H HA1 — 7401N E01 — JM1
-KP25 B BUS 17B2 H
KP25 IND MQ H JE1 — 7401N E08
KP25 IND PC H JJ1 — 7401N E08
KP25 IND OA H JD1 — 7401N E08
KP25 IND XR H JN1 — 7401N E11
KP25 IND LR H JR2 — 7401N E11

NOTE SET MQ PRESETS MQ 00-17 TO ALL 1'S
JAM PC-MQ CAUSES ZEROS
TRANSFER OF PC TO MQ

KP24 SET MQ L JD2
KP24 LDMQ 05M2 H JB2
KP18 M 17L1 (1)H JE2 — KP18 MQ17 7474N E09 — (OUTPUT BUF TO MEMORY)
KP24 JAM PC-MQ H HH2
KP18 PC 17B1 (0)H — 74H00N E03

+3V H
KP24 LDPC 06-17M2 H HP2
KP18 PC 17B1 (1)H JL1 — KP18 PC17 7474N E06 — (PROGRAM COUNTER)
HM2

+3V H
KP24 LD OA 07M2 H HN2
KP18 OA 17C1 (1)H — KP18 OA17 7474N E06 — (MEMORY ADDRESS REG)

+3V K31V1 H JN2
KP24 LDXR 09M2 H JP2
KP18 XR 17F1 (1)H — KP18 XR17 7474N E12 — (INDEX REGISTER)
JR1

+3V H
KP18 SHIFT BUS 17D2 L JT2
KP24 LDLR 08M2 H JS2
KP18 LR 17G1 (1)H — KP18 LR17 7474N E12 — (LIMIT REGISTER)

KP18 MDL 17I2 H
+3V H — 74H00N E03 — HE2
74H50N E04 — HF1 KP18 MI 17 (0)H
+3V H
+3V H
74H50N E04 — HK2 KP18 MI 17 (1)H
KP27 MDL 17 L HD2
KP32 LD MI H HE1

KP18 BAC 17A1 H
KP19 BAC-C 09-17 H HV2
KP18 DS 17 (1)H
KP19 DS-C 11M2 H JH2
KP52 IOB 17J1 H HU2
KP19 I/O BUS-C 12M2 H JJ2
KP18 MI 17 (0)H
KP18 BAC 17A1 H
KP19 XOR-C 13M2 H JU2
74H53N E10 — HN1 KP18 C BUS 17C2 L

HB2 — 74H00N E03
KP19 C-A BUS 08M1 H HH1
KP18 C BUS 17C2 H
KP19 -C-A 0-12 14-17 H HM1
KP47 XR-A 06-17 H HF2
KP18 XR 17F1 (1)H
KP19 PC-A 06-17 11M1 H HL1
KP18 PC 17B1 (1)H HK1
+3V H

KP18 A BUS 17A2 L
74H53N E02 — HJ1
KP18 B BUS 17B2 L

KE03 SC 17E1 (1)H JL2
KP19 SC-C 14M2 JM2
KP18 LR 17G1 (1)H
KP19 LR-C 02M2 H JV2
KP19 MQ-C 16M2 H JK2
KE02 MQ 17D1 (1)H JS1
KP18 AC17 (0)H
KP19 XOR-C 13M2 H
KP18 MI 17 (1)H — 74H53N E13

KP66 TT DATA 07 H HP1
KP19 SL6-A 12M1 H HR1
KP68 I/O A 17E2 H HV1
KP19 I/O ADD-A 13M1 H JA1
KP19 ADR SW-A 14M1 H HS1
KP44 CDL 17 H
KP18 OA 17C1 (1)H
+3V H
KP19 OA-A 15M1 H HU1
74H53N E05

KP18 AC17 A1 (1)L JV1
+3V H
74H00N E03 — JK1 KP18 BAC 17A1 H

KP47 MI-B 09-17 H HJ2
KP18 MI 17 (1)H
KP18 MI 17 (0)H HS2
KP19 -MI-B 09-17 H
KP18 XR 17F1 (1)H HT2
KP47 XR-B 06-17 15M2 H
KP19 AND-B 03M2 H HR2
KP18 BAC 17A1 H
KP18 MI 17 (1)H
74H53N E07 — HL2 KP18 B BUS 17B2 L

+3V H
KP44 CDL 17 H JC1
KP25 LDAC SW H JF2
KP18 DS17 7474N E09 — JF1 KP18 DS 17 (1)H
+3V H

REGISTER MODULE
M226
H29
J29

KP18 A BUS 17A2 L
KP18 B BUS 17B2 L
V2
U2
C OUT
C IN
17
U1 — KP18 SUM BUS 17F2 H
P2
N2
M2
L1 — KP48 CARRY INSERT L

ADDER MODULE 1 BIT
OF 6 SHOWN
M164
J23

KE01 MQ 0001 (1) H HP1
KP19 DIVSHIFT-D 00M1 H
KP19 MULSHIFT-D 01M1 H JV1
KP17 SUM BUS 16F2 H JU1
KP22 ENAC 17 RAL H JV2
KP19 RAL-D 02M1 H
KP19 RAR-D 03M1 H
+3V H
KP17 AC16 A1 (1)H
KP01 SUM BUS 00F2 H JR1
KP19 RTL-D 04M1 H
KP19 RTR-D 05M1 H
KP16 SUM BUS 15F2 H
KP18 SUM BUS 17F2 H JN1
KP9 NO SHIFT-D 06M1 H JT2
KP19 SW-D 07M1 H
KP09 AC08 A1 (1)H JS1
74H53N E22 — JS2
74H53N E23

+3V H
KP18 SHIFT BUS 17D2 L
KP24 LD AC 04M2 H
KP18 AC17 7474N E21 — JP2 KP18 AC17 A1 (1)H
JR2
+3V H
KP18 AC17 A1 (0)H

AC SHIFTER MODULE
1 BIT OF 9 SHOWN
M227
H22
J22

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	C
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00052	D
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	E

REVISIONS		
CHK	CHANGE NO.	REV
JS	KP15-00[illegible]	F

DRN. L HOHOS	DATE 7/15/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D L HOHOS	DATE 7/15/70	
ENG. F AUMANN	DATE 7/15/70	TITLE REG & BUS BIT 17
PROJ. ENG. F AUMANN	DATE 7/15/70	
PROD. F LASKEY	DATE 7/15/70	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KP15-0-18 REV. F
SCALE		
SHEET OF		DIST

A BUS ENABLES

KP28 CMA*TS02*F L
KP29 XG*TS03*F L
KE04 EAE COMP C-A L
→ M627 F16 → V2 KP19 -C-A Ø-12 14-17 J1 H

KP29 XG*TS03*F L
KP28 CMA*TS02*F L
KE04 EAE COMP C-A L
KP31 CAL ADDR EN L
→ M627 F30 → S1 KP19 -C-A BUS 13 H

KP19 SLG-A L
KP66 TTY READ IN (1)H
KP51 IOP 2 (1)H
KP21 TS03 H
→ M135 E24 → M149 K23 → V1 KP19 SLG-A 12M1 H

KP48 TS02+2A+/R2 H
-KP28 CMA*TS02*F H
-KP30 DZM*TS02*(F+D) H
-KE04 EAE COMP C-A H
→ M627 F05 → L1
KP21 TS03 H
-KP29 XG*TS03*F H
-KE04 EAE COMP C-A H
→ M135 E11 → J1
→ M627 F16 → S1 KP19 C-A BUS Ø8M1 H
KP34 KEY ACT (1)L

KP19 I/O-BUS-C 12M2 L

KP21 TS Ø3 H
KP35 INTRPT ACK (1)H
→ M133 E32 → F1 S2 → M611 E22 → T2 KP19 I/O ADDR-A 13M1 H

KP19 AXR ENAB XR L
KP29 AXR H
KP29 XGRP*TS02 H
→ M133 F29 → S2
→ M627 K30 → S1 KP19 XR-A Ø0-Ø5 H
KP29 XG ENAB XR L
KP47 ENAB XR 1 L
KP47 ENAB XR 2 L
→ M627 F15 → S1 KP19 XR-A Ø6-17 H

KE04 EAE SC-C L
→ M611 F14 → B1 KP19 SC-C 14M2 H
KP30 GRP4*TS02*(F+D) L
→ M611 F14 → T2 KP19 L BM UM-A H

KP34 DSW-C L
→ M611 F14 → E1 KP19 DS-C 11M2 H

KP34 ADRSW-A L
→ M611 F14 → H1 KP19 ADRSW-A 14M1 H

KP19 I/O BUS-C 12M2 H

KP49 PCO I/O CONT L
+3V F0SU1 H
→ M627 E14 → S1
→ M149 E03 → V1 KP19 I/O BUS-C 12M2 H

KP55 EN IOP 2 H
KP35 IOT REQ (1)H
→ M113 H31 → C1

KP29 XG ENAB LR L
KP29 TEST LR TS03 L
→ M627 F16 → P2 KP19 LR-C Ø2M2 H

KE04 EAE MQ1-C L
KE04 EAE MQ2-C L
+3V F08V1 H
→ M627 F08 → V2 KP19 MQ-C 16M2 H

KP30 XOR*TS02*E L
KP48 SAD*TS01*E L
+3V F1GU1 H
→ M627 F16 → J2 KP19 XOR-C 13M2 H

KP30 GRP4*TS01*E L
KP34 NEXT*TS01 L
KP48 INCR*TS01 L
KP49 RI INCR OA L
→ M627 F15 → V2
→ M611 E12 → V2
→ M133 E02 → N1 KP19 OA-A 1-4 H
KP19 OA-A 15M1 H

KP48 XCT REM (1)H
KP20 FETCH H
KP21 TS01 H
KP30 GRP 1 H
→ M627 J30 → V2
→ M611 E18 → P1 J1
KP58 15 MODE H
→ M133 E02 → K1 J2
→ M133 E02 → K2 KP19 OA-A 5 H

B BUS ENABLES

KP48 AND*TS02*E L
→ M611 F14 → K1 KP19 AND-B Ø9M2 H

KE03 EAE -MI-B L
KP29 XG*NEG*TS02*F L
→ M133 E07 → N2 KP19 -MI-B Ø0-Ø8 H

KE03 EAE -MI-B L
→ M611 F14 → F2 KP19 -MI-B Ø9-17 H

KP29 TEST LR*TS03 L
KP47 ENAB XR2 L
→ M135 E11 → D1 KP19 XR-B Ø0-Ø5 15M2 H

KP29 TEST LR*TS03 L
→ M611 M21 → H1 KP19 XR-B Ø6-17 H

KP48 XCT REM (1)L
KP48 INH DECODES L
→ M133 E02 → F2 → M611 E22 → R1 +S1
KP20 FETCH (1)H
KP30 GRP1 H
KP21 TS01 H
→ M627 E13 → S1 KP19 GRP 1 ENAB PC L

KP30 (-GRP4)*TS01*E L
KP45 CONTINUE H
KP34 KEY ACT (1)H
KP21 TS Ø1 H
→ M135 E15 → U1 J2
→ M133 E32 → K2 V2
→ M611 F14 → V2 KP19 ENAB PC-A Ø3-Ø4 L
KP19 RESTORE M L

KP19 GRP1 ENAB PC L
KP30 OPR*TS01*F L
KP19 ENAB PC-A Ø3-Ø4 L
→ M135 J13 → U1 KP19 PC-A Ø1-Ø2 H

KP19 GRP1 ENAB PC L
KP30 GRP4*TS02*(F+D) L
KP30 OPR*TS01*F L
KP19 ENAB PC-A Ø3-Ø4 L
→ M627 J30 → J2 KP19 PC-A Ø3-Ø4 H

KP58 15 MODE H
KP19 GRP1 ENAB PC L
→ M611 E12 → M1
→ M133 E02 → F1
→ M133 E07 → S1 KP19 PC-A Ø5 H

KP19 PC-A Ø6-17 11M1 H
KP30 GRP4*TS02*(F+D) L
KP30 OPR*TS01*F L
KP48 SET FETCH*TS03 L
KP19 ENAB PC-A Ø3-Ø4 L
→ M627 F18 → P2
→ M611 E12 → F2

SHIFT BUS ENABLES

KE04 EAE LRS L
KP28 RAR*TS02*F L
→ M627 F17 → P2 KP19 RAR-D Ø3M1 H

KE04 EAE LLS L
KE04 EAE NORMS L
KE04 EAE ACLS L
KP28 RAL*TS02*F L
→ M627 F15 → P2 KP19 RAL-D Ø2M1 H

KE04 EAE MUL L
→ M611 F14 → J2 KP19 MULSHIFT-D Ø1M1 H

KE04 EAE DIVSHIFT L
→ M611 F14 → M1 KP19 DIVSHIFT-D Ø0M1 H

KP20 EAE (Ø)H
-KP28 OPR SHIFT H
-KP28 CLA*TS01*F H
-KP28 SWHA*TS02*F H
→ M627 E13 → J2
KE04 EAE NO SHIFT L
→ M627 F15 → L1 KP19 NO SHIFT-D Ø6M1 H

KP28 RTR*TS02*F L
→ M611 F14 → L2 KP19 RTR-D Ø5M1 H

KP28 RTL*TS02*F L
→ M611 F14 → P1 KP19 RTL-D Ø4M1 H

KP28 SWHA*TS02*F L
→ M611 E18 → T2 KP19 SW-D Ø7M1 H

*NOTE: ECO KP15-#52 IS OPTIONAL IN OLDER MACHINES. INDICATED GATES ARE REPLACED BY BOXED CIRUITRY ON KP47. REQUIRED FOR GREATER THAN 32K ADDRESSING.

+ IF ECO KP15-#52 IS NOT INSTALLED, INVERTER IS M133 E02 OUTPUT N2.

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP15-00038	H	GH	KP15-00056	M
S GOLDSBY 7/15/70			N COTE 6/30/71		
F HUMANN 7/22/70			F HUMANN 6/30/71		
GH	KP15-00045	J		KP15-00058	N
S GOLDSBY 10/9/70					
F HUMANN 10/13/70			KP15-[illegible]		P
SH	KP15-00050	K			
S GOLDSBY 2/9/71			F. DOLL		
F HUMANN 2/17/71					
	KP15-00052	L			
S GOLDSBY 3/1/71					
F HUMANN 3/2/71					

DRN. S GOLDSBY	DATE 10/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. L HOHOS	DATE 10/15/69		
ENG. F HUMANN	DATE 10/7/69	TITLE MAJOR BUS CONTROL LOGIC	
PROJ. ENG. G BUTLER	DATE 10/7/69		
PROD. F LASKEY	DATE 10/7/69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-19	REV. P
SHEET 1 OF 1		DIST.	

KP31 TRAP H
KP35 INTRPT ACK (1)H
KP21 2 TS03 H
KP21 CLOCK H
M627 N09
KP20 PWR CLR L
M113 N20
M611 L19
KP20 MS PWR CLR L

KP20 SET INCR H
KP20 SET DEFER H
KP20 SET EXECUTE H
KP20 SET EAE H
KP20 MS PWR CLR L
+3V E23U1 H
KP20 SET FETCH H
-KP20 SET FETCH H
FETCH M242 E25
INCR M242 E26
DEFER M242 E25
EXE CUTE M242 E25
EAE M242 E27
MAINTENANCE POINT
GROUND TO INHIBIT
MAJOR STATE TRANSITIONS
+3V E32V1 H
KP21 TIME STATE 3 (1)L
M611 E22
KP21 PHASE 3 (0)H
M611 E18
KP20 FETCH H
KP31 IR04 (0)H
KP33 AUTO (1)H
M135 E24
KP20 DEFER (1)H
KP30 ISZ H
M133 F29
KP20 FETCH H
KP31 IR04 (0)H
KP30 ISZ H
M135 E24
KP20 SET INCR L
KP20 FETCH H
KP31 IR04 (1)H
KP33 AUTO (0)H
-KP48 OPR+LAW H
-KP29 XG*FETCH H
KP34 KEY ACT (0)H
-KP48 EAE H
+3V F10U1 H
M139 F10
M133 E21
M611 E22
KP20 SET DEFER L
KP20 INCR (1)H
M133 E21
KP30 ISZ H
KP33 AUTO (0)H
KP20 INCR (1)H
M133 E21
KP20 DEFER (1)H
-KP30 ISZ H
-KP30 JMP H
-KP30 XCT H
M627 E23
M627 F30
KP20 EAE (1)L
-KP20 SET DEFER H
KP20 FETCH H
-KP20 SET INCR H
M627 E23
KP20 IOT+XG SE L
KP30 GRP 5 L
M135 F28
KP30 GRP 2 H
KP34 FORCE FETCH (0)H
M133 E21
-KP20 SET INCR H
-KP20 SET DEFER H
-KP20 SET EXECUTE H
-KP20 SET EAE H
M627 E23
V2 KP20 SET FETCH L
M611 E22
F2 KP20 SET FETCH H
KP20 FETCH (1)L
M611 E22
P1 KP20 FETCH H
M611 E22
R2 KP20 SET EXECUTE L
KP20 FETCH H
KP48 EAE H
-KE04 SU H
M135 H01
KP20 SET EAE L
M611 E22
KP31 IR00 (1)H
KP31 IR01 (1)H
KP31 IR02 (1)H
KP31 IR03 (0)H
-KP48 FP H
KP34 KEY ACT (0)H
KP20 FETCH H
+3V F12U1 H
M139 F12
P2 KP20 IOT+XG SE L
KP20 PWR CLR L
KP50 INT RESET H
M611 E22
M611 E22
J2 KP20 PWR CLR H

REVISIONS		
CHK	CHANGE NO	REV
LH	KP15-00038	E
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GH	KP15-00046	F
	F AUMANN 3/2/71	
GH	KP15-00056	H
	N COTE 6/22/71	
	F AUMANN 6/22/71	
GH	KP15-00057	J
	N COTE 6/30/71	
	E PERMON 9/3/71	

REVISIONS		
CHK	CHANGE NO.	REV.
	KP15-00065	K
	F Aumann 4-71	

DRN. J.FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORP. MAYNARD, MASSACHUSETTS
CHK'D. R.COOK	DATE 10/7/69	
ENG. F.AUMANN	DATE 10/7/69	TITLE MAJOR STATE SEQUENCER
PROJ. ENG. G.BUTLER	DATE 10/9/69	
PROD. F.LASKEY	DATE 10/6/69	
FIRST USED ON KP15		SIZE D CODE NUMBER KP15-0-30 REV. K
SCALE		
SHEET 1 OF 1		DIST.

NOTE: TYPICAL TIME GENS.

NOTE: ...HOUT THE FP15 OPTION THE ...LOWING SIGNALS ARE CONNECTED: +3V ...27 CP ACT DIS L NO FP15 ...NNECTED TO +3V N01U1. ...27 DIS RD RST L NO FP15 ...ONNECTED TO +3V N01V1.

KP21 STOP CLK L — P1 — CLOCK M775 E30 — E2 KP21 HS CLOCK L; F2 KP21 HS CLOCK H; U1 V1

KP20 PWR CLR H — A1 — M611 E18 — B1

KP21 PHASE 3 (1)H

+3V E23U1 H V2

PHASE 0 M242 E27 — R1 S1 U1 V1 S2 T2 — P1 U2 R2

PHASE 1 M242 E28 — B1 C1 D1 E1 E2 F2 H2 — A1 J2 D2

PHASE 2 M242 E27 — B1 C1 D1 E1 E2 F2 H2 — A1 J2 D2

PHASE 3 M242 E26 — B1 C1 D1 E1 E2 F2 H2 — A1 J2 D2

KP21 PHASE 3 (0)H

KP21 PHASE 3 (1)H — P1 — M133 E32 — S1 P1 N1 — S 1 M240 E29 R 0 — U1 KP21 END PHASE 3 (1)H

KP21 HS CLOCK H — R1

KP21 RUN (1)H

KP21 PHASE 3 (0)L — R1

S1 — P2 — M611 E18 — R2 — KP21 CLOCK H

KP21 CLOCK (1)H

+3V E23U1 H

-KP21 STOP PHASE H

KE04 REPEAT TS02 L — F1 — M775 E30

+3V E32U1 — E1 — M775 E30

KP21 TS02 H — C1 — M775 E30

-KP30 ADD*TS02*E H — A1 — M775 E30 — M775 E30

KP30 ADD*TS02*E H

TIME STATE 1 M775 E30 — R2 — P2

TIME STATE 2 M775 E30

TIME STATE 2A M775 E30

TIME STATE 3 M775 E30 — T2

KP21 TS01 H — J1 — M775 E30 — K2

KP21 TS 01 H — H1 — M775 E30 — L1

+3V E23U1 H

KP21 TS02 H — H2 — M775 E30 — J2

KP21 TS 02 H — M775 E30 — L2

KP21 TS02A H — D1 — M775 E30 — M2

KP21 TS03 H — V2 — M775 E30 — D2

M775 E30 — N2

KP21 TS 03 H

KP21 TIME STATE 1 (0)H

KP21 TIME STATE 2 (0)H

KP21 TIME STATE 2A (0)H

KP21 TIME STATE 3 (0)H

KP21 TIME STATE 2 (1)L — A1 — M112 K20 — C1

-KP26 I/O INACTIVE L — D2 — M133 N01 — F2

KP27 CP ACT DIS L * — E2

KP26 CP ACT (1)L — B1

KP21 TIME STATE 3 (1)L — D1 — M112 K20 — F1 — E1

KP21 PHASE 3 (1)H — N1

KP27 ADR ACK B (0)H — P2

KP32 START WRITE H — P1

KP32 START READ H — R2

M129 F22 — L1 KP21 STOP CLK L

KP21 RD RST WAIT H — N2 M1 M2

KP34 STOP L — D2

KP34 STOP TS RUN (1)L — E2

KP46 SING INST (1)L — F2

KP28 OPR HALT L — H2

M627 H30 — J2 D1 — M611 K25 — E1 P1 — M133 E16 — S1 R2

KP57 PWR HALT L — R1

S2 T2 U2 — M627 F30 — V2 K2 L2 M2 N2 — M627 F05 — P2 — KP21 STOP RUN H

KP21 TS03 H

KP20 SET FETCH H

KP34 INH STOP RUN (0)H

M002 L17 — V2 KP27 PAR HALT L

KP34 START RUN (1)H — S2

KP21 PHASE 3 (1)H — T2

KP21 HS CLOCK H — V1

KP21 PHASE 2 (1)H — R1

-KP21 STOP PHASE H — U1

RUN M242 E28 — U2 P1 V2

KP20 PWR CLR L

N1 — KP21 FPXINT ACK (0)L

KP34 START RUN (1)H — J1

KP21 PHASE 3 (1)H — K1 L1

KP21 HS CLOCK H — M1

KP21 STOP RUN H — L2

KP21 PHASE 2 (1)H — M2

-KP35 I/O STOP INH H — N2

I/O RUN M242 E28 — H1 P2 K2

KP20 PWR CLR L

-KP32 RD RST L — D1

KP27 DIS RD RST L * — E1

M133 N01 — F1 — KP21 RD RST WAIT H

KP35 IOT REQ (1)L — T2

KP46 SING STEP (1)L — U2

KP35 INTRPT ACK (1)L — V2

M135 F32 — V1 — KP21 TS 03 H — N2 P2 R2 — M135 E31 — S2

KP20 PWR CLR L — V2

KP26 CP ACTIVE (1)H — R1

+3V E23U1 H — S1

KP21 PHASE 2 (1)H — U1

KP21 HS CLK H — V1

STOP PHASE M242 E26 — P1 — STOP PHASE L

KP21 PHASE 1 (1)H — S2 T2 — K 0 — U2

+3V E23U1 H — R2

KP46 SING TIME (1)H — D2

KP35 IOT REQ (0)H — E2

KP34 INH STOP RUN (0)H — F2

M135 E31 — H2

KP21 RUN (1)H

FP48 FP H — H2

FP35 INT ACK (0)H — J2

M133 N01 — K2 U2

M611 M01 — V2 — M133 N01 — K1 — KP21 FPXINT ACK (0)L

REVISIONS			REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP15-00038	K	GH	KP15-00056	P	GH	KP15-00062	U
	S GOLDSBY 7-15-70			N COTE 6/22/71			N COTE 9/2/71	
	F AUMANN 7-22-70			F AUMANN 6/22/71			F AUMANN 9/2/71	
GH	KP15-00242	L	GH	KP15-00057	R		KP15-00063	V
	K WALSH 12/18/70			N COTE 6/30/71				
	F AUMANN 12/18/70			F AUMANN 6/30/71				
GH	KP15-00248	M	GH	KP15-00058	S		KP15-00064	W
	N LEGERE 1/12/71			N COTE 7/6/71				
	F AUMANN 1/12/71			F AUMANN 7/6/71				
GH	KP15-00254	N	GH	KP15-00059	T			
	S GOLDSBY 3/3/71			N COTE 7/7/71				
	F AUMANN 2/12/71			F AUMANN 7/7/71				

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N.RHEAULT	DATE 11-7-69		
ENG. F.AUMANN	DATE 11-7-69	TITLE TIME STATE GEN WITH START STOP CONTROL	
PROJ. ENG. G.BUTLER	DATE 11-7-69		
PROD. F.LASKEY	DATE 11-7-69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-21	REV. W
SHEET 1 OF 1		DIST.	

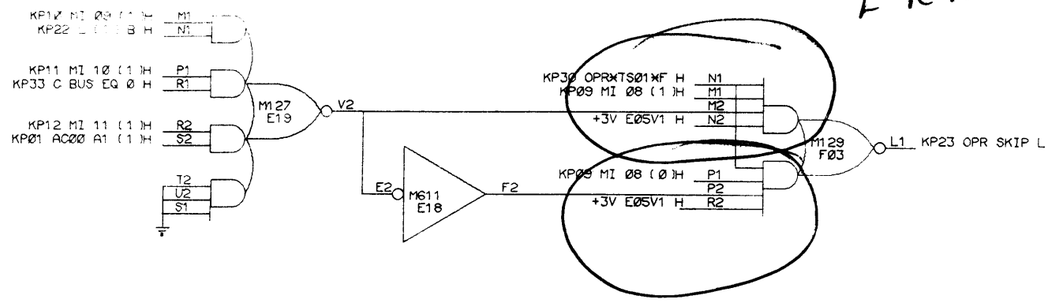
KP21 TS02A H H2
KP01 SUM BUS 00F2 H F2
F2
D2
M129 F03
C1 KP22 OVERFLOW L
-KP01 SHIFT BUS 00D2 H F1
E1
C1
KE03 DIV OVERFLOW (1)H H2
M133 E05
K2
J1
M611 M01
K1
KP22 SET LINK L
A1
B1
C1
D1
D2
E2
F2
H2
M129 F07
J2
D1
D 1 L M205 E09 C 0
E1
C1
KP24 LD AC 04M2 H B1
F1
A1
+3V F07U1
KP05 MI 04 (1)H F1
KP22 EAE*TS01*F*CLK H H1
KP22 RESTORE H J1
KP01 MI 00 (0)H K1
KP22 CLR LINK H K2
+3V E10U1 H L2
M127 E09
F2
KP22 OPR*TS02 H M2
KP07 MI 06 (1)H N2
KP21 PHASE 1 (1)H L1
KP28 OPR*TS02 L U1
M149 K12
V1 KP22 OPR*TS02 H
+3V E07U1 H H1
KP01 AC00 A1 (1)H H2
KP22 CARRY H P2
D 1 Ki SE M205 E08 C 0 N1 M1 J1 L1
D 1 F2 SAVE M205 E08 C 0 J2 K2 E2 D2
D 1 N2 EAC M205 E08 C 0 R2 S2 M2 L2
KP20 PWR CLR L
KP30 ADD*TS02*E H
(SAVE SIGN COMPRISON)
(SAVE AC SIGN)
(ONES COMPLEMENT END AROUND CARRY)
P2 M611 F14 R2 KE04 A (1)L
+3V F05V1 H L2
KP05 MI 04 (1)H B1
KP01 AC 00 A1 (1)H H1
J1
M129 F03
B2
KP01 MI 00 (1)H K2
KP22 RESTORE H J2
KP21 TS 01 H K1
KP22 CML L
KP22 OPR*TS02 H L2
KP17 MI 16 (1)H M2
M133 F25
N2
F1
M611 E12
Hi
KP22 L (0)H D2
E2
M133 E07
F2
KP22 CARRY H I2
KP22 L (0)H U2
KP22 TAD+IAC H V2
M135 E15
V1
KP48 EAE H L2
KP33 TS01*F*CLK H M2
M133 F01
N2
U2
M611 K01
V2 KP22 EAE*TS01*F*CLK H
KP28 RAR*TS02*F H P1
KP18 AC17 A1 (1)H R1
M133 F25
S1
KP22 DISABLE L+L L F2
KP22 L (1)H R2
M133 E07
S2
KE04 EAE DIV L A1
KP22 CML L B1
KP28 OPR SHIFT L C1
KP22 TAD+IAC L D1
M627 E13
E1
P1
M611 E12
S1
KP19 RTR-D 05M1 H L1
KP17 AC16 A1 (1)H M1
M133 E07
N1
KP01 MI 00 (1)H A1
KP01 AC00 A1 (1)H B1
KP01 MI 00 (0)H C1
KP01 AC00 A1 (0)H D1
M121 F02
E1
KP20 DEFER (1)H E1
KP21 TS01 H F1
H1
M135 E15
J1 KP22 RESTORE L
E2
M111 E06
F2 KP22 RESTORE H
KP30 TAD*TS02*E L A1
KP28 OPR*INCR AC L B1
M133 E16
C1 KP22 TAD+IAC H P2
M611 L19
R2 KP22 TAD+IAC L
KE04 EAE LLS L D2
KE04 EAE NORMS L E2
+3V E10U1 H F2
M135 E15
H2
KP19 DIVSHIFT-D 00M1 H M1
KP01 SUM BUS 00F2 H N1
KP19 RAL-D 02M1 H L1
-KP48 EAE H M1
M133 J01
N1
E2
M611 K01
F2
KP01 AC00 A1 (1)H P1
R1
KP19 RTL-D 04M1 H R2
KP02 AC01 A1 (1)H S2
KP22 L (1)H T2
-KP22 CARRY H U2
KP22 TAD+IAC H S1
M127 E09
V2
S 1 M240 E29 R 0
H2
F2
E2
D2
J2
KP20 PWR CLR L
KE01 MQ 00 D1 (1)H F1
H1
KP22 L (1)H J1
K1
M121 F02
L1 KP22 EN AC 17 RAL L
KE04 EAE ACLS L H2
KP28 RAL*TS02*F L J2
M133 H31
K2
K2
M111 E06
L2 KP22 EN AC 17 RAL H
KP58 DBR H T2
KP58 RES H U2
M112 M15
V2
KP22 DEFER*TS02 L
KP20 DEFER (1)H P2
KP21 TS 02 H R2
M133 H31
S2
KP22 L (1)L S2
M611 E12
I2 KP22 L (1) B H
KP01 NCA BIT 00 L M1
KP01 SCA BIT 00 L N1
KP01 CA BIT 00 L P1
KP01 SNCA BIT 00 L R1
M121 F02
S1 KP22 CARRY H D1
M611 E12
E1 KP2. CARRY L
-KE04 EAE MUL H H1
KP22 L (1)H J1
M133 J01
K1
KP20 PWR CLR L D2
KE03 EAE CLR LINK L E2
M133 J01
F2 KP22 CLR LINK H
KP22 CARRY L U2
M133 J01
K2 KP22 L+CARRY L

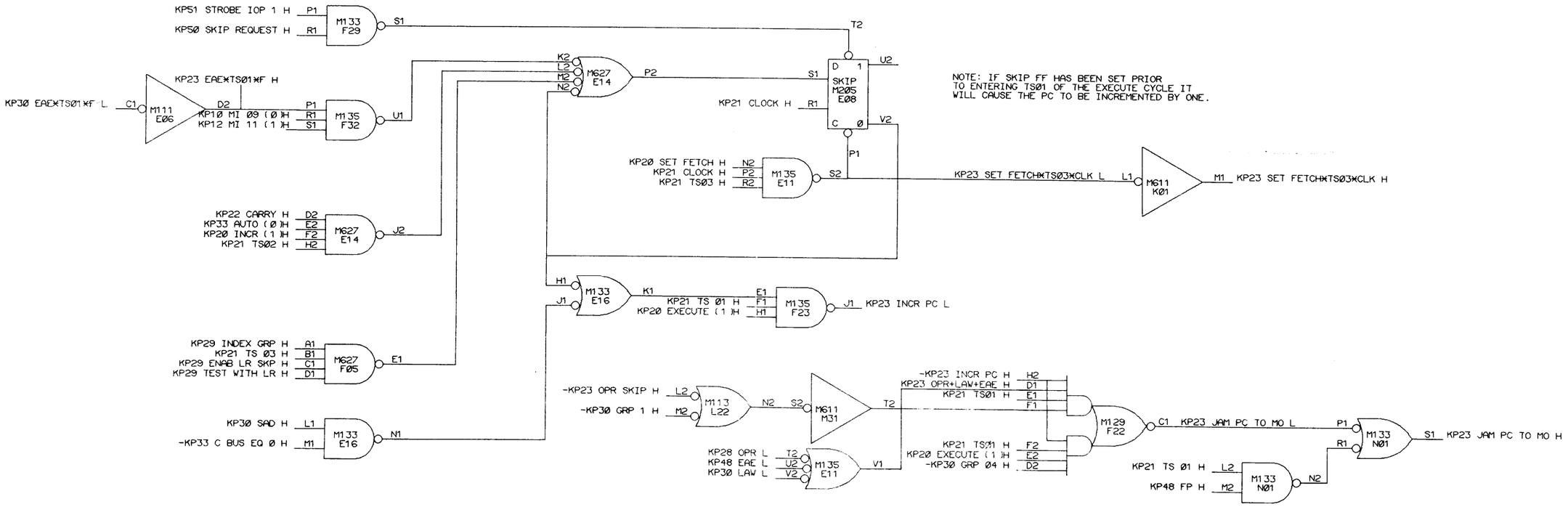
REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	E
	S SOLOBY 7-15-70	
	F RUMANN 7-22-70	
EH	KP15-00045	F
	R WALSH 12/18/72	
	F RUMANN 12/18/72	
	KP15-XCCSF	H

REVISIONS		
CHK	CHANGE NO	REV
	KP [illegible]	
	F DOLL	

DRN. J.FASSHAUER	DATE 10/7/68	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R.COOK	DATE 10/7/68	
ENG. F.RUMANN	DATE 10/7/68	TITLE LINK, LINK CONTROL
PROJ. ENG. G.BUTLER	DATE 10/9/68	
PROD. F.RASKEY	DATE 10/8/68	
FIRST USED ON KP15		SIZE D / CODE 1AS / NUMBER KP15-M-22 / REV. K
SCALE		
SHEET 1 OF 1		DIST.

ERROR on Dim.





NOTE: IF SKIP FF HAS BEEN SET PRIOR TO ENTERING TS01 OF THE EXECUTE CYCLE IT WILL CAUSE THE PC TO BE INCREMENTED BY ONE.

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	D
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GJH	KP15-00046	E
	K WALSH 12/18/70	
	F AUMANN 12/18/70	
JH	KP15-00056	F
	J COTE 6/22/71	
	F AUMANN 6/22/71	
JH	KP15-00065	G
	J COTE 6/30/71	
	F AUMANN 9/23/71	

REVISIONS		
CHK	CHANGE NO	REV
	KP15-00065	J

DRN. J.FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D R.COOK	DATE 10/7/69		
ENG. F.AUMANN	DATE 10/7/69	TITLE SKIP CONTROL	
PROJ. ENG. G.BUTLER	DATE 10/9/69		
PROD. F.LASKEY	DATE 10/8/69		
FIRST USED ON KP15		SIZE D	CODE BS	NUMBER KP15-0-23	REV. J
SCALE					
SHEET 1 OF 1		DIST.			

KP49 RI INCR OA L
KP23 OPR SKIP L
KP34 KEY ACT (1)L
KP24 GRP4*EXEC L
M627 E17
V2
V1
M611 M31
U1
KP49 RI INCR OA L
KP21 TIME STATE 1 (1)L
M133 E18
F2
KP30 GRP 1*TS01*KF L
KP30 CAL*TS01*KF L
KP20 DEFER (1)L
M627 E23
S1
KP21 CLOCK H
M133 E15
D1 KP24 LD MQ OA L
KP32 CP WR HDR ACK L
M627 E13
P2 KP24 LD MQ ØØM2 H
'LOAD MEMORY OUTPUT BUFFER' (BITS Ø-17)
KP48 INCR*TS01 L
KP34 EX SW TS02 L
KP23 INCR PC L
M135 F32
D1
KP20 FETCH H
KP31 IR04 (1)H
M133 E07
KP21 CLOCK H
M135 E15
M2
KP35 INTERRUPT STB L
KP20 DEFER (1)H
-KP30 JMP H
KP21 TS01 H
KP21 CLOCK H
M627 E17
L1
KP24 LD MQ OA L
+3V H04U1 H
M627 H04
V2 KP24 LD OA ØTM2 H
'LOAD OPERAND ADDRESS BUFFER' (BITS Ø-17)
-KP34 START H
KP34 CONT*-INT H
M135 E24
H2 KP24 INH PC COUNT L
KP34 XCW IN PROG (1)H
KP48 XCT REQ (1)H
M112 L21
S1
KP49 KEY+RI INHIBIT L
KP35 INT ACK+ST L
M135 F32
S2
P2
M111 F26
R2 KP24 INH PC LOAD L
'INHIBIT PC+1 TO PC'
KP21 PHASE 2 (1)H
-KP35 INT INH SET MQ H
M627 H04
L1 KP24 SET MQ L
NOTE:
MQ IS FIRST PRESET TO ALL ONES AT PHASE 2 TIME, THEN SET TO DESIRED VALUE WITH ZEROS TRANSFER AT CLOCK H TIME.
KP30 GRP 4 H
KP20 EXECUTE (1)H
KP23 INCR PC L
KP23 OPR SKIP L
M133 E10
KP24 GRP 4*EXEC L
M627 E14
E1
KP58 15 MODE H
M627 E17
S1
P2 KP24 LDPC Ø6-17 M2 H
KP24 TS01+TS03 *SF H
KP21 CLOCK H
KP58 9 MODE H
M627 E17
E1
M135 E15
S2 KP24 LDPC Ø5 H
KP20 SET FETCH H
KP21 TS03 H
KP21 RUN (1)H
-KP24 INH PC LOAD H
M627 F30
L1
KP21 TIME STATE 1 (1)L
M133 E32
KP24 TS01+TS03*SF H
KP20 PWR CLR L
M133 E10
N1 KP24 LDPC Ø-4 H
KP23 JAM PC TO MQ H
KP21 CLOCK H
M133 E10
F2
KP20 PWR CLR L
M627 H04
P2 KP24 JAM PC-MQ H
'TRANSFER CONTENTS OF PCØ-17 TO MEMORY OUTPUT BUFFER'
KP30 LAW L
KP28 OPR L
KP30 GRP 5*EXECUTE L
KP29 XG LD AC L
M627 E13
V2
KP30 JMP H
KP21 TS Ø1 H
M133 E10
KP45 START H
KP21 TS01 H
M133 E32
M627 N09
V2
H1
M133 E32
K1
KP21 CLOCK H
KP41 RI INCR OA L
KP30 GRP 4*TS01*E L
KP29 XG LD XR L
KP20 PWR CLR L
M627 F17
L1 KP24 LD XR ØM2 H
'LOAD INDEX REGISTER' (BITS Ø-17)
KP29 I/O STB AC EN H
KP21 STROBE IOP 2 H
KP20 PWR CLR H
+3V F24U5 H
M627 F04
V2
KP21 TSØ2A H
KP21 CLOCK H
KP20 CLEAR AC H
KP21 TS Ø1 H
KP21 CLOCK H
-KP30 SAD H
KP21 CLOCK H
KP21 TS02 H
M627 E14
V2
KP20+ ERE LD AC L
M627 H04
J2 KP24 LD AC Ø4M2 H
'LOAD ACCUMULATOR' (BITS Ø-17)

REVISIONS		
CHK	CHANGE NO.	REV.
[illegible]	KP15-00038	K
[illegible]	[illegible]	[illegible]

REVISIONS		
CHK	CHANGE NO	REV
[illegible]	KP15-00078	P
	G. Gaudet 1-16-73	
	F. DOLL	
[illegible]	KP15-00082	R
	[illegible]	
	F. DOLL	

DRN. M. SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N. RHEAULT	DATE 11-7-69	
ENG. [illegible]	DATE 11-7-69	TITLE [illegible]
PROJ. ENG. [illegible]	DATE 11-7-69	
PROD. [illegible]	DATE 11-7-69	
FIRST USED ON KP-[illegible]		SIZE D / CODE [illegible] / NUMBER KP15-[illegible] / REV. R
SCALE		
SHEET [illegible] OF [illegible]		DIST.

KP44 IND A BUS L — E2 — M611 K27 — F2 — KP25 IND A BUS H

KP44 IND B BUS L — J1 — M611 K27 — K1 — KP25 IND B BUS H

KP44 IND C BUS L — H2 — M611 K27 — J2 — KP25 IND C BUS H

KP44 IND SUM BUS L — L1 — M611 K27 — M1 — KP25 IND SUM BUS H

KP44 IND MO L — K2 — M611 K27 — L2 — KP25 IND MO H

KP44 IND SHIFT BUS L — N1 — M611 K27 — P1 — KP25 IND SHIFT BUS H

KP44 IND PC L — F1 — M611 K27 — H1 — KP25 IND PC H

KP44 IND AC L — R1 — M611 K27 — S1 — KP25 IND AC H

KP44 IND OA L — P2 — M611 K27 — R2 — KP25 IND OA H

KP44 IND LR L — V1 — M611 K27 — U1 — KP25 IND LR H

KP45 STROBE TWO L — S2 — M611 K27 — T2 — KP25 IND MEM H

KP44 IND XR L — U2 — M611 K27 — V2 — KP25 IND XR H

KP44 IND MMA L — U1 — M149 K29 — V1 — KP25 IND MMA H

KP44 IND MMB L — U1 — M149 L28 — V1 — KP25 IND MMB H

KP44 IND MST L — U1 — M149 L29 — V1 — KP25 IND MST H

KP45 AC AVAIL L — K2 — M611 M31 — L2 — KP25 LDAC SW H

REVISIONS		
CHK	CHANGE NO.	REV.
EH	-PI- 00938	A

DRN. Steve Tetreault	DATE 7/10/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D Lou Hobar	DATE 7/15/70	TITLE INDICATOR STROBES
ENG. F.AUMANN	DATE 7/15/70	
PROJ. ENG. F.AUMANN	DATE 7/15/70	
PROD. F.CASHEY	DATE 7/15/70	
FIRST USED ON KP15		SIZE D | CODE BS | NUMBER KP15-0-25 | REV. A
SCALE		DIST.
SHEET 1 OF 1		

KP26 I/O M REQ (1)H D2
KD05 E T C & L LYD (1)H E2
KP26 CP ACT (0)H F2
M115 M32 H2
M611 K25 J1 K1 KP26 I/O ACT (1)H R2
-KP27 I/O ACT DIS H T2
M133 N01 U2 V2 KP26 SING CYC B TO B L
KP26 I/O ACT (1)L P1
KP26 I/O M REQ (1)L R1
M112 L18 S1 KP26 I/O ADDR-MDL H

KP26 I/O ACT (1)L A1
KP57 POWER ON L B1
M112 M13 KP26 I/O ENABLE H C1
KP26 I/O M REQ (1)H D2 E2
M133 K17 F2 H2
KP26 CP ACT*HOLD MO L J2
M133 K17 K2

KP26 D+C SYNC L
KP27 IO ACT DIS L *
F1
KP26 I/ ACT(1)L T2
-KP32 RD ACT L U2
M112 M24 V2 H2
KP32 ADR ACK H J2
M133 K18 K2 KP26 I/O ADDR ACK L

+3V K17U1 H B1 C1 D1
P2 M611 K25 R2
KP21 HS CLOCK L E1
MPX M242 K14 A1
+3V K17U1 H E2 F2 H2
+3V K0SU1 H D2
J2
KP51 DCH SYNC (1)L A1
KP51 CLK SYNC L B1
M133 K17 C1

+3V K17U1 H B1 C1 D1
KP21 HS CLOCK L E1
J 1 M REQ M242 K13 A1
E2 F2 H2
K Ø J2
D2
B1 C1 M622 K10 D2 KP26 M REQ L

KP32 ADR ACK H T2
KP32 START READ H U2
M133 F01 V2
KP26 CLR REQ L T2
KP32 CP WR ADR ACK L U2 V2
M135 J13 V1
KP31 TRAP P H D1 E1
M112 M13 F1

KP32 CP MRLS (1)L R1
M622 K10 S1 S2 KP26 MRLS L
KD04 I/O MRLS (1)L N1
M622 K10 P1 P2

KD05 DATA CYCLE (1)H D1
KD04 I/O MRLS ACK H E1
M133 K17 F1
D1
D 1 I/O M REQ M205 K15 C Ø E1 F1
+3V K17U1 H C1
KD04 SET I/O M REQ H B1
KD04 I/O ADDR ACK H T2
KP50 IN RESET H U2
M112 L18 V2 A1
KP26 CLR REQ L

+3V K0SU1 H N1
J1 K1 L1
KP21 HS CLOCK L M1
KP50 INT RESET H L2 M2 N2
J 1 I/O ACT M242 K14 K Ø H1 P2
K2
KP32 I/O MRLS ACK L
A1 B1 M112 M12 C1 D2
KP32 RD RST H E2
M133 K18 F2 KP26 I/O RD RST I

KP32 CP MRLS (1)H D2
KD04 I/O DATA ACK (1)H E2
M112 M15 F2
M622 K10 U1 V1 V2 KP26 DATA ACK L

KP26 CP ACT (1)L D1
KP32 START READ L E1
M622 K10 E2 KP26 MRD L
KP26 IO ACT (1)L F1
KD04 I/O READ (1)L H1
M622 K10 H2

KP26 I/O ACT (0)L J1
KP32 START WRITE L K1
M622 K10 K2 KP26 MWR L
KP26 IO ACT (1)L L1
KD04 I/O WRITE (1)L M1
M622 K10 M2

+3V K17U1 H V2
L1 M611 L19
M1 KP26 I/O INACTIVE H R1
-KP27 CP ACT DIS H * S1
KP32 CP MEM REQ HOLD (1)H U1
KP21 HS CLOCK L V1
S2 T2
CP ACT M242 K13 K Ø P1 U2
KP32 END OF CP CYCLE L R2
H2
+3V K17U1 H F2
D 1 HOLD MO M205 K15 C Ø J2 E2 K2
D2
KP32 ADR ACK H L2
M2
M133 K18 N2 KP26 CP ADR ACK L
KP26 I/O ACT (0)H H1
KP26 MPX (1)H J1
M133 K18 K1 KP26 I/O INACTIVE L

KD04 I/O MRLS (1)H P2
KP32 MRLS ACK H R2
M133 K17 S2 KP26 I/O MRLS ACK L

KP26 HOLD MO (1)H L1
KP26 CP ACT (1)H M1
M133 K17 N1
KP26 CP ACT*HOLD MO L
R2 S2 T2 U2 M627 K30 V2 KP26 MO-MDL H
L2
KP32 START WRITE H M2
M133 K17 N2
KP34 M0-MDL L
KP26 HOLD MO (1)H A1 B1 C1
M135 J13 D1
K1 L1 M1 M135 J13 N1 KP26 MO MDL00-05 H
KD33 AUTO (1)H D2
KP32 CP MEM REQ HOLD (1)H E2
KP20 DEFER (0)H F2
M135 J13 H2
E1 F1 H1 M135 J13 J1

* WITHOUT THE FP15 OPTION
THE FOLLOWING SIGNALS
ARE CONNECTED TO +3V
-KP27 CP ACT DIS H NO FP15 CONNECTED TO +3V N01U1
KP27 I/O ACT DIS L NO FP15 CONNECTED TO +3V K05U1

REVISIONS		
CHK	CHANGE NO.	REV
GH	KP15-00044	A
S GOLDSBY 10-3-70		
F AUMANN 10-13-70		
GH	KP15-00046	B
K WALSH 12/14/70		
F AUMANN 12/17/70		
GH	KP15-00048	C
F AUMANN 1/8/71		

REVISIONS		
CHK	CHANGE NO.	REV.
GH	KP15-00056	L
N COTE 8/22/71		
F AUMANN 8/22/71		
GH	KP15-00057	M
N COTE 8/23/71		
F AUMANN 8/23/71		
GH	KP15-00058	N
N COTE 9/3/71		
F AUMANN 9/3/71		

REVISIONS		
CHK	CHANGE NO.	REV
	KP15-00066	K

REVISIONS		
CHK	CHANGE NO	REV
GH	KP15-00067	N
F. DOLL		

DRN. S GOLDSBY	DATE 7/15/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. HOMOS	DATE 7/15/70		
ENG. F AUMANN	DATE 7/20/70	TITLE MEMORY MPX	
PROJ. ENG. F AUMANN	DATE 7/20/70		
PROD. F LASKEY	DATE 7/20/70		
FIRST USED ON PDP15		SIZE D	CODE 18
SCALE		NUMBER KP15-0-26	REV. N
SHEET 1 OF 1		DIST.	

M904 J02

A1	
B1	KP27 MDL 00 L
C1	
D1	KP27 MDL 01 L
E1	KP27 MDL 02 L
F1	
H1	KP27 MDL 03 L
J1	KP27 MDL 04 L
K1	
L1	KP27 MDL 05 L
M1	KP27 MDL 06 L
N1	
P1	KP27 MDL 07 L
R1	
S1	KP27 MDL 08 L
T1	
U1	
V1	

M904 J03

A1	
B1	KP26 MREQ L
C1	
D1	KP27 ADR ACK B (1) L
E1	KP27 RD RST B (1) L
F1	
H1	KP26 DATA ACK L
J1	KP26 MRLS L
K1	
L1	KP27 MRLS ACK (B) L
M1	KP20 PWR CLR L
N1	
P1	KP26 MRD L
R1	
S1	KP26 MWR L
T1	
U1	
V1	

M901 H02

A1	KP46 I BUS 18 L
B1	KP46 I BUS 19 L
C1	KP46 I BUS 20 L
D1	KP46 I BUS 21 L
E1	KP46 I BUS 22 L
F1	KP46 I BUS 23 L
H1	KP46 I BUS 00 L
J1	KP46 I BUS 01 L
K1	KP46 I BUS 02 L
L1	KP46 I BUS 03 L
M1	KP46 I BUS 04 L
N1	KP46 I BUS 05 L
P1	KP46 I BUS 06 L
R1	KP46 I BUS 07 L
S1	
T1	
U1	KP46 I BUS 08 L
V1	KP46 I BUS 09 L

M966 L08

A1	
B1	KP26 MREQ L
C1	
D1	KP27 ADR ACK B (1) L
E1	KP27 RD RST B (1) L
F1	
H1	KP26 DATA ACK L
J1	KP26 MRLS L
K1	
L1	KP27 MRLS ACK (B) L
M1	KP20 PWR CLR L
N1	
P1	KP26 MRD L
R1	
S1	KP26 MWR L
T1	
U1	
V1	

TERMINATOR

M966 J04

A1	
B1	KP27 MDL 00 L
C1	
D1	KP27 MDL 01 L
E1	KP27 MDL 02 L
F1	
H1	KP27 MDL 03 L
J1	KP27 MDL 04 L
K1	
L1	KP27 MDL 05 L
M1	KP27 MDL 06 L
N1	
P1	KP27 MDL 07 L
R1	
S1	KP27 MDL 08 L
T1	
U1	
V1	

TERMINATOR

M904 J02

A2	
B2	
C2	
D2	KP27 MDL 09 L
E2	KP27 MDL 10 L
F2	
H2	KP27 MDL 11 L
J2	
K2	KP27 MDL 12 L
L2	
M2	KP27 MDL 13 L
N2	
P2	KP27 MDL 14 L
R2	
S2	KP27 MDL 15 L
T2	KP27 MDL 16 L
U2	
V2	KP27 MDL 17 L

M904 J03

A2	
B2	
C2	
D2	KP27 CP ACT DIS L *
E2	KP57 POWER OK H
F2	
H2	KP27 TRAP L
J2	
K2	KP31 DEFER H
L2	
M2	KP51 DCH SYNC B H
N2	
P2	KP27 IO ACT DIS L *
R2	
S2	KP31 RUN H *
T2	KP27 RD RST DIS L *
U2	
V2	KP27 PAR HALT L

M901 H02

A2	
B2	
C2	
D2	KP46 I BUS 10 L
E2	KP46 I BUS 11 L
F2	KP46 I BUS 12 L
H2	KP46 I BUS 13 L
J2	KP46 I BUS 14 L
K2	KP46 I BUS 15 L
L2	KP46 I BUS 16 L
M2	KP46 I BUS 17 L
N2	KP45 STROBE ZERO L
P2	KP44 IND PL/SC L
R2	KP46 STROBE ONE L
S2	
T2	KP25 IND MMB H
U2	KP25 IND MMA H
V2	KP25 IND MST H

M966 L08

A2	
B2	
C2	
D2	KP27 CP ACT DIS L *
E2	KP57 POWER OK H
F2	
H2	
J2	
K2	
L2	
M2	
N2	
P2	KP27 IO ACT DIS L *
R2	
S2	
T2	KP27 RD RST DIS L *
U2	
V2	

TERMINATOR

M966 J04

A2	
B2	
C2	
D2	KP27 MDL 09 L
E2	KP27 MDL 10 L
F2	
H2	KP27 MDL 11 L
J2	
K2	KP27 MDL 12 L
L2	
M2	KP27 MDL 13 L
N2	
P2	KP27 MDL 14 L
R2	
S2	KP27 MDL 15 L
T2	KP27 MDL 16 L
U2	
V2	KP27 MDL 17 L

TERMINATOR

* THESE SIGNALS WILL ONLY BE PRESENT ON THE CABLE WHEN A FP15 IS INSTALLED IN THE SYSTEM

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP15-00038	C	GH	KP15-00057	H
	S GOLDSBY 7/15/70			N COTE 6/30/71	
	F AUMANN 7/20/70			F AUMANN 7/2/71	
GH	KP15-00044	D		KP15-00059	J
	S GOLDSBY 10-9-70				
	F AUMANN 10-15-70				
GH	KP15-00046	E			
	K WALSH 12/11/70				
	F AUMANN 12/11/70				
GH	KP15-00055	F			
	K WALSH 12/11/70				
	F AUMANN 12/11/70				

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N.RHEAULT	DATE 11-7-69		
ENG. F.AUMANN	DATE 11-7-69	TITLE	
PROJ. ENG. K.BUTLER	DATE 11-7-69	CP MEM INTERFACE CABLES	
PROD. T.LASKEY	DATE 11-7-69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-27	REV. L
SHEET 1 OF 1		DIST.	

KP28 ROT EN L

KP28 OPR H
-KP28 MI 13*MI 14 H
KP21 TS02 H
M135 F21
M611 E18
V2 KP28 ROT EN H

KP08 MI 07 (0) H
KP14 MI 13 (1) H
M135 F21
V1 KP28 RAR*TS02*F L

KP08 MI 07 (0) H
KP15 MI 14 (1) H
M135 F21
U1 KP28 RAL*TS02*F L

KP08 MI 07 (1) H
KP15 MI 14 (0) H
M135 F21
S2 KP28 RTR*TS02*F L

KP08 MI 07 (1) H
KP15 MI 14 (1) H
M135 F21
N1 KP28 RTL*TS02*F L

KP14 MI 13 (1) H
KP15 MI 14 (1) H
M133 E10
V2 KP28 MI 13*MI 14 L

KP28 MI 13*MI 14 H
KP28 OPR H
KP08 MI 07 (0) H
KP21 TS 02 H
M627 H30
V2 KP28 OPR*INCR AC L

KP28 OPR H
-KP69 USER MODE (1) H
KP13 MI 12 (1) H
M135 F28
S2 KP28 OPR HALT L

KP28 OPR H
KP69 USER MODE (0) H
KP16 MI 15 (1) H
M135 F21
H2 KP28 OAS L

'OR AC WITH SWITCH REGISTER'

KP28 OPR H
KP21 TS 02 H
KP18 MI 17 (1) H
M135 F32
N1 KP28 CMA*TS02*F L

'COMPLIMENT ACCUMULATOR'

KP28 RAL*TS02*F L
KP28 RAR*TS02*F L
KP28 RTL*TS02*F L
KP28 RTR*TS02*F L
M627 F19
J2
M611 E12
J2 KP28 OPR SHIFT L

KP28 MI 13*MI 14 H
KP28 OPR H
KP08 MI 07 (1) H
M135 J32
D1 KP28 SW HA*TS02*F L

KP21 TS 01 H
M133 F29
N1 KP28 CLA*TS01*F L

KP28 OPR H
KP06 MI 05 (1) H
M133 E07
'CLA'
M133 F25
N1 KP28 CLEAR AC H

KP35 IOT MEM H
KP20 FETCH H
KP15 MI 14 (1) H
M135 F32
M2

KP28 RAR*TS02*F L
M611 E12
K1 KP28 RAR*TS02*F H

KP28 MI 13*MI 14 L
M611 E12
U1 KP28 MI 13*MI 14 H

KP28 OPR H
KP21 TS02 H
+3V E10U1 H
M135 E15
N1 KP28 OPR*TS02 L

KP31 IR00 (1) H
KP31 IR02 (1) H
KP31 IR03 (1) H
KP31 IR01 (1) H
KP31 IR04 (0) H
-KP35 INT ACK+ST H
KP34 KEY ACT (0) B H
M139 F11
V2
M111 E06
E1 KP28 OPR H
D1
KP28 OPR L

KP66 READ IN (1) H
-KP49 RI INCR OA H
M113 L30
S1
KP30 XCT L
M113 L30
V2
M611 L19
S2
T2 KP28 INH CARRY L

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	E
	S GOLDSY 7/15/70	
	F AUMANN 7/15/70	
	KP15-00056	F
	KP15-0062	H
	F D.[illegible]	

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE: OPERATE DECODING
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON: KP15		SIZE D; CODE BS; NUMBER KP15-0-28; REV. H
SCALE		DIST.
SHEET 1 OF 1		

KP01 XR 00F1 (1)L A1 — M611 M19
-KP01 A BUS 00A2 H B1
-KP01 C BUS 00C2 H
KP01 XR 00F1 (0)H
M121 M11 E1
-KP22 CARRY H F1
M121 M11 L1
J1 K1
KP22 CARRY H
F1 M111 L24 H1
D1 M611 M19 E1 KP49 ENAB LR SKP H

KP06 MI 05 (0)H A1
KP07 MI 06 (0)H B1
KP21 TS02 H C1 D1
M627 F18 E1 KP29 XG ENAB AC L

KP06 MI 05 (0)H A1
KP07 MI 06 (1)H B1
KP21 TS 02 H C1 D1
M627 F19 E1 KP29 XG ENAB XR L

KP06 MI 05 (1)H D2
KP07 MI 06 (0)H E2
KP21 TIME STATE 1 (0)H F2 H2
M627 F18 J2 KP29 XG ENAB LR L

+3V F18U1 H R2 S2 T2 U2
M627 F18 V2
KP29 INDEX GRP H R2
KP21 TS02 H S2
KP29 MI 09 (1)H T2
U2
M627 F19 V2 KP29 XG*NEG*TS02*F L
A1 B1 C1
KP29 INDEX GRP H
KP21 TS02 H
M135 F23 D1 KP29 XG MEM 09-17 L

KP06 MI 05 (0)H K2
KP07 MI 06 (1)H L2
KP08 MI 07 (0)H M2
KP09 MI 08 (1)H N2
M627 F19 P2
"AXS" P2 R2
M133 E16 S2 KP29 TEST WITH LR H
KP29 INDEX GRP H J2
KP21 TS03 H K2 L2
M135 E24 M2 KP29 TEST LR*TS03 L

KP09 MI 08 (1)H F1
KP21 CLOCK H H1
-KP29 AAC H J1
KP29 X GRP*TS02 H K1
M627 F18 L1 KP29 XG LD XR L

KP06 MI 05 (0)H M1
KP07 MI 06 (0)H N1
KP08 MI 07 (1)H P1
KP09 MI 08 (1)H R1
M627 F18 S1
KP29 AAC L

KP21 TS03 H T2 U2
M133 F25 V2 KP29 XG*TS03*F L

KP08 MI 07 (1)H F1
KP09 MI 08 (0)H H1
KP21 CLOCK H J1
KP29 X GRP*TS02 H K1
M627 F19 L1 KP29 XG LD LR L

KP06 MI 05 (1)H M1
KP07 MI 06 (1)H N1
KP08 MI 07 (1)H P1
KP09 MI 08 (1)H R1
M627 F19 S1
KP29 AXR L
R1 M111 F26 S1 KP29 AXR H

KP01 MI 00 (1)H M1
KP02 MI 01 (1)H N1
KP03 MI 02 (1)H P1
KP04 MI 03 (0)H R1
KP05 MI 04 (1)H R2
-KP35 INT ACK+ST H S2
KP20 FETCH H T2
KP34 FORCE FETCH (0)H U2
M139 F12 V2
KP29 XG*FETCH L
R1 M611 F14 S1 KP29 INDEX GRP H
KP21 TS 02 H T2 U2
M133 E32 V2 H2
M611 E18 J2 KP29 X GRP*TS02 H

KP08 MI 07 (0)H P1
KP09 MI 08 (0)H R1
M133 E10 S1
L2 M133 E10 N2 KP29 XG LOAD AC H
M2
H1
KP29 INDEX GRP H J1
M133 E10 K1 KP29 XG LD AC L

REVISIONS		
CHK	CHANGE NO.	REV.
KW	KP15-0002	F
	KP15-0003	H
	F. DOLL	

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CH'K'D. N.RHEAULT	DATE 11-7-69	TITLE INDEX INSTRUCTION BUS CONTROL	
ENG. F.AUMANN	DATE 11-7-69		
PROJ. ENG. G.BUTLER	DATE 11-7-69		
PROD. F.LASKEY	DATE 11-7-69		
FIRST USED ON KP15		SIZE D	CODE BS	NUMBER KP15-0-29	REV. H
SCALE		DIST.	
SHEET 1 OF 1			

KP30 XCT L — E2 — M111 F26 — F2 — KP30 XCT H

KP30 ADD*TS02*E L — H2 — M111 E06 — J2 — KP30 ADD*TS02*E H

KP20 EXECUTE (1)L — D2, E2
KP21 TIME STATE 2 (1)L — F2, H2
M121 F02 — J2 — KP30 TS02*E H

KP30 TS02*E H — T2, U2 — M133 E05 — V2 — KP30 TAD*TS02*E L

KP30 TS02*E H — P2, R2 — M133 E05 — S2 — KP30 ADD*TS02*E L

KP30 TS02*E H — P1, R1 — M133 E05 — S1 — KP30 XOR*TS02*E L

-KP48 INH DECODES H — T2
KP31 IR00 (0)H — S1
+3V F05U1 H — S2
M161 E04 — R1, R2, P1, P2, L1, L2, H1, H2, M1, M2, F1, F2, N1, N2, J1, J2, E1, E2, D1, D2

KP30 TS02*E H — L2 — M133 E05 — N2 — KP30 GRP 6*TS02*E L
KP30 GRP 6 H
TAD, ADD

KP31 IR01 (1)H — V2 — U1 — 2^2
KP31 IR02 (1)H — U2 — 2^1
KP31 IR03 (1)H — V1 — 2^0

KP30 TS02*E H — L1, M1 — M133 E05 — N1 — KP30 DZM*TS02*(F+D) L

KP30 CAL L
KP30 CAL H

KP66 RI STORE L

KP20 FETCH (1)L — K2
KP20 DEFER (1)L — L2
M121 F02 — P2
KP21 TIME STATE 2 (1)L — M2
+3V F05V1 H — N2

KP30 TS02*E H — A1, B1 — M133 E05 — C1 — H1, J1 — M133 E05 — K1 — KP30 DAC*TS02*(F+D) L

KP30 TS02*E H — D2, E2 — M133 E05 — F2 — KP30 CAL*TS02*(F+D) L

KP31 IR00 (0)H — D2
KP31 IR01 (0)H — E2
KP31 IR03 (0)H — F2
-KP49 KEY+RI INHIBIT H — H2
M627 F05 — J2

KP21 TS01 H — J2
KP20 EXECUTE (1)H — K2, L2
M135 E11 — M2 — KP30 (-GRP 4)*TS01*E L

KP30 (F+D) H — K1, L1
KP21 TS02 H — M1
M135 E11 — N1 — KP30 GRP 4*TS02*(F+D) L

KP30 GRP 4 L
JMS.CALS — R1
M111 E06 — S1 — KP30 GRP 4 H

KP20 EXECUTE (1)H — P1
KP21 TS01 H — R1, S1
M135 E11 — U1 — KP30 GRP 4*TS01*E L

KP20 EXECUTE (1)H — L2
KP30 GRP5 H — M2
M133 E16 — N2 — KP30 GRP5*EXECUTE L

KP20 FETCH (1)L — I2
KP20 DEFER (1)L — U2
M133 E07 — V2 — KP30 (F+D) H

KP31 IR00 (1)H — D2
KP31 IR01 (0)H — E2
KP31 IR02 (0)H — F2
KP31 IR03 (0)H — H2
M627 F08 — J2 — KP30 XCT L

KP21 TS 01 H — M1
KP20 FETCH (1)H — N1
KP01 MI 00 (0)H — P1
KP02 MI 01 (0)H — R1
KP03 MI 02 (0)H — R2
KP04 MI 03 (0)H — S2
-KP48 INH DECODES H — T2, U2
M139 F10 — V2 — KP30 CAL*TS01*F L

KP01 MI 00 (1)H — A1
KP02 MI 01 (1)H — B1
KP03 MI 02 (1)H — C1
KP04 MI 03 (1)H — D1
KP05 MI 04 (0)H — D2, E2, F2, H2
M139 F06 — J2 — KP30 OPR*TS01*F L

KP01 MI 00 (1)H — M1
KP02 MI 01 (1)H — N1
KP03 MI 02 (1)H — P1
KP04 MI 03 (1)H — R1
KP05 MI 04 (0)H — R2, S2, T2, U2
M139 F06 — V2 — KP30 EAE*TS01*F L

KP05 MI 04 (0)H — F1
-KP48 INH DECODES H — H1
KP34 KEY ACT (0)H — J1
KP06 MI 05 (0)H — K1, K2, L2, M2, N2
M139 F06 — P2 — KP30 IOT INHM REQ L

KP01 MI 00 (1)H — F1
KP02 MI 01 (1)H — H1
KP03 MI 02 (1)H — J1
KP04 MI 03 (1)H — K1
KP05 MI 04 (1)H — K2
-KP48 INH DECODES H — L2
KP20 FETCH (1)H — M2
+3V F07U1 H — N2
M139 F07 — P2 — KP30 LAW L

KP01 MI 00 (1)H — A1
KP02 MI 01 (1)H — B1
KP04 MI 03 (1)H — C1
KP01 MI 00 (0)H — D1
M127 F04 — J2 — KP30 GRP 1 L

DZM
DAC
JMS
XCT
LAC
ADD
TAD
XOR
AND
JMP
ISZ
SAD

KP03 MI 02 (1)H — D2
KP01 MI 00 (0)H — E2
KP04 MI 03 (0)H — F2
KP02 MI 01 (1)H — H2
KP03 MI 02 (0)H — E1

KP20 FETCH (1)H — D2
KP21 TS01 H — E2
KP30 GRP 1 H — F2
-KP48 INH DECODES H — H2
M627 E17 — J2 — KP30 GRP 1*TS01*F L

KP31 IR00 (1)H — F1
KP31 IR01 (0)H — H1
KP31 IR02 (1)H — J1
KP31 IR03 (1)H — K1
M627 F08 — L1 — KP30 SAD L
M611 F14 — U1 — KP30 SAD H

KP31 IR02 (0)H — M1
N1
P1
R1
M627 F08 — S1 — KP30 ISZ L
M111 E06 — H1 — KP30 ISZ H

KP31 IR01 (1)H — K2
L2
M2
N2
M627 F08 — P2 — KP30 JMP L
M111 E06 — N2 — KP30 JMP H

KP30 OPR*TS01*F L — P2
M111 E06 — R2 — KP30 OPR*TS01*F H

KP30 GRP 1 L — V1
M111 E06 — U1 — KP30 GRP 1 H

KP31 IR00 (0)H — D2
KP31 IR01 (0)H — E2
-KP49 KEY+RI INHIBIT H — F2
M135 E11 — H2 — P2
M133 E10 — S2 — KP30 GRP 2 H

KP30 GRP 2 L

CAL
DAC
JMS
DZM

KP66 RI STORE L

F1
H1
KP31 IR01 (1)H — J1
KP31 IR00 (0)H — K1
M127 F04 — P2 — S2
M111 E06 — T2 — KP30 GRP 3 H

KP30 GRP 3 L

KP31 IR01 (0)H — K2
KP31 IR00 (1)H — L2
KP31 IR01 (1)H — M2
KP31 IR02 (0)H — N2
KP31 IR03 (0)H — L1

LAC
XOR
ADD
TAD
ISZ
AND
SAD
JMP

+3V E05V1 H — V2
+3V E05V1 H — S1
KP31 IR00 (0)H — S2
KP31 IR01 (1)H — T2
M129 F03 — R1 — U2
M111 E06 — V2 — KP30 GRP 5 H

KP30 GRP 5 L

KP31 IR01 (0)H — V1
KP31 IR00 (1)H — U2
KP31 IR02 (1)H — U1

LAC
ADD
TAD
XOR
AND
SAD

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	H
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
	KP15-00046	J
	K WALSH	
GH	KP15-00050	K
	S GOLDSBY 2/9/71	
	F AUMANN 2/10/71	
	KP15-00057	L

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	TITLE: MAJOR INST DECODING
ENG. F.AUMANN	DATE 11-7-69	
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON: KP15		SIZE D; CODE 85; NUMBER KP15-0-50; REV. L
SCALE		SHEET 1 OF 1; DIST.

KP26 CP ACT (1)H — A1
-KP34 EXAMINE H — B1
M133 N01 — C1 — U2
M611 L13 — V2 — KP31 CP ACT H

KP20 DEFER (1)L — K2
M611 E12 — L2 — KP31 DEFER H

KP21 RUN (1)L — P2
M611 M01 — R2 — KP31 RUN H

KP69 NEXM L — K2
M611 M01 — L2 — KP31 NEXM H

KP20 SET FETCH L — R1
M611 E18 — S1 — KP31 P SET FETCH H

KP51 PI SYNC (1)L — E2
M611 M31 — F2 — KP31 PI SYNC H

M002 L17
KP27 TRAP L — P2 — V1
M111 F26 — U1 — KP31 TRAP H

KP03 MI Ø2 (1)L — D1
KP22 RESTORE L — E1
M112 K22 — F1 — L2
M112 N11 — N2 — S2 — KP31 RESTORE UM L
M002 L17
M2

KP46 FROT (Ø)H — L1
KP34 START L — M1
M112 N11 — N1

KP21 TS Ø1 H — D2
KP20 FETCH H — E2
M133 F29 — F2 — KP31 F*TSØ1 L — J1
M111 F26 — K1 — KP31 F*TSØ1 H

KP21 PHASE 1 (1)H — F1
KP31 F*TSØ1 H — H1
KP34 KEY ACT (Ø)H — J1
KP35 INTRPT STATE (Ø)H — K1
M627 E23 — L1 — N1
M611 E12 — P1 — KP31 LOAD IR H

KP31 MEM TRAP L — N1
PA
+3V N16U1 H — P2
M606 N15 — N2 — KP31 TRAP P L
U1
M149 K24 — V1 — KP31 TRAP P H

KP30 CAL*TSØ1*F L — U2
M111 F26 — V2 — KP31 CAL*TSØ1*F H
KP21 CLOCK H — R2
KP35 INTRPT STATE (Ø)H — S2
M627 M16 — T2 — U2 — V2 — KP31 API CAL L

KP31 CAL*TSØ1*F H — A1
KP31 TRAP ADDR EN (1)H — B1
M112 N11 — C1 — KP31 CAL ADDR EN L

KP35 API SET IR Ø0 L
KP02 MI Ø1 (1)H
KP03 MI Ø2 (1)H
KP04 MI Ø3 (1)H
KP05 MI Ø4 (1)H
KP06 MI Ø5 (1)H

+3V F08U1 H — D1 — F2 — K1 — N2 — R1 — U2

KP01 MI Ø0 (1)H — C1
IR00 M206 FØ9 — E1 — B1 — F1 — A1
IR01 M206 FØ9 — E2 — H2 — D2 — J2
IR02 M206 FØ9 — J1 — L1 — H1 — M1
IR03 M206 FØ9 — M2 — P2 — L2 — R2 — K2
IR04 M206 FØ9 — P1 — S1 — N1 — U1 — K2
IR05 M206 FØ9 — T2 — V2 — S2 — V1 — K2

KP31 CLR IR Ø0-Ø5 L
KP31 LOAD IR H

(OPERATION CODE) (INDIRECT ADDRESS) (INDEXED ADDRESS)

INSTRUCTION REGISTER

KP27 PAR HALT L — S2
M611 K01 — T2 — KP31 PAR HALT H

KP35 INTRPT STATE (1)H — H2
KP35 API STATE (1)H — J2
M112 N11 — K2 — L1
M611 M01 — M1 — KP31 INT+API ST H

KP34 FORCE FETCH (1)H — L1
KP34 KEY ACTIVE (1)H — M1
M133 K26 — N1 — KP31 KEY ACTIVE*FF L

KP20 PWR CLR L — E1
KP35 INTRPT CLR IR L — F1
M135 E31 — H1 — J1
M111 F26 — D1 — E1 — KP31 CLR IR Ø0-Ø5 L

+3V F30U1 — P2
KP51 PIE (Ø)H — N2
TRAP ADDR EN M205 H32 — D 1 C Ø — R2 — S2
KP35 TRAP*TS03*PHASE 1 L — D1
M611 M01 — E1 — M2
KP35 INTRPT STATE (1)L — D1
KP21 TIME STATE 2 (1)L — E1
M112 N11 — F1 — D2
M112 N11 — F2 — L2
E2
KP20 PWR CLR H

KP31 MEM TRAP L
KP32 START WRITE H — M1
KP31 TRAP H — N1
M121 M11 — S1 — A1
KP31 NEXM H — P1 — R1
M112 M15 — B1 — C1 — D1
M112 M15 — F1 — KP31 TRAP CLR MEM L
S1 — Z
KP20 PWR CLR H
KP26 M REQ (1)H

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP15-00038	H		KP15-00057	M
	S GOLDSBY 7/15/70				
	F AUMANN 7/22/70				
GH	KP15-00045	J		KP15-C0082	
	S GOLDSBY 10-9-70				
	F AUMANN 10-13-70			F. DELL	
GJH	KP15-00047	K			
	K WALSH 12-1[illegible]-70				
	F AUMANN 12-1[illegible]-70				
GH	KP15-00056	L			
	N COTE 6/22/71				
	F AUMANN 6/22/71				

DRN M.SCHURMAN	DATE 11-7-68	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N.RHEAULT	DATE 11-7-68	
ENG P.AUMANN	DATE 11-7-68	TITLE: INSTRUCTION REG
PROJ ENG C.BUTLER	DATE 11-7-68	
PROD T.LASKEY	DATE 11-7-68	
FIRST USED ON KP15		SIZE D · CODE BS · NUMBER KP15-Ø-31 · REV. N
SCALE		
SHEET OF		DIST.

KP20 FETCH H F1
KP31 IR04 (1)H H1
-KP29 XGXFETCH H J1
-KP48 EAE H K1
M627 J30 L1

KP30 GRP 3 H D1
KP30 (F+D)H E1
M133 E16 F1

KP20 SET FETCH H A1
KP34 KEY ACT (0)H B1
KP66 READ IN (0)H C1
M135 E31 D1

KP34 KEY REQ RD L
KE05 EAE RD RQ L
KP57 KEY ACTXCL L
+3V F24U1 H
M139 F24 A1 B1 C1 D1 D2 E2 F2 H2 J2

KP32 START READ H
M611 M19 V1 U1
KP32 START READ L

KP30 XCT H L2
KP20 INCR (0)H M2
M133 E32 N2

-KP32 START READ H T2
KP30 GRP 2 H U2
KP30 (F+D)H V2
M135 F28 V1

KP34 KEY REQ WRITE L A1
KP20 INCR (1)L B1 C1 D1
M627 F30 E1

KP32 START WRITE H
M611 K27 A1 B1 KP32 START WRITE L

KP21 TS 01 H L1
KP21 PHASE 2 (1)H M1
M133 H31 N1

-KP32 END OF CP CYCLE H E1 F1 H1
M135 F21 J1

KP27 RD RST B (1)L F1
M111 F26 H1 KP32 RD RST H

KP21 RD RST WAIT H V1
M611 M01 U1

KP26 CP ACT (1)H K2
KP21 PHASE 3 (1)H L2
KP21 TS 03 H M2
M627 F30 P2

KP32 CP RD RST L
KP32 CP+RI RD RST L
M602 L32 P2 N2 M2 L2 R2 S2

KP26 MO-MDL H A1
KP66 READ IN EXEC (1)H B1
KP21 TS 03 H C1
KP21 PHASE 1 (1)H D1
M627 K30 E1
KP32 RI RD RST

KP26 CP ACT (1)H A1
KP32 START WRITE H B1
KP21 TS 02 H C1
KP21 PHASE 3 (1)H D1
-KP27 TRAP H D2 E2 F2 H2
M139 F12 J2 KP32 CP WR ADR ACK L

+3V K17U1 H
M602 K16 K1 J2 K2 F2 J1 E2 D2
CP MRLS M205 K15 D 1 C 0 M1 N1 H1 L1

KP27 ADR ACK B (1)L P1
KP31 TRAP PL R1
M133 K17 S1
KP32 ADR ACK H

KP32 MRLS ACK H
KP27 MRLS ACK (B)L H2
M611 M01
KP20 PWR CLR H J2
M112 M15 H2 K2
KP32 MRLS ACK L

KP32 CP+RI RD RST L P2
KP31 TRAP CLR MEM L N2
KP26 HOLD MC (0)H D2 E2 F2
M135 F28 H2
M602 K16 L2 KP32 END OF CP CYCLE L R2 S2

KP32 CP+RI RD RST L M1
KP34 EX SW LD MI L N1
KP34 CONSOLE LD MI L P1
KP20 PWR CLR L R1
M627 H30 S1 KP32 LD MI H

KP34 KEY ACTIVE (1) B H L2
KP45 EX SW H M2
M133 F29 N2

KP66 STOREXFIRST CHAR L K2
KP30 IOT INH M REQ L L2
KP29 XGXFETCH L M2 N2
M627 H30 P2

KP20 FETCH H E1
M133 F25 D1 F1

KP21 TS 01 H E1
KP20 EAE (0)H F1 H1
M135 F32 J1 R1

M611 L19 S1

KP32 EN CP MEM REQ HOLD H
-KP31 MEM TRAP H J1
KP21 PHASE 2 (1)H K1 L1
KP21 HS CLOCK L M1
KP50 INT RESET H L2 M2 N2
CP MEM REQ HOLD M242 K13 J 1 K 0 H1 P2

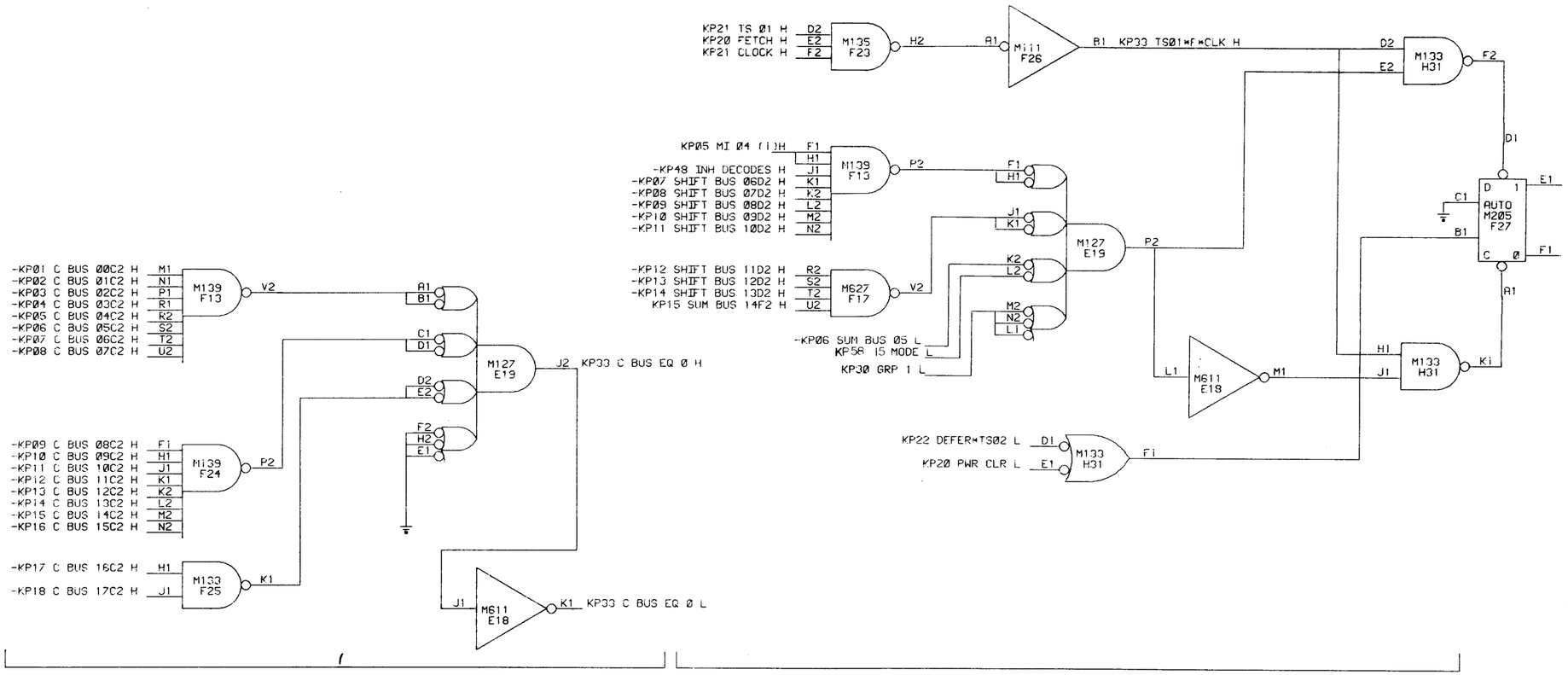
+3V K17U1 H N1
KP26 CP ADR ACK L K2

NOTE: IF ECO KP15-#52 FOR GREATER THAN 32K ADDRESSING (OPTIONAL IN OLDER MACHINES) IS NOT INSTALLED, INDICATED GATES ARE RESPECTIVELY:
* M113 E29 OUTPUT C1
+ M133 K17 OUTPUT V2

*NOTE: REMOVE WIRE BETWEEN K16D2 AND K16E2 IF PARITY OPTION IS INSTALLED.

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV
LH	KP15-00038	M		KP15-00075	S
	S GOLDSBY 7/15/70			SWANSON 2/73	U
	F AUMANN 7/22/70				
GH	KP15-00056	N			T
	S GOLDSBY 3/1/71				
	F AUMANN 3/2/71				
GH	KP15-00056	I			
	S GOLDSBY 6/22/71				
	F AUMANN 6/22/71				
	KP15-00075				

DRN. S GOLDSBY	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. L HOHOS	DATE 10-15-69		
ENG. F AUMANN	DATE 10-7-69	TITLE MEMORY INTERFACE CONTROL	
PROJ. ENG. G BUTLER	DATE 10-7-69		
PROD. F LASKEY	DATE 10-7-69		
FIRST USED ON PDP15		SIZE D	CODE RS
SCALE		DIST.	
SHEET 1 OF 1			



LOGIC TESTS C BUS FOR ALL ZEROS
USED FOR OPERATE SKIP TESTS
AND SAD

LOGIC EXAMINES ADDRESS OF MEMORY REFERENCE INSTRUCTIONS
IF ADDRESS REFERENCED INDIRECTLY IS BETWEEN 10 AND 17
THEN CONTENTS OF REFERENCED LOCATION IS AUTO INCREMENTED

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	C
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GH	KP15-00046	D
	K WALSH 12/18/70	
	F AUMANN 12/18/70	
	KP15-00056	E

REVISIONS		
CHK	CHANGE NO	REV
	KI [illegible]	F
	F. DELL	

DRN. J.FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R.COOK	DATE 10/7/69	
ENG. F.AUMANN	DATE 10/7/69	TITLE: DETECT XMODE & CBUS
PROJ. ENG. G.BUTLER	DATE 10/9/69	
PROD. F.LASKEY	DATE 10/8/69	
FIRST USED ON: KP15		SIZE D; CODE BS; NUMBER KP15-0-33; REV. F
SCALE		
SHEET 1 OF 1		DIST.

KP45 STOP H K2 M111 F26 L2 KP34 STOP L

KP45 DEPOSIT H U2 M611 E22 V2 KP34 DEPOSIT L

KP45 EXAMINE H L1 M111 F26 M1 KP34 EXAMINE L

KP45 NEXT H M2 M111 F26 N2 KP34 NEXT L

KP45 DEPOSIT H P2
KP34 KEY ACT (1)B H R2
M133 E21 S2 KP34 KEY REQ WRITE L

T2
U2
M133 E21 V2 KP34 KEY REQ RD L

KP34 EXAMINE L J2
KP34 START L K2
KP34 CONTINUE L L2
M135 F23 M2 KP34 EX+ST+CONT H

KP45 START H H2 M111 F26 J2 KP34 START L

KP45 EX SW H K2 M611 E22 L2 KP34 EXECUTE L

KP45 CONTINUE H N1 M111 F26 P1 KP34 CONTINUE L

KP45 CONTINUE H N2
KP35 INT ACK+ST H P2
R2
M135 F23 S2 KP34 CONT*-INT L

KP34 DEPOSIT L K2
KP34 NEXT L L2
KP28 OAS L M2
KP34 EXECUTE L N2
M627 N09 P2
A1
KP21 TS Ø2 H B1
M133 F25 C1 KP34 DSW-C L

KP34 EXAMINE L A1
KP34 START L B1
KP34 DEPOSIT L C1
KP45 KEY READ IN L D1
M627 J30 E1
E1
-KP34 NEXT H F1
KP21 TS Ø1 H H1
M135 F28 J1 KP34 ADR SW-A L

KP34 KEY ACT (1)L V1 M611 E22 U1 KP34 KEY ACT (1)B H

KP45 DEPOSIT H M1
KP21 PHASE 1 (1)H N1
P1
KP21 TS Ø3 H R1
M627 J30 S1 KP34 CONSOLE LD MI L

KP34 KEY ACT (Ø)L A1 M611 E12 B1 KP34 KEY ACT (Ø)B H

KP45 NEXT H H2
KP21 TSØ1 H J2
M133 E16 K2 KP34 NEXT*TSØ1 L

KP57 AUTO RESTART (1)L H2

KP21 TSØ3 H J2
KP20 SET FETCH H K2
L2
M135 F28 M2 P2
R2
M112 M15 S2
KP45 CF PULSE H E2
-KP30 XCT L

D 1
KEY ACT M205 F27
C Ø
J2
K2
D2

KP34 START L M1
KP34 DEPOSIT L N1
KP34 EXAMINE L P1
KP34 EXECUTE L R1
KP45 KEY READ IN L R2
KP34 CONT*-INT L S2
+3V F24U1 H T2
+3V F24U1 H U2
M139 F24 V2

KP24 LD 0A Ø7 M2 H D2
KP66 TTY READ IN (1)H E2
M113 K31 F2

KP49 RI ADV H D1
KP51 STROBE IOP2 H E1
M113 L30 F1
KP35 INTERRUPT STB L
KP34 CONT RESTART (1)L
M627 K30 P2
KP21 RUN (Ø)H D2
E2
M113 L30 F2

KP34 KEY ACT (1) L

+3V F30U1 H P2
KP34 KEY ACT (Ø)B H
M133 F25 S2 N2
KP21 TS Ø1 H M2
D 1
FORCE FETCH M205 F27
C Ø
R2
S2

KP66 READ IN (1)L

+3V F30U1 H S1
KP55 ICT DONE L R1
D 1
START RUN M205 F27
C Ø
T2
U2
V2

KP21 END PHASE 3 (Ø)L P1

NOTE: FORCE FETCH PREVENTS MAJOR STATE GENERATOR FROM ENTERING EXECUTE STATE.

KP34 CLEAR CONSOLE H
M113 K31 L1
M1
N1
J1
M611 M19 K1 KP34 CLEAR CONSOLE L

KP45 AC AVAIL L

KP34 CLEAR KEYS H
KP20 PWR CLR L D2
E2
M133 F25 F2 C1
M111 F26 D2

KP21 TS Ø3 H P1
KP34 FORCE FETCH (1)H R1
KP34 XSW IN PROG (1)H S1
M135 E31 U1 KP34 MO-MDL L E2
M611 M19 F2
KP21 CLOCK H M1
M133 E32 L1 N1 KP34 EX SW LD MI L

KP21 TSØ3 H P2
KP21 PHASE 1 (1)H R2
M133 E32 S2

+3V N16V1 H P2
KP45 CONTINUE H N2
KP45 CF PULSE H M2
D 1
CONT RE START M205 N32
C Ø
R2
S2
KP21 RUN (1)L L2

KP32 RI RD RST L L2
KP34 EX+ST+CONT H J2
KP34 EXAMINE L K2
KP34 KEY ACT (1)F H L2
M135 E31 M2 N2 S2
KP21 TS Ø1 H M2
D 1
INH STOP RUN M205 K15
C Ø
R2
+3V K17U1 H P2

KP34 XSW IN PROG (1)H H1
KP34 FORCE FETCH (Ø)H J1
M133 K17 K1 L1

KP34 DEPOSIT L P1
KP34 EXAMINE L R1
KP49 RI PAUSE L S1
M135 F23 U1 K1
KP21 TS Ø2 H J1
D 1
STOP TS RUN M205 F27
C Ø
M1
N1
KP21 I/O RUN (Ø)L H1

STOP THE COMPUTER ON COMPLETION OF DEPOSIT OR EXAMINE OR ELSE TO WAIT FOR READ IN HDWR TO ASSEMBLE ANOTHER CHARACTER.

KP21 TS Ø2 H J2
KP45 EX SW H K2
KP34 KEY ACT (1)H L2
M135 J32 M2 KP34 EX SW*TS Ø2 L
H2
D 1
XSW IN PROG M205 H32
C Ø
F2
J2
K2

KP20 PWR CLR H E2

KP21 TSØ3 H A1
KP20 SET FETCH H B1
KP34 FORCE FETCH (Ø)H C1
KP21 I/O RUN (Ø)H D1
M627 H30 E1 D2

EXECUTE SWITCHES IN PROGRESS

NOTE: THIS FLIP FLOP SETS DURING CONSOLE FUNCTION EX SW AND IS USED TO GENERATE A SIGNAL STOPPING RUN ON COMPLETION OF INSTRUCTION.

RESTART THE PROCESSOR IF:
1. KEY DEPRESSED
2. IO PROCESSOR DONE
3. INTERRUPT ADDRESS ON I/O BUS
4. READ IN HDW HAS ANOTHER WORD

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	L
	S GOLDSBY 7/15/70	
	F AUMANN 7/15/70	
GH	KP15-00048	M
	N LEGERE 1/12/71	
	F AUMANN 1/12/71	
	KP15-00056	N

REVISIONS		
CHK	CHANGE NO	REV
	KP15-00075	P
	F. DOLL 1/16/73	
	KP15 00082	R
	F. DOLL	

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE CONSOLE INTERFACE
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D CODE 88 NUMBER KP15 0 34 REV. R
SCALE		
SHEET 1 OF 1		DIST.

KP27 PHASE 3 (1)H H2
KP27 TS02 H J2
M133 F29
K2 N1
M611 L19
P1 KP35 TS02*PHASE 3 H

KP23 SET FETCH *TS03*CLK H I2
KP35 INTRPT ACK (1)H U2
KP26 CP ACT (0)H V2
M135 F23
V1 KP35 EN INTERRUPT L
A1 M611 L19
B1 KP35 EN INTERRUPT H

KE05 DISABLE INTRPT ACK H L2
KP30 XCT H M2
M112 L23
N2

KP20 SET FETCH H J2
KP35 TS02*PHASE 3 H K2
KP35 INTERRUPT H L2
M115 M32
M2 U2
M111 L24
V2
-KP30 IOT INH M REQ H D2
E2
F2
H2
M627 K30
J2

KP28 OPR WALT L
P1
M113 L31
L2 M2 N2
M113 L22
R1 S1

KP34 CLEAR KEYS H E1
KP31 TRAP H F1
KP34 FORCE FETCH (0)H H1
M135 J32
J1 KP35 TRAP*TS03*PHASE 1 L

KP35 INTRPT STB L L1
KP21 TS 03 H J1
D 1 INTRPT STATE M205 H32 C 0
K1
M1
N1
KP20 PWR CLR L H1

D1
C1
D 1 INTRPT ACK M205 H32 C 0
KP31 TRAP H B1
E1
F1
A1

KP35 INTRPT STATE (1)H P1
R1
M112 M15
S1 KP35 INT ACK+ST L

M002 L17
KP69 CP API RQ L K2
P1 M113 K31
R1 S1 KP35 INTERRUPT H

KP50 PROGRAM INTERRUPT H N2
KP51 PIE (1)H P2
R2
M135 J32
S2
M002 L17
R2
-KP69 API RQ H

P1 M113 K31
KP27 TRAP L R1
S1 P2
M113 L25
R2 M113 K31
S2 KP35 PI REQ L
KP35 EN INTERRUPT H

KP35 INTERRUPT STB L H2
KP20 PWR CLR L J2
M133 F25
K2 S2
M111 F26
T2

+3V M23U1 H P2
KP35 IOT MEM H N2
D 1 IOT REQ M205 M23 C 0
R2
S2
L2

KP31 F*TS01 L P1
KP21 PHASE 1 (1)L R1
M112 K20
S1 M2

KP50 INT RESET H D2
KP55 IOT DONE H E2
M112 L18
F2

KP35 INTRPT STATE (1)H P1
KP21 TS01 H R1
M113 L31
S1 KP35 INT INH SET MO L
L1 PA
+3V M23U1 H M2
M606 N15
L2 KP35 INTRPT CLR IR L

KP35 API STATE (1)H T2
KP35 INTRPT STATE (1)H U2
M133 E02
V2 KP35 API SET IR 00 L

KP35 INTERRUPT STB L
KP51 API SYNC (1)L A1
KP51 PI SYNC (1)L B1
M113 L31
C1 L1
KP55 TIME 4 H M1
M133 N31
N1 S2
M611 K25
T2 KP35 INTERRUPT STB H P2
KP51 API SYNC (1)H R2
M113 L31
S2
KP35 SET API STATE L
T2

KP69 CP API RQ L U2
M611 K25
V2
KP35 EN INTERRUPT H T2
U2
M113 K31
V2 KP35 API REQ L

-KP30 GRP2 H A1
KP35 INTRPT STATE (0)H B1
KP21 TS02 H C1
KP21 PHASE 2 (1)H D1
M627 N09
E1
KP32 CP WR ADR ACK L P2
R2
M133 K19
S2 R1
D 1 API STATE M205 L04 C 0
S1
U2
V2
KP50 INT RESET L P1

KP30 IOT INH M REQ L P1
KP03 USER MODE B (0)L R1
M112 L23
S1 KP35 IOT MEM H

KP30 IOT INH M REQ L H1
KP32 START READ L J1
M112 L18
K1 H2
J2
M112 L23
K2 KP35 I/O STOP INH L
KP35 INTRPT ACK (1)H

REVISIONS			REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV
LH	KP15-00038	L	GH	KP15-00056	R		[illegible]	V
	S GOLDSBY 7-15-70			N COTE 6/22/71			[illegible]	
	F AUMANN 7-22-70			F AUMANN 6/24/71			WALSH 2-21-72	
GH	KP15-00046	M	GH	KP15-00062	S		[illegible]	
	K WALSH 12/11/70			N COTE 9/7/71			KP15-00078	W
	F AUMANN 12/11/70			F AUMANN 9/27/71			[illegible]	
GH	KP15-00048	N		KP15-00066	T		F DOL	
	N LESIRE 1/12/71			[illegible]				
	F AUMANN 1/12/71							
GH	KP15-00050	P						
	S GOLDSBY 3/1/71							
	F AUMANN 3/2/71							

DRN. S GOLDSBY	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. L HOHOS	DATE 10-15-69		
ENG. F AUMANN	DATE 10-7-69	TITLE INTERRUPT CONTROL LOGIC	
PROJ. ENG. G BUTLER	DATE 10-7-69		
PROD. F LASKEY	DATE 10-7-69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-35	REV. W
SHEET 1 OF 1		DIST.	

KE01 MQ 00D1 (1)H — A1 — M149 K11
KE01 MQ 01D1 ( )H — D1 — M149 K11
KE01 MQ 02D1 (1)H — D2 — M149 K11
KE01 MQ 03D1 (1)H — H1 — M149 K11
KE01 MQ 04D1 (1)H — H2 — M149 K11
KE01 MQ 05D1 (1)H — L1 — M149 K11
KE01 MQ 06D1 (1)H — L2 — M149 K11
KE01 MQ 07D1 (1)H — P1 — M149 K11
KE01 MQ 08D1 (1)H — P2 — M149 K11
U2 — M149 K11 — KP44 IND MQ L

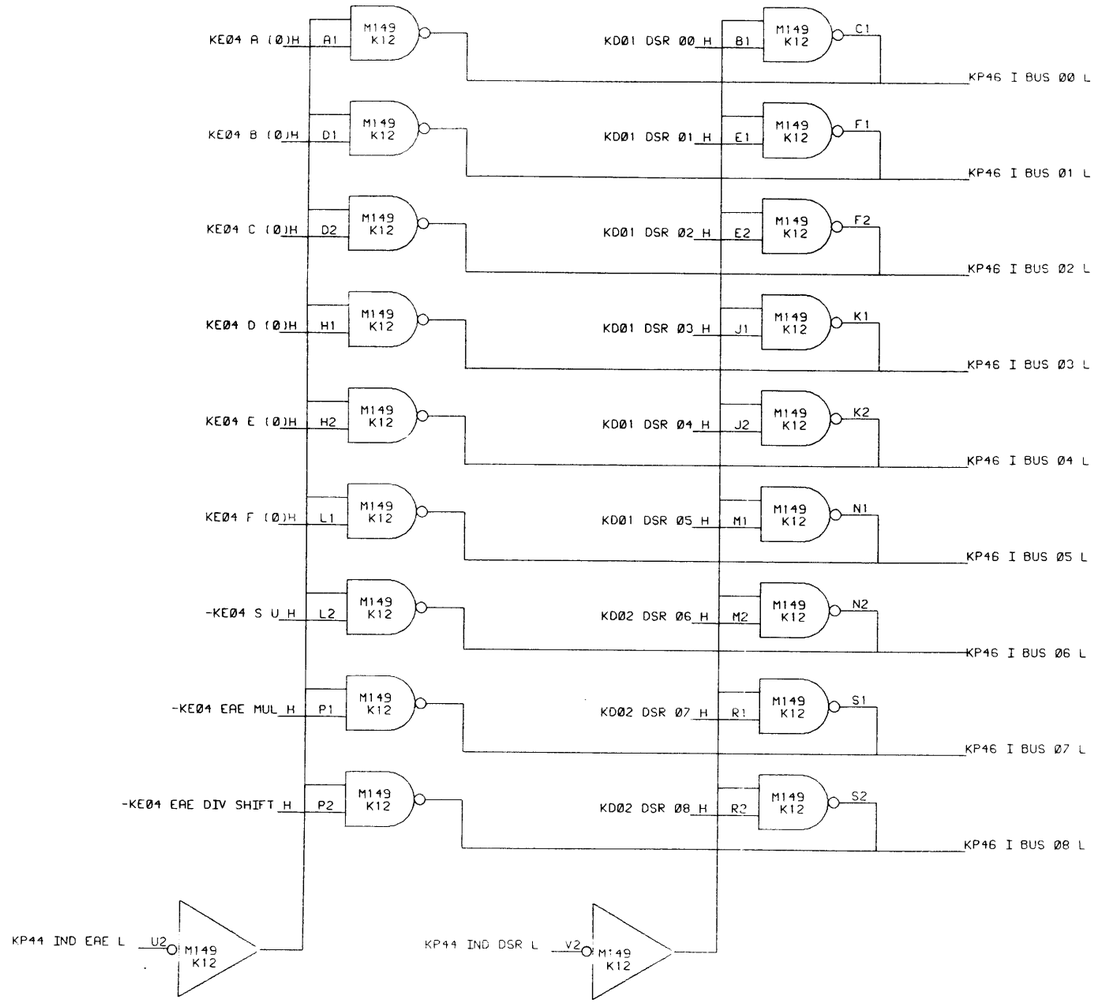
KP22 L (1) B H — B1 — M149 K11 — C1
E1 — M149 K11 — F1
E2 — M149 K11 — F2
J1 — M149 K11 — K1
J2 — M149 K11 — K2
KP50 PROGRAM INTERRUPT H — M1 — M149 K11 — N1
KP51 PIE (1)H — M2 — M149 K11 — N2
R1 — M149 K11 — S1
R2 — M149 K11 — S2
KP45 STROBE ZERO L — V2 — M149 K11

KP19 DIVSHIFT-D 00M1 H — A1 — M149 J31
KP19 MULSHIFT-D 01M1 H — D1 — M149 J31
KP19 RAL-D 02M1 H — D2 — M149 J31
KP19 RAR-D 03M1 H — H1 — M149 J31
KP19 RTL-D 04M1 H — H2 — M149 J31
KP19 D-RTR 05M1 H — L1 — M149 J31
KP19 NO SHIFT-D 06M1 H — L2 — M149 J31
KP19 SW-D 07M1 H — P1 — M149 J31
KP19 C-A BUS 08M1 H — P2 — M149 J31
KP44 IND M1 L — U2 — M149 J31

KP23 SKIP (1)H — B1 — M149 J31 — C1 — KP46 I BUS 00 L
KP19 -M-B 00-08 H — E1 — M149 J31 — F1 — KP46 I BUS 01 L
KP19 LR-C 02M2 H — E2 — M149 J31 — F2 — KP46 I BUS 02 L
KP19 AND-B 03M2 H — J1 — M149 J31 — K1 — KP46 I BUS 03 L
KP24 LD AC 04M2 H — J2 — M149 J31 — K2 — KP46 I BUS 04 L
KP24 LD MQ 05M2 H — M1 — M149 J31 — N1 — KP46 I BUS 05 L
KP24 LDPC 06-17M2 H — M2 — M149 J31 — N2 — KP46 I BUS 06 L
KP24 LD OA 07M2 H — R1 — M149 J31 — S1 — KP46 I BUS 07 L
KP24 LD LR 08M2 H — R2 — M149 J31 — S2 — KP46 I BUS 08 L
KP44 IND M2 L — V2 — M149 J31

REVISIONS		
CHK	CHANGE NO.	REV.
GH	KP15-00038	B
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
	KP15-00046	C

DRN. J FASSHAUER	DATE 10/7/68	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/68	
ENG. F AUMANN	DATE 10/7/68	TITLE: I BUS 00-08
PROJ. ENG. G BUTLER	DATE 10/7/68	
PROD. F LASKEY	DATE 10/7/68	
FIRST USED ON: KP15		SIZE D | CODE BS | NUMBER KP15-0-38 | REV. C
SCALE		DIST.
SHEET 1 OF 1		



REVISIONS		
CHK	CHANGE NO.	REV.
KH	KE-0004-E	

DRN.	DATE 7/15/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. Dan Hoban	DATE 7/15/70	
ENG. F AUMANN	DATE 7/15/70	TITLE I BUS 02-06
PROJ. ENG. F AUMANN	DATE 7/15/70	
PROD. F LACKEY	DATE 7/15/70	
FIRST USED ON KP15		SIZE D · CODE 89 · NUMBER KP15-0-02 · REV. A
SCALE		
SHEET 1 OF 1		DIST.

KE02 MQ 09D1 (1)H — A1 — M149 K24 — B1 — M149 K24 — C1 — KP19 -C-A 0-12 14-7_H — A1 — M149 K32 — B1 — M149 K32 — C1 — KP24 LDXR 09M2_H — KP46 I BUS 09 L

KE02 MQ 10D1 (1)H — D1 — M149 K24 — E1 — M149 K24 — F1 — KP19 XR-A 06-17_H — D1 — M149 K32 — E1 — M149 K32 — F1 — KP19 BAC-C 09-17_H — KP46 I BUS 10 L

KE02 MQ 11D1 (1)H — D2 — M149 K24 — E2 — M149 K24 — F2 — KP66 READ IN (1)H — D2 — M149 K32 — E2 — M149 K32 — F2 — KP19 XR-B 0-5 15M2_H — KP46 I BUS 11 L

KE02 MQ 12D1 (1)H — H1 — M149 K24 — J1 — M149 K24 — K1 — KP19 SLG-A 12M1_H — H1 — M149 K32 — J1 — M149 K32 — K1 — KP19 I/O BUS-C 12M2_4 — KP46 I BUS 12 L

KE02 MQ 13D1 (1)H — H2 — M149 K24 — J2 — M149 K24 — K2 — KP19 I/O ADD-A 13M1_H — H2 — M149 K32 — J2 — M149 K32 — K2 — KP19 XOR-C 13M2_H — KP46 I BUS 13 L

KE02 MQ 14D1 (1)H — L1 — M149 K24 — M1 — M149 K24 — N1 — KP19 ADR SW-A 14M1_H — L1 — M149 K32 — M1 — M149 K32 — N1 — KP26 CP ACT (1)H — KP46 I BUS 14 L

KE02 MQ 15D1 (1)H — L2 — M149 K24 — M2 — M149 K24 — N2 — KP19 OA-A 15M1_H — L2 — M149 K32 — M2 — M149 K32 — N2 — KP32 START READ_H — KP46 I BUS 15 L

KE02 MQ 16D1 (1)H — P1 — M149 K24 — R1 — M149 K24 — S1 — KD05 DATA IN (1)H — P1 — M149 K32 — R1 — M149 K32 — S1 — KP32 START WRITE_H — KP46 I BUS 16 L

KE02 MQ 17D1 (1)H — P2 — M149 K24 — R2 — M149 K24 — S2 — KD05 DATA OUT (1)H — P2 — M149 K32 — R2 — M149 K32 — S2 — KP32 CP MRLS (1)H — KP46 I BUS 17 L

U2 — M149 K24 — KP44 IND MQ L

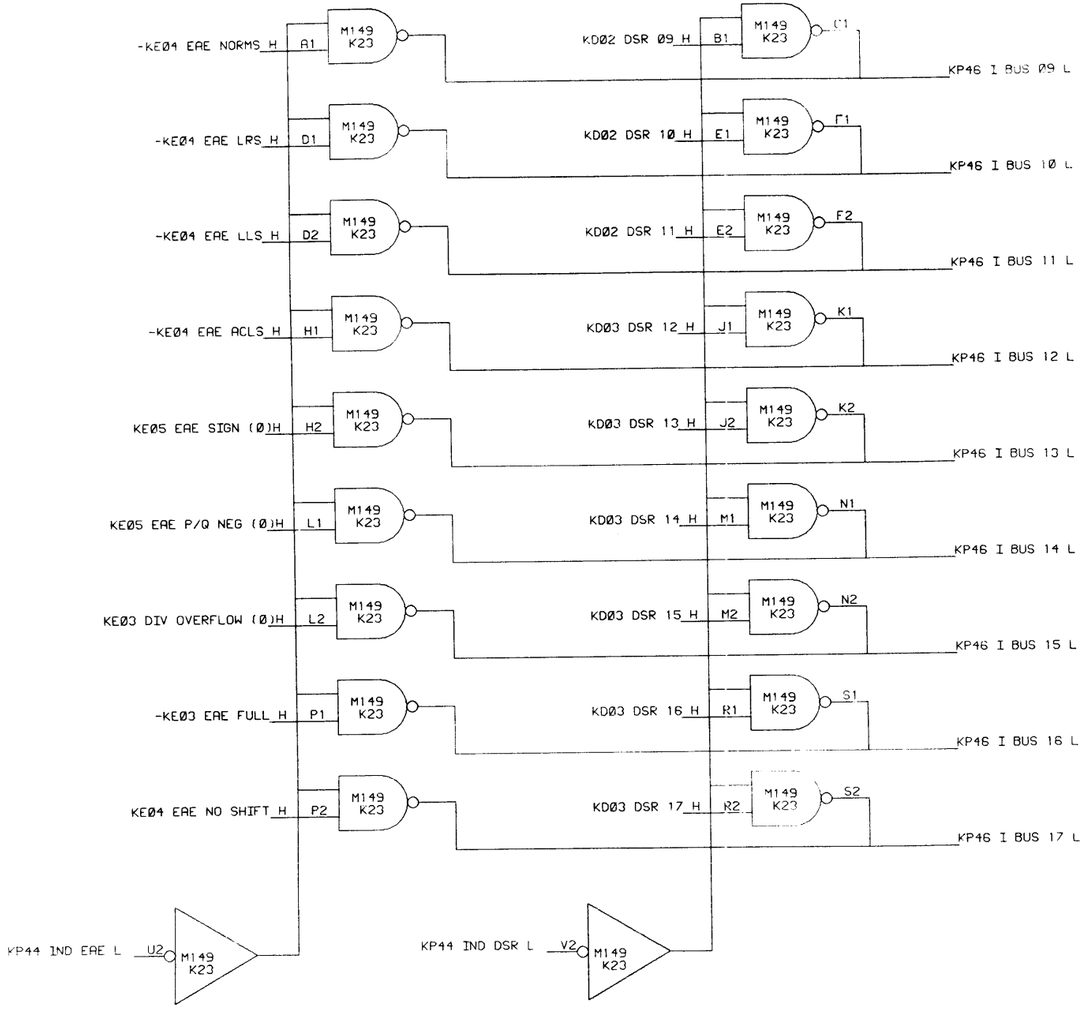
+3V L21U1 H — V2 — M149 K24

KP44 IND M1 L — U2 — M149 K32

KP44 IND M2 L — V2 — M149 K32

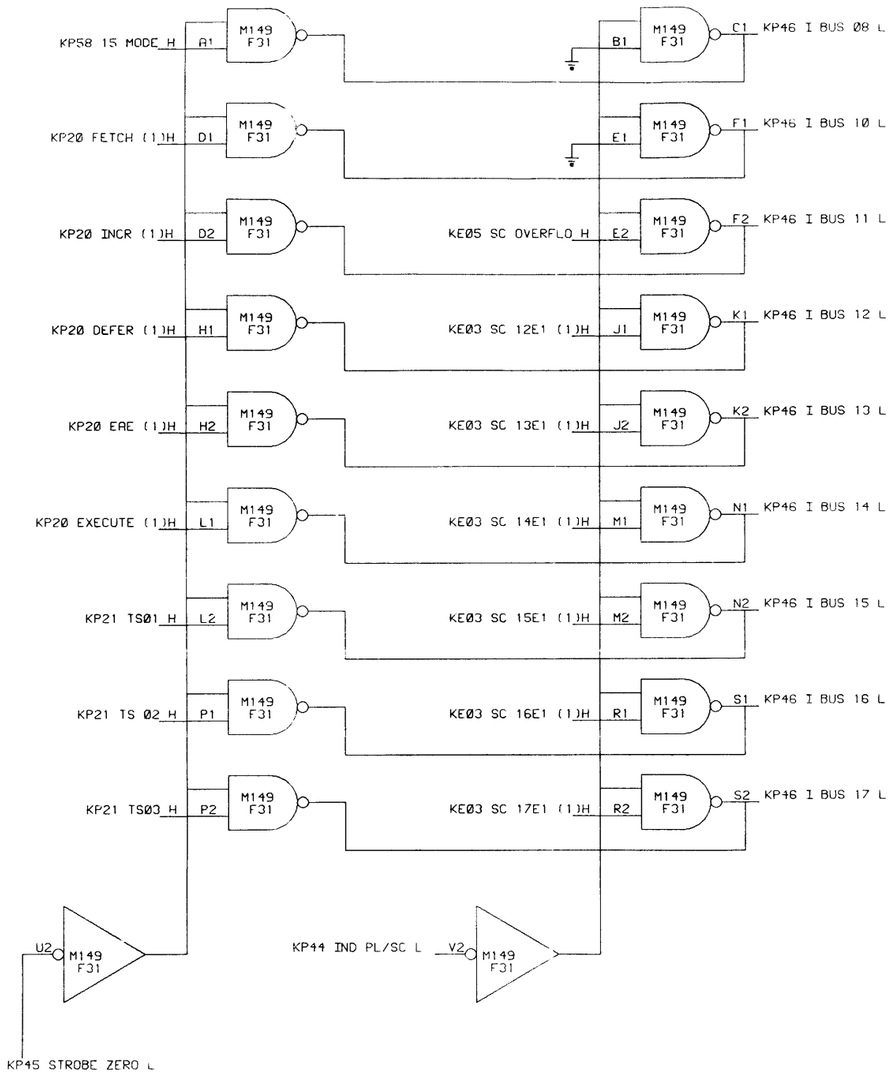
REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
	KP15-00057	C

DRN J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D R COOK	DATE 10/7/69	
ENG F AUMANN	DATE 10/7/69	TITLE I BUS 09-17 MQ-M1-M2
PROJ ENG G BUTLER	DATE 10/7/69	
PROD F LASKEY	DATE 10/7/69	
FIRST USED ON KP15		SIZE D / CODE BS / NUMBER KP15-0-40 / REV. C
SCALE		
SHEET OF		DIS



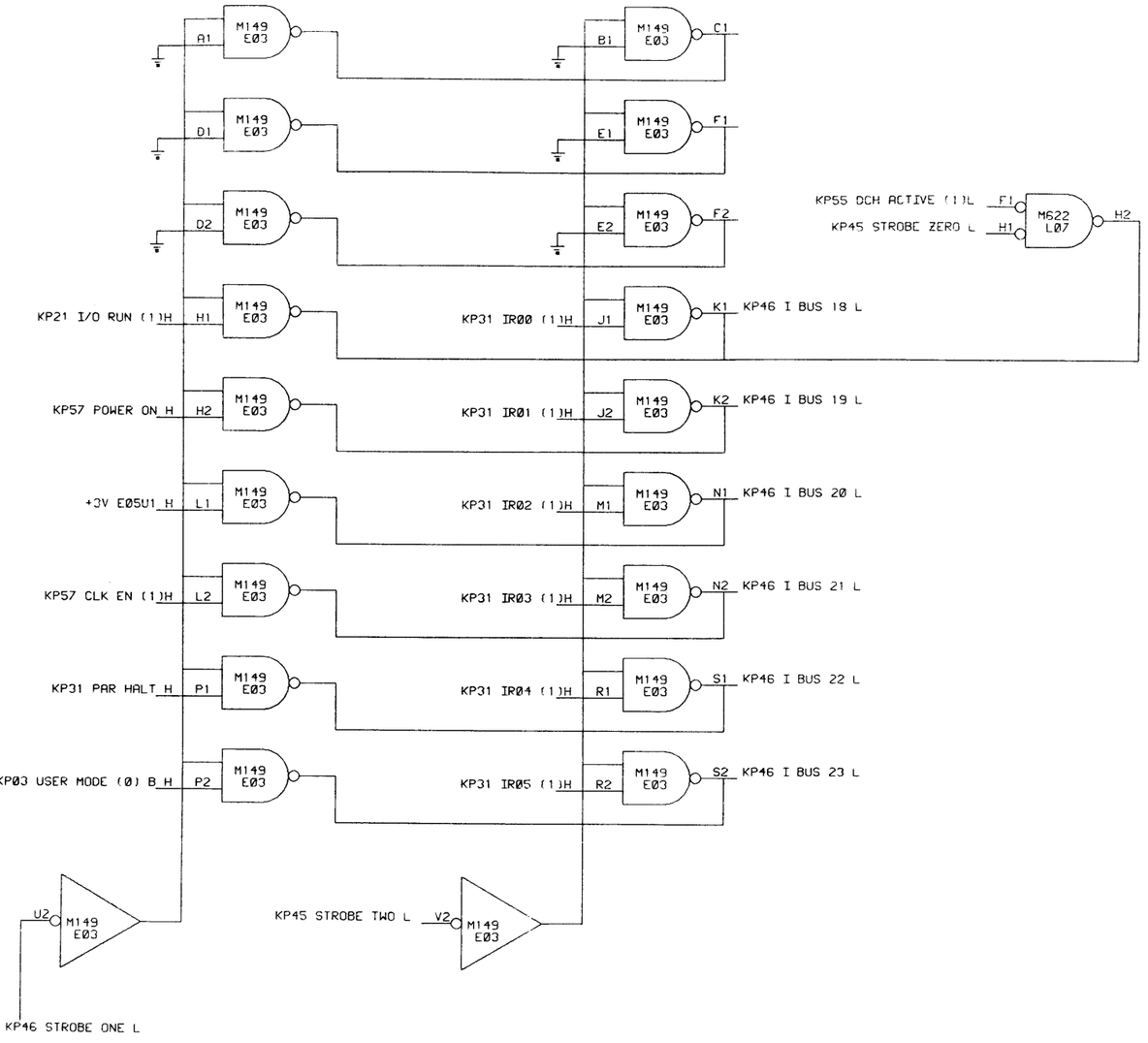
REVISIONS		
CHK	CHANGE NO.	REV.
	KP15-0003	E

DRN J.PASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. R.COOK	DATE 10/7/69		
ENG. F.RUMANN	DATE 10/7/69	TITLE I BUS 09-17	
PROJ. ENG. G.BUTLER	DATE 10/9/69		
PROD. F.LASKEY	DATE 10/8/69		
FIRST USED ON KP15		SIZE D / CODE BS / NUMBER KP15-0-41	REV. B
SCALE			
SHEET OF		DIST.	



REVISIONS		
CHK	CHANGE NO.	REV.
RW	KP15-000[illegible]	[illegible]

DRN J.FASSHAUER	DATE 1077/68	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D R.COOK	DATE 1077/68	
ENG. R.HUMANN	DATE 1077/68	TITLE I BUS 08 10-17 SC
PROJ. ENG. D.BUTLER	DATE 1079/68	
PROD. P.CASKEY	DATE 1078/68	
FIRST USED ON KP15		SIZE D / CODE BS / NUMBER KP15-0-42 / REV. B
SCALE		
SHEET 1 OF 1		DIST.



REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00045	C
	S GOLDSBY 10-3-70	
	F AUMANN 10-13-70	
GH	KP15-00046	D
	S GOLDSBY 12/1/71	
	F AUMANN 12/17/71	
	KP15-00056	E

DRN. S GOLDSBY	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D L HOHOS	DATE 10-15-69	TITLE I BUS 13-23 IR
ENG. F AUMANN	DATE 10-7-69	
PROJ. ENG. G BUTLER	DATE 10-7-69	
PROD. F LASKEY	DATE 10-7-69	
FIRST USED ON KP15		SIZE D | CODE BS | NUMBER KP15-0-43 | REV. E
SCALE		
SHEET 1 OF 1		DIST.

+3V H 04 → 7400N E06 (06) → MA1 KP44 CDL 04 H
KP46 I BUS 04 L → MB1 05
+3V H 01 → 7400N E06 (03) → MC1 KP44 CDL 06 H
KP46 I BUS 06 L → MD1 02

KP46 SING INST (0)L → NV2 02
KP46 SING STEP (0)L → NU2 04
KP46 SING TIME (0)L → NT2 05
+3V H 01 → 7440N E18 (06) → NS2

KP46 I BUS 09 L → MR2 09
+3V H 10 → 7400N E09 (08) → MN2 KP44 CDL 09 H
KP46 I BUS 07 L → ML2 09
+3V H 10 → 7400N E06 (08) → MJ2 KP44 CDL 07 H
KP46 I BUS 08 L → MP2 12
+3V H 13 → 7400N E09 (11) → MM2 KP44 CDL 08 H
KP46 I BUS 05 L
MK2 12
+3V H 13 → 7400N E06 (11) → ME2 KP44 CDL 05 H

KP46 I BUS 10 L → NA1 01
+3V H 02 → 7400N E09 (03) → MS2 KP44 CDL 10 H

+3V H 04 → 7400N E09 (06) → MV2 KP44 CDL 11 H
KP46 I BUS 11 L → MV1 05

KP46 I BUS 12 L → NV1 09
+3V H 10 → 7400N E12 (08) → NB1 KP44 CDL 12 H

+3V H 04 → 7400N E09 (06) → NE2 KP44 CDL 13 H
KP46 I BUS 13 L → NF2 05

KP46 I BUS 14 L → NH2 01
+3V H 02 → 7400N E12 (03) → NJ2 KP44 CDL 14 H

KP46 I BUS 15 L → NU1 12
+3V H 13 → 7400N E09 (11) → NL1 KP44 CDL 15 H

+3V H 04 → 7400N E15 (06) → NP1 KP44 CDL 16 H
KP46 I BUS 16 L → NM1 05

+3V H 01 → 7400N E15 (03) → NP2 KP44 CDL 17 H
KP46 I BUS 17 L → NN1 02

MK1 → KP44 CONSOLE DLY1 H
NK1 → KP44 CONSOLE DLY2 H

+3V H → 7474N E02 (09, 05) → 7474N E02 (09, 05) → 7474N E05 (09, 05) → 7474N E05 (09, 05) → 7474N E08 (09, 05) → 7474N E08 (09, 05) → 7474N E11 (09, 05) → 7474N E11 (09, 05) → 7474N E14 (09, 05) → 7474N E14 (09, 05) → 7474N E17 (09, 05) → 7474N E17 (09, 05)

KP45 BANK 1 AVAIL L
ME1 01
+3V H 02
04
05 → 7440N E03 (06)

KP45 REG NORM STROBE L
MD2 09
+3V H 10
12
13 → 7440N E03 (08)

KP45 REG MAINT STROBE L NR2
09
+3V H 10
12
13 → 7440N E18 (08)

08 → 7400N E01 (11) → MF2 KP44 IND AC L
01, 02 → 7400N E01 (03) → MH2 KP44 IND MQ L

08 → 7400N E04 (11) → MM1 KP44 DISPLAY STATUS L
01, 02 → 7400N E04 (03) → MN1 KP44 IND IOB L

08 → 7400N E07 (11) → MT2 KP44 IND DSR L
01, 02 → 7400N E07 (03) → MU2 KP44 IND EAE L

08 → 7400N E10 (11) → ND1 KP44 IND LR L
01, 02 → 7400N E10 (03) → ND2 KP44 IND XR L

08 → 7400N E13 (11) → NK2 KP44 IND PL/SC L
01, 02 → 7400N E13 (03) → NL2 KP44 IND MQ L

08 → 7400N E16 (11) → NM2 KP44 IND DA L
01, 02 → 7400N E16 (03) → NN2 KP44 IND PC L

08 → 7400N E01 (08) → MF1 KP44 IND A BUS L
04, 05 → 7400N E10 (06) → MH1 KP44 IND MST L

08 → 7400N E04 (08) → MJ1 KP44 IND MMB L
04, 05 → 7400N E04 (06) → MR1 KP44 IND MMA L

08 → 7400N E07 (08) → MS1 KP44 IND MDL L
04, 05 → 7400N E07 (06) → MU1 KP44 IND M2 L

08 → 7400N E10 (08) → NC1 KP44 IND M1 L
04, 05 → 7400N E10 (06) → NE1 KP44 IND SUM BUS L

08 → 7400N E13 (08) → NF1 KP44 IND I/O A L
04, 05 → 7400N E13 (06) → NH1 KP44 IND SHIFT BUS L

08 → 7400N E16 (08) → NR1 KP44 IND C BUS L
04, 05 → 7400N E16 (06) → NS1 KP44 IND B BUS L

M772
M26
N26

REVISIONS		
CHK	CHANGE NO.	REV.
[illegible]	[illegible]	[illegible]

DRN. Larry Gelot	DATE 7/15/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. Tom Hoke	DATE 7/15/70	TITLE CONSOLE CONTROL #1
ENG. E AUMANN	DATE 7/15/70	
PROJ. ENG. E AUMANN	DATE 7/15/70	
PROD. L LASKEY	DATE 7/15/70	
FIRST USED ON KP15		SIZE D · CODE 05 · NUMBER KP15-0-44 · REV. A
SCALE		
SHEET 1 OF 1		DIST.

KP46 I BUS 01 L MC1 — 7400N E01 — ME2 KP45 CDL 21 H
KP46 I BUS 03 L MM1 — 7400N E04 — MN2 KP45 CDL 03 H
KP46 I BUS 19 L MF1 — 7400N E01 — MH2 KP45 CDL 19 H
KP46 I BUS 21 L MF2 — 7400N E01 — MD1 KP45 CDL 21 H
KP46 I BUS 23 L NG1 — 7400N E12 — NC2 KP45 CDL 23 H
KP46 I BUS 00 L NC1 — 7402N E13 — ND2 KP45 CDL 00 H
KP45 I BUS 02 L MN1 — 7400N E04 — ML1 KP45 CDL 02 H
KP46 I BUS 18 L MK1 — 7400N E04 — ML2 KP45 CDL 18 H
KP46 I BUS 20 L MH1 — 7400N E01 — ME1 KP45 CDL 20 H
KP46 I BUS 22 L NH2 — 7400N E16 — NF2 KP45 CDL 22 H
KP45 ZERO (1)H, KP45 TWO (1)H, KP45 HALF (0)H, KP45 ONE (0)H — 7440N E24 — NV2 KP45 AC AVAIL L
KP45 HALF (0)H, KP45 TWO (1)H, KP45 ZERO (0)H, KP45 ONE (1)H — 7440N E13 — NE2 KP45 BANK 1 AVAIL L
KP45 TWO (0)H, KP45 ONE (0)H, KP45 HALF (0)H, KP45 ZERO (1)H — 7440N E13 — MP1 KP45 BANK 2 AVAIL L
KP46 MISC AVAIL INH L NB1 — 7402N E13 — KP45 MISC AVAIL H

KP45 DEPOSIT (1)L, KP45 EXAMINE (1)L, KP45 START ENABLE (1)L — 7410N E10
KP45 REPT ENABLE (1)L — 7402N E13 — 7400N E16
KP45 MISC AVAIL H, KP45 REPT (1)H — 7400N E16
KP45 REPT (0)H, KP45 MISC AVAIL H — 7400N E12
KP45 REPT (1)H, KP45 MISC AVAIL H — 7440N E19 — NM2 KP45 CF PULSE H
KP46 REPEAT CLOCK H, KP45 REPT (1)H, KP45 EX SW L, KP45 CONTINUE ENABLE (1)L — 7410N E18
KP45 EX SW L, KP45 CONTINUE ENABLE (1)L — 7400N E07

7402N E22 — NS1 KP46 CONSOLE FAIL L
7402N E22 — NR2 KP45 CONSOLE TWO H
7402N E22 — NV1 KP45 CONSOLE ONE H
7402N E22 — NU1 KP45 CONSOLE ZERO H

+3V 10, +3V 04, 10 — HALF 7474N E20 — KP46 CLK IN H NN2
TWO 7474N E20
ONE 7474N E23
ZERO 7474N E23 — NU2 KP45 CONSOLE CK H
KP45 MISC AVAIL H

KP45 REPT (1)H — 7400N E03 — 7400N E03
KP45 CDL 22 H, KP45 ACTIVE (1)L — REPT ENABLE 7474N E05
KP45 REPT (1)H — REPT 7474N E15
KP45 CDL 19 H — REG GROUP 7474N E15
KP45 BLOCK (1)H — BLOCK 7474N E06
KP46 SWITCH ACTIVE H — ACTIVE 7474N E06

KP45 CDL 03 H — START ENABLE 7474N E14 — MV2
KP45 START H, KP45 CDL 00 H — CONT ENABLE 7474N E08 — MT2
KP45 CONTINUE H, KP45 CDL 22 H — EXE-CUTE ENABLE 7474N E14 — NE1
KP45 EX SW H, KP45 CDL 18 H — DEPOSIT 7474N E11 — MM2
KP45 DEPOSIT H, KP45 CDL 02 H — EXAMINE 7474N E11 — MU2
KP45 EXAMINE H, KP45 CDL 19 H — NEXT 7474N E08 — MR2
KP45 NEXT H, KP45 CDL 20 H — STOP 7474N E05 — MK2
KP45 STOP H, KP45 CDL 01 H — I/O RESET 7474N E02 — MD2
KP45 I/O RESET H, KP45 CDL 21 H — READ IN 7474N E02

KP45 ONE (0)H, KP45 ZERO (0)H, KP45 TWO (1)H — 7440N E21 — MP2 KP46 REPEAT CLOCK H — NP2 KP45 REG MAINT STROBE L
KP34 CLEAR CONSOLE L — 7440N E21 — NL2 KP45 REG NORM STROBE L
KP45 STOP AVAIL H — 7400N E04 — MJ1 KP45 KEY READ IN L
KP45 TWO (0)H, KP45 ONE (0)H, KP45 ZERO (0)H — 7410N E18 — NJ2 KP45 STROBE ZERO L
KP45 ONE (1)H, KP45 ZERO (0)H, KP45 TWO (0)H — 7410N E18 — NK2 STROBE TWO L

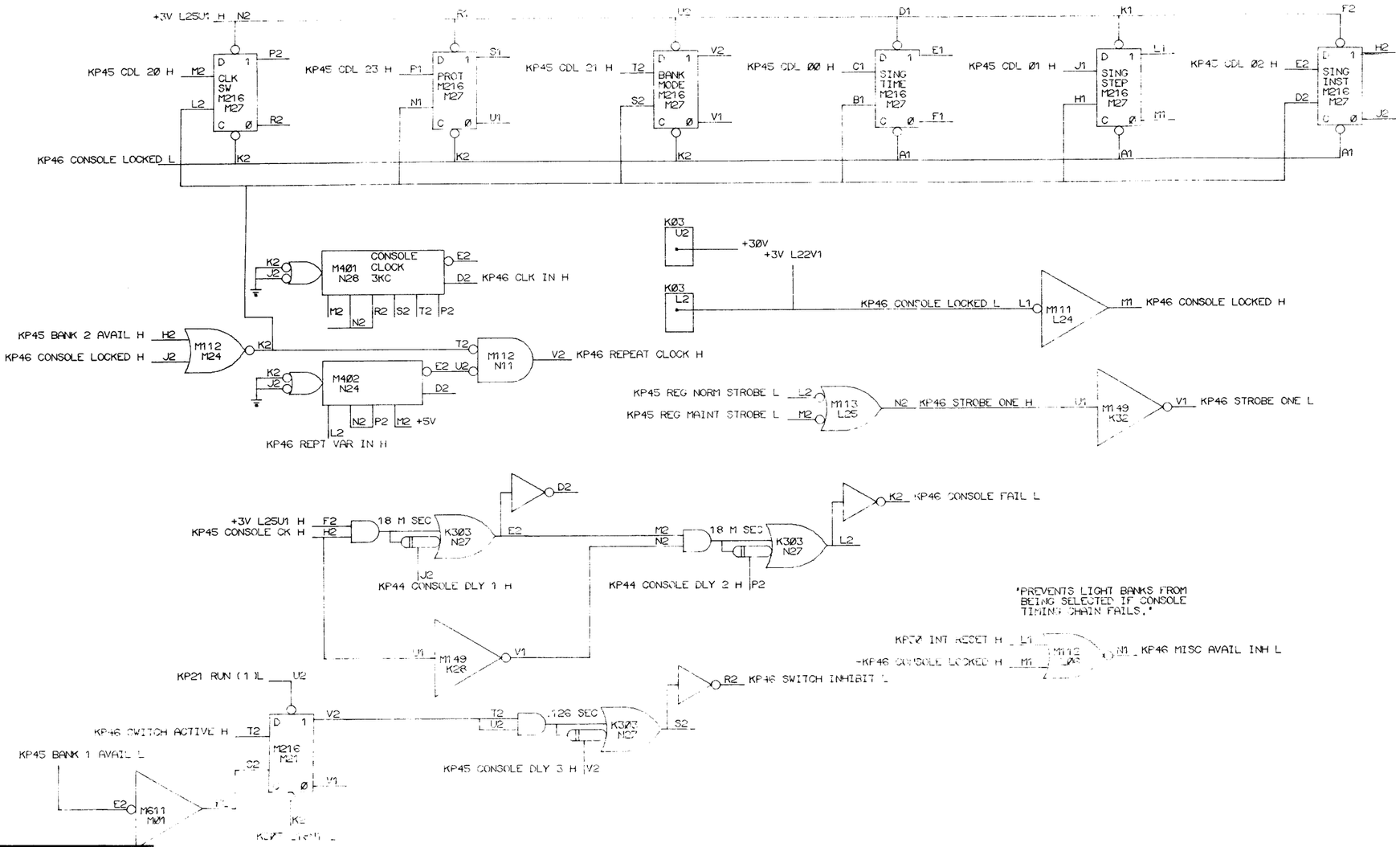
KP45 CONSOLE DLY 3 — NH1

-KP46 SWITCH INHIBIT H MR1
-KP46 MISC AVAIL INH L, KP45 BANK 1 AVAIL L — 7402N E13 — KP45 BLOCK (0)H — 7410N E03 — 7440N E17 — MS2
KP45 STOP AVAIL H — 7400N E07 — 7440N E17
KP34 CLEAR CONSOLE H MS1, KP45 REPT (0)H — 7400N E07 — KP45 STOP (1)L
KP45 CDL 19 H — 7400N E07

KP45 STOP AVAIL H

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV
LH	KP15-00038	C			
	S GOLDSBY 7-15-70				
	F AUMANN 7-22-70				
BJH	KP15-00046	E			
	K WALSH 12/18/7[illegible]				
	F AUMANN 12/[illegible]				
	KP15-00[illegible]	F			

DRN. J.FASSHAUER	DATE 10-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D R.COOK	DATE 10-7-69		
ENG. F.AUMANN	DATE 10-7-69	TITLE CONSOLE CONTROL #2	
PROJ. ENG. G.BUTLER	DATE 10-8-69		
PROD. F.LASKEY	DATE 10-8-69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-15	REV. F
SHEET 1 OF 1		DIST.	



M901
L02

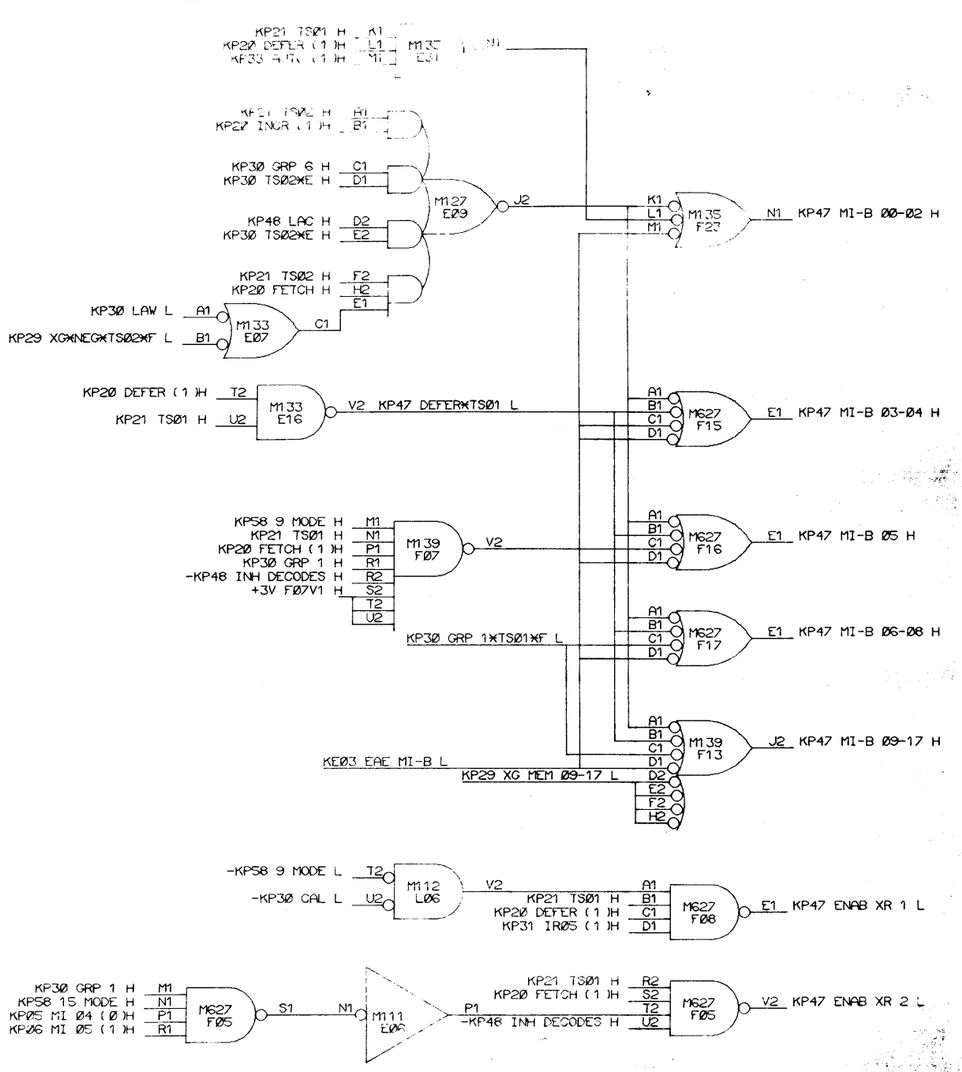
A1	KP46 I BUS 18 L
B1	KP46 I BUS 19 L
C1	KP46 I BUS 20 L
D1	KP46 I BUS 21 L
E1	KP46 I BUS 22 L
F1	KP46 I BUS 23 L
H1	KP46 I BUS 00 L
J1	KP46 I BUS 01 L
K1	KP46 I BUS 02 L
L1	KP46 I BUS 03 L
M1	KP46 I BUS 04 L
N1	KP46 I BUS 05 L
P1	KP46 I BUS 06 L
R1	KP46 I BUS 07 L
S1	KP46 SWITCH ACTIVE H
T1	
U1	KP46 I BUS 08 L
V1	KP46 I BUS 09 L

M901
L02

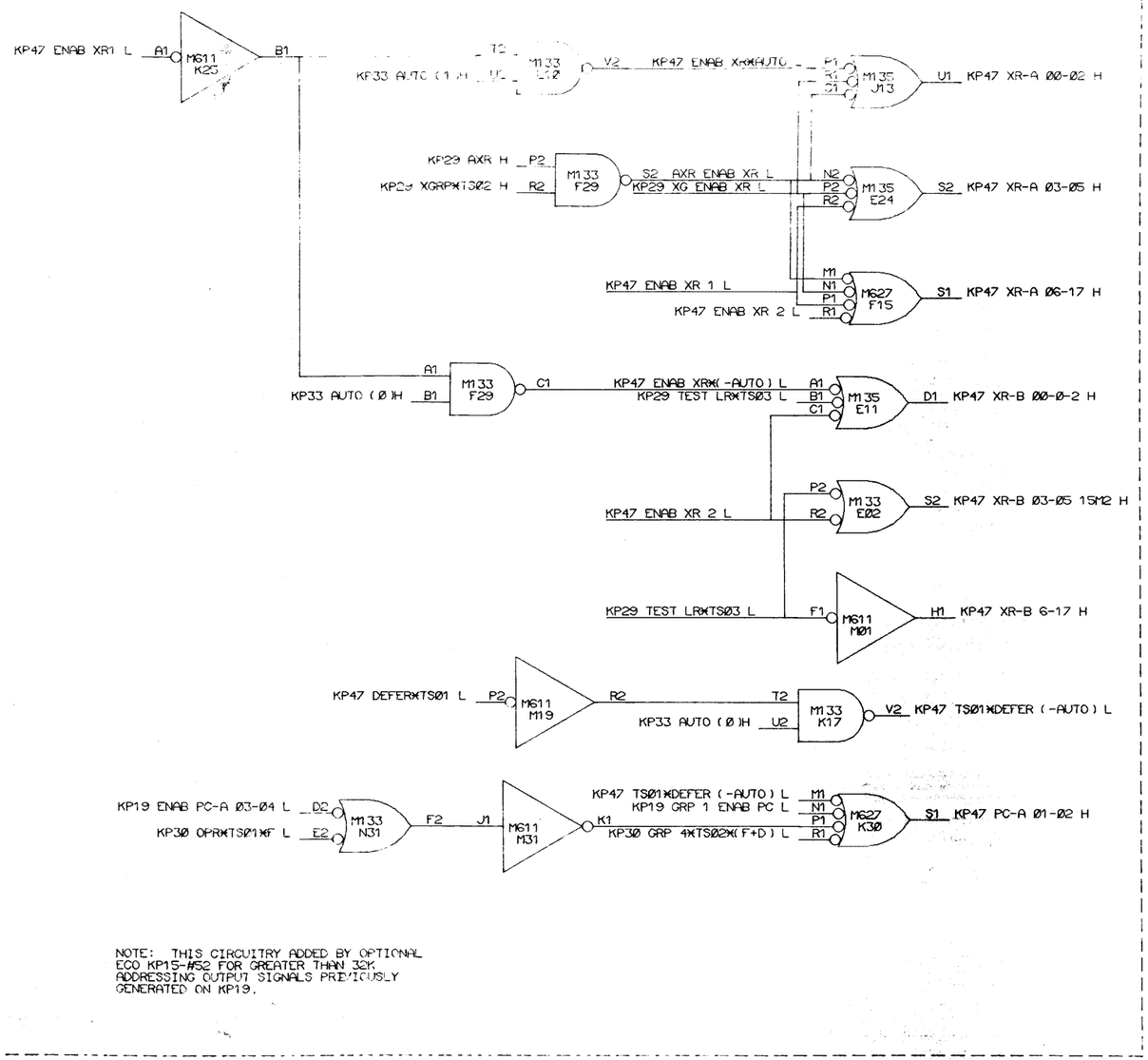
A2	+5V H
B2	
C2	
D2	KP46 I BUS 10 L
E2	KP46 I BUS 11 L
F2	KP46 I BUS 12 L
H2	KP46 I BUS 13 L
J2	KP46 I BUS 14 L
K2	KP46 I BUS 15 L
L2	KP46 I BUS 16 L
M2	KP46 I BUS 17 L
N2	
P2	
R2	KP46 REPT VAR IN H
S2	
T2	KP45 CONSOLE TWO H
U2	KP45 CONSOLE ONE H
V2	KP45 CONSOLE ZERO H

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00026	H
	2 SCO BY 7-15-77	
	KP15-00248	
	KP15-00255	K

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEHULT	DATE 11-7-69	
ENG. T.AUMANN	DATE 11-7-69	TITLE MISC CONSOLE LOGIC
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. T.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D / CODE 85 / NUMBER KP15-A-46 / REV. K
SCALE		
SHEET 1 OF 1		DIST.



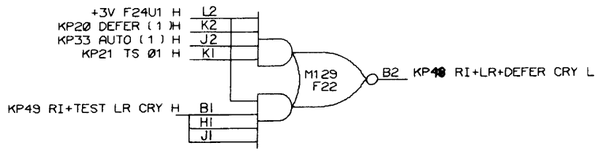
ENABLE INDEX REGISTER FOR INDEXED ADDRESSING

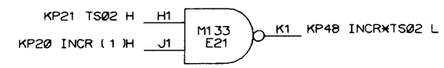


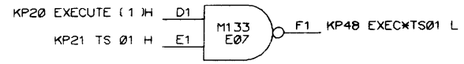
NOTE: THIS CIRCUITRY ADDED BY OPTIONAL ECO KP15-#52 FOR GREATER THAN 32K ADDRESSING OUTPUT SIGNALS PREVIOUSLY GENERATED ON KP19.

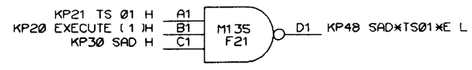
REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-ØØØ38	D
	S GOLDSBY 7/15/70	
	F HUMANN 7/22/70	
JH	KP15-ØØØ5[illegible]	E
	S GOLDSBY 3/1/71	
	F HUMANN 3/1/71	
	KP15-ØØØ52	F
	[illegible]	

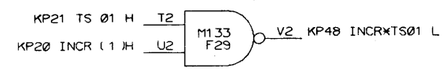
DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F HUMANN	DATE 10/7/69	TITLE: MI CONTROL
PROJ. ENG. C BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KP15		SIZE D · CODE BS · NUMBER KP15-Ø-47 · REV. F
SCALE		
SHEET 1 OF 1		DIST.

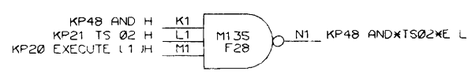


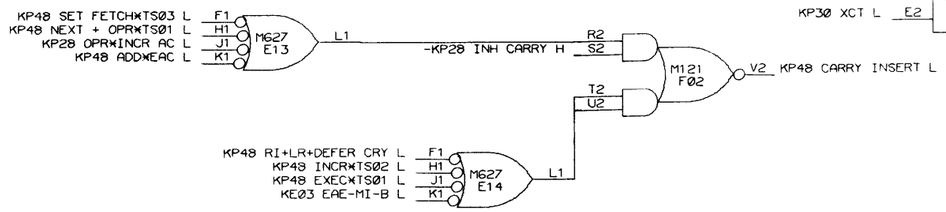


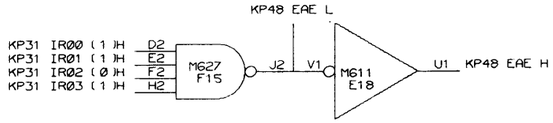


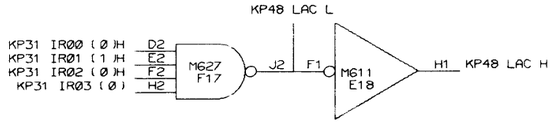


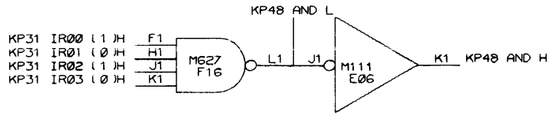


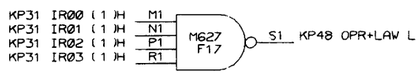


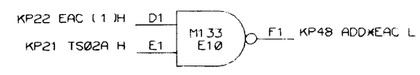


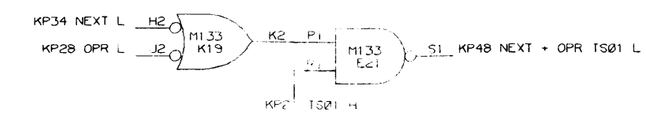


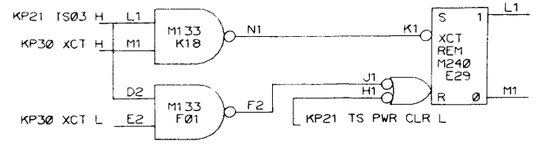


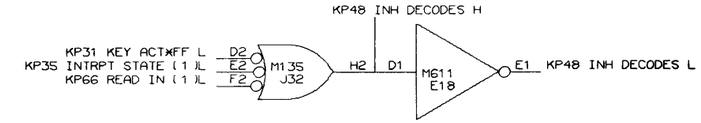


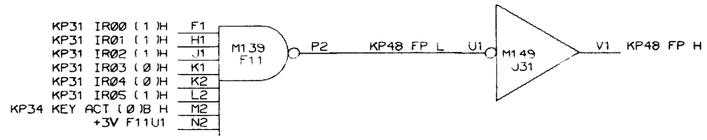








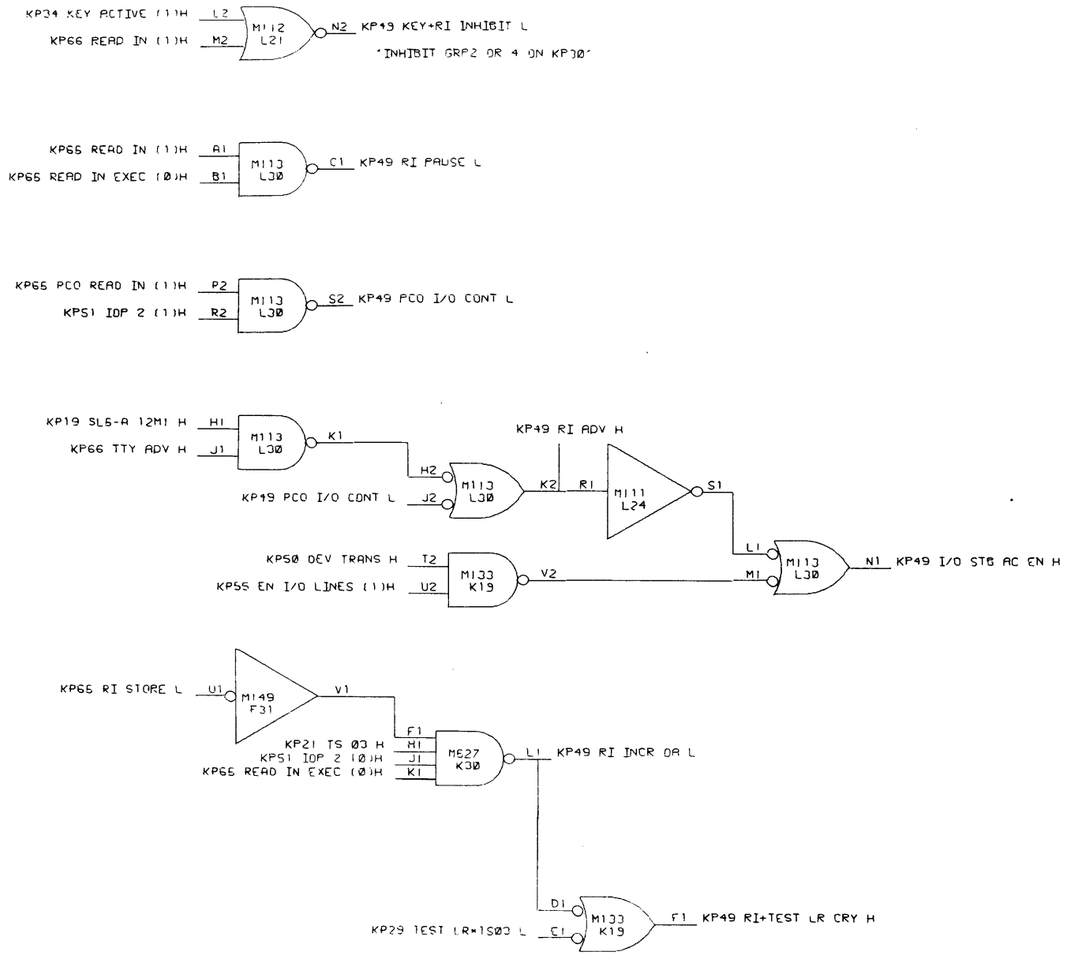




REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	E
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GH	KP15-00046	F
	K WALSH 12/11/70	
	F AUMANN 12/11/70	
	KP15-00057	H

REVISIONS		
CHK	CHANGE NO	REV
	F. DOLL	

DRN. M.SCHURMAN	DATE 11-7-68	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N.RHEAULT	DATE 11-7-68		
ENG. F.AUMANN	DATE 11-7-68	TITLE MISC LOGIC	
PROJ. ENG. G.BUTLER	DATE 11-7-68		
PROD. F.LASKEY	DATE 11-7-68		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-Ø-48	REV. J
SHEET 1 OF 1		DIST.	



REVISIONS		
CHK	CHANGE NO.	REV.
	KP15-000--	E

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	TITLE CP READ IN LOGIC
ENG. F.AUMANN	DATE 11-7-69	
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D · CODE 85 · NUMBER KP15-0-49 · REV. E
SCALE		
SHEET 1 OF 1		DIST.

KP07 MI 06 (1)L — M112 K22 D2, E2 — F2 KP50 INT DS 00 H
KP08 MI 07 (1)L — M112 K22 H1, J1 — K1 KP50 INT DS 01 H
KP50 INT DS 02 H
KP09 MI 08 (1)L — M112 K22 H2, J2 — K2
KP50 INT DS 03 H — M112 K22 L1, M1 — N1
KP10 MI 09 (1)L
KP11 MI 10 (1)L — M112 K22 L2, M2 — N2
KP50 INT DS 04 H
KP55 EN I/O LINES (1)L
KP66 PCO READ IN (1)L — M133 K26 H2, J2 — K2
KP50 INT DS 05 H
KP55 EN I/O LINES (1)H — M133 K26 H1, J1 — K1
KP13 MI 12 (1)L
KP12 MI 11 (1)H
KP55 EN I/O LINES B L — M112 K22 P2, R2 — S2
KP14 MI 13 (1)L
KP50 INT SD 00 H
KP50 INT SD 01 H

M622 N07: B1, C1 → D2; D1, E1 → E2; F1, H1 → H2; J1, K1 → K2; L1, M1 → M2; N1, P1 → P2; R1, S1 → S2; U1, V1 → V2

M910 M05: A2, B2, C2, D2, E2, F2, H2, J2, K2, L2, M2, N2, P2, R2, S2, T2, U2, V2
KP50 DS 00 H
KP50 DS 01 H
KP50 DS 02 H
KP50 DS 03 H
KP50 DS 04 H
KP50 DS 05 H
KP50 SING BR L
KP50 SD 00 H
KP50 SD 01 H
KP66 PCO READ IN (1)H

KP50 INT DS 00 H — M611 N13 U2, V2 — KP50 INT DS 00 L
KP50 INT DS 03 H — M111 N18 D1, E1 — KP50 INT DS 03 L
KP44 DISPLAY STATUS L — M111 N18 J1, K1 — P1
KP21 I/O RUN (0)H — M133 H31 R1, S1 — KP50 STATUS L
KP58 IORS L — M111 N18 E2, F2
KP51 IOP 2 (1)H — M133 N16 P2, R2 — S2
KP50 IORS SELECTED H
KP50 IORS SEL L
P1 — M133 N16 R1, S1 — KP50 READ STATUS H — M622 N06 L1, M1 — M2
KP45 I/O RESET H — M133 K19 L1, M1 — N1 KP50 RESTART CLK L
-KP57 POWER UP L — M113 N20 A1, B1 — C1
KP55 TIME 1 H — M627 M16 A1, B1, C1, D1 — E1 KP50 INT RESET
KP66 READ IN START H — M133 N16 L2, M2 — N2 — M622 N06 N1, P1 — P2
KP21 I/O RUN (0)L — M113 K31 D1, E1 — F1
KP34 STOP L
KP58 CAF H — M111 N18 H2, J2
M627 M16: K2, L2, M2, N2 → P2 KP50 INT RESET H
KP50 INT CLEAR H — M111 N18 L1 — M1 KP50 INT CLEAR L
K2 — M611 M19 L2 KP50 INH SFXTS03 L

KP50 INT DS 05 L
KP50 INT DS 05 H — M611 N13 P2, R2
KP64 KBD FLAG L — M611 N13 N1, P1 — KP50 KBD FLAG H
KP50 INT SD 00 H — M611 N13 V1, U1 — KP50 INT SD 00 L
KP65 TELEPRINT FLAG L — M611 N13 R1, S1 — KP50 TELEPRINT FLAG H
KP50 INT SD 01 H — M611 N13 S2, T2 — KP50 INT SD 01 L

KP50 PROGRAM INTERRUPT H
KP57 POWER FAIL PI L, KP57 CLK PI L, KP50 PIR L, KP65 TELEPRINT FLAG L, KP64 KBD FLAG L, +3V L21U1 H — M119 N19 A1, B1, C1, D1, D2, E2, F2, H2 — J2

KP57 POWER FAIL SKP L, KP57 CLK SKP RQ L, KP58 SKIP IF PCO L, KP50 TTS L, KP50 SKP L, KP65 TTO SKIP L, KP64 KBD SKIP L, KP58 EXBA L — M119 N19 F1, H1, J1, K1, K2, L2, M2, N2 — P2 KP50 SKIP REQUEST H

M910 M05: A1, B1, C1, D1, E1, F1, H1, J1, K1, L1, M1, N1, P1, R1, S1, T1, U1, V1
KP50 I/O SYNC H
KP50 IOP 1 H
KP50 IOP 2 H
KP50 IOP 4 H
KP69 SKIP RQ L
KP69 PROG INT RQ L
KP69 RD RQ L
KP50 RD STATUS H
KP50 I/O PWR CLR H

KP55 SYNC H — M622 N06 C1, D2
KP55 BUSS IOP 1 H — M622 N06 D1, E1 — E2
KP55 BUSS IOP 2 H — M622 N06 F1, H1 — H2
KP51 IOP 4 (1)H — M622 N06 J1, K1 — K2
KD06 SIN CY IOP 4 H

KP69 SKIP RQ L — M611 M19 N1, P1 — KP50 SKP H R1 — M611 M19 S1 — KP50 SKP L

KP58 TTS H — M111 N18 C1, D2 — KP50 TTS L

KP50 SING BR L — M510 N10 U1 — V1 KP50 SING CYC RQ L, V2 KP50 SING CYC RQ H

KP69 PROG INT RQ L — M510 N10 R2 — U2 KP50 PIR L, T2 KP50 PIR H

KP69 RD RQ L — M510 N10 S2 — R1 KP50 RD RQ L, S1 KP50 RD RQ H

KP50 RD RQ L, KP58 KRB L — M113 L31 H1, J1 — K1 — M112 M13 D2, E2 — F2 KP50 DEV TRANS L

KP50 DEV TRANS L — M111 L24 V1 — U1 KP50 DEV TRANS H

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	H
	C COLOSKY 7-15-70	
	F AUMANN 7-22-70	
DH	KP15-00046	J
	K WALSH 11/18/70	
	F AUMANN 12/18/70	
	KP15-00055	K

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE: DEVICE SELECTOR
PROJ. ENG. C.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON: KP15		SIZE D; CODE BS; NUMBER KP15-0-50; REV. K
SCALE		
SHEET 1 OF 1		DIST.

KD05 DATA OUT (1)H
KD05 DSR-I/O BUS (1)H
M113 N12

KP16 MI 15 (1)H
KP51 IOP 2 (1)H
KP51 IOT SYNC (1)H
M115 M32

KP51 IOP 2 (0)H
KP55 TIME 3 H
KD05 DATA OUT (0)H
M115 K21

KP55 TIME 1 L
M113 N20

KP50 INT RESET L

KD06 DCH EN IOP 2 H
KP51 MORE L
M112 M24

KP17 MI 16 (1)H
KP16 MI 15 (1)H
M112 M13
M112 M13
KP51 IOP 1 (1)L

KP66 READ IN READY L
M113 N20

IOP 4 M216 N17

+3V M14U1 H

KP55 TIME 1 H
IOP 2 M216 N17

KP55 SET IOP 1 L
KP55 TIME 1 H
IOP 1 M216 N17

KP50 INT RESET L

+3V M14U1 H
T1 M216 N23

+3V M14U1 H
T2 M216 N23

KP58 IOP L
PIE M216 N23

+3V M14U1 H

KP50 RESTART CLK L
M611 M31
+KD05 DCH WAIT H
M401 N21
KP51 I/O CLOCK

KP50 INT RESET L
KP58 IOP L
KP51 PI SYNC (1)L
M115 K21

+3V M14U1 H
DCH SYNC M216 N23

KP55 TIME 1 L
M112 M14

KP51 IOT SYNC (0)H
M113 N20

KP51 CLK SYNC (0)L
KP51 DCH SYNC (0)L
M112 M13

KP51 IOT SYNC (0)H
M113 N20

KP51 CLOCK (J) L
CLK SYNC M216 N17

+3V M14U1 H
API SYNC M216 N22

+3V M14V1 H
PI SYNC M216 N22

IOT SYNC M216 N22

KD06 DATA RQ H
M611 L19

DCH SYNC M216 N23

KP55 TIME 4 H
M112 M13

KD06 RESTART L
M112 M14

KD06 +1 WC HOLD (1)L

KP51 CLR SYNC L
M112 M14

KD05 DCH DONE H

KP55 TIME 4 L
M602 L20

KP51 TIME 4P L
M112 M14

KP57 CLK RQ (1)L
CLOCK M216 N17

+3V M14U1 H

+3V M14V1 H
KP35 API REQ L
API M216 N22

KP35 INTERRUPT STB L
M113 L31

KP51 CLOCK (1)L

KP50 INT RESET L
M113 N20

KP55 IOT DONE L
M133 N01

KP55 IOT DONE E
M112 M14

M111 N18

KP51 PI (1)L
M112 M14

KD06 DISABLE SYNC (1)H

+3V M14V1 H
KP35 PI REQ L
PI M216 N22

+3V M14V1 H
KP35 IOT REQ (1)L
IOT M216 N22

KP51 BUMP IOT H
M112 L23

KP51 IOP 2 (1)L
KP55 TIME 4 L
M112 M14

KP51 IOP 1 (1)L
M112 L06

KP51 STROBE IOP 2 H

KP51 STROBE IOP 1 H

KP26 D+C SYNC L
M611 M01
KP51 DCH SYNC B H

* NORMAL SETTING IS 250 NS SET TO 300 NS WHEN MX15A AND MX15B ARE CONNECTED TO THE MDL

REVISIONS			REVISIONS			REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV	CHK	CHANGE NO	REV
JH	KP15-00038	-	JH	KP15-00048	R	JH	KP15-0007[illegible]	V	JH	KP15-00078	Y
S.GOLDSBY 7/15/70			N.LEGERE 1/27/71			KP15			B.Bolgiano 1/6/77		
[illegible]			[illegible]						F. DOLL		
[illegible]			[illegible]				KP15-00[illegible]52	Z			
[illegible]			[illegible]						2-1-77		
									F. DOLL		

DRN. J. FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. R. COOK	DATE 10/7/69		
ENG. F. AUMANN	DATE 10/7/69	TITLE I/O CONTROL SYNC	
PROJ. ENG. G. BUTLER	DATE 10/7/69		
PROD. F. LASKEY	DATE 10/7/69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-S1	REV. Z
SHEET 1 OF 1		DIST.	

KP53 BAC-15 BUS H

KD05 DSR-I/O BUS H

KD00 DSR 09 H — L1
KP10 BAC 09A1 H — M1
M621 M07 → M2 KP52 I/O BUS 09 L

KD02 DSR 10 H — N1
KP11 BAC 10A1 H — P1
M621 M07 → P2 KP52 I/O BUS 10 L

KD02 DSR 11 H — R1
KP12 BAC 11A1 H — S1
M621 M07 → S2 KP52 I/O BUS 11 L

KD03 DSR 12 H — D1, D2
KP13 BAC 12A1 H — E1, C1
M621 M08 → E2 KP52 I/O BUS 12 L

KD03 DSR 13 H — F1
KP14 BAC 13A1 H — H1
M621 M08 → H2 KP52 I/O BUS 13 L

KD03 DSR 14 H — J1
KP15 BAC 14A1 H — K1
M621 M08 → K2 KP52 I/O BUS 14 L

KD03 DSR 15 H — L1
KP16 BAC 15A1 H — M1
M621 M08 → M2 KP52 I/O BUS 15 L

KD03 DSR 16 H — N1
KP17 BAC 16A1 H — P1
M621 M08 → P2 KP52 I/O BUS 16 L

KD03 DSR 17 H — R1
KP18 BAC 17A1 H — S1
M621 M08 → S2 KP52 I/O BUS 17 L

M910 M04 (A2, B2, C2, D2, E2, F2, H2, J2, K2, L2, M2, N2, P2, R2, S2, T2, U2, V2)
+5V PULLUP FOR I/O BUS

M909 M02 (A2, B2, C2, D2, E2, F2, H2, J2, K2, L2, M2, N2, P2, R2, S2, U2, V2)
I/O BUS CABLE CONNECTOR (SEE NOTE ON KP59)

KP52 I/O BUS 09 L — M2 — M510 M10 — C1, D1 — KP52 IOB 09J1 H
KP52 I/O BUS 10 L — H2 — M510 M10 — F1, H1 — KP52 IOB 10J1 H
KP52 I/O BUS 11 L — K2 — M510 M10 — J1, K1 — KP52 IOB 11J1 H
KP52 I/O BUS 12 L — M2 — M510 M10 — L1, M1 — KP52 IOB 12J1 H
KP52 I/O BUS 13 L — P2 — M510 M10 — N1, P1 — KP52 IOB 13J1 H
KP52 I/O BUS 14 L — R2 — M510 M10 — U2, T2 — KP52 IOB 14J1 H
KP52 I/O BUS 15 L — S2 — M510 M10 — R1, S1 — KP52 IOB 15J1 H
KP52 I/O BUS 16 L — U1 — M510 M10 — V1, V2 — KP52 IOB 16J1 H
KP52 I/O BUS 17 L — R2 — M510 N10 — F1, H1 — KP52 IOB 17J1 H

REVISIONS		
CHK	CHANGE NO.	REV.
[illegible]	KP15-000[illegible]	[illegible]

DRN. J FASSHAUER	DATE 1077/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 1077/69	
ENG. F RAUMANN	DATE 1077/69	TITLE: I/O BUS BITS 9-17
PROJ. ENG. G BUTLER	DATE 1077/69	
PROD. F CASKEY	DATE 1077/69	
FIRST USED ON: KP15		SIZE D; CODE 85; NUMBER KP15-0-52; REV. B
SCALE		
SHEET 1 OF 1		DIST.

-KP5Ø DEV TRANS H D2
KP55 EN I/O LINES (1)H E2
M113 N20 F2 — A1 M611 N13 B1 KP53 AC-I/O BUS H

KP5Ø IORS SEL L N1
KP51 PIE (1)L P1
M622 L07 P2

KDØ5 DSR-I/O BUS H

KDØ1 DSR ØØ H D1 D2
KPØ1 BAC ØØA1 H E1 C1
M621 MØ6 E2 KP53 I/O BUS ØØ L

KDØ1 DSR Ø1 H F1
KPØ2 BAC Ø1A1 H H1
M621 MØ6 H2 KP53 I/O BUS Ø1 L

KDØ1 DSR Ø2 H J1
KPØ3 BAC Ø2A1 H K1
M621 MØ6 K2 KP53 I/O BUS Ø2 L

KDØ1 DSR Ø3 H L1
KPØ4 BAC Ø3A1 H M1
M621 MØ6 M2 KP53 I/O BUS Ø3 L

KP5Ø IORS SEL L D1
KP64 KBD FLAG L E1
M622 L07 E2

KDØ1 DSR Ø4 H N1
KPØ5 BAC Ø4A1 H P1
M621 MØ6 P2 KP53 I/O BUS Ø4 L

KDØ1 DSR Ø5 H R1
KPØ6 BAC Ø5A1 H S1
M621 MØ6 S2 KP53 I/O BUS Ø5 L

KP5Ø IORS SEL L B1
KP65 TELEPRINT FLAG L C1
M622 L07 D2

KDØ2 DSR Ø6 H D1 D2
KPØ7 BAC Ø6A1 H E1 C1
M621 MØ7 E2 KP53 I/O BUS Ø6 L

KDØ2 DSR Ø7 H F1
KPØ8 BAC Ø7A1 H H1
M621 MØ7 H2 KP53 I/O BUS Ø7 L

KP5Ø IORS SEL L R1
KP57 CLK FLAG (1)L S1
M622 L07 S2

KP5Ø IORS SEL L U1
KP57 CLK EN (1)L V1
M622 L07 V2

KDØ2 DSR Ø8 H J1
KPØ9 BAC Ø8A1 H K1
M621 MØ7 K2 KP53 I/O BUS Ø8 L

NOTES:
GND M02,M04. PINS:C1,F1,K1,N1,R1
GND M06,M08. PINS:F2,J2,L2,M2
GND M06. PINS:R2,U2

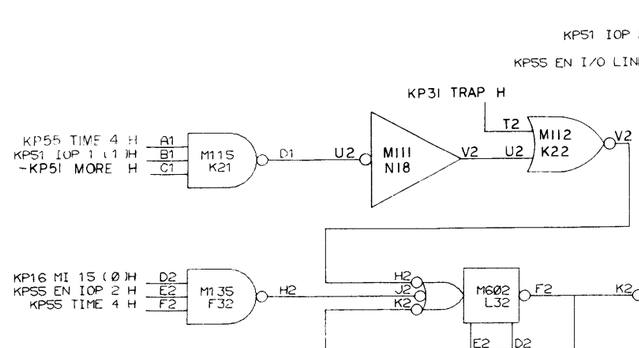
M910 MØ4
A1 B1 C1 D1 E1 F1 H1 J1 K1 L1 M1 N1 P1 R1 S1 T1 U1 V1
+5V PULLUP FOR I/O BUS

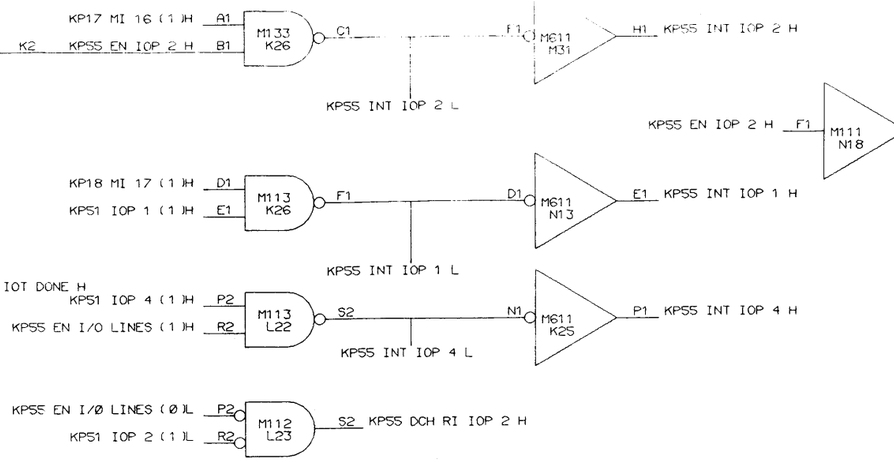
M909 MØ2
A1 B1 C1 D1 E1 F1 H1 J1 K1 L1 M1 N1 P1 R1 S1 T1 U1 V1
I/O BUS CABLE CONNECTOR (SEE NOTE ON KPS9)

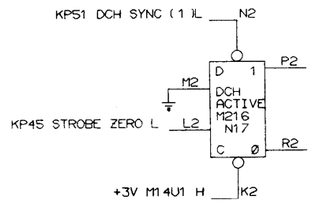
KP53 I/O BUS ØØ L D2 — M51Ø MØ9 — C1 D1 KP53 IOB ØØJ1 H
KP53 I/O BUS Ø1 L H2 — M51Ø MØ9 — F1 H1 KP53 IOB Ø1J1 H
KP53 I/O BUS Ø2 L K2 — M51Ø MØ9 — J1 K1 KP53 IOB Ø2J1 H
KP53 I/O BUS Ø3 L M2 — M51Ø MØ9 — L1 M1 KP53 IOB Ø3J1 H
KP53 I/O BUS Ø4 L P2 — M51Ø MØ9 — N1 P1 KP53 IOB Ø4J1 H
KP53 I/O BUS Ø5 L R2 — M51Ø MØ9 — U2 T2 KP53 IOB Ø5J1 H
KP53 I/O BUS Ø6 L S2 — M51Ø MØ9 — R1 S1 KP53 IOB Ø6J1 H
KP53 I/O BUS Ø7 L U1 — M51Ø MØ9 — V1 V2 KP53 IOB Ø7J1 H
KP53 I/O BUS Ø8 L — M51Ø MØ9 — S1 D1 KP53 IOB Ø8J1 H

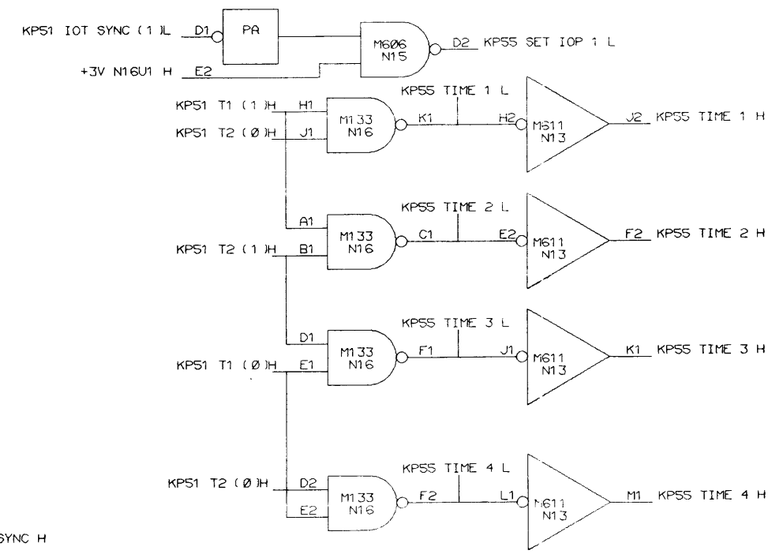
REVISIONS		
CHK	CHANGE NO.	REV.
CH	KP15-ØØ(	

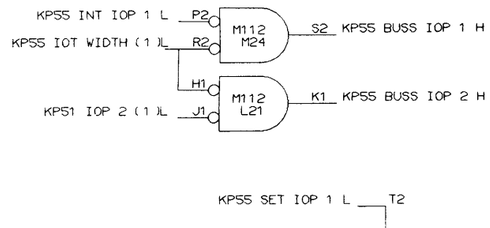
DRN. J FASSHAUER	DATE 1077/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 1077/69	
ENG. F HUMANN	DATE 1077/69	TITLE I/O BUS BITS Ø-8
PROJ. ENG. G BUTLER	DATE 1077/69	
PROD. F CASKEY	DATE 1077/69	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KP15-Ø-53 REV. B
SCALE		
SHEET 1 OF 1		DIST.

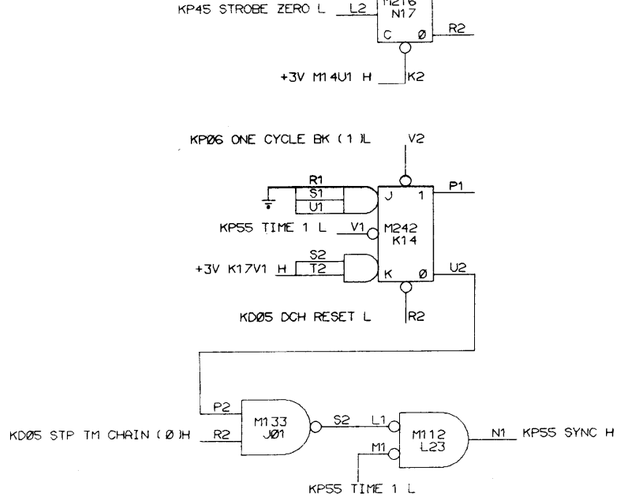


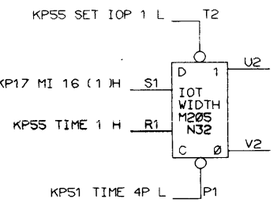


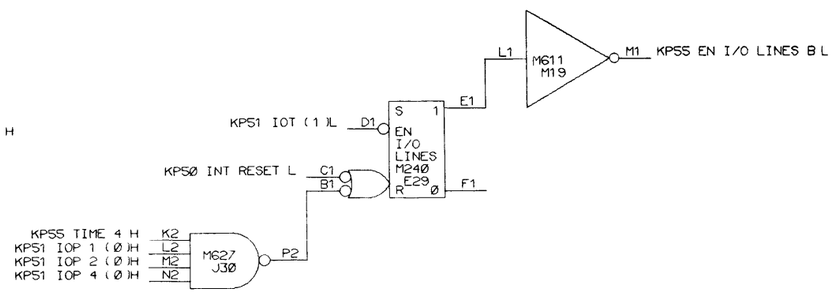






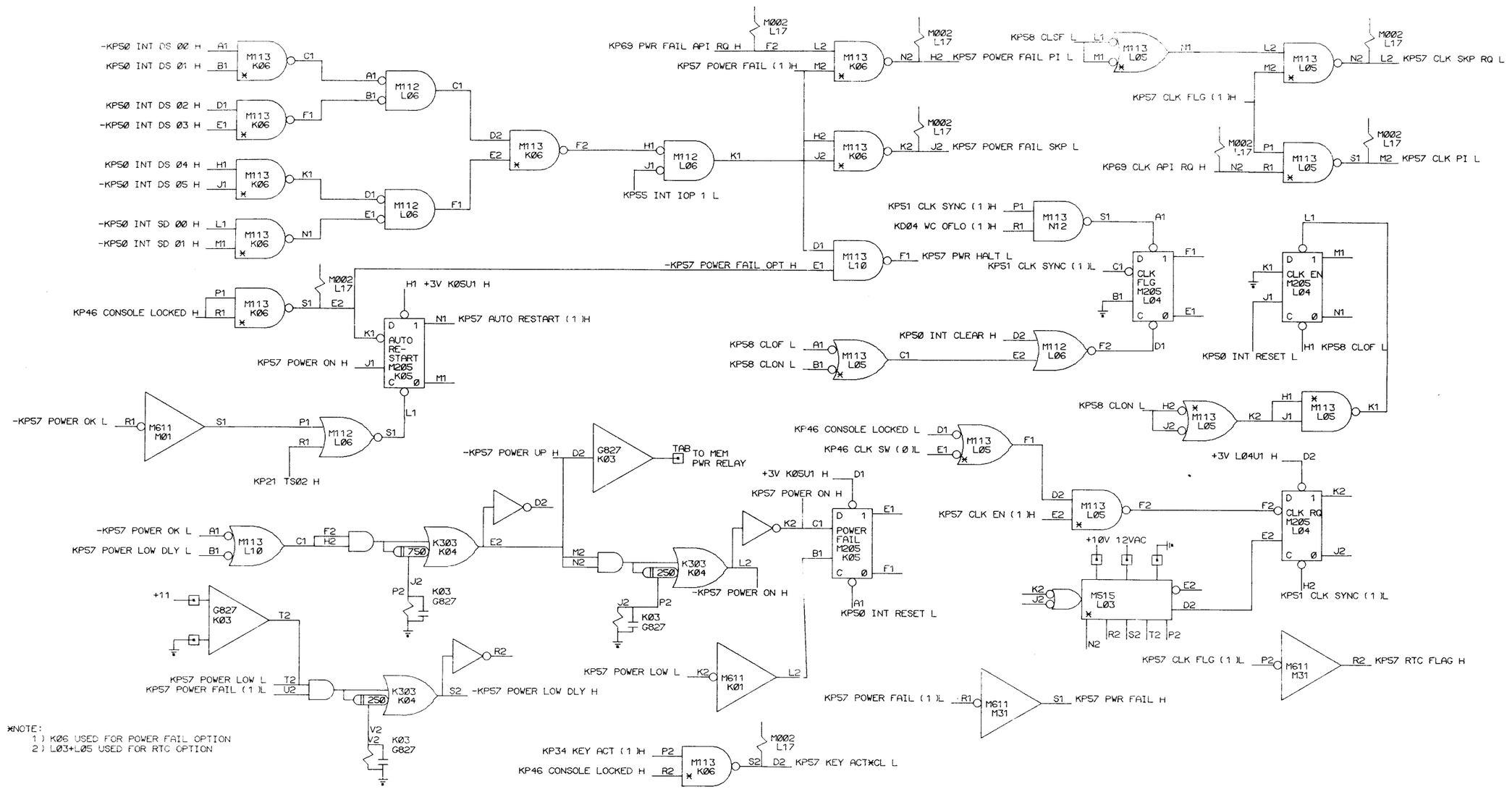






REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP15-00038	H	[illegible]	KP15-00065	M
	S. GOLDSBY 7-15-70			[illegible]	
	F. HUMANN 7-21-70			[illegible]	
DH	KP15-00046	J	[illegible]	KP15-00078	N
	K. WHITE 12/11/70			[illegible]	
	F. HUMANN 12/11/70			F. DULL	
DH	KP15-00048	K			
	N. LEGERE 1/12/71			KP15-00082	P
	F. HUMANN 1/12/71			F. DULL	
DH	KP15-00058	L			
	R. GUTE 2/24/71				
	F. HUMANN 2/24/71				

DRN. M. SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. R. RHEAULT	DATE 11-7-69		
ENG. F. RUMANN	DATE 11-7-69	TITLE IOT AND TIME LOGIC	
PROJ. ENG. G. BUTLER	DATE 11-7-69		
PROD. F. LASKEY	DATE 11-7-69		
FIRST USED ON KP15		SIZE D / CODE BS / NUMBER KP15-0-55 / REV. E	
SCALE			
SHEET 1 OF 1		D'ST.	



*NOTE:
1) KØ6 USED FOR POWER FAIL OPTION
2) LØ3+LØ5 USED FOR RTC OPTION

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP1S-ØØØ38	H	[illegible]	KP1S-ØØØ56	M
	S.GOLDSBY 7/15/70				
	F.AUMANN 7/22/70				
GH	KP1S-ØØØ43	J			
	J.EGERE 9-8-70				
	F.AUMANN 9-14-70				
GH	KP1S-ØØØ45	K			
	K.WALSH 12/11/70				
	F.AUMANN 12/11/70				
GH	KP1S-ØØØ46	L			
	J.EGERE 1/5/71				
	F.AUMANN 1/6/71				

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D R COOK	DATE 10/7/69		
ENG. F AUMANN	DATE 10/7/69	TITLE POWER FAIL AND R T CLOCK	
PROJ. ENG. G BUTLER	DATE 10/7/69		
PROD. F LASKEY	DATE 10/7/69		
FIRST USED ON KP1S		SIZE D / CODE BS / NUMBER KP1S-Ø-S7 / REV. M	
SCALE			
SHEET 1 OF 1		DIST.	

KP22 RESTORE L L2
KP24 LD MO 0A L M2
M112 L06
N2 KP58 RESTORE MODE H

KP50 INT DS 00 H M1
KP50 INT DS 01 H N1
KP50 INT DS 02 H P1
KP50 INT DS 03 H R1
KP50 INT DS 04 H R2
KP50 INT DS 05 H S2
KP50 INT SD 00 H T2
U2
M119 N19
V2

KP58 IOT 77(11) H
KP50 INT SD 01 L P2 R2
M112 L18
S2 P1 R1 S1
KP58 9 MODE H
KP55 INT IOP 1 H
M135 J32
U1 A1 B1
M113 K31
C1 N1
M611 M31
P1 KP58 EXBA L

A1 M611 M31 B1
-KP50 INT SD 01 H
T2 U2 V2
KP55 INT IOP 1 H
M135 J32
V1
F1 M611 M19 H1 KP58 RES H

-KP50 INT SD01 H R1
KP55 INT IOP 2 H S1
M135 F28
U1 KP58 RES L

KP58 IOT 77(11) H D2 E2
KP55 INT IOP 2 H
KP58 RESTORE MODE H F2
KP02 MEM IN 01 (0)H H2
M121 M11
J2 T2

KP46 BANK MODE (0) H S1
D 1
M205 M23
C 0
U2 KP58 15 MODE H
V2 KP58 9 MODE H

KP34 START L I2
KP45 KEY READ IN L U2
M133 H31
V2 R1

P1

KP58 IOT 77(11) H K2
KP55 INT IOP 4 H L2
KP58 RESTORE MODE H M2
KP02 MEM IN 01 (1)H N2
M121 M11
P2

KP50 INT DS 01 H P2
03 02 7402N E02 01
-KP50 INT DS 00 H A1

-KP50 INT DS 03 H V2
01 02 03 04 05 06 11 12
7430N E03 08

KP50 INT DS 02 H D2
06 05 7402N E02 04

01 02 03 04 05 06 11 12
7430N E11 08

+3V
01 02 03 04 05 06 11 12
7430N E04 08

KP50 INT DS 04 H U2
03 02 7402N E07 01

KP50 INT DS 05 H V1
12 11 7402N E07 13

KP50 INT SD 00 H M2
09 08 7402N E07 10

KP58 INT DS03 H
01 02 03 04 05 06 11 12
7430N E08 08

KP50 INT SD 01 H N1
06 05 7402N E07 04

+3V
01 02 03 04 05 06 11 12
7430N E12 08

KP66 SET PCO H L2
M2
M133 K26
N2 KP58 SKIP IF PCO H

12 11 7402N E06 13 F2
09 08 7402N E06 10 E2 KP58 DBR H
06 05 7402N E06 04 K2 KP58 TTS H
03 02 7402N E06 01 K1 KP58 CAF H
09 08 7402N E10 10 R2 KP58 DBK H

-KP50 INT DS03 H
09 10 7400N E01 08 E1 KP58 INT DS03 H

KP16 MI 15 (1)L C1
M111 L24
D2 KP58 MEM 15 BUF H

-INT SD01 L
12 11 7402N E09 13
01 F1 02 7400N E01 03 H1 KP58 IORS L
KP58 MEM 15 BUF H

KP55 INT IOP 1 H D1
-INT SD01 H
12 13 7400N E01 11

12 11 7402N E02 13 B1 KP58 KSF H

P1 KP58 IOT 03XX
09 08 7402N E02 10 C1 KP58 KRB H

KP58 KRB L
A1 M111 E06 B1

09 08 7402N E09 10
04 05 7400N E01 06 J1 KP58 CLSF L
04 05 7400N E05 06 L2 KP58 ION L
09 10 7400N E05 08 H2 KP58 IOF L
01 02 7400N E05 03 N2 KP58 CLOF L
12 13 7400N E05 11 J2 KP58 CLON L
-KP50 INT SD 00 H
KP50 INT SD 00 H

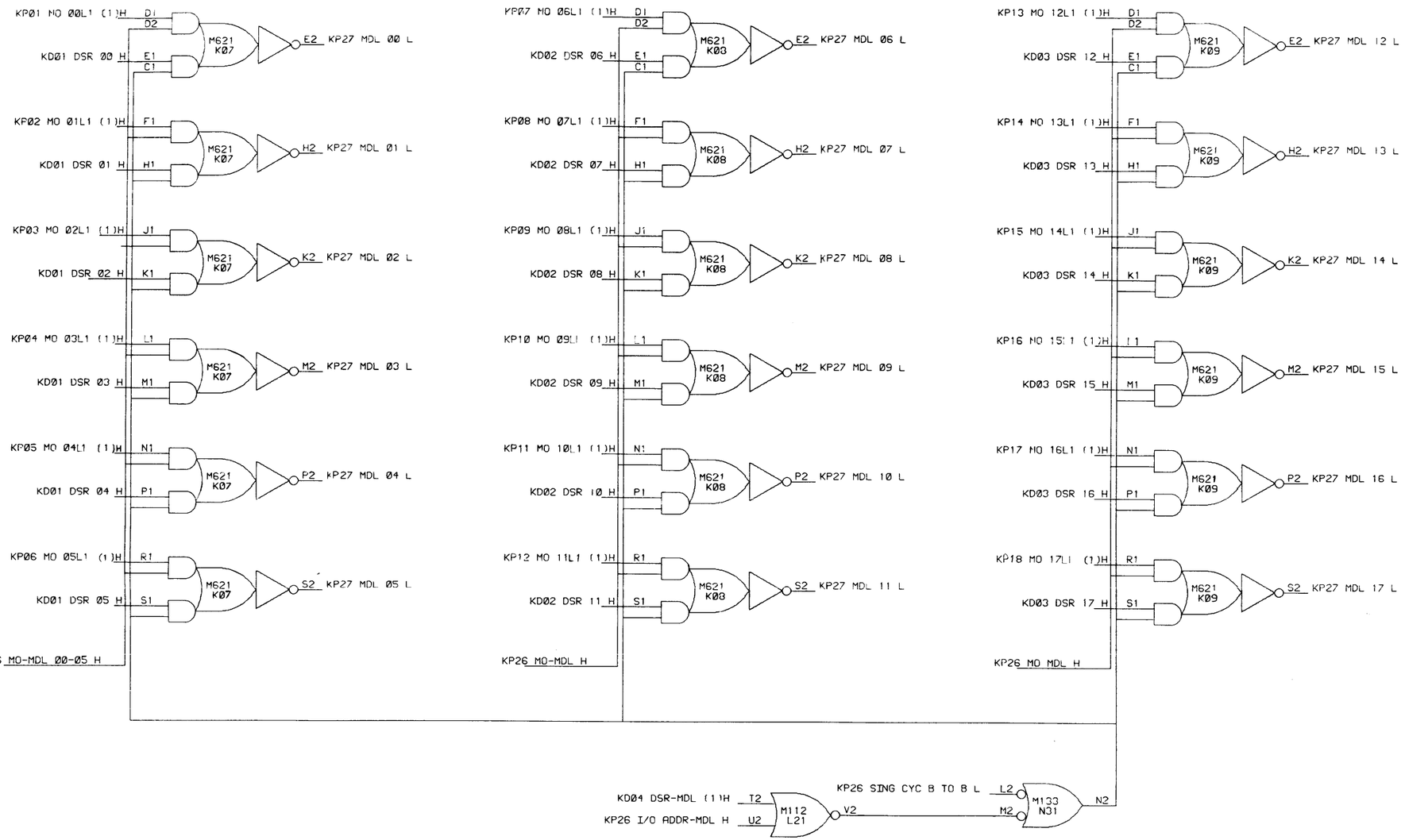
12 11 7402N E10 13 R1 KP58 TSF H
03 02 7402N E10 01 T2 KP58 TCF H
06 05 7402N E10 04 U1 KP58 TLS H
M1 KP55 INT IOP 4 L
S1 KP55 INT IOP 2 L
S2 KP55 INT IOP 1 L

06 05 7402N E09 04
03 02 7402N E09 01

M771
N14

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	D
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GH	KP15-00046	E
	K WALSH 12/18/70	
	F AUMANN 12/18/70	
GH	KP15-00048	F
	N LEGERE 1/12/71	
	F AUMANN 1/12/71	
	KP15-0005B	H

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE INTERNAL IOT DECODER
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D CODE 83 NUMBER KP15 0 58 REV. H
SCALE		
SHEET 1 OF 1		DIST.



REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	S
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GH	KP15-00046	C
	K WALSH 12/11/70	
	F AUMANN 12/11/70	
	KP15-00248	D

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N.RHEAULT	DATE 11-7-69		
ENG. F.AUMANN	DATE 11-7-69	TITLE MDL DRIVER	
PROJ. ENG. G.BUTLER	DATE 11-7-69		
PROD. F.LASKEY	DATE 11-7-69		
FIRST USED ON KP15		SIZE D	CODE BS
SCALE		NUMBER KP15-0-59	REV. D
SHEET 1 OF 1		DIST.	

KP53 IOB 00J1 H	A1	M149 K29	B1	M149 K29	C1	KP01 MDL 00I2 H	A1	M149 K28	B1	M149 K28	C1	KP51 PIE (1)H	KP46 I BUS 00 L
KP53 IOB 01J1 H	D1	M149 K29	E1	M149 K29	F1	KP02 MDL 01I2 H	D1	M149 K28	E1	M149 K28	F1	KP53 IOB 01J1 H	KP46 I BUS 01 L
KP53 IOB 02J1 H	D2	M149 K29	E2	M149 K29	F2	KP03 MDL 02I2 H	D2	M149 K28	E2	M149 K28	F2	KP53 IOB 02J1 H	KP46 I BUS 02 L
KP53 IOB 03J1 H	H1	M149 K29	KP68 I/O A 03E2 H	J1	M149 K29	K1	KP04 MDL 03I2 H	H1	M149 K28	J1	M149 K28	K1	KP50 KBD FLAG H	KP46 I BUS 03 L
KP53 IOB 04J1 H	H2	M149 K29	KP68 I/O A 04E2 H	J2	M149 K29	K2	KP05 MDL 04I2 H	H2	M149 K28	J2	M149 K28	K2	KP50 TELEPRINT FLAG H	KP46 I BUS 04 L
KP53 IOB 05J1 H	L1	M149 K29	KP68 I/O A 05E2 H	M1	M149 K29	N1	KP06 MDL 05I2 H	L1	M149 K28	M1	M149 K28	N1	KP53 IOB 05J1 H	KP46 I BUS 05 L
KP53 IOB 06J1 H	L2	M149 K29	KP68 I/O A 06E2 H	M2	M149 K29	N2	KP07 MDL 06I2 H	L2	M149 K28	M2	M149 K28	N2	KP57 CLK FLG (1)H	KP46 I BUS 06 L
KP53 IOB 07J1 H	P1	M149 K29	KP68 I/O A 07E2 H	R1	M149 K29	S1	KP08 MDL 07I2 H	P1	M149 K28	R1	M149 K28	S1	KP57 CLK EN (1)H	KP46 I BUS 07 L
KP53 IOB 08J1 H	P2	M149 K29	KP68 I/O A 08E2 H	R2	M149 K29	S2	KP09 MDL 08I2 H	P2	M149 K28	R2	M149 K28	S2	KP53 IOB 08J1 H	KP46 I BUS 08 L

U2	M149 K29	KP44 IND IOB L	KP44 IND I/O A L	V2	M149 K29	KP44 IND MDL L	U2	M149 K28	KP50 STATUS L	V2	M149 K28

REVISIONS		
CHK.	CHANGE NO.	REV.
LH	KP15-00032	E

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R COOK	DATE 10/7/69	
ENG. F RUMANN	DATE 10/7/69	TITLE I BUS 00-08
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KP15		SIZE D / CODE BS / NUMBER KP15-0-60 / REV. B
SCALE		DIST.
SHEET 1 OF 1		

KP52 IOB 09J1_H — A1 — M149 L29 — KP68 I/O A 09E2_H — A1 — M149 L29 — KP52 IOB 09J1_H — A1 — M149 L28 — KP[illegible] MDL [illegible]I2_H — [illegible] — M149 L28 — KP46 I BUS 09 L

KP52 IOB 10J1_H — D1 — M149 L29 — KP68 I/O A 10E2_H — F1 — M149 L29 — F1 — KP52 IOB 10J1_H — D1 — M149 L28 — KP[illegible] MDL 10I2_H — F1 — M149 L28 — F1 — KP46 I BUS 10 L

KP52 IOB 11J1_H — D2 — M149 L29 — KP68 I/O A 11E2_H — E2 — M149 L29 — F2 — KP52 IOB 11J1_H — D2 — M149 L28 — KP12 MDL 11I2_H — E2 — M149 L28 — F2 — KP46 I BUS [illegible] L

KP52 IOB 12J1_H — H1 — M149 L29 — KP68 I/O A 12E2_L — J1 — M149 L29 — K1 — KP52 IOB 12J1_H — H1 — M149 L28 — KP13 MDL 12I2_H — J1 — M149 L28 — K1 — KP46 I BUS 12 L

KP52 IOB 13J1_H — H2 — M149 L29 — KP68 I/O A 13E2_H — J2 — M149 L29 — K2 — KP52 IOB 13J1_H — H2 — M149 L28 — KP14 MDL 13I2_H — J2 — M149 L28 — K2 — KP46 I BUS 13 L

KP52 IOB 14J1_H — L1 — M149 L29 — KP68 I/O A 14E2_H — M1 — M149 L29 — N1 — KP52 IOB 14J1_H — L1 — M149 L28 — KP15 MDL 14I2_H — M1 — M149 L28 — N1 — KP46 I BUS 14 L

KP52 IOB 15J1_H — L2 — M149 L29 — KP68 I/O A 15E2_H — M2 — M149 L29 — N2 — KP52 IOB 15J1_H — L2 — M149 L28 — KP16 MDL 15I2_H — M2 — M149 L28 — N2 — KP46 I BUS 15 L

KP52 IOB 16J1_H — P1 — M149 L29 — KP68 I/O A 16E2_H — R1 — M149 L29 — S1 — KP52 IOB 16J1_H — P1 — M149 L28 — KP17 MDL 16I2_H — R1 — M149 L28 — S1 — KP46 I BUS 16 L

KP52 IOB 17J1_H — P2 — M149 L29 — KP68 I/O A 17E2_H — R2 — M149 L29 — S2 — KP52 IOB 17J1_H — P2 — M149 L28 — KP18 MDL 17I2_H — R2 — M149 L28 — S2 — KP46 I BUS 17 L

U2 — M149 L29 — KP44 IND IOB L

KP44 IND I/O A L — V2 — M149 L29

KP50 STATUS L — U2 — M149 L28

KP44 IND MDL L — V2 — M149 L28

REVISIONS		
CHK	CHANGE NO.	REV.
EH	ECO [illegible]	A

DRN. [illegible]	DATE [illegible]	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. [illegible]	DATE 7/14/70	TITLE I BUS 09-17
ENG. E ALMANN	DATE 7/14/70	
PROJ. ENG. E ALMANN	DATE 7/14/70	
PROD. E ALMANN	DATE 7/14/70	
FIRST USED ON KP15		SIZE D; CODE 85; NUMBER KP15-C S2; REV. A
SCALE		
SHEET 1 OF 1		DIST.

KP64 TT 00 L MK2 · KP64 TT 01 L MR2 · KP64 TT 02 L MS2 · KP64 TT 03 L ML1 · KP64 TT 04 L MM1 · KP64 TT 05 L MP2 · KP64 TT 06 L MT2 · KP64 TT 07 L MN2 · KP64 KBD SKIP L NH2

KP64 ECHO H · KP64 EIGHT BIT H · KP58 KSF H ND2 · KP64 IN STOP 02 L NR2 · KP64 KBD FLAG L MF2

KP64 INACTIVE (1)H · KP64 CLK SCALE 02 (1)H NU1 · KP64 TTI SHIFT L · KP64 TTI SHIFT H MS1 · KP64 PRESET L · +3V L25U1 H ML2 · MV1

KP64 START ENABLE L · +3V N16V1 H NR1 · NS2 · KP64 KCC L ME2

G858 K02 · KP64 TT KBD IN H NM2 · KP65 PRINTER DRIVE H · PRINTER SEL DRIVER MAGNET · KP64 READER RUN H · +30V

KP64 TTI CLOCK H · KP66 TT READ IN START H ND1 · KP58 KRB H NJ2 · NE2 · P1 KP64 READER SELECT H

KP66 READ IN START H NF2 · KP64 ECHO H MM2 · KP64 TTI SHIFT H · KP64 SPIKE DETECT (1)H · KP66 READ IN EXEC (0)H · KP66 FULL DUPLEX (1)H

KP64 IN LAST UNIT (0)H · KP64 INACTIVE (0)H · KP64 START ENABLE L · MN1 · NT2 · NS1 · NP2 · KP64 IN ACTIVE (0)H · NP1 · KP64 IN STOP 02 L NV2 · MV2 · KP64 READER RUN H · NL2 · MU2

M410 M28 · CLK 880HZ J2 · KP64 TTI CLK H · K2 KP64 TTO CLOCK L · -KP65 TTO SHIFT H · KP64 IN LAST UNIT (1)H · KP64 PRESET L · KP64 TTI SHIFT L

M706 M30 N30

REVISIONS

CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
	KP15-00046	C

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE: TELETYPE RECEIVER
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON: KP15		SIZE D · CODE BS · NUMBER KP15-0-61 · REV. C
SCALE		
SHEET 1 OF 1		DIST.

KP65 TTO SELECT H

ME2 01
ME1 02
MF2 03
MF1 04
MH2 05
MJ2 06
11
12
7430N E01 08
MN1 04 05
7400N E04 06
09 10 7400N E04 08
KP58 TLS H MS1
12 13 7400N E04 11
MR1

-KP64 ECHO L L1
KP65 H-D ECHO (1)L M1
M112 L21 N1 K2
M111 L24 L2
MB1 01 02 7400N E03 03
KP65 PRINTER DRIVE H MV2

+3V N16V1 H MN2
KP52 IOB 10J1 H MP2
01 02 7400N E04 03 10
12 13 7400N E05 11 04

KP52 IOB 11J1 H MR2
09 10 7400N E05 08 10
01 02 7400N E05 03 04

KP52 IOB 12J1 H ML2
04 05 7400N E05 06 10
09 10 7400N E07 08 04

KP52 IOB 13J1 H MM2
KP52 IOB 14J1 H MU2
12 13 7400N E07 11 10
01 02 7400N E07 03 04

KP52 IOB 15J1 H MS2
KP52 IOB 16J1 H MT2
04 05 7400N E07 06 10
KP52 IOB 17J1 H MU1

KP65 OUT ACTIVE (0)L MD1

D 1 TTO ENABLE 7474N E06 C 0 — 09 MK2, 08 ML1
D 1 TTO 00 7474N E06 C 0 — 09
D 1 TTO 01 7474N E08 C 0 — 09
D 1 TTO 02 7474N E08 C 0 — 09
D 1 TTO 03 7474N E11 C 0 — 09
D 1 TTO 04 7474N E11 C 0 — 09
D 1 TTO 05 7474N E15 C 0 — 09
D 1 TTO 06 7474N E15 C 0 — 09
D 1 TTO 07 7474N E02 C 0 — 09
D 1 LINE 7474N E02 C 0 — 05 MD2

01 02 03 04 05 06 MH1 11 12 7430N E09 08 KP65 TTO FIN L

KP65 ACTIVE (1)H

01 02 04 05 7440N E10 06

04 KP65 TTO SHIFT H

+3V H

09 10 7400N E12 08 +3V
04 05 7400N E12 06

04 05 7400N E18 06 12 -KP64 TTO CLOCK H NP2
D 1 FREQ DIVIDE 7474N E14 C 0 — 09, 08, 11, +3V H 13

D 1 OUT STOP 1 C E14 0 — 05, 06 NR2, 02, 03, +3V H 01
D 1 OUT STOP 1.5 C E17 0 — 05, 08 NP1, 09, 12, 11
D 1 OUT STOP 2 C E17 0 — 05, 06 NN1, 09, 02, 03
D 1 OUT ACTIVE 7474N E16 C 0 — 05 MD1, 06, 02, 03, 01

NS2
09 10 7400N E18 08 -KP65 TTO FIN H
KP65 OUT ACTIVE (1)H
KP65 OUT ACTIVE (0)H

KP65 OUT STOP 02 (0)H NN2

01 02 7400N E18 03 12 13 7400N E12 11
12 13 7400N E18 11 KP65 TTO ENABLE (1)H MK1

T2 U2 M113 L25 V2
KP66 FULL DUPLEX (0)H

KP64 PRESET L M2 M111 L24 N2

P2
N2 D 1 H-D ECHO M205 L04 C 0 R2 S2
KP66 IN STOP 02 H M2
KP50 INT CLEAR L L2

KP65 TTO SELECT H 13
KP58 TCF H ND2 01 02 7410N E13 12
09 10 12 13 +3V 7440N E10 08
KP50 INT CLEAR H NE2

03 04 05 7410N E13 06 01 +3V 02 7400N E12 03
NF2 +3V N16V1 H

+3V H 13
D 1 TELE PRINT FLAG 7474N E16 C 0 — 08, 1C
-KP65 TTO FIN H 12
KP65 TTO SHIFT H 11
KP58 TSF H NH2 09 10
09 KP65 TTO SELECT H 11
7410N E13 08 KP65 TTO SKIP L NJ2
KP65 TELEPRINT FLAG L NK2

M707
M29
N29

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	C
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
	KP15-00046	D
	KP15-CCCB2	E
	F DOLL	

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE TELETYPE TRANSMITTER
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KP15-0-65 REV. E
SCALE		
SHEET 1 OF 1		DIST.

KP64 TT Ø2 L → M112 M15 L1/M1 → N1 KP66 TT DATA Ø2 H
KP64 TT Ø3 L → M112 M15 L2/M2 → N2 KP66 TT DATA Ø3 H
KP64 TT Ø4 L → M112 K20 D2/E2 → F2 KP66 TT DATA Ø4 H
KP64 TT Ø5 L → M112 K20 H1/J1 → K1 KP66 TT DATA Ø5 H
KP64 TT Ø6 L → M112 K20 H2/J2 → K2 KP66 TT DATA Ø6 H
KP66 TTY READ IN (1)L → M112 K20 L1
KP64 TT Ø7 L → M112 K20 M1 → N1 KP66 TT DATA Ø7 H

KP64 KCC L → M112 K20 T2
KP5Ø INT SD Ø1 L → M112 K20 U2
M112 K20 V2 ← KP66 TTY READ IN (1)H
M112 K20 P2/R2 → S2 → H2

KP5Ø PROGRAM INTERRUPT H → M133 K26 P2
KP66 READ IN (1)H → M133 K26 R2
M133 K26 S2 → KP66 READ IN READY L

H2 → D 1 FULL DUPLEX M2Ø5 KØ5 C Ø
F2 → D 1
E2 ← KP5Ø KBD FLAG H
J2 → D 1
K2 → D 1
D2 ← KP66 READ IN START L

KP64 IN STOP Ø2 L → M111 L24 J1/K1 → KP66 IN STOP Ø2 H

KP32 CP+RI RD RST L → M135 E31 T2
KP34 STOP L → M135 E31 U2
KP5Ø INT RESET L → M135 E31 V2
M135 E31 → V1 KP66 RI RESET H

KP64 TT Ø0 L → M622 L09 B1/C1 → D2 KP52 I/O BUS 1Ø L
KP64 TT Ø1 L → M622 L09 D1/E1 → E2 KP52 I/O BUS 11 L
KP64 TT Ø2 L → M622 L09 F1/H1 → H2 KP52 I/O BUS 12 L
KP64 TT Ø3 L → M622 L09 J1/K1 → K2 KP52 I/O BUS 13 L
KP64 TT Ø4 L → M622 L09 N1/P1 → P2 KP52 I/O BUS 14 L
KP64 TT Ø5 L → M622 L09 R1/S1 → S2 KP52 I/O BUS 15 L
KP64 TT Ø6 L → M622 L09 L1/M1 → M2 KP52 I/O BUS 16 L
KP58 KRB L → M622 L09 U1
KP64 TT Ø7 L → M622 L09 V1 → V2 KP52 I/O BUS 17 L

-KP66 RI STORE H → M112 N11 H1
KP66 FIRST CHAR (1)H → M112 N11 J1 → K1

KP66 READ IN (Ø)H → M133 K19 P1
KP34 KEY ACT (1)H → M133 K19 R1 → S1
KP5Ø INT CLEAR L → M602 L27 H2/J2/K2 → F2 → D1
M602 L27 E2/D2
M111 L24 → E1 KP66 READ IN START H

KP66 READ IN (Ø)L → PA J1
+3V N16U1 H → PA K2
PA → M606 N15 → J2

U1 ← M149 K11
V1 → KP66 READ IN (1)H → M133 H31 L2/M2 → N2 KP66 -STOREXFIRST CHAR L

KP66 CC Ø (Ø)H → M627 M16 F1
KP66 CC 1 (1)H → M627 M16 H1
KP66 TTY READ IN (1)H → M627 M16 J1
KP34 FORCE FETCH (1)H → M627 M16 K1
M627 M16 L1 ← KP66 PCO READ IN (1)L → M113 L25 D1/E1 → F1 KP66 STORE H → M113 L30 L2/M2 → N2 KP66 RI STORE L
KP66 FIRST CHAR (Ø)H → M113 L30 M2

KP66 PCO READ IN (1)H → M113 L25 D2/E2 → F2
KP5Ø SKP H → M113 L25 H1/J1 → K1
KP66 TTY READ IN (1)H → M113 L25 H2/J2 → K2

KP64 TT Ø1 L → M111 L24 A1 → B1

KP51 IOP 2 (1)L → M112 K20 L2
KP55 TIME 3 L → M112 K20 M2 → N2 B1

+3V L25U1 H → D 1 M216 L26 C Ø
D1 → D 1
C1 ← D 1
E1 → D 1
F1 → C Ø → KP66 READ IN EXEC (Ø)H
A1 ← C Ø

KP66 RI RESET H → M112 L23 H1
KP5Ø INT CLEAR H → M112 L23 J1 → K1

KP64 TT Ø0 L → M112 L23 D2
KP66 TTY READ IN (1)L → M112 L23 E2 → F2
KP51 STROBE IOP 2 H → M113 L25 L1/M1 → N1 → S2
M113 L25 P1 ← KP66 TTY ADV H
M611 M19 → T2

+3V L25V1 H → D 1 FIRST CHAR M2Ø5 H32 C Ø
T2 → D 1
U2 ← D 1
S1 ← D 1
R1 ← KP66 READ IN (1)H
V2 → C Ø → P1

KP66 STORE H → M115 M32 N2
KP21 TIME STATE 3 (Ø)H → M115 M32 P2
KP51 IOP 2 (1) H → M115 M32 R2
M115 M32 → S2

+3V M26V1 H → D 1 CC Ø M216 L26 C Ø
F2 → D 1
H2 → D 1
D2 ← C Ø
J2 ← C Ø
A1 ← C Ø

KP66 CC Ø (Ø)L → M112 L23 D1
KP66 CC 1 (Ø)L → M112 L23 E1
M112 L23 → F1 E2 → D 1 CC 1 M216 L26 C Ø
KP45 KEY READ IN L → K1
L1 ← D 1
J1 ← D 1
H1 ← C Ø
M1 ← C Ø
A1 ← C Ø

R1 KP45 KEY READ IN L → P1 READ IN M216 L26 C Ø
S1 → D 1
N1 ← C Ø
U1 → C Ø
K2 ← C Ø

U2 +3V L25U1 H → T2 TTY READ IN M216 L26 C Ø
V2 → D 1
S2 ← C Ø
V1 → C Ø
K2 ← C Ø

N2 +3V L25U1 H → M2 PCO READ IN M216 L26 C Ø
P2 → D 1 → KP66 PCO READ IN (1)H
L2 ← D 1
R2 → C Ø → KP66 PCO READ IN (Ø)H
K2 ← C Ø

M002 L17
KP66 GND IF PCO * → I2 M111 L24 E2
F2 → KP66 SET PCO H

KP66 RI RESET H → R2 M121 M11 S2
KP66 READ IN (1)H → T2
KP5Ø INT CLEAR H → U2
M121 M11 V2 → K2

KP66 TTY READ IN (1)H → T2 M133 K26 U2
KPS1 STROBE IOP 2 H → U2
M133 K26 V2 → H2 M111 L24 J2 → KP66 TT READ IN START H

* NOTE PIN L17T2 KP66 GND IF PCO IS TO BE WIRE TO GROUND AT SYSTEM ASSEMBLY IF SYSTEM HAS A PC15. THIS WILL ALLOW READ IN THROUGH HIGH SPEED READER AND ENABLE SKIP IF PCO INSTRUCTION.

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	F
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GH	KP15-00046	H
	K WALSH 12/18/70	
	F AUMANN 12/18/70	
	KP15-00056	J

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE READ IN
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KP15-Ø-66 REV. J
SCALE		
SHEET 1 OF 1		DIST.

KP21 I/O RUN (1)H — L1, M1 — M622 L07 — M2 — KP68 I/O RUN H

KD05 DATA OFLO (1)H — R1, S1 — M622 N06 — S2 — KP68 DATA OFLO H

KD04 WC OFLO (1)H — U1, V1 — M622 N06 — V2 — KP68 I/O OFLO H

KP69 I/O ADDR 03 L — A1 — M111 N08 — B1 — KP68 I/O A 03E2 H

KP69 I/O ADDR 04 L — C1 — M111 N08 — D2 — KP68 I/O A 04E2 H

KP69 I/O ADDR 05 L — D1 — M111 N08 — E1 — KP68 I/O A 05E2 H

KP69 I/O ADDR 06 L — F1 — M111 N08 — H1 — KP68 I/O A 06E2 H

KP69 I/O ADDR 07 L — E2 — M111 N08 — F2 — KP68 I/O A 07E2 H

KP69 I/O ADDR 08 L — J1 — M111 N08 — K1 — KP68 I/O A 08E2 H

KP69 I/O ADDR 09 L — H2 — M111 N08 — J2 — KP68 I/O A 09E2 H

KP69 I/O ADDR 10 L — L1 — M111 N08 — M1 — KP68 I/O A 10E2 H

KP69 I/O ADDR 11 L — K2 — M111 N08 — L2 — KP68 I/O A 11E2 H

KP69 I/O ADDR 12 L — N1 — M111 N08 — P1 — KP68 I/O A 12E2 H

KP69 I/O ADDR 13 L — M2 — M111 N08 — N2 — KP68 I/O A 13E2 H

KP69 I/O ADDR 14 L — R1 — M111 N08 — S1 — KP68 I/O A 14E2 H

KP69 I/O ADDR 15 L — P2 — M111 N08 — R2 — KP68 I/O A 15E2 H

KP69 I/O ADDR 16 L — V1 — M111 N08 — U1 — KP68 I/O A 16E2 H

KP69 I/O ADDR 17 L — S2 — M111 N08 — T2 — KP68 I/O A 17E2 H

KP69 WRITE RQ L — K2 — M510 N10 — J1 KP68 WRITE REQ L, K1 KP68 WRITE REQ H

KP69 INC MB L — M2 — M510 N10 — L1 KP68 +1 WC L, M1 KP68 +1 WC H

KP69 +1 TO CA INH L — P2 — M510 N10 — N1 KP68 - INC CA L, P1 KP68 - INC CA H

KP51 API SYNC (0)H — R1 — M611 K25 — S1 — KP68 API SYNC B H

KP51 API (0)H — F1 — M611 L19 — H1 — KP68 API B L

M910 N04

A1 KP68 I/O RUN H
B1
C1
D1 KP68 DATA OFLO H
E1 KP68 I/O OFLO H
F1
H1 KP69 I/O ADDR 03 L
J1 KP69 I/O ADDR 04 L
K1
L1 KP69 I/O ADDR 05 L
M1 KP69 I/O ADDR 06 L
N1
P1 KP69 I/O ADDR 07 L
R1
S1 KP69 I/O ADDR 08 L
T1
U1
V1

+5V PULLUP FOR I/O BUS

M910 N04

A2
B2
C2
D2 KP69 I/O ADDR 09 L
E2 KP69 I/O ADDR 10 L
F2
H2 KP69 I/O ADDR 11 L
J2
K2 KP69 I/O ADDR 12 L
L2
M2 KP69 I/O ADDR 13 L
N2
P2 KP69 I/O ADDR 14 L
R2
S2 KP69 I/O ADDR 15 L
T2 KP69 I/O ADDR 16 L
U2
V2 KP69 I/O ADDR 17 L

+5V PULLUP FOR I/O BUS

M910 N05

A1
B1 KP69 WRITE RQ L
C1
D1 KP69 INC MB L
E1 KP69 +1 TO CA INH L
F1
H1 KP69 API 0 RQ L
J1
K1
L1 KP69 API 0 EN H
M1 KP69 API 1 RQ L
N1
P1
R1
S1 KP69 API 1 EN H
T1
U1
V1

+5V PULLUP FOR I/O BUS

M910 N05

A2
B2
C2
D2 KP69 API 2 RQ L
E2
F2
H2 KP69 PWR FAIL API RQ H
J2
K2 KP69 API 3 RQ L
L2
M2
N2
P2 KP69 CLK API RQ H
R2
S2 KP69 DCH RQ L
T2 KP68 DCH GR H
U2
V2 KP68 DCH EN H

+5V PULLUP FOR I/O BUS

KP69 DCH RQ L — U2 — M111 N08 — V2 — KP68 DCH REQ H

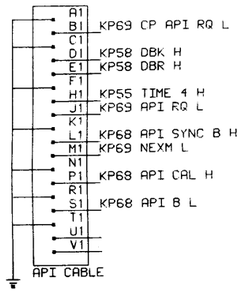
KD06 GRANT (1)H — J1, K1 — M622 L07 — K2 — KP68 DCH GR H

KP31 API CAL L — A1
KP35 INTRPT STATE (0)L — B1
M112 K22 — C1 — KP68 API CAL H

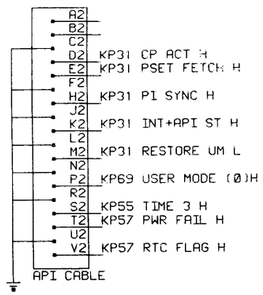
REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
GH	KP15-00048	C
	N LEGERE 1/12/71	
	F AUMANN 1/12/71	
	KP15-00056	D

DRN. S GOLDSBY	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. L HOHOS	DATE 10-15-69	TITLE: I/O ADDRESS
ENG. F AUMANN	DATE 10-7-69	
PROJ. ENG. G BUTLER	DATE 10-7-70	
PROD. F LASKEY	DATE 10-7-70	
FIRST USED ON: KP15		SIZE D; CODE 85; NUMBER KP15-0-68; REV. D
SCALE		DIST
SHEET 1 OF 1		

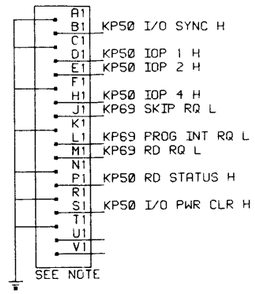
M904
H03



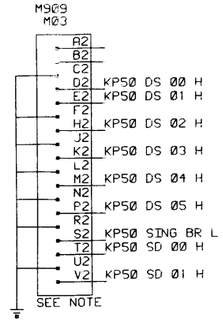
M904
H03



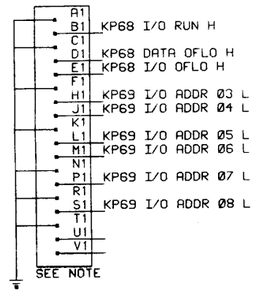
M909
M03



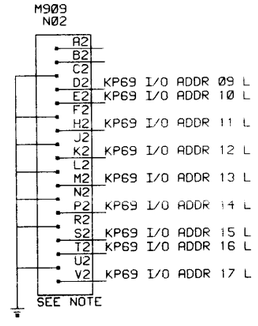
M909
M03



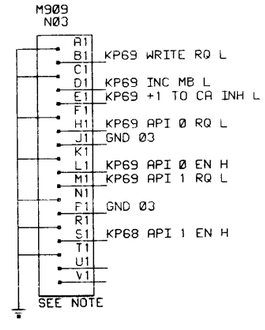
M909
N02



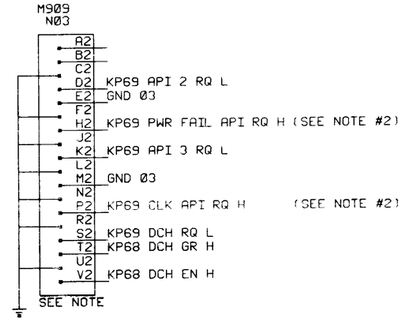
M909
N02



M909
N03



M909
N03

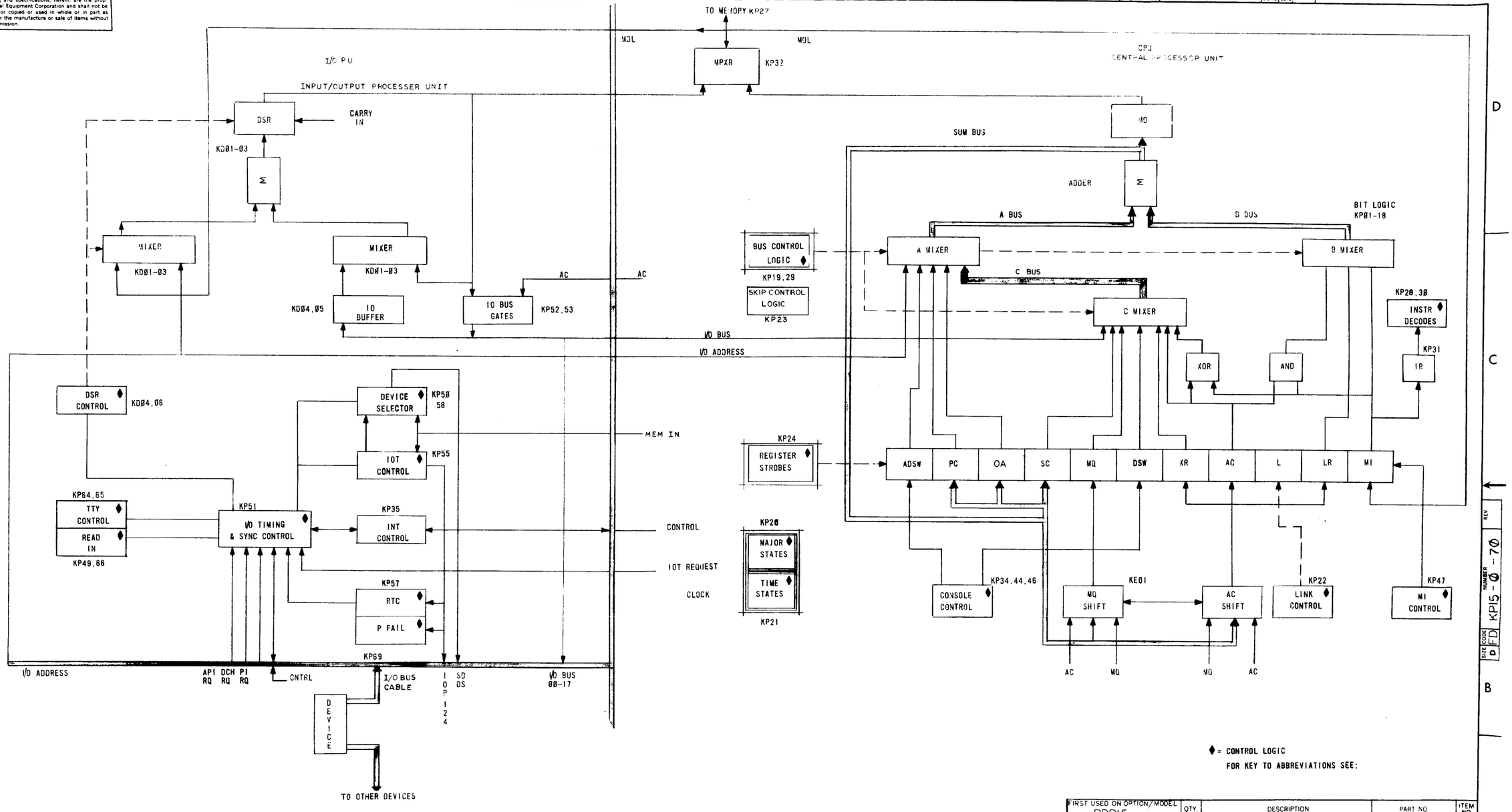


NOTE #1: M909 TERMINATOR BOARDS IN M.N02.03 ARE USED IN PLACE OF THE M912 I/O BUS CABLE CONNECTOR WHEN NO I/O BUS CABLE IS INCLUDED IN THE SYSTEM. IN SYSTEM USING AN I/O BUS CABLE THE M909'S MUST BE PLACED IN THE LAST DEVICE ON THE I/O BUS.

NOTE #2: IF API (KA15) IS PART OF SYSTEM, SIGNALS ON N03H2 AND N03P2 ARE RESPECTIVELY KP69 API 2 EN H AND KP69 API 3 EN H.

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	E
	S GOLDSBY 7-15-70	
	F AUMANN 7-22-70	
GH	KP15-00046	F
	K WALSH 12/18/70	
	F AUMANN 12/18/70	
GH	KP15-00048	H
	N LEGERE 1/12/71	
	F AUMANN 1/12/71	
	KP15-00056	J

DRN. M.SCHURMAN	DATE 11-7-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N.RHEAULT	DATE 11-7-69	
ENG. F.AUMANN	DATE 11-7-69	TITLE: I/O BUS CABLE
PROJ. ENG. G.BUTLER	DATE 11-7-69	
PROD. F.LASKEY	DATE 11-7-69	
FIRST USED ON: KP15		SIZE D / CODE IC / NUMBER KP15-0-69 / REV. J
SCALE		DIST.
SHEET 1 OF 1		



♦ = CONTROL LOGIC

FOR KEY TO ABBREVIATIONS SEE:

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN	Kent D Bauer	DATE 12/18/69
CHK'D	P the Rus	DATE 3/25/70
ENG	[illegible]	DATE 3/25/70
PROJ. ENG.		DATE 3/27/70
PROD.		DATE

NEXT HIGHER ASSY: A-ML-KP15-Ø

SCALE

SHEET 1 OF 1

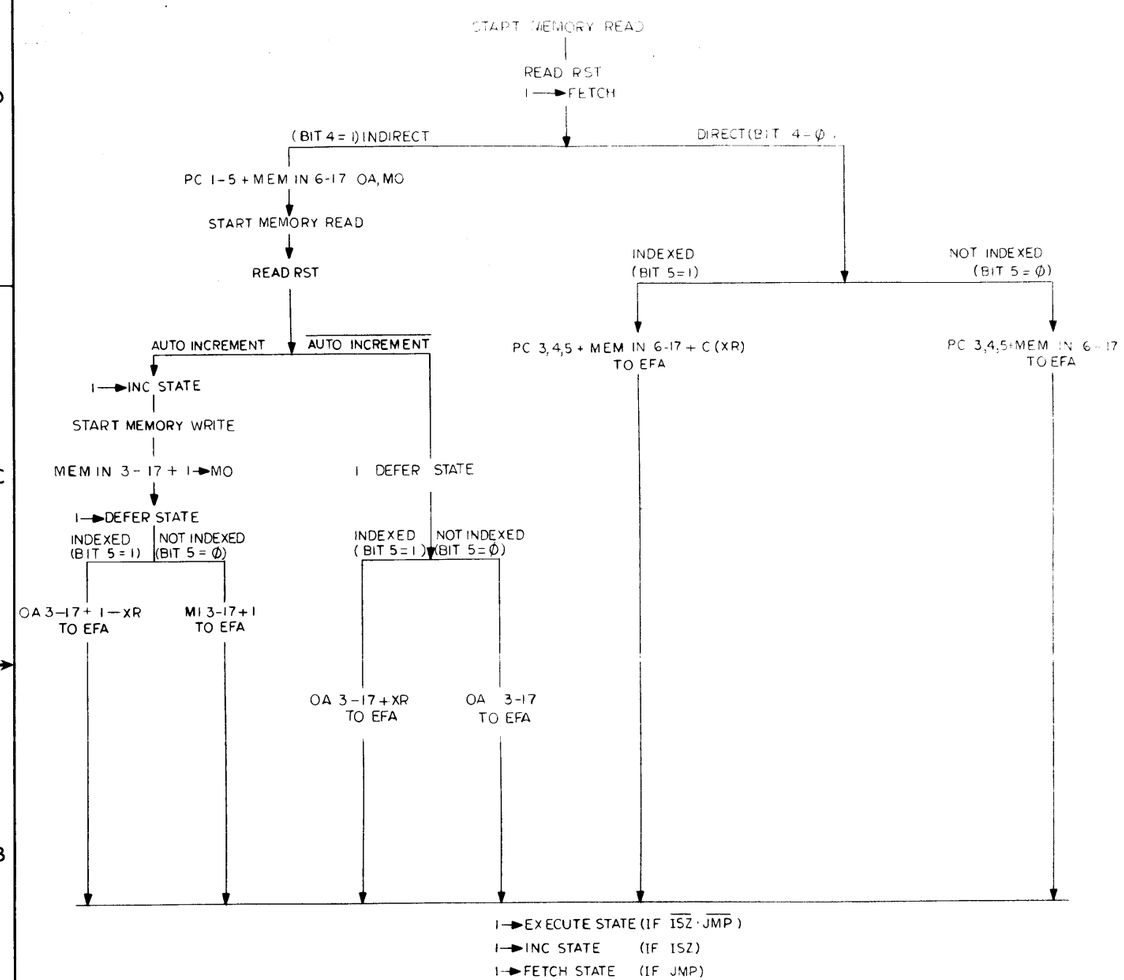
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: KP15 BLOCK DIAGRAM & PRINT KEY

SIZE	CODE	NUMBER	REV.
D	FD	KP15-Ø-7Ø	

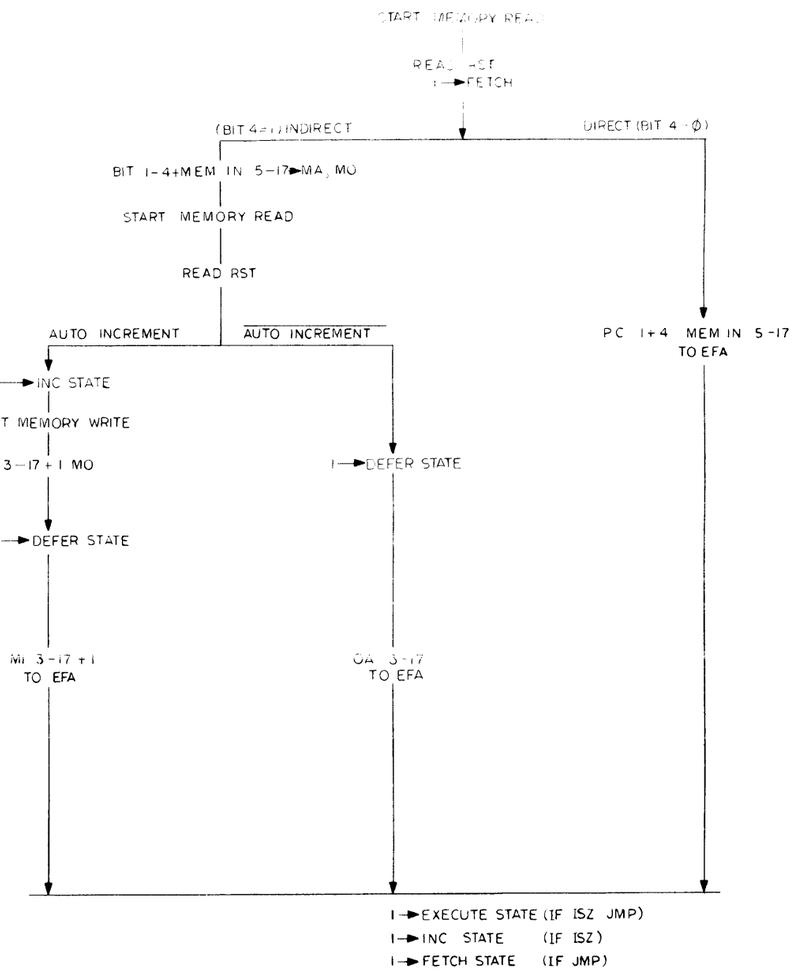
DIST.

REVISIONS | REV | CHANGE NO | CHK



BANK MODE = Ø
(NORMAL)

EFA = EFFECTIVE ADDRESS



BANK MODE = 1
(PDP 9 COMPATABLE)

EFA = EFFECTIVE ADDRESS

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION / MODEL: PDP15

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

		DATE
DRN.		11/1/70
CHK'D.		11/3
ENG.		11/3/70
PROJ. ENG.		11/3/70
PROD.		11/4/70

NEXT HIGHER ASSY: A-MI-KP15-Ø

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: PDP15 ADDRESS CALCULATION FLOW CHART

SIZE D | CODE FD | NUMBER KP15-Ø-71 | REV.

DIST.

REVISIONS | REV. | CHANGE NO. | CHK

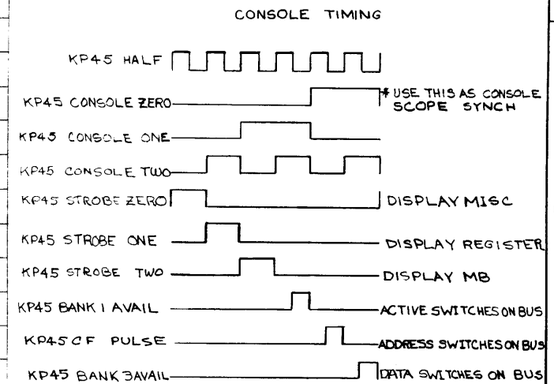
DEC FORM NO DRD 100

SIZE D | CODE FD | NUMBER KP15-Ø-71 | REV.

CABLE LOC.	TIME	KP45 STROBE ZERO L ØØØ	ØØ1																							Ø1Ø STROBE TWO	Ø11 BANK 1 AVA	1ØØ CF PULSE	1Ø1 AC AVA
	STROBE	STROBE ZERO	KP45 STROBE ONE L																										
	REGISTER STROBE		IND AC	IND PC	IND OA	IND MQ	IND PL/SC	IND XR	IND LR	IND* EAE	DSR	IND I/OB	STATUS	IND MO	IND* A BUS	IND* B BUS	IND* C BUS	IND* SHFT	IND I/OA	IND SUM	IND MAINT 1	IND MAINT 2	IND MDL	IND MMA	IND MMB	IND MST	IND MEM				
HI	I BUS ØØ	LINK	ACØØ	PCØØ	OAØØ	MQØØ	PL REQ ØØ	XRØØ	LRØØ	A(Ø)H	DSR ØØ	I/OB ØØ	PIE	MOØØ	A BUS ØØ	B BUS ØØ	C BUS ØØ	SHIFT ØØ		SUM ØØ	D → DIV SHIFT	SKIP	MDL ØØ	MAØØ	MBØØ	ADR ACK	MEM IN ØØ	CONT	SING TIME		
JI	I BUS Ø1	PLEN Ø5	AC Ø1	PC Ø1	OA Ø1	MQ Ø1	PL REQ Ø1	XR Ø1	LR Ø1	B(Ø)H	DSR Ø1	I/OB Ø1	IOB Ø1	MO Ø1	A BUS Ø1	B BUS Ø1	C BUS Ø1	SHFT Ø1		SUM Ø1	D → MULT SHIFT	B → MEM IN	MDL Ø1	MA Ø1	MB Ø1	BUS EN	MEM IN Ø1	RE RESET	SING STEP	DSW ØØ	
KI	I BUS Ø2	PLEN Ø6	AC Ø2	PC Ø2	OA Ø2	MQ Ø2	PL REQ Ø2	XR Ø2	LR Ø2	C(Ø)H	DSR Ø2	I/OB Ø2	IOB Ø2	MO Ø2	A BUS Ø2	B BUS Ø2	C BUS Ø2	SHFT Ø2		SUM Ø2	D → RAL	C → LR	MDL Ø2	MA Ø2	MB Ø2	RD RST	MEM IN Ø2	EXAM THIS	SING INST	DSW Ø1	
LI	I BUS Ø3	PLEN Ø7	AC Ø3	PC Ø3	OA Ø3	MQ Ø3	PL REQ Ø3	XR Ø3	LR Ø3	D(Ø)H	DSR Ø3	I/OB Ø3	KBD FLAG	MO Ø3	A BUS Ø3	B BUS Ø3	C BUS Ø3	SHFT Ø3	I/OA Ø3	SUM Ø3	D → RAR	B → AND	MDL Ø3	MA Ø3	MB Ø3	WREN	MEM IN Ø3	START	ADR SW Ø3	DSW Ø3	
MI	I BUS Ø4	API EN	AC Ø4	PC Ø4	OA Ø4	MQ Ø4	PL REQ Ø4	XR Ø4	LR Ø4	E(Ø)H	DSR Ø4	I/OB Ø4	TELE-PRINT FLAG	MO Ø4	A BUS Ø4	B BUS Ø4	C BUS Ø4	SHFT Ø4	I/OA Ø4	SUM Ø4	D → RTL	LD AC	MDL Ø4	MA Ø4	MB Ø4	MRLS ACK	MEM IN Ø4		ADR SW Ø4	DSW Ø4	
NI	I BUS Ø5	PI	AC Ø5	PC Ø5	OA Ø5	MQ Ø5	PL REQ Ø5	XR Ø5	LR Ø5	F(Ø)H	DSR Ø5	I/OB Ø5	IOB Ø5	MO Ø5	A BUS Ø5	B BUS Ø5	C BUS Ø5	SHFT Ø5	I/OA Ø5	SUM Ø5	D → RTR	LD MO	MDL Ø5	MA Ø5	MB Ø5	MEM IDLE	MEM IN Ø5	RS1	ADR SW Ø5	DSW Ø5	
PI	I BUS Ø6	PI EN	AC Ø6	PC Ø6	OA Ø6	MQ Ø6	PL REQ Ø6	XR Ø6	LR Ø6	-SU	DSR Ø6	I/OB Ø6	CLK FLAG	MO Ø6	A BUS Ø6	B BUS Ø6	C BUS Ø6	SHFT Ø6	I/OA Ø6	SUM Ø6	D → NO SHIFT	LD PC	MDL Ø6	MA Ø6	MB Ø6		MEM IN Ø6		ADR SW Ø6	DSW Ø6	
RI	I BUS Ø7		AC Ø7	PC Ø7	OA Ø7	MQ Ø7	PL REQ Ø7	XR Ø7	LR Ø7	-MUL	DSR Ø7	I/OB Ø7	CLK EN	MO Ø7	A BUS Ø7	B BUS Ø7	C BUS Ø7	SHFT Ø7	I/OA Ø7	SUM Ø7	D → SW	LD OA	MDL Ø7	MA Ø7	MB Ø7	MDL Ø3	MEM IN Ø7	RS2	ADR SW Ø7	DSW Ø7	
UI	I BUS Ø8	15 MODE	AC Ø8	PC Ø8	OA Ø8	MQ Ø8		XR Ø8	LR Ø8	- DIV SHIFT	DSR Ø8	I/OB Ø8	IOB Ø8	MO Ø8	A BUS Ø8	B BUS Ø8	C BUS Ø8	SHFT Ø8	I/OA Ø8	SUM Ø8	A → C BUS	LD LR	MDL Ø8	MA Ø8	MB Ø8	MDL Ø4	MEM IN Ø8	RS3	ADR SW Ø8	DSW Ø8	
VI	I BUS Ø9		AC Ø9	PC Ø9	OA Ø9	MQ Ø9		XR Ø9	LR Ø9	-EAE NORMS	DSR Ø9	I/OB Ø9	IOB Ø9	MO Ø9	A BUS Ø9	B BUS Ø9	C BUS Ø9	SHFT Ø9	I/OA Ø9	SUM Ø9	A → -C BUS	LD XR	MDL Ø9	MA Ø9	MB Ø9		MEM IN Ø9	RS4	ADR SW Ø9	DSW Ø9	
D2	I BUS 1Ø	FETCH	AC 1Ø	PC 1Ø	OA 1Ø	MQ 1Ø		XR 1Ø	LR 1Ø	-EAE LRS	DSR 1Ø	I/OB 1Ø	IOB 1Ø	MO 1Ø	A BUS 1Ø	B BUS 1Ø	C BUS 1Ø	SHFT 1Ø	I/OA 1Ø	SUM 1Ø	A → XR	C → BAC	MDL 1Ø	MA 1Ø	MB 1Ø		MEM IN 1Ø	RS5	ADR SW 1Ø	DSW 1Ø	
E2	I BUS 11	INC	AC 11	PC 11	OA 11	MQ 11	SC OFLO	XR 11	LR 11	-EAE LLS	DSR 11	I/OB 11	IOB 11	MO 11	A BUS 11	B BUS 11	C BUS 11	SHFT 11	I/OA 11	SUM 11	READ IN	B → XR	MDL 11	MA 11	MB 11	RD CON	MEM IN 11	RS6	ADR SW 11	DSW 11	
F2	I BUS 12	DEFER	AC 12	PC 12	OA 12	MQ 12	SC 12	XR 12	LR 12	-EAE ACLS	DSR 12	I/OB 12	IOB 12	MO 12	A BUS 12	B BUS 12	C BUS 12	SHFT 12	I/OA 12	SUM 12	A → SL6	C → I/O BUS	MDL 12	MA 12	MB 12	WR CON	MEM IN 12	RS7	ADR SW 12	DSW 12	
H2	I BUS 13	EAE	AC 13	PC 13	OA 13	MQ 13	SC 13	XR 13	LR 13	-EAE SIGN	DSR 13	I/OB 13	IOB 13	MO 13	A BUS 13	B BUS 13	C BUS 13	SHFT 13	I/OA 13	SUM 13	A → I/OAD	C → XOR	MDL 13	MA 13	MB 13		MEM IN 13	RS8	ADR SW 13	DSW 13	
J2	I BUS 14	EXEC	AC 14	PC 14	OA 14	MQ 14	SC 14	XR 14	LR 14	-P/Q	DSR 14	I/OB 14	IOB 14	MO 14	A BUS 14	B BUS 14	C BUS 14	SHFT 14	I/OA 14	SUM 14	A → ADR SW	CP ACT	MDL 14	MA 14	MB 14	PAR MB	MEM IN 14	RS9	ADR SW 14	DSW 14	
K2	I BUS 15	TS1	AC 15	PC 15	OA 15	MQ 15	SC 15	XR 15	LR 15	-DIV O FLO	DSR 15	I/OB 15	IOB 15	MO 15	A BUS 15	B BUS 15	C BUS 15	SHFT 15	I/OA 15	SUM 15	A → MA	START READ	MDL 15	MA 15	MB 15	PAR EXIST	MEM IN 15	RS1Ø	ADR SW 15	DSW 15	
L2	I BUS 16	TS2	AC 16	PC 16	OA 16	MQ 16	SC 16	XR 16	LR 16	-FULL	DSR 16	I/OB 16	IOB 16	MO 16	A BUS 16	B BUS 16	C BUS 16	SHFT 16	I/OA 16	SUM 16	DATA IN	START WRITE	MDL 16	MA 16	MB 16		MEM IN 16	RS11	ADR SW 16	DSW 16	
M2	I BUS 17	TS3	AC 17	PC 17	OA 17	MQ 17	SC 17	XR 17	LR 17	-EAE NOSFT	DSR 17	I/OB 17	IOB 17	MO 17	A BUS 17	B BUS 17	C BUS 17	SHFT 17	I/OA 17	SUM 17	DATA OUT	CP MRLS	MDL 17	MA 17	MB 17		MEM IN 17	RS12	ADR SW 17	DSW 17	
AI	I BUS 18	DCH ACT	I/O RUN (1) H																							IR CODE Ø	DEP THIS		DSW Ø2	
BI	I BUS 19	PLEN ØØH	POWER ON																							IR CODE 1	NEXT	CLK		
CI	I BUS 2Ø	PLEN Ø1 H	EXTD (+3V)																							IR CODE 2	STOP	REG GROUP		
DI	I BUS 21	PLEN Ø2 H	CLK EN (1) H																							IR CODE 3	READ IN	BANK MODE		
EI	I BUS 22	PLEN Ø3 H	ERROR																							DEFER	EXE CUTE	REPEAT		
FI	I BUS 23	PLEN Ø4 H	USER MODE																							INDEX		PROT		

* INDICATES A LOW TRUE SIGNAL WHEN INDICATOR IS NOT LIGHTED SIGNAL IS TRUE

CONSOLE TIMING



REVISIONS	REV	CHK	DRN
CHANGE NO KP15-00057	A	F. Aumann 2-24-71	F. Aumann 2-24-71
KP15-00062	B	F. DOLL 3-4-71	F. Doll 3-4-71

FIRST USED ON OPTION/MODEL	DO NOT SCALE DRAWING	DRN	CHK'D	ENG	PROJ. ENG.	PROD.	NEXT HIGHER ASSY	SCALE	SHEET
PDP15	UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' FINAL SURFACE QUALITY ✓ REMOVE BURRS AND BREAK SHARP CORNERS MATERIAL FINISH	R Tiller 8/31/69	D P Fisher 3/20/70	T C Aumann 3/25/70	T C Aumann 3/25/70	F. DATE	A-ML- KP15-Ø		1 OF 1

PARTS LIST

QTY.	DESCRIPTION	PART NO.	ITEM NO.

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: SIGNAL CHART IND BUS

SIZE	CODE	NUMBER	REV.
D	FD	KP15-Ø-72	B

DIST.

DEC FORM NO DRD 100

SIZE D CODE FD NUMBER KP15-Ø-72 REV B

	START	CONTINUE
TSØ3 SF RUN = Ø	SET KEY ACTIVE START RUN	SET KEY ACTIVE START RUN
TSØ1	FORCE FETCH Ø → IR ADSW → OA, MO PC SM (READ)	FORCE FETCH Ø → IR PC → OA, MO SM (READ)
TSØ2	NOP	NOP
TSØ3	WAIT FOR RD RST & CP ACT (1) MDL → MI 1 → FETCH	WAIT FOR RD RST & CP ACT (1) MDL → MI 1 → FETCH
	CONTINUE WITH INSTRUCTION JUST FETCHED	CONTINUE WITH INSTRUCTION JUST FETCHED

RUN = Ø & ANY TS OR MS EXCEPT TSØ3 • SF

CONTINUE	RESTART
START	RUN

TSØ3 • SF
RUN = Ø

CONTINUE WITH INSTRUCTION IN PROGRESS

EXECUTE	EXAMINE	EXAMINE NEXT	DEPOSIT	DEPOSIT NEXT
SET KEY ACTIVE START RUN	SET KEY ACTIVE START RUN	SET KEY ACTIVE START RUN	SET KEY ACTIVE START RUN	SET KEY ACTIVE START RUN
FORCE FETCH Ø → IR	FORCE FETCH Ø → IR ADSW → MO, OA SM (READ)	FORCE FETCH Ø → IR OA+1 → MO, OA SM (READ)	FORCE FETCH Ø → IR ADSW → MO, OA SM (WRITE)	FORCE FORCE Ø → IR A+1 → MO OA SM (WRITE)
DSW → MO SET XSW IN PROG	SET STOP TS RUN	SET STOP TS RUN	SET STOP TS RUN MO → MDL WAIT FOR ADR ACK & CP ACT (1) DSW → MO 1 → MRLS	SET STOP TS RUN MO → MDL WAIT FOR ADR ACK & CP ACT (1) DSW → MO 1 → MRLS
MO → MDL MDL → MI 1 → FETCH	MDL → MI Ø → RUN	MDL → MI Ø → RUN	MO → MDL MDL → MI Ø → RUN	MO → MDL MDL → MI Ø → RUN
DO INSTR IN DSW XSW IN PROG WILL CAUSE Ø → RUN WHEN TSØ3 • SF Ø → RUN				

REVISIONS	REV	CHANGE NO	CHK

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN [illegible] DATE 10/16/67
CHKD [illegible] DATE 3/6/73
ENG [illegible] DATE 3/6/73
PROJ ENG [illegible] DATE 3/6/73
PROD [illegible] DATE [illegible]
NEXT HIGHER ASSY
A-ML-KP15-Ø
SCALE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
KEY FLOW

SIZE D | CODE FD | NUMBER KP15-Ø-73 | REV.
DIST.

DEC FORM NO DRD 107A

SIZE D | CODE FD | NUMBER KP15-Ø-73 | REV

PROGRAM INTERRUPT REQ
KP69
KP5Ø PIR L
KP5Ø
KP5Ø PROGRAM INTERRUPT
KP5Ø
KP58 ION L
KP51
YES
NO
END
NO CENTRAL PROCESSOR INTERSECTION TAKES PLACE
PIE (1)
API YES NO
KP35
END
API REQUEST SYNCHRONIZES BEFORE PI AND PI IS RELEASED BEFORE NEXT SYNC TIME

CP API INTERRUPT REQ
KP69

TSØ2
SET FETCH

KP35 INTERRUPT H * TSØ2 * SETFEDR * CLOCK * XCT * IOT MEM
KP35
INTERRUPT ACKNOWLEDGE

KP35 INTERRUPT ACK (1) L * TSØ3 * KP34 INH * STOP RUN Ø H
KP21
KP21 STOP RUN
KP21
STOP RUN * PHASE 2 (1) * HS CLOCK * STOP PHASE
KP21
RUN (Ø)
KP21
HOLDS CP @ PHASE 2 TIME STATE 3

IOT MEM L * START READ L
KP35
KP35 I/O STOP INH
KP35
I/O STOP INH * PHASE 2 (1) STOP RUN * HS CLOCK
KP21
I/O RUN (Ø) H
KP21

KP35 INTERRUPT ACK (1) H * TSØ3 * SET FETCH * CLOCK H
KP35
KP35 EN INTERRUPT
KP35
PI OR API 2
KP35
KP35 PI REQ L
KP35
PI REQ L * TIME 4
KP51
KP51 PI → 1
KP51
PI → 1 * TIME 1
KP51
PI SINC Ø H
KP51
PIE → Ø
KP51
PI SYNC (1) L * TIME 4
KP35
KP35 INTERRUPT SIB
KP35
WAIT FOR I/O TO RESTART

TSØ3
SET FETCH

INTERRUPT STB L
KP35
INTERRUPT STB * RUN (Ø) H
KP34
START RUN
KP21
INTERRUPT STB L * API SYNC (1) H
KP35

TSØ1
FETCH

API STATE → 1
KP35
FORCE IR TO XCT
KP31

TSØ2

XCT
SEE XCT FLOW CHART

TSØ3 →
CLEAR INTERRUPT STATE
KP35

I/O RESTART SP
(INTERRUPT STROBE)
LOAD MQ WITH I/O ADDRESS
SET INTERRUPT STATE

PI
INTERRUPT STATE * TSØ1
KP31
KP31 INTRRPT CLR IR
KP31
CLEAR IR (CAL)
KP31

CAL
SEE CAL FLOW GRAPH
NOTE:
INTERRUPT STATE USED TO GATE OFF BIT 13

TSØ3 →
CLEAR INTERRUPT STATE
KP35

REVISIONS | REV | CHANGE NO | CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL
FINISH

DRN	J F Conroy	DATE 8-7-69
CHK'D	[illegible]	DATE 3/25/70
ENG	[illegible]	DATE 3/25/70
PROJ ENG	[illegible]	DATE 4-7-70
PROD	[illegible]	DATE [illegible]

NEXT HIGHER ASSY: A-ML- KP15-Ø
SCALE: NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
INTERRUPT FLOW GRAPH

SIZE	CODE	NUMBER	REV.
D	FD	KP15 - Ø - 74	

DIST.

DEC FORM NO DRG 1024

TSØ1

ADDR SW → A BUS

LD MO, ØA
+1 → FORCE FETCH

Ø → FIRST CHAR
FORCE GROUP 2 INST.
TO START MEMORY
SM(W)

+1 → FORCE FETCH

TSØ2

+1 → STOP TS RUN

+1 → STOP TS RUN

+1 → STOP TS RUN

FORCE DAC* TSØ2*(F+D)
TO STORE AC IN LOC C(ØA)

RI EXECUTE

RI EXECUTE

AC → MO
MO → MDL

AC → MO
MO → MDL

TSØ3

OA+1→OA, MO

MDL→MEM IN
Ø → ALL RI

KEY READ IN → +1 → READ IN
+1 → {TTY READ IN OR / PCO READ IN}
+1 → KEY ACTIVE
+1 → START RUN
+1 → FIRST CHAR

WAIT FOR IOP 2

IOP 2•TTY RI

IOP 2•PCO RI

SL6 → A BUS

IOB → C BUS

IOP 2•TIME 3•RI

+1 → START RUN

STROBE IOP 2 → LD AC

RI STORE

RI STORE

FETCH TSØ1

READ ANOTHER WORD

	6 BITS	12 BITS	18 BITS	6 BITS
TTY RI	1	2	2	3
		FETCH	EXECUTE	FETCH

EXECUTE LAST WORD

READ ANOTHER WORD

	FIRST WORD	ALL OTHER WORDS
PCO RI	1	3
	FETCH	FETCH

EXECUTE LAST WORD

NOTES:
1. RI EXECUTE SET BY (PCO RI•SKIP) V (TTY RI•HOLE 7)
2. RI STORE = FIRST CHAR •[PCO RI V(TTY RI•THIRD CHAR)]

1 2 3

REVISIONS | REV. | CHANGE NO. | CHK

FIRST USED ON OPT/MOD	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN.	DATE 1/30/67
CHK'D.	DATE 1/29/67
ENG.	DATE 3/25/70
PROJ. ENG.	DATE 3/25/70
PROD.	DATE 3/31/70

NEXT HIGHER ASS'Y
A-ML-KP15-Ø

SCALE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

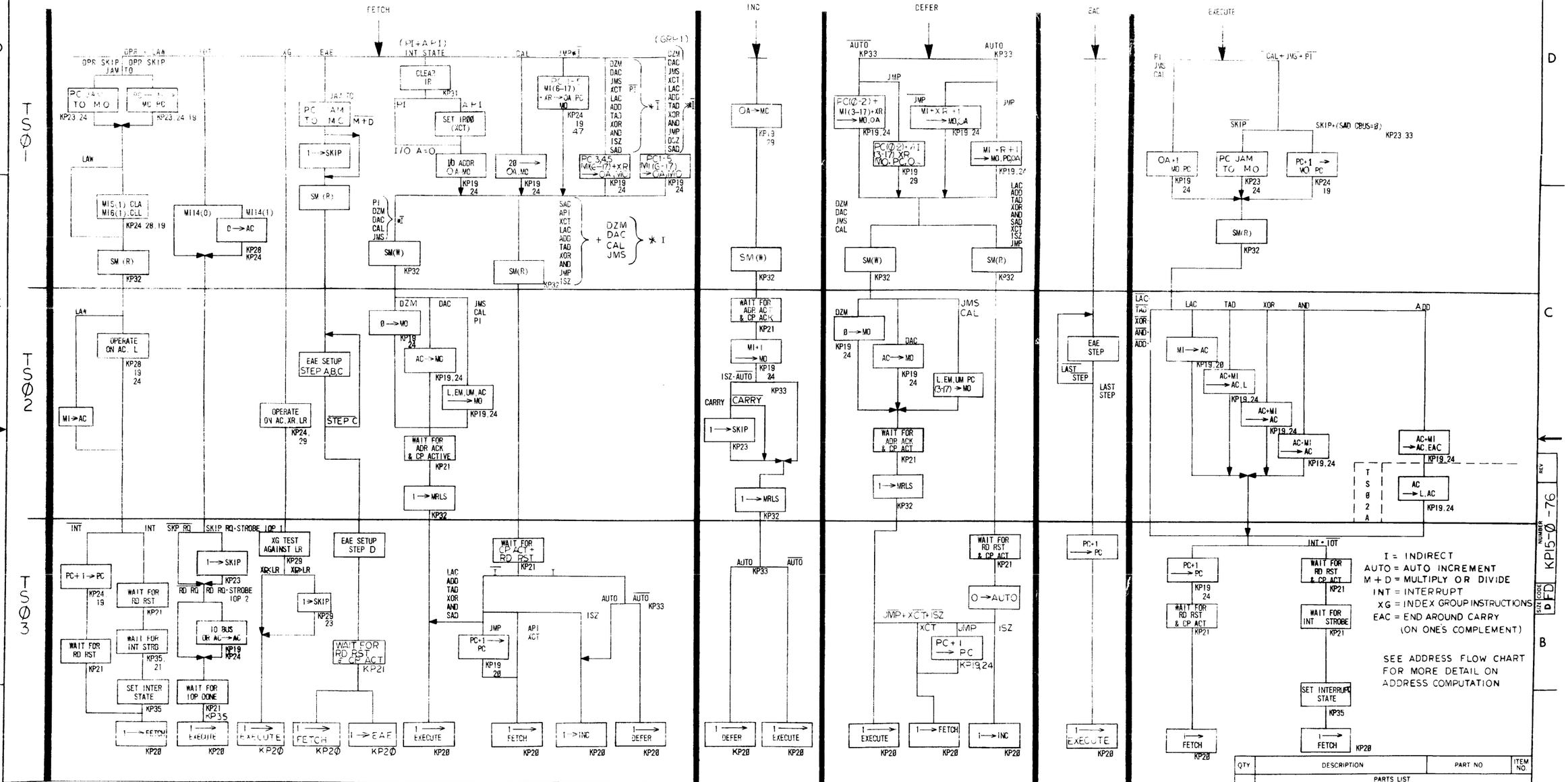
TITLE
READ IN FLOW

SIZE	CODE	NUMBER	REV.
D	FD	KP15-Ø-75	

DIST.

DEC FORM NO. DRD 102A

REV | NUMBER KP15-Ø-75 | SIZE D | CODE FD



QTY	DESCRIPTION	PART NO	ITEM NO

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP15

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN		DATE 12/17/69
CHK'D		DATE 3/25/70
ENG		DATE 3/25/70
PROJ ENG		DATE 3/25/70
PROD		DATE

NEXT HIGHER ASSY: A-ML-KP15-Ø

SCALE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

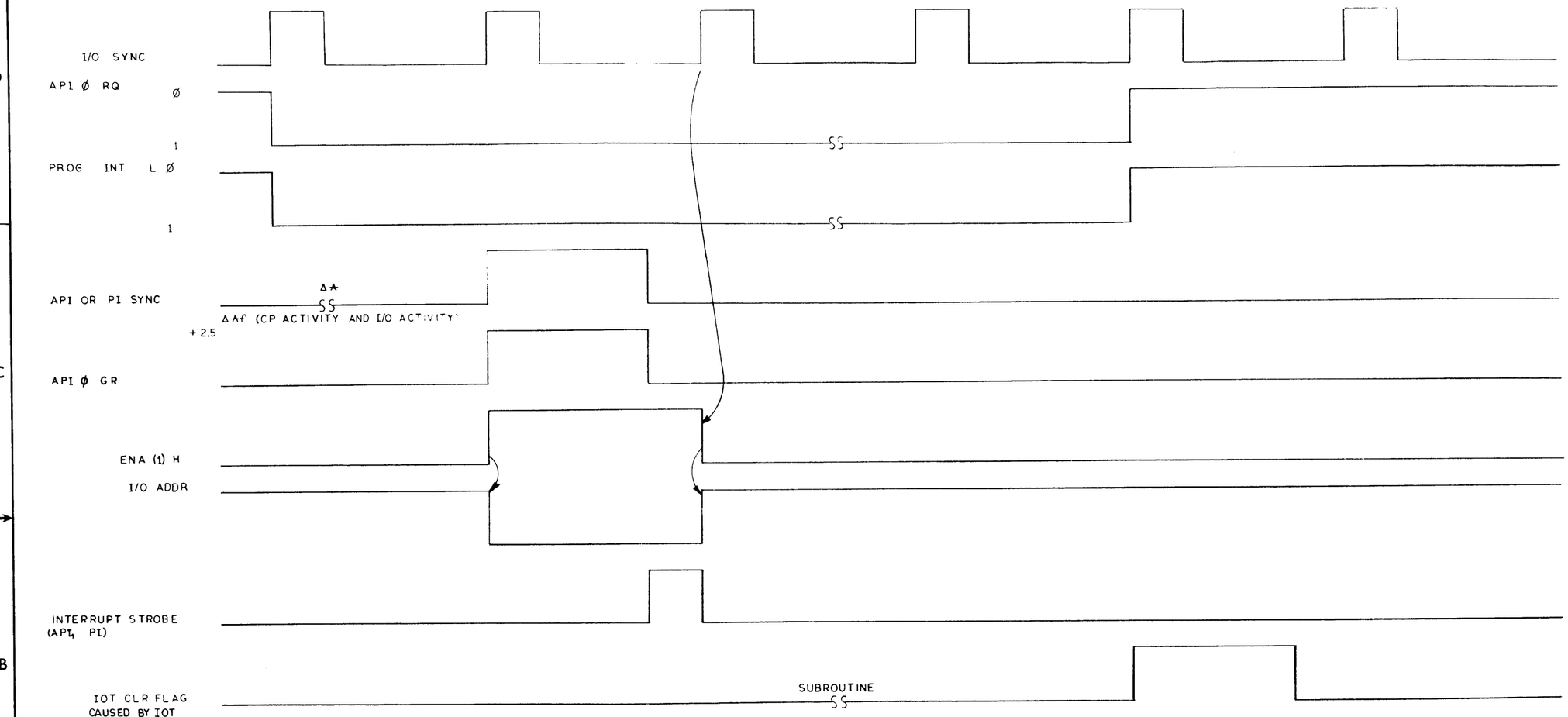
TITLE: INSTRUCTION FLOW CHART

SIZE D | CODE FD | NUMBER KP15-Ø-76 | REV.

DIST.

REVISIONS | REV | CHANGE NO | CHK

SIZE FORM NO C4D 102A



FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

DRN		DATE 12/15/69
CHK'D	P Taylor	DATE 3/25/70
ENG	J Cameron	DATE 3/25/70
PROJ. ENG.	J Cameron	DATE 3/25/70
PROD.		DATE

NEXT HIGHER ASSY
A-ML-KP15-Ø

SCALE —

SHEET OF

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
API/PI TIMING DIAGRAM BUS SIGNALS

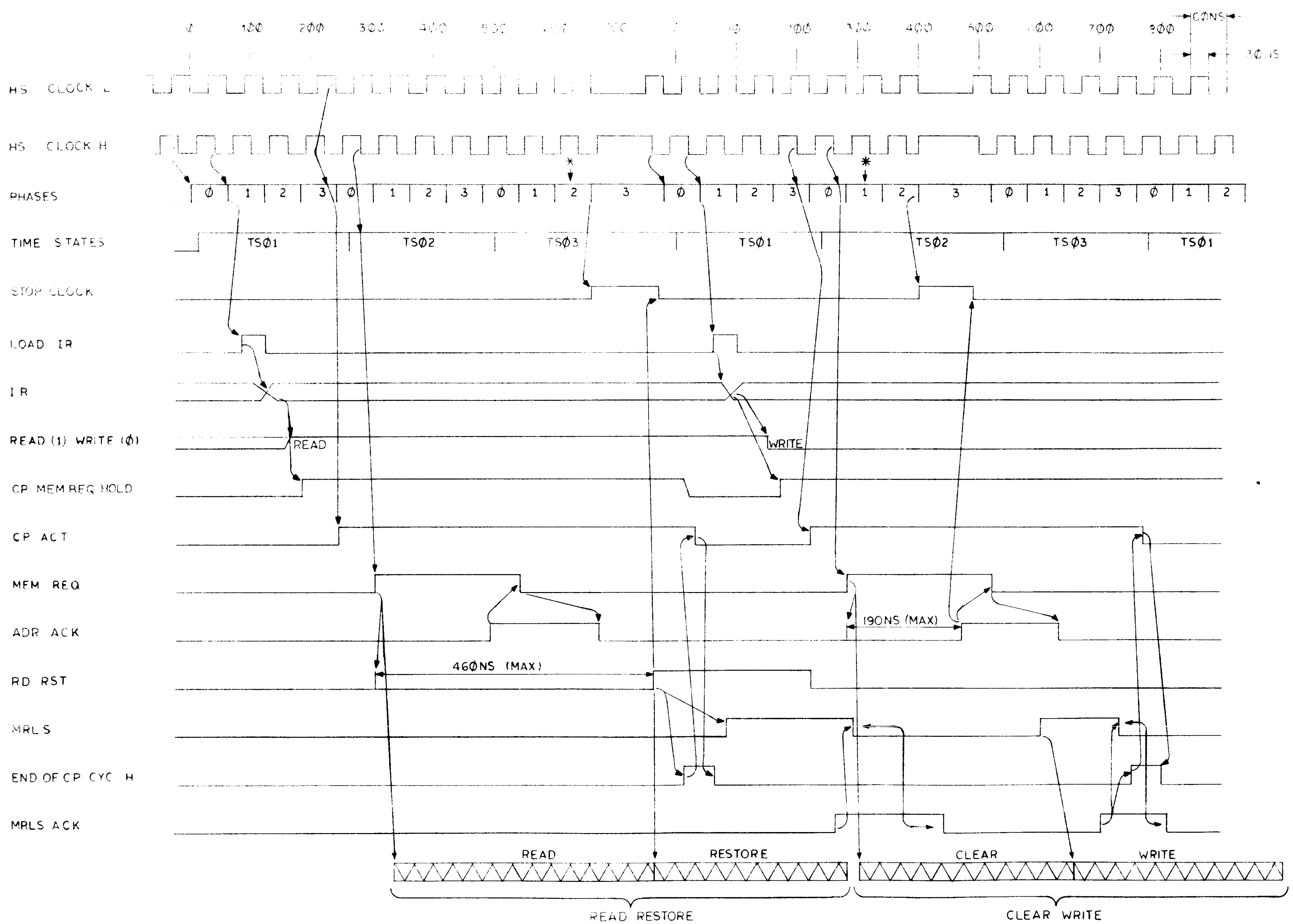
SIZE	CODE	NUMBER	REV.
D	TD	KP15-Ø-77	

DIST.

REVISIONS	REV.
CHANGE NO.	
CHK	

DEC FORM NO. DRD 102A

SIZE D CODE TD NUMBER KP15-Ø-77 REV



NOTE: *HOLD IN PHASE 2 WITH CLOCK RUNNING IF I/O ACT WAIT FOR MEMORY AVAILABILITY TO CP.

THIS CHART SHOWS WORSE CASE TIMING SITUATIONS. TYPICAL TIMING MAY SHOW AS MUCH AS 5Ø% LESS DELAY BETWEEN CERTAIN SIGNALS

REVISIONS			
CHK	CHANGE NO	REV	
	KP15-C0082	A	2-22-74 F. DOLL 3-4-74

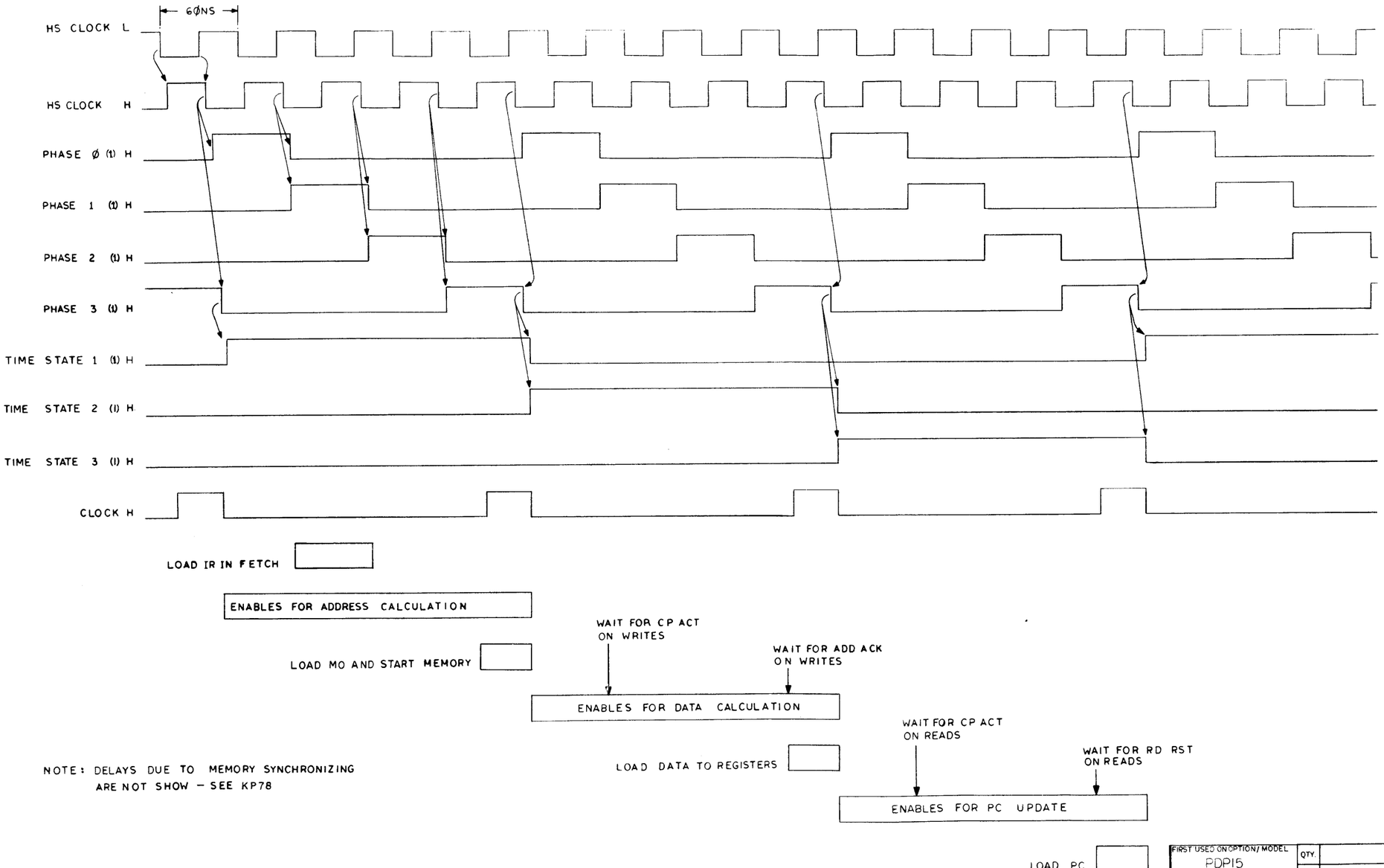
FIRST USED ON OPTION/MODEL	PDP15
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	
MATERIAL	—
FINISH	—
DRN	DATE 12/18/69
CHK'D	DATE 3/25/70
ENG	DATE 3/25/70
PROJ ENG	DATE 3/25/70
PROD	DATE
NEXT HIGHER ASSY	A-ML-KP15-Ø
SCALE	—
SHEET 1 OF 1	

PARTS LIST: QTY | DESCRIPTION | PART NO | ITEM NO.

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CP — MEMORY TIMING

SIZE D CODE TD NUMBER KP15-Ø-78 REV. A



NOTE: DELAYS DUE TO MEMORY SYNCHRONIZING ARE NOT SHOW – SEE KP78

REVISIONS	CHANGE NO	CHK
REV		

DEC FORM NO DPD 102A

FIRST USED ON OPTION/ MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15	PARTS LIST			

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN	Jack Olsen	DATE 11/6/70
CHK	P.D. Hahn	DATE 3/25/70
ENG	W. Cameron	DATE 3/25/70
PROJ. ENG.	W. Cameron	DATE 3/25/70
PROD.	[illegible]	DATE [illegible]

NEXT HIGHER ASSY
A-ML-KP15-0

SCALE

SHEET 1 OF 1

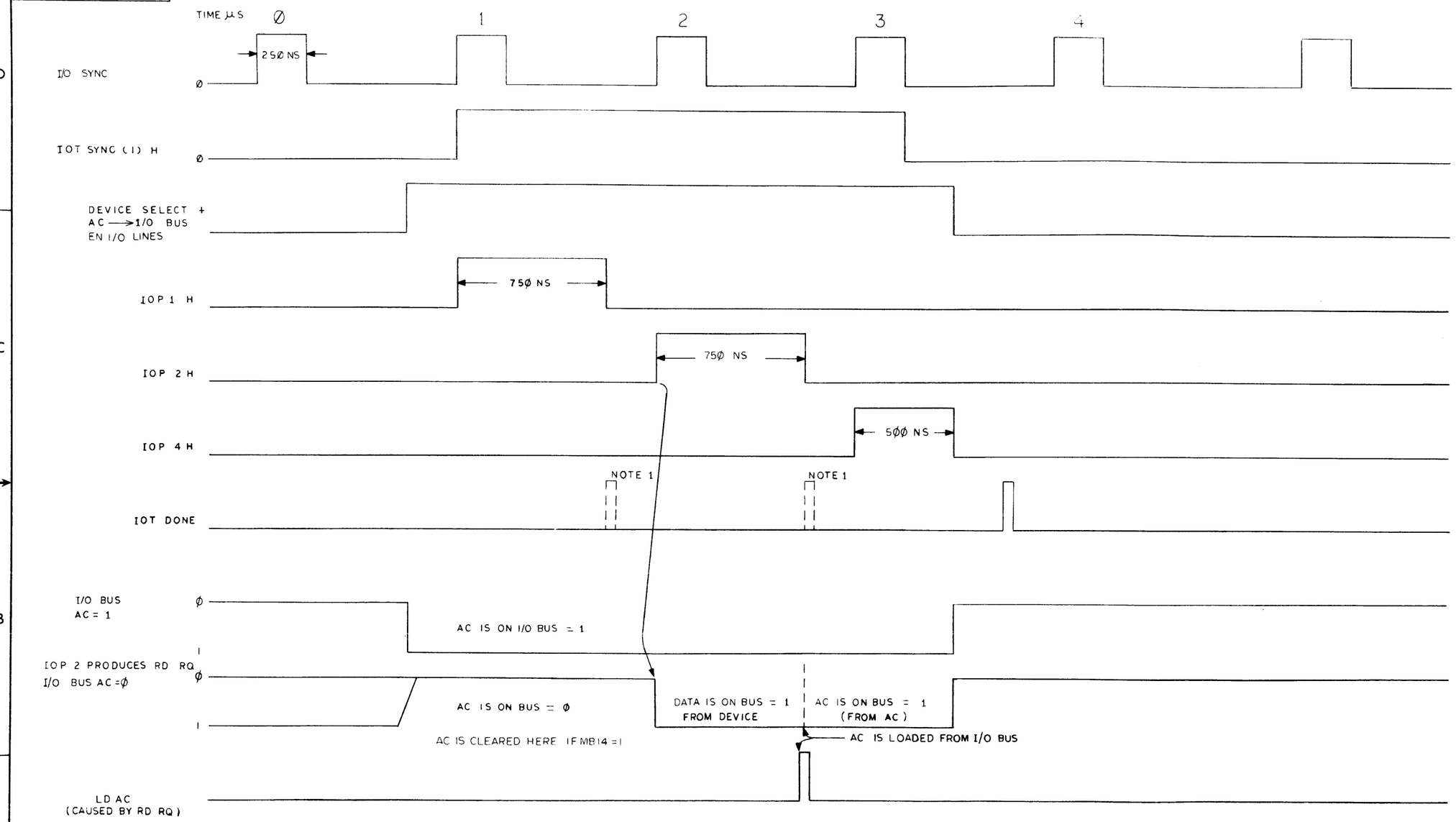
digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
CP TIMING – COMMON EVENTS

SIZE	CODE	NUMBER	REV
D	TD	KP15-0-79	

DIST.

SIZE	CODE	NUMBER	REV
D	TD	KP15-0-79	



NOTE: 1. IOT DONE IS ISSUED WITH LAST IOP PULSE.

REVISIONS	REV	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN.		DATE 11/5/70
CHK'D		DATE 3/05/70
ENG.		DATE 3/25/70
PROJ. ENG.		DATE 3/25/70
PROD.		DATE 3/25/70

NEXT HIGHER ASSY A-ML-KP15-Ø
SCALE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

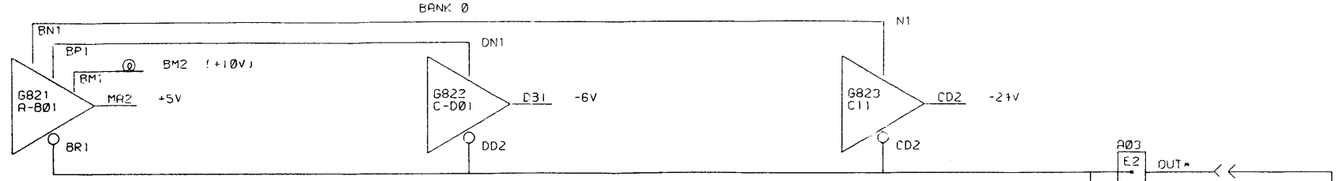
TITLE
IOT INSTRUCTION TIMING DIAGRAM BUS SIGNALS

SIZE	CODE	NUMBER	REV.
D	TD	KP15-Ø-8Ø	

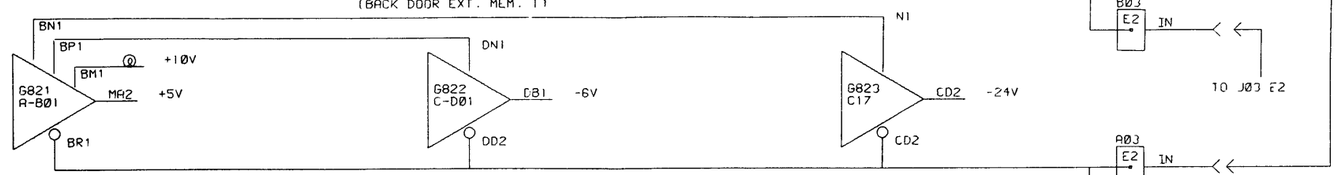
DIST.

DEC FORM NO DRD 102A

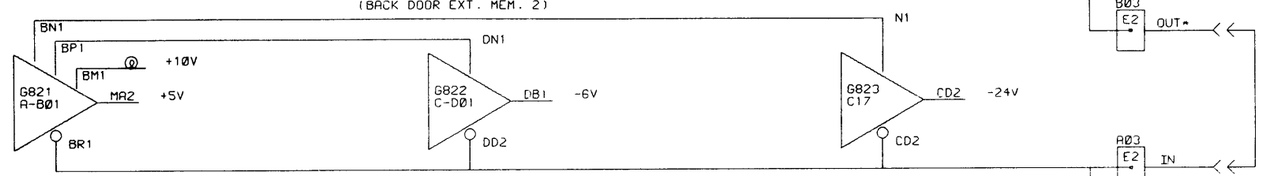
32K MEMORY
BANK Ø



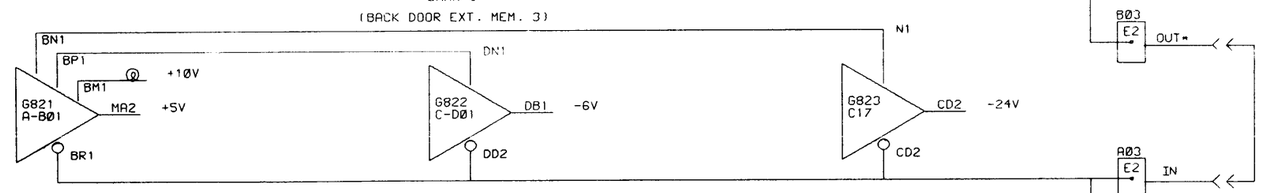
BANK 1
(BACK DOOR EXT. MEM. 1)



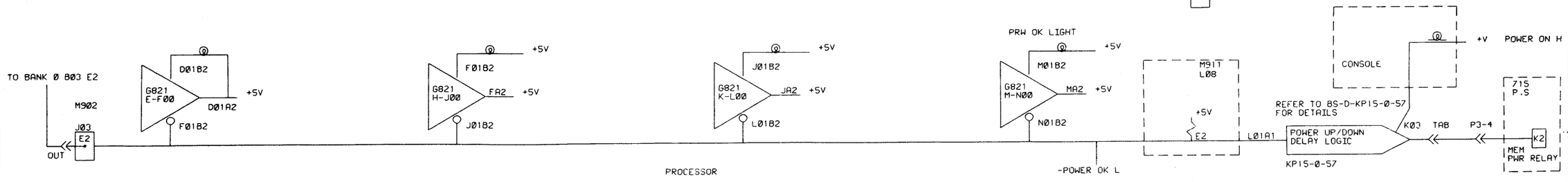
BANK 2
(BACK DOOR EXT. MEM. 2)



BANK 3
(BACK DOOR EXT. MEM. 3)



NOTES:
1. *THE M902 TERMINATOR CARD IS ALWAYS PLACED IN THE LAST BANK OF THE TOTAL MEMORY CAPACITY.
2. REFER TO MM15-Ø-20 FOR INDIVIDUAL REGULATOR VOLTAGE ADJUSTMENT.



REVISIONS		
CHK	CHANGE NO.	REV.
	KP15-00036	B

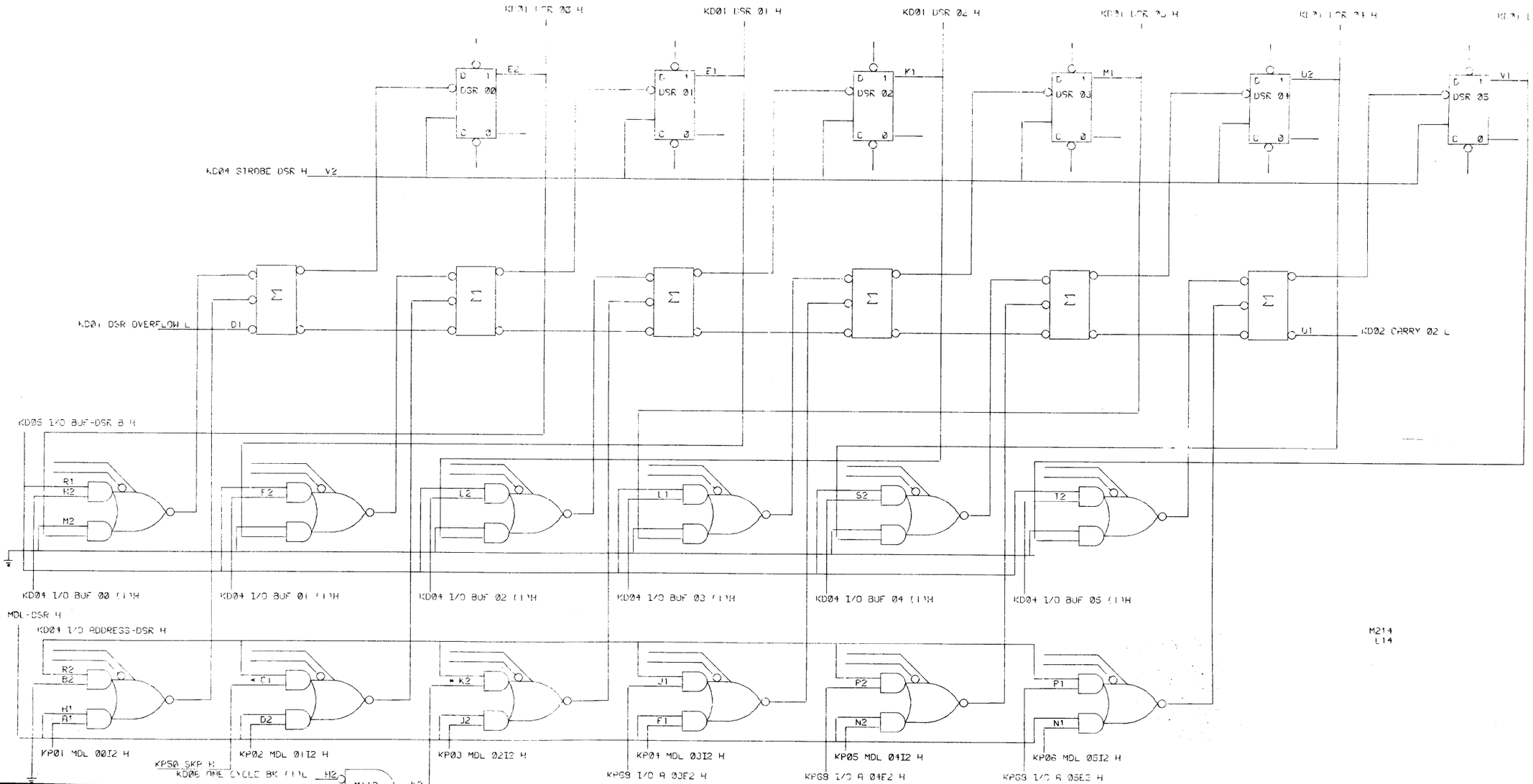
DRN.		DATE 6/27/70
CHK'D.	Tom Hoban	DATE 7/15/70
ENG.	E. AUMANN	DATE 7/15/70
PROJ. ENG.	E. AUMANN	DATE 7/14/70
PROD.	E. LASKEY	DATE 7/15/70
FIRST USED ON	KP15	
SCALE		
SHEET	OF	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
POWER REGULATOR & OK BUS

SIZE	CODE	NUMBER	REV.
D	BS	KP15-Ø-81	B

DIST.



*NOTE: IF ECO KP15-#52 (OPTIONAL IN OLDER MACHINES) IS NOT INSTALLED, INDICATED PINS ARE GROUNDED.

REVISIONS		
CHK LTR	CHANGE NO.	REV.
	KP15-00038	A
	S GOLDSBY 7/15/70	
	F AUMANN 7/22/70	
	KP15-00052	B
	F. Aumann 7/31/70	

DRN. S.GOLDSBY	DATE 10/14/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. L HOHOS	DATE 10/15/69	
ENG. F AUMANN	DATE 10/7/69	TITLE DSR 00-05
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KD15		SIZE D / CODE 80 / NUMBER KD15-0-01 / REV. B
SCALE		
SHEET 1 OF 1		DIST.

KD02 DSR 06 H
KD02 DSR 07 H
KD02 DSR 08 H
KD02 DSR 09 H
KD02 DSR 10 H
KD02 DSR 11 H

DSR 06 E2
DSR 07 E1
DSR 08 K1
DSR 09 M1
DSR 10 U2
DSR 11 V1

KD04 STROBE DSR H V2

KD02 CARRY 02 L — D1

Σ

KD03 CARRY 01 L — U1

KD05 I/O BUF-DSR B H

R1 H2 M2 — KD04 I/O BUF 06 (1)H
F2 — KD04 I/O BUF 07 (1)H
L2 — KD04 I/O BUF 08 (1)H
L1 — KD05 I/O BUF 09 (1)H
S2 — KD05 I/O BUF 10 (1)H
T2 — KD05 I/O BUF 11 (1)H

KD04 MDL - DSR H

KD04 I/O ADDRESS - DSR H

R2 B2 H1 A1 — KP07 MDL 06I2 H — KP68 I/O A 06E2 H
D2 — KP08 MDL 07I2 H — KP68 I/O A 07E2 H
K2 J2 — KP09 MDL 08I2 H — KP68 I/O A 08E2 H
J1 F1 — KP10 MDL 09I2 H — KP68 I/O A 09E2 H
P2 N2 — KP11 MDL 10I2 H — KP68 I/O A 10E2 H
P1 N1 — KP12 MDL 11I2 H — KP68 I/O A 11E2 H

M214
L15

REVISIONS		
CHK	CHANGE NO.	REV.
RH	KP15-00038	A

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D	DATE	
ENG. F. AUMANN	DATE 4/7/69	TITLE DSR 06-11
PROJ. ENG. G. BUTLER	DATE 4/7/69	
PROD. F. LASKEY	DATE 4/7/69	
FIRST USED ON KD15		SIZE D CODE BS NUMBER KD15-0-02 REV. A
SCALE		
SHEET 1 OF 1		DIST.

KD03 DSR 12 H
KD03 DSR 13 H
KD03 DSR 14 H
KD03 DSR 15 H
KD03 DSR 16 H
KD03 DSR 17 H

D 1 DSR 12 C 0 — E2
D 1 DSR 13 C 0 — E1
D 1 DSR 14 C 0 — K1
D 1 DSR 15 C 0 — M1
D 1 DSR 16 C 0 — U2
D 1 DSR 17 C 0 — V1

KD04 STROBE DSR H V2

KD03 CARRY 01 L D1

Σ — U1 — KD04 ADD 1

KD05 I/O BUF-DSR B H

R1 H2 M2 — KD05 I/O BUF 12 (1)H
F2 — KD05 I/O BUF 13 (1)H
L2 — KD05 I/O BUF 14 (1)H
L1 — KD05 I/O BUF 15 (1)H
S2 — KD05 I/O BUF 16 (1)H
T2 — KD05 I/O BUF 17 (1)H

KD04 MDL - DSR H
KD04 I/O ADDRESS - DSR H

R2 B2 H1 A1 — KP13 MDL 12I2 H — KP68 I/O A 12E2 H
C1 D2 — KP14 MDL 13I2 H — KP69 I/O A 13E2 H
K2 J2 — KP15 MDL 14I2 H — KP8 I/O A 14E2 H
J1 F1 — KP16 MDL 15I2 H — KD03 I/O AD 15 H
P2 N2 — KP17 MDL 16I2 H — KD03 I/O AD 16 H
P1 N1 — KP18 MDL 17I2 H — KD03 I/O AD 17 H

KP69 I/O ADDR 15 L — A1
KP51 CLK SYNC (1)L — B1
M133 K19 — C1 — KD03 I/O AD 15 H

KP69 I/O ADDR 16 L — D2 E2
M133 K19 — F2 — KD03 I/O AD 16 H

KP69 I/O ADDR 17 L — L2 M2
M133 K19 — N2 — KD03 I/O AD 17 H

M214
L16

REVISIONS

CHK	CHANGE NO.	REV.
LH	KP15-00038	A
	S GOLDSBY 7/12/70	
	F AUMANN 7/12/70	
	KP15-0005E	B

DRN. S.GOLDSBY	DATE 10/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. L.HOHOS	DATE 10/15/69	
ENG. F.AUMANN	DATE 10/7/69	TITLE DSR 12-17
PROJ. ENG. G.BUTLER	DATE 10/7/69	
PROD. F.LASKEY	DATE 10/7/69	
FIRST USED ON KD15		SIZE D · CODE BS · NUMBER KD15-0-03 · REV. B
SCALE		
SHEET 1 OF 1		DIST.

KP53 IOB 00J1 H
KP53 IOB 01J1 H
KP53 IOB 02J1 H
KP53 IOB 03J1 H
KP53 IOB 04J1 H
KP53 IOB 05J1 H
KP53 IOB 06J1 H
KP53 IOB 07J1 H
KP53 IOB 08J1 H

+3V L06V1 H
KP53 IOB 00J1 H
KD05 STROBE I/O BUF H
+3V L10U1 H
I/O BUF 00 M216 L11
I/O BUF 01 M216 L11
I/O BUF 02 M216 L11
I/O BUF 03 M216 L11
I/O BUF 04 M216 L11
I/O BUF 05 M216 L11
I/O BUF 06 M216 L12
I/O BUF 07 M216 L12
I/O BUF 08 M216 L12

KD06 STROBE ADDR L
KD06 CA DLYD L
KD06 SET DSR-MDL L
M627 M16
KD04 STROBE DSR H
KD04 START CA L
I/O M HOLD M205 M23
+3V M24U1 H
KD06 GRANT (1)L
KP51 CLK SYNC (1)L
M113 L10
KD04 I/O CYCLE REQ H
KD06 CA DLYD L
KD06 STROBE ADDR L
M133 J01
KD05 DCH RESET H
M112 M12
+3V M24U1 H
KD04 SET I/O M REQ H
KD01 DSR OVERFLOW L
KD04 WC (1)L
M112 L21
KD04 STROBE DSR H
WC OFLO M205 M23
KD04 WC (0)L

KD04 WC (1)L
KD06 SET DSR-MDL L
M112 M12
KD06 EN CA H
M113 L22
KD04 START CA L
+3V L25U1 H
+3V M24U1 H
KD04 WC ENABLE (0)H
WC M205 M22
KD04 WC (1)H
KD05 DCH RESET H
CA M205 M23
KD05 DCH RESET H
KD04 I/O MRLS (1)H
M112 M12
KD04 I/O MRLS (1)H
KD05 DATA CYCLE (1)H
M113 L10

KD05 DATA CYCLE (1)L
KP32 I/O M REQ (1)L
M112 M12
KD05 DATA IN (1)H
M113 N12
KD05 DATA OUT (1)H
M113 L31
KD04 SET I/O READ L
-KD04 EN RD L
KD06 ONE CYCLE BK (1)H
KD06 SING CYC DIR (1)H
M113 L10
KD04 I/O M HOLD (0)H
I/O READ M216 M20
KD06 ONE CYCLE BK (1)H
KD06 SING CYC DIR (0)H
KD04 I/O M HOLD (0)H
I/O WRITE M216 M20
KD05 DCH RESET H
KD04 I/O ADDR ACK H
M112 M24

KD04 I/O RD RST H
KD04 DSR-MDL (0)H
KD04 I/O DATA ACK (0)H
M115 K21
M611 K25
KD04 MDL-DSR H

KP26 I/O RD RST L
M611 L19
KD04 I/O RD RST H
KD04 I/O CYCLE REQ H
M611 M31
KD04 I/O CYCLE REQ L

+3V M14U1 H
KD04 CA (1)H
KD04 I/O RD RST H
PRE DATA CYCLE M216 N23
KP51 CLR SYNC L

+3V M24U1 H
I/O DATA ACK M216 M20
KD06 PRE MRLS H
+3V M24U1 H
I/O MRLS M216 M20
KD06 STROBE MRLS H
+3V M24U1 H
DSR-MDL M216 M20
KD04 EN RD H
KD06 SET DSR MDL H

KD04 I/O MRLS ACK H
KP26 I/O MRLS ACK L
M111 N18
KD05 DCH RESET H
M112 M12

KD04 WC (0)H
KD04 CA (0)H
KD04 I/O M HOLD (1)H
M115 M32
WC ENABLE M205 M22
-KD06 STROBE ADDR H
-KD05 DCH RESET L

-KD04 MDL-DSR H
KD04 I/O M HOLD (1)H
M113 K31
KD04 RETURN DATA L
M611 K27
KD04 I/O ADDRESS-DSR H

KP26 I/O ADDR ACK L
M611 M31
KD04 I/O ADDR ACK H

KD05 ADD-MEM (0)H
KD05 DATA CYCLE (1)H
KD05 DATA IN (1)H
M115 K21
KD06 SING CYCLE DIR (1)L
M113 K19
KD04 I/O ADDR ACK H
M113 L10
M611 L19
KD04 RETURN DATA H

KD04 WC (1) L
MI33 K26
KD04 CA (1)H
KP68-INC CA H
KD04 SET I/O M REQ H
KD06 ONE CYCLE BK(1)L
M627 N09
KD04 ADD : L
M113 N12

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV
LH	KP15-00038	J	[illegible]	KP15-00078	N
	S GOLDSBY 7-14-70			J. Hodgart 7-17-73	
	F AUMANN 7-22-70			F. DOLL	
GH	KP15-00042	K			
	K WALSH 9-1-70				
	F AUMANN 9-2-70				
GH	KP15-00046	L			
	S GOLDSBY 3/1/71				
	F AUMANN 3/2/71				
WA	KP15-00056	M			
	N Cook 6/24/71				
	F Aumann 6/24/71				

DRN. J FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHKD. R COOK	DATE 10/7/69	
ENG. F AUMANN	DATE 10/7/69	TITLE: I/O BUF 00-08
PROJ. ENG. G BUTLER	DATE 10/7/69	
PROD. F LASKEY	DATE 10/7/69	
FIRST USED ON KD15		SIZE D / CODE BS / NUMBER KD15-0-04 / REV. N
SCALE		DIST.
SHEET 1 OF 1		

KP52 IOB 09J1 H
KP52 IOB 10J1 H
KP52 IOB 11J1 H
KP52 IOB 12J1 H
KP52 IOB 13J1 H
KP52 IOB 14J1 H
KP52 IOB 15J1 H
KP52 IOB 16J1 H
KP52 IOB 17J1 H
+3V L06U1 H
KD05 STROBE I/O BUF H
I/O BUF 09 M216 L12
I/O BUF 10 M216 L12
I/O BUF 11 M216 L12
I/O BUF 12 M216 L13
I/O BUF 13 M216 L13
I/O BUF 14 M216 L13
I/O BUF 15 M216 L13
I/O 16 M216 L13
I/O BUF 17 M216 L13
+3V L10V1 H
KD04 WC (1)H
KD06 ENCA H
KD05 DATA IN (0)H
KD05 DATA OUT (0)H
M627 N09
+3V M23V1 H
KD04 CA (1)H
KD06 PRE MRLS H
DATA CYCLE M216 M17
M611 M19
KP55 TIME 1 H
ENB CYCLE M216 M17
KD05 DCH DONE H
M111 L24
+3V M12U1 H
KP50 RD RQ H
DATA IN M216 M17
KD05 ENB CYCLE (1)L
KP55 TIME 4 L
M112 L23
IN XFER CYCLE M216 M17
KD05 ENB CYCLE (1)H
KP55 TIME 4 H
KP68 WRITE REQ H
DATA OUT M216 M17
ADD-MEM M216 M17
KP55 TIME 1 H
KD05 DATA IN (1)L
KD05 DATA OUT (1)L
M112 M12
KD05 DATA IN (1)L
KD04 PRE DATA CYCLE (1)L
M112 M24
M112 M24
KD06 SING CYC DIR (1)H
M112 M24
KD05 DSR I/O BUS (1)H
KD06 BACK TO BACK (0)
KD04 I/O MRLS (1)L
M112 N11
KD05 DCH RESET L
KD01 DSR 00 (1)H
M611 L19
KD04 I/O BUF 00 (1)H
KD06 LIKE SIGNS (1)H
M115 M32
KD04 I/O BUF 00 (0)H
KD06 LIKE SIGNS (1)H
M115 M32
KD05 DATA CYCLE (1)L
KD05 DSR-I/O BUS (1)H
KD06 STROBE MRLS H
M113 L10
M113 L22
KD05 DATA IN (1)H
KP51 STROBE IOP 2 H
M113 L10
M627 M16
KD05 STROBE I/O BUF H
KD06 SING CYC DIR (1)H
KD04 STROBE DSR H
M113 N12
M113 N12
KD04 EN RD H
M113 N12
DSR-I/O BUS M216 M21
KD06 PRE MRLS H
M112 M24
DATA OFLO M216 M21
KD05 ADD-MEM (1)L
KD05 CLR DSR-I/O BUS H
KD05 DCH RESET H
M112 L18
KD05 DSR-I/O BUS (1)H
KP50 IOP 4 H
M113 N12
KD04 RETURN DATA L
KD05 DCH RESET L
M115 M32
KD06 BACK TO BACK (0)H
M113 K31
M611 K25
KD05 DCH DONE L
M611 K25
KD05 DSR-I/O BUS H
KD05 DCH DONE H
KP55 TIME 4 L
KP51 I/O CLK L
M112 M13
-KP50 IOP 4 L
PA
+3V L18U1 H
M606 N15
M111 N18
KD05 CLR DSR-I/O BUS H
KD06 BACK TO BACK (1)H
M113 N16
KD05 DATA OUT (1)H
KD05 IN XFER CYCLE (0)H
STP TM CHAIN M205 M22
KP55 TIME 2 H
M113 N12
KD05 DCH WAIT L
+3V L25U1 H
I/O BUF -DSR M205 M22
KD04 STROBE DSR H
KD05 DCH RESET L
M611 K25
KD05 I/O BUF-DSR B H
M611 M01
KP56 INT RESET L
-KP57 POWER ON L
M133 K31
M112 M12
M111 L24
KD05 DCH RESET L

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP15-00038	E	[illegible]	KP15-00056	K
	S GOLDSBY 7-15-70				
	F AUMANN 7-17-70				
LH	KP15-00042	F		KP15-[illegible]	L
	W4 SH				
	F AUMANN			F AUMANN	
LH	KP15-00044	H			
	S GOLDSBY 10-9-70				
	F AUMANN 10-12-70				
	KP15-00042				
	S GOLDSBY 3/2/71				
	F AUMANN 3/2/71				

DRN. J FASSHAUER	DATE 10/7/68	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D R COOK	DATE 10/7/68	
ENG. F AUMANN	DATE 10/7/68	TITLE I/O BUF 09-17
PROJ. ENG. G BUTLER	DATE 10/7/68	
PROD. F LASKEY	DATE 10/7/68	
FIRST USED ON KD15		SIZE D | CODE BS | NUMBER KD15-0-05 | REV. L
SCALE		DIST.
SHEET 1 OF 1		

KD04 I/O RD RST H
KD06 PRE MRLS L
M311 M18
M611 M19
M133 N16
M133 N16
KD06 PRE MRLS H
KD06 PRE MRLS L
KD06 SET DSR-MDL L
M611 K25
M1 KD06 SET DSR-MDL H
M311 M18
KD06 RESTART L
NOTE: SING CYC DIR (1) H=INPUT TRANSFER
SING CYC DIR (0) H=OUTPUT TRANSFER
M112 L18
KD06 SING CYC IOP 4 H
KD06 STROBE MRLS H
KD06 STB MRLS DLY L
M240 E29
KP50 INT RESET L
KD05 DSR-I/O BUS (1)L
M112 L18
M133 K18
KD06 DCH OUT XFER L
KD06 ONE CYCLE BK (1)H
-KD04 EN RD L
M111 N18
KD04 RETURN DATA H
KD06 PRE MRLS H
M112 L18
PA
M606 N15
KD06 SET DSR-MDL L
+3V N16U1 H
KD06 ONE CYCLE BK (1)L
M112 M24
KP50 SING CYC RQ L
+3V L22U1 H
BACK TO BACK M216 M21
KD06 GRANT (0)H
KD05 DCH RESET H
KD05 DCH DONE H
M112 M13
+3V L22U1 H
ONE CYCLE BK M216 M21
KP50 SING CYC RQ H
KP51 DCH (1)H
KP68 DCH REQ H
SING CYC DIR M216 M21
KD04 CA (1)H
KD04 I/O MRLS ACK H
M113 L31
KD06 CA-DLYD L
KP51 DCH SYNC (1)H
KD06 ONE CYCLE BK (0)H
M113 L22
KD06 ONE CYCLE BK (1)L
KP51 DCH SYNC (1)L
M112 L21
KP50 SING CYC RQ H
KD06 DISABLE (0)H
M133 N31
-KP50 SING CYC RQ H
KP68 DCH REQ H
M133 N31
M113 L22
KD06 DATA RQ H
KP51 DCH SYNC (1)L
+3V L22U1 H
KP51 AP1 (1)H
KP55 SYNC H
DIS-ABLE M205 N32
DISAB SYNC M205 N32
KP50 INT RESET L
KP55 TIME 4 H
KD06 BACK TO BACK (0)H
M113 L22
KD06 STB MRLS DLY L
KD06 SING CYC DIR (0)L
M112 M12
M113 N12
KD06 BACK TO BACK (1)H
M602 L27
KP55 TIME 4 H
KD06 SING CYC DIR (1)H
M113 L25
KD04 WC ENABLE (1)L
M112 L21
M611 M31
KD06 STROBE ADDR L
KD06 STROBE ADDR H
KD06 SING CYC DIR (0)H
M113 L22
M602 L20
M113 L10
M611 N13
KD06 SING CYC DIR (1)H
KP51 IOT SYNC (0)H
M115 K21
KD04 I/O ADDR ACK H
KD06 BACK TO BACK (1)H
M133 K18
KD06 SET GRANT L
+3V L21U1 H
KD06 ONE CYCLE BK (0)H
KD06 GRANT (1)H
KP51 CLK SYNC (0)H
M135 J13
-KP68 +1WC L
M112 L21
KD06 EN CA H
M111 N18
KD06 3 CYCLE L
KD06 M24 N2
KD04 I/O ADD R ACK H
M133 N31
M133 N31
KD06 B TO B DLYD (1) H
KD06 M13 K1
M133 N31
KD04 I/O BUF 00 (1)H
KP01 MDL 0012 H
M611 L19
KD04 I/O BUF 03 (0)H
M133 K18
M133 K18
M133 K18
KD04 STROBE DSR H
+3V L22U1 H
LIKE SIGNS M205 N32
KP50 INT RESET L
KD05 DATA IN (1)H
KD05 ENB CYCLE (1)H
M113 L31
M111 N18
KD06 DCH [illegible] P2 H
KD06 STROBE ADDR H
-KD06 3 CYCLE H
M113 L22
KD06 GRANT (0)H
KD06 +1WC HOLD M205 K05
KP68 +1WC H
KP51 DCH SYNC (0)L
KD04 CA (1)H
KP55 TIME 4 H
M133 K25
M113 L25
KP68 +1WC H
GRANT M205 M22
KP26 I/O RD RST L
M112 L21
KD05 DCH RESET H
M112 M12

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
LH	KP15-00038	F	GH	KP15-00045	L
	S.GOLDSBY 7/15/70			S. GOLDSBY 10/9/70	
	F.AUMANN 7/22/70			F. AUMANN 10/10/70	
TC	KP15-00039	H		KP15-00046	M
	S.GOLDSBY 8/5/70			N. LEGERE 11/2/71	
	F.AUMANN 8/5/70			F. AUMANN 11/12/71	
GH	KP15-00043	J		KP15-00056	N
	N. LEGERE 9/8/70				
	F. AUMANN				
GH	KP15-00044	K			P
	S. GOLDSBY 10/9/70				
	F. AUMANN 10/10/70				

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
	KP15-00052	S			T
	F. DELL				

* FOR ALL MACHINES WITH FP15, MX15 OR KM15 AND GREATER THAN 8K CORE - CHANGE THE FOLLOWING:

DEL:	KD06 STB MRLS DLY L	M18 V1 - M12 T2
ADD:	KP26 I/O MRLS ACK L	M17 S2 - M12 T2
DEL:	KD06 M18 L1	M18 L1 - L18 A1
ADD:	(ONLY FP15) KD06 M18 N1	M18 N1 - L18 A1
	(KM15) KD06 M18 P1	M18 P1 - L18 A1
	(MX15) KD06 M18 R1	M18 R1 - L18 A1

DRN. J. FASSHAUER	DATE 10/7/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. R. COOK	DATE 10/7/69	TITLE MSC DCH LOGIC	
ENG. F. AUMANN	DATE 10/7/69		
PROJ. ENG. G. BUTLER	DATE 10/7/69		
PROD. F. LASKEY	DATE 10/7/69		
FIRST USED ON KD15		SIZE D	CODE 65
SCALE		NUMBER KD15-0-06	REV. T
SHEET 1 OF 1		DIST	

TWO INPUT TRANSFERS FOLLOWED BY TWO OUT PUT TRANSFERS

REVISIONS	CHANGE NO.	CHK
REV		

FIRST USED ON OPTION/ MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN.		DATE 12/29/69
CHK'D.		DATE 3/25/70
ENG.		DATE 3/25/70
PROJ. MGR.		DATE 3/26/70
PROD.		DATE 5/1/70

NEXT HIGHER ASSY
A-ML-KD15-Ø

SCALE

SHEET 1 OF 1

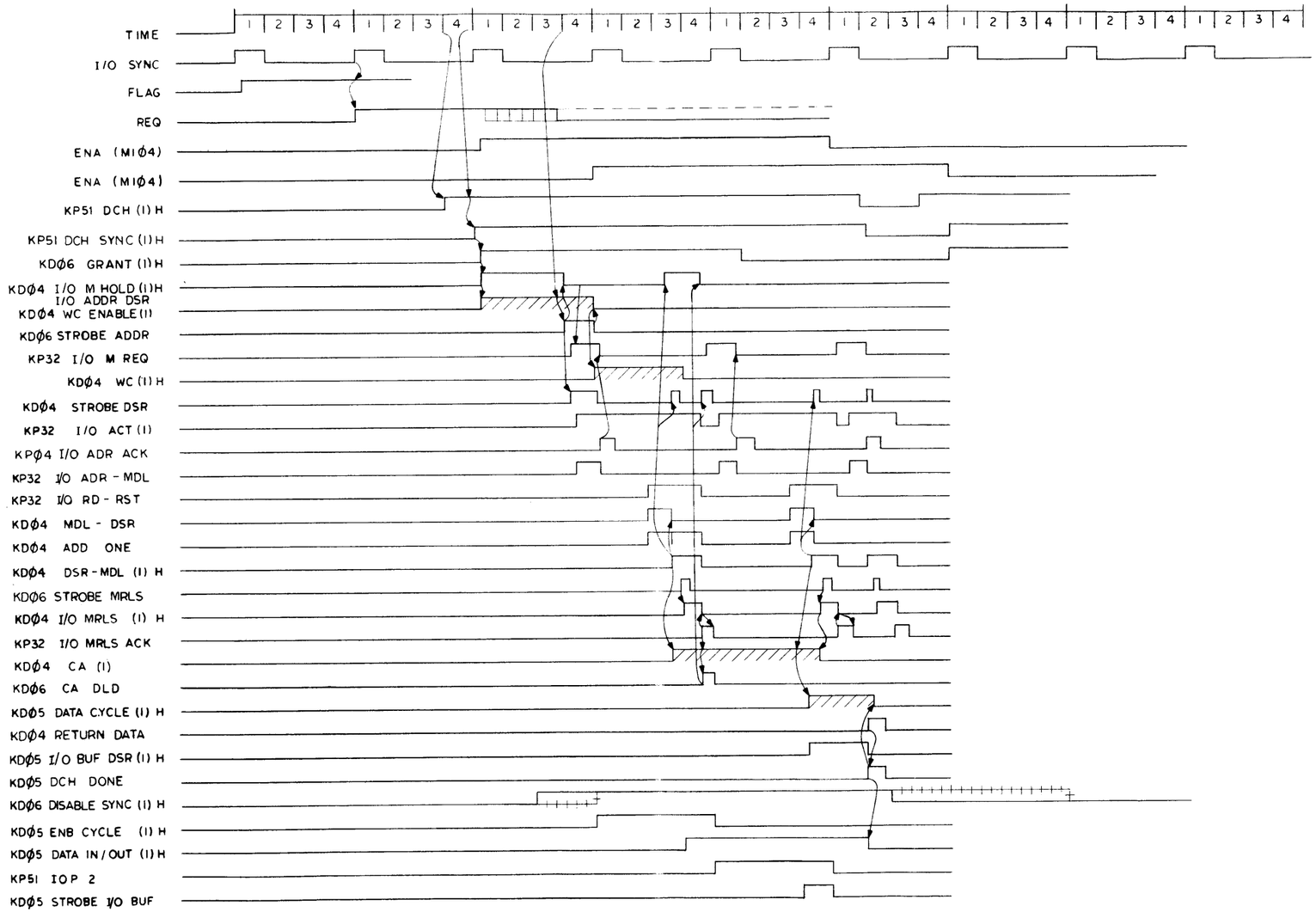
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
DETAILED TIMING — SINGLE CYCLE IN&OUT TRANSFERS

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-Ø7	

DIST.

DEC FORM NO. DPI-1002A



REVISIONS	REV	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

DRN		DATE 12/23/69
CHK'D.	J P Hoban	DATE 3/25/70
ENG.	F C Ammann	DATE 3/25/70
PROJ. ENG.	F C Ammann	DATE 3/25/70
PROD.		DATE 3/25/70

NEXT HIGHER ASSY
A-ML-KD15-Ø

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

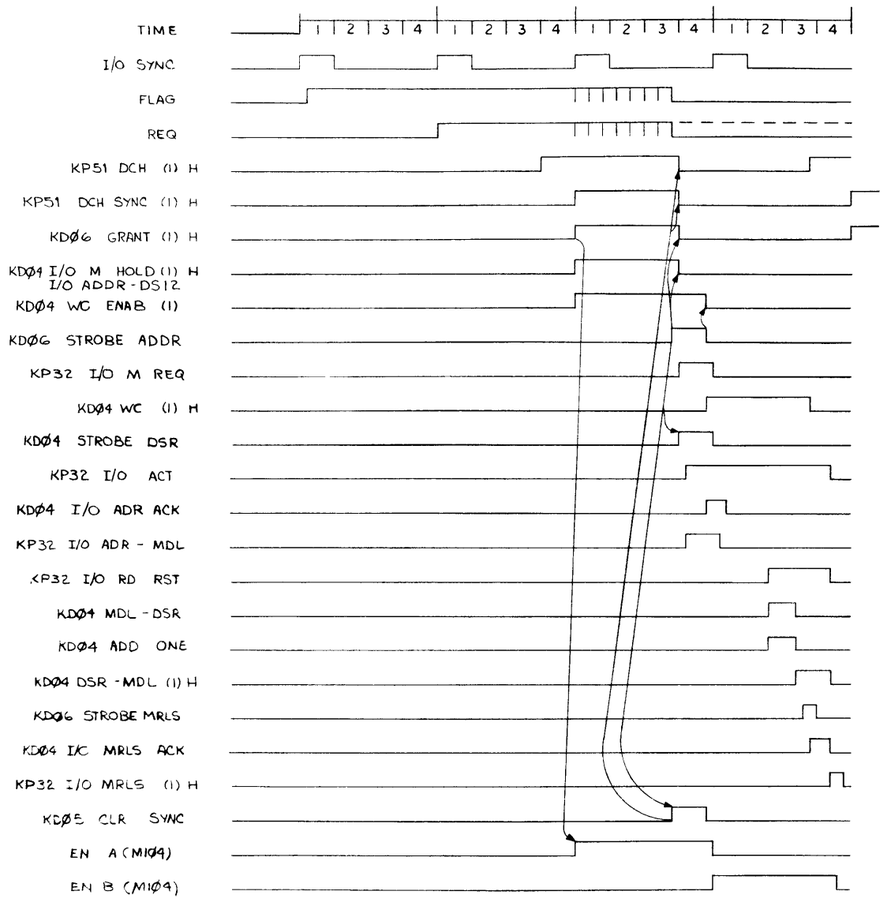
TITLE
DETAILED TIMING
3 CYCLE DCH IN
TRANSFER

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-Ø8	

DIST.

DEC FORM NO DRD 102A

SIZE D CODE TD NUMBER KD15-Ø-Ø8 REV



REVISIONS	CHANGE NO	CHK
REV.		

FIRST USED ON OPTION / MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15	PARTS LIST			

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN		DATE 12/10/69
CHKD		DATE 3/25/70
ENG		DATE 3/25/70
PROJ ENG		DATE 3/25/70
PROD		DATE

NEXT HIGHER ASSY
A-ML-KD15-Ø

SCALE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

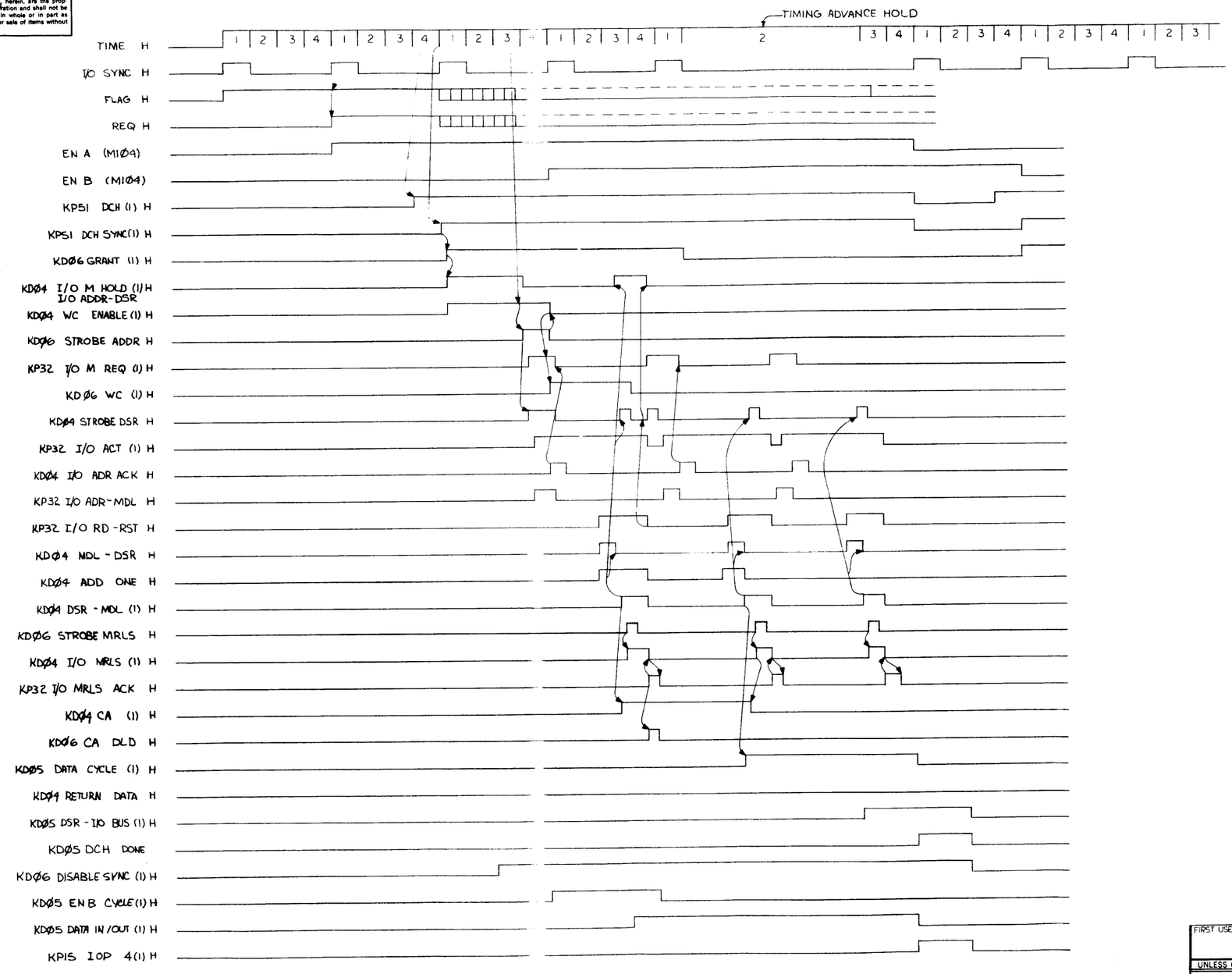
TITLE
DETAILED TIMING
INC MB TRANSFER

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-Ø9	

DIST.

DEC FORM NO
DRD 102A

REV	NUMBER	SIZE	CODE
	KD15-Ø-Ø9	D	TD



REVISIONS		
REV.	CHANGE NO	CHK

FIRST USED ON OPTION MODEL: PDP15	QTY.	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		

UNLESS OTHERWISE SPECIFIED

DRN [signature] DATE 1/6/70
CHKD [signature] DATE 3/25/70
ENG [signature] DATE 3/25/70
PROJ ENG [signature] DATE 3/25/70
PROD [signature] DATE

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS.

MATERIAL —

FINISH —

NEXT HIGHER ASSY: A-ML-KD15-Ø

SCALE —

SHEET 1 OF 1

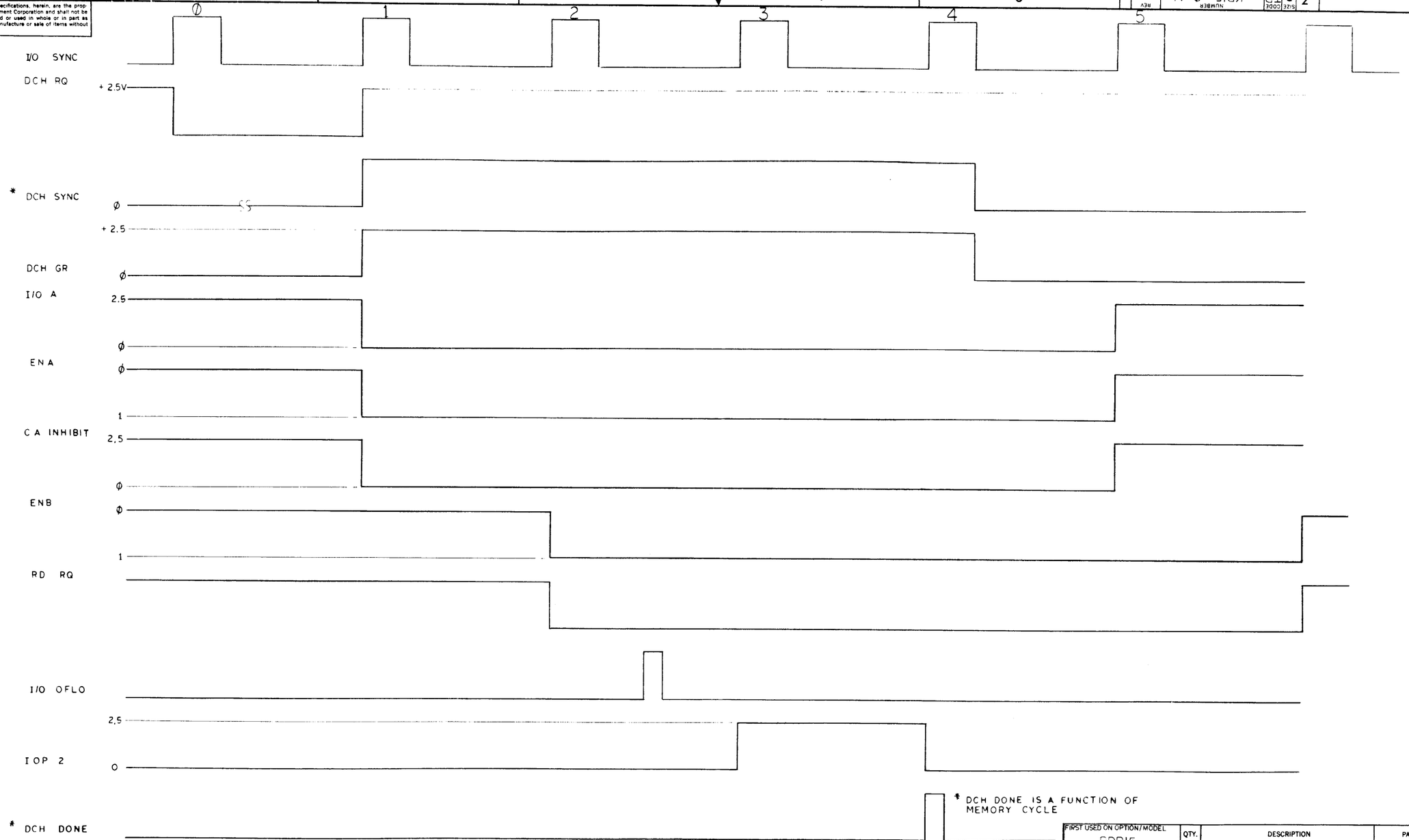
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DETAILED TIMING - 3 CYCLE DCH OUT TRANSFER

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-1Ø	

DIST.

DEC FORM NO DRD 102A



* DCH DONE IS A FUNCTION OF MEMORY CYCLE

REVISIONS	REV.	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN		DATE 1/17/70
CHK	J P Fisher	DATE 3/3/70
ENG	T Quinn	DATE 3/05/70
PROJ. ENG.	T Quinn	DATE 3/05/70
PROD.		DATE

NEXT HIGHER ASSY
A-ML-KD15-Ø

SCALE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

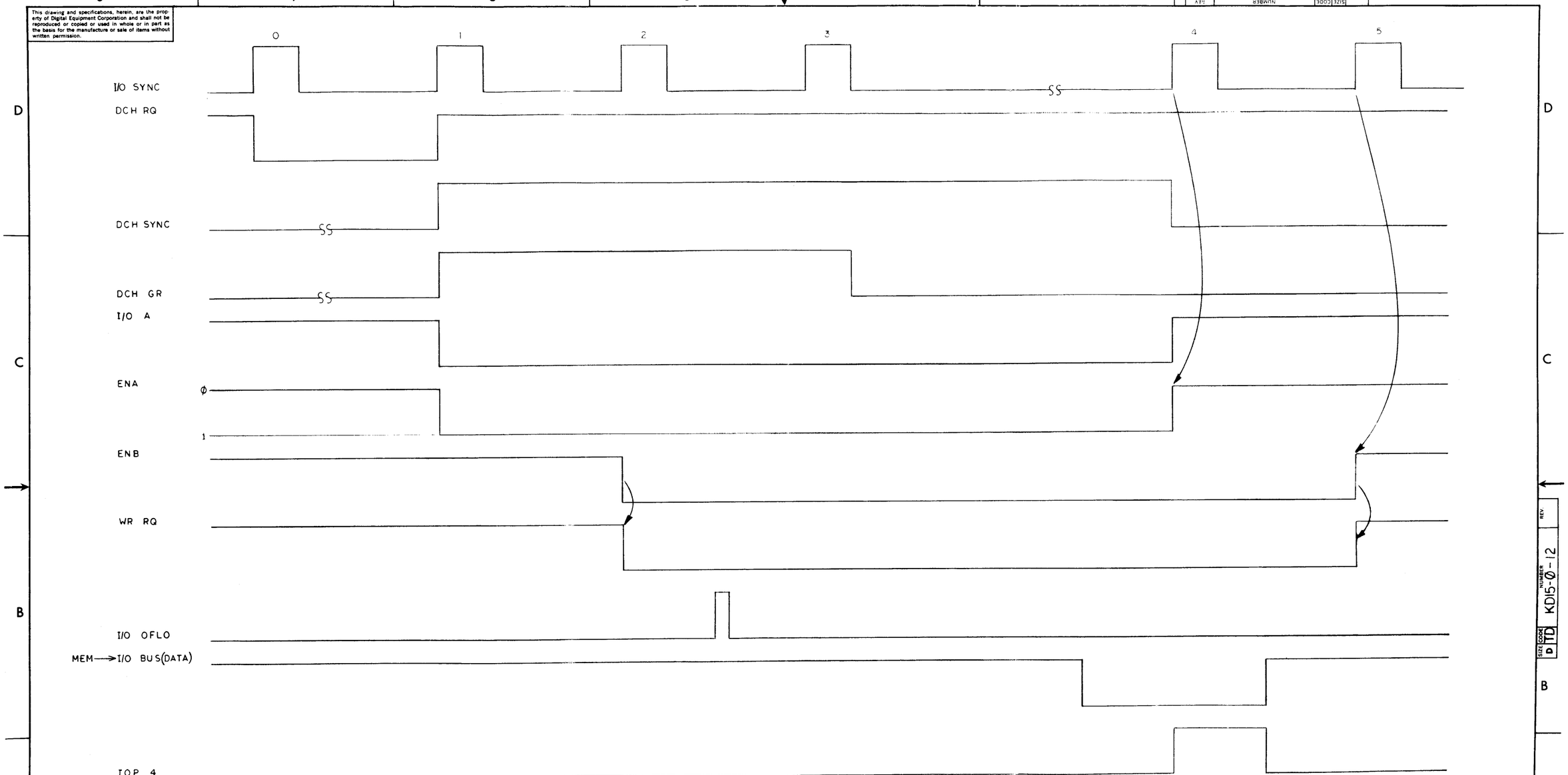
TITLE
DCH INPUT TIMING DIAGRAM BUS SIGNALS

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-11	

DIST.

SIZE	CODE	NUMBER	REV
D	TD	KD15-Ø-11	

DEC FORM NO DRD 102A



FIRST USED ON OPTION / MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

DRN	Art D'Agosta	DATE 12/18/69
CHKD	P. Hoffman	DATE 3/2/70
ENG.	[illegible]	DATE 3/25/70
PROJ. ENG.	[illegible]	DATE 3/9/70
PROD.	[illegible]	DATE 12/21/72

NEXT HIGHER ASSY A-ML-KD15-Ø

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

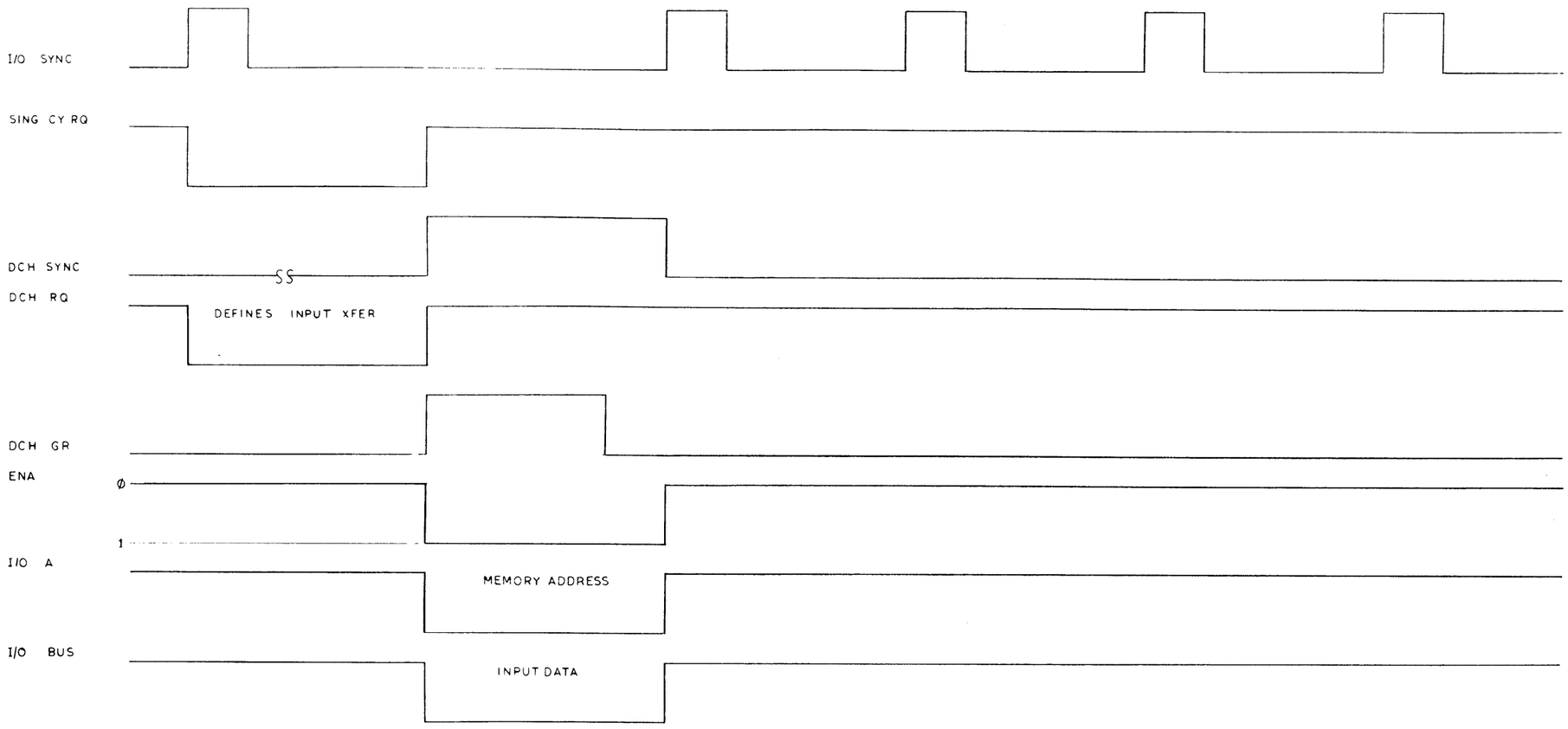
TITLE
DCH OUTPUT TIMING DIAGRAM BUS SIGNALS

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-12	

DIST.

REVISIONS	REV.	CHANGE NO.	CHK

DEC FORM NO. DRD 102A



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

DRN.		DATE 12/16/66
CHKD.	T. Baker	DATE 3/25/70
ENG.	C. Newman	DATE 3/25/70
PROJ. ENG.	C. Newman	DATE 3/25/70
PROD.		DATE

NEXT HIGHER ASSY A-ML-KD15-Ø

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
SINGLE CYCLE
INPUT TIMING
BUS SIGNALS

SIZE	CODE	NUMBER	REV
D	TD	KD15-Ø-3	

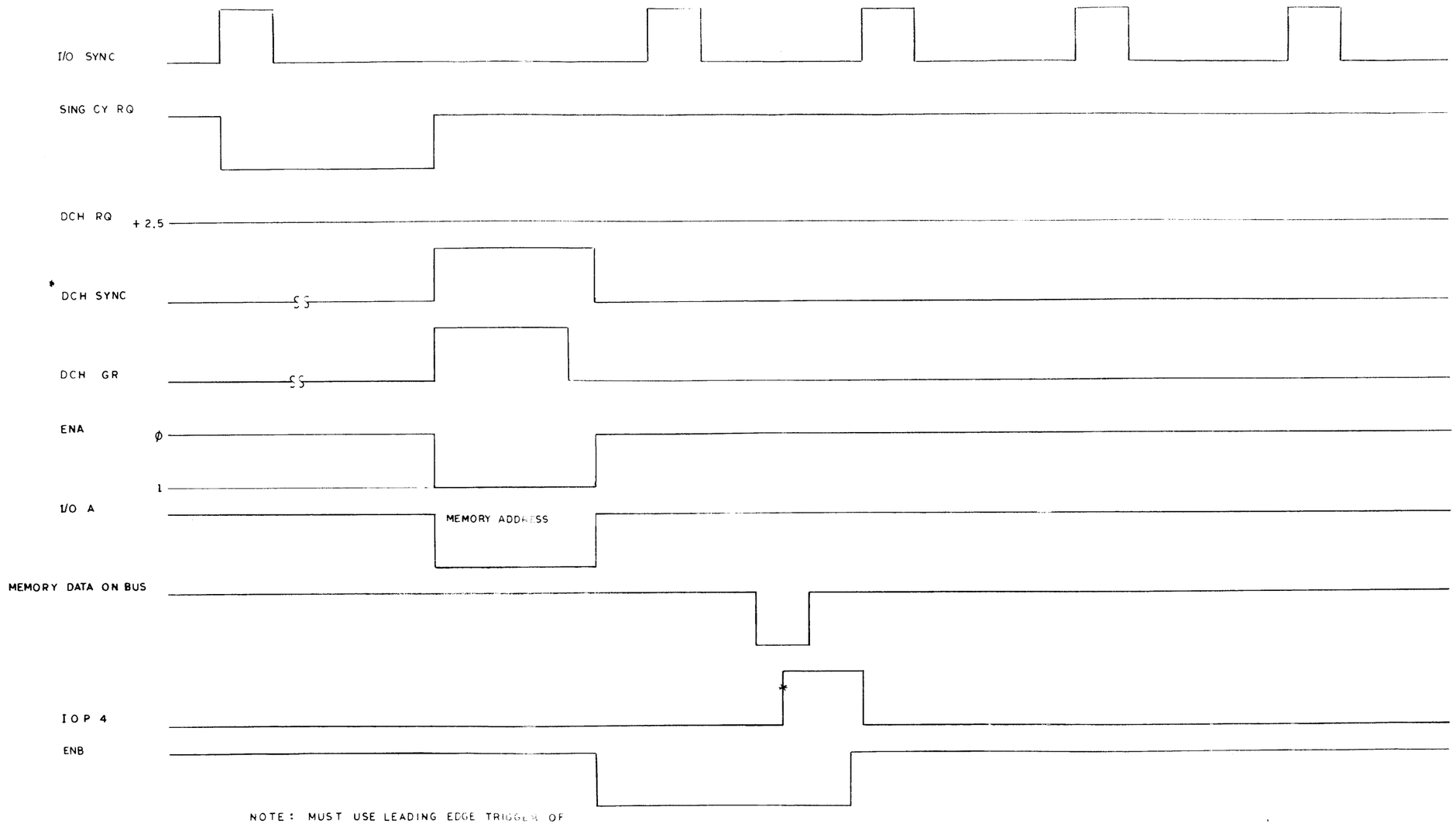
DIST.

REVISIONS	REV.
CHANGE NO.	
CHK	

DEC FORM NO. DRD 102A

SIZE D | CODE TD | NUMBER KD15-Ø-13 | REV

KD15-Ø-13 NUMBER | REV | SIZE D | CODE TD



FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

DRN.		DATE 12/17/69
CHK'D.		DATE 3/23/70
ENG.		DATE 4/2/70
PROJ. ENG.		DATE 4/15/70
PROD.		DATE 5/21/70

NEXT HIGHER ASSY
A-ML-KD15-Ø

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
SINGLE CYCLE OUTPUT TIMING DIAGRAM BUS SIGNALS

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-14	

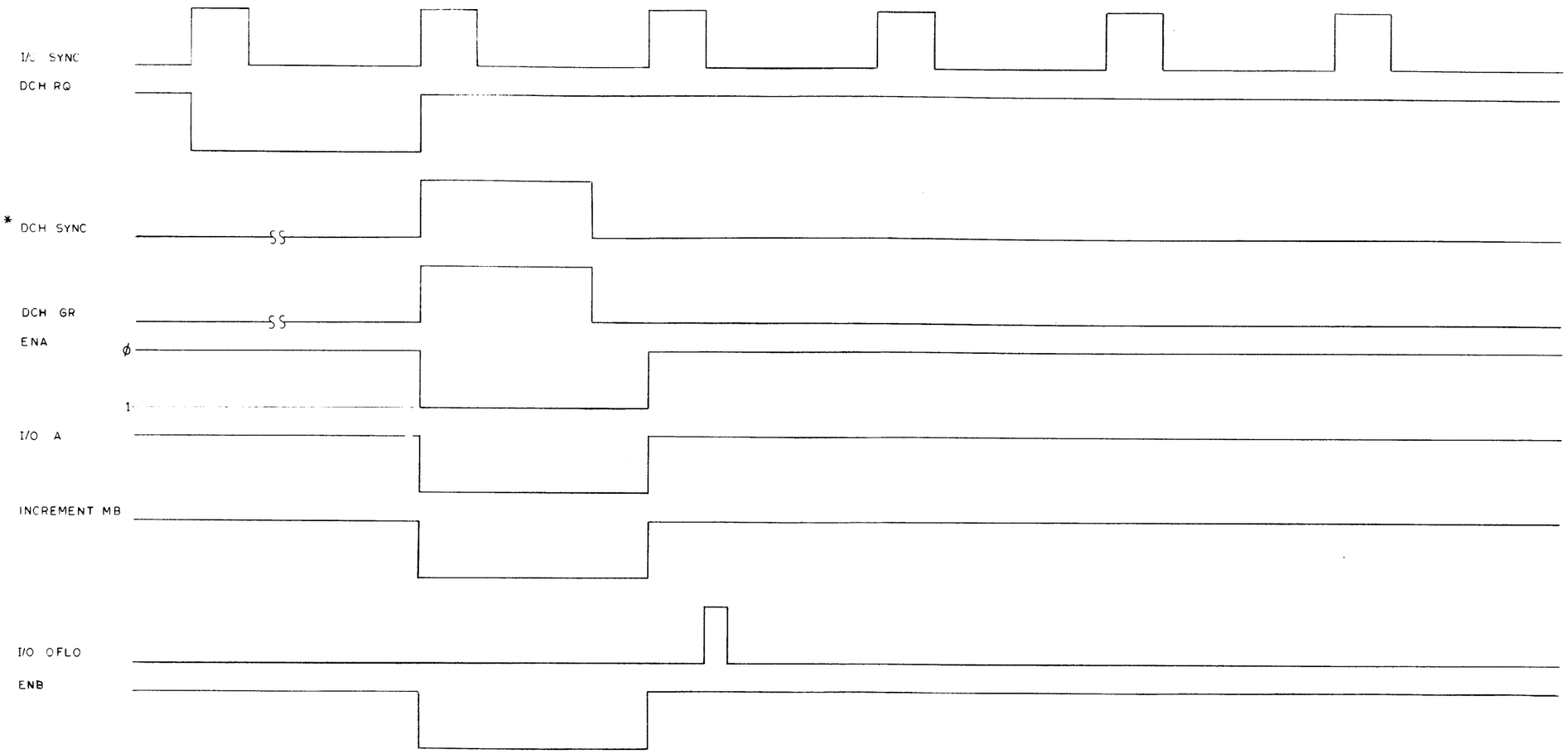
DIST.

REVISIONS

REV.	CHANGE NO.	CHK

DEC FORM NO DRD 102A

KD15-Ø-14 REV D SIZE D CODE TD



REVISIONS	REV.	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 15		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

		DATE
DRN.	[signature]	12/15/69
CHK'D.	[signature]	3/25/70
ENG.	[signature]	3/25/70
PROJ. ENG.	[signature]	3/25/70
PROD.		DATE

NEXT HIGHER ASSY A-ML-KD15-Ø

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
INCREMENT MEMORY TIMING DIAGRAM BUS SIGNALS

SIZE	CODE	NUMBER	REV.
D	TD	KD15-Ø-15	

DIST.

DEC FORM NO. DRD 102A

REV. KD15-Ø-15 SIZE D CODE TD

KE01 MQ 00D1 (0)H
+3V F11V1_H JR2
KE01 MQ 01D1 (0)H
KE01 MQ 02D1 (0)H
KE01 MQ 03D1 (0)H
KE01 MQ 04D1 (0)H
KE01 MQ 05D1 (0)H
KE01 MQ 06D1 (0)H
KE01 MQ 07D1 (0)H
KE01 MQ 08D1 (0)H
KE01 MQ 09D1 (0)H

MQ 00 7474N E03 — HC1, HB1, JP1, JP2
MQ 01 7474N E03 — HL1, HE2
MQ 02 7474N E07 — HN2, HM2
MQ 03 7474N E07 — HR1, JB1
MQ 04 7474N E11 — JF1, JE1
MQ 05 7474N E11 — JE2, JJ2
MQ 06 7474N E15 — JM2, JN2
MQ 07 7474N E15 — JS2, JT2
MQ 08 7474N E13 — JR1, JS1

+3V F11V1_H
KE04 EAE LD MQ H

KE05 EAE SHIFT RT H — HP1
KP18 AC17 A1 (1)H — HM1
+3V F11V1 H — HN1
-KE04 EAE MUL H — HE1
74H60N E01

+3V F11V1 H — HL1
KP19 MULTSHIFT-D 00M1 H — HK1
KP18 SUM BUS 17F2 H — HJ1
+3V F11V1 H — HF1
74H60N E01

HD1, HH1, HH2, HF2
74H53N E02
KP03 SUM BUS 02F2_H
KE01 MQ 02D1 (0)H

JC1, JD1
74H53N E06
KE01 MQ 04D1 (0)H
KP05 SUM BUS 04F2_H

JK2, JL2
74H53N E10
KP07 UM BUS 06F2_H
KE01 MQ 06D1 (0)H

JU1, JV1
74H53N E14
KE01 MQ 08D1 (0)H
KP09 SUM BUS 08F2_H

JM1, JN1
74H53N E09
KE02 MQ 09D1 (1)H
+3V F11V1 H
JK1, JJ1

HV2, HU2, HT2, HU1
74HS0N E05

HR2, HS2, HV1, HS1
74HS0N E05

KE04 COMP MQ H
KE03 EN SUM BUS TO MQ H
KE05 EAE SHIFT L H
KE04 EAE SHIFT RT H
+3V F11V1 H
KE01 MQ 00D1 (0)H
KP01 SUM BUS 00F2 H

JH1, JD2, HK2, HD2, HL2, JL1
74H53N E04
KP02 SUM BUS 01F2 H
KE01 MQ 01D1 (0)H

74H53N E08
KE01 MQ 03D1 (0)H
KP04 SUM BUS 03F2_H

JF2, JH2
74H53N E12
KP06 SUM BUS 05F2 H
KE01 MQ 05D1 (0)H

JU2, JV2
74H53N E16
KE01 MQ 07D1 (0)H
KP08 SUM BUS 07F2 H

M218
H11
J11

REVISIONS		
CHK	CHANGE NO.	REV.
AK	KP15-00046	C

DRN. KATHY COTE	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. LOU HOHOS	DATE 10-15-69	
ENG. F RUMANN	DATE 10-7-69	TITLE: BI DIRECTIONAL SHIFT REG 00-08 (MQ REG)
PROJ. ENG. G BUTLER	DATE 10-7-69	
PROD. F LASKEY	DATE 10-7-69	
FIRST USED ON: KP15		SIZE D | CODE 85 | NUMBER KE15-0-01 | REV. C
SCALE		DIST.
SHEET 1 OF 1		

KE02 MQ 09D1 (1)H
KE02 MQ 10D1 (1)H
KE02 MQ 11D1 (1)H
KE02 MQ 12D1 (1)H
KE02 MQ 13D1 (1)H
KE02 MQ 14D1 (1)H
KE02 MQ 15D1 (1)H
KE02 MQ 16D1 (1)H
KE02 MQ 17D1 (1)H

KE02 MQ 09D1 (0)H
KE02 MQ 10D1 (0)H
KE02 MQ 11D1 (0)H
KE02 MQ 12D1 (0)H
KE02 MQ 13D1 (0)H
KE02 MQ 14D1 (0)H
KE02 MQ 15D1 (0)H
KE02 MQ 16D1 (0)H
KE02 MQ 17D1 (0)H

+3V F19V1 H
KE04 EAE LD MQ H

MQ 09 7474N F03
MQ 10 7474N E03
MQ 11 7474N E07
MQ 12 7474N E07
MQ 13 7474N E11
MQ 14 7474N E11
MQ 15 7474N E15
MQ 16 7474N E15
MQ 17 7474N E13

74H60N E01
74H60N E01

74H53N E02
74H53N E06
74H53N E10
74H53N E14
74H53N E09

KP12 SUM BUS 12F2 H
KE02 MQ 11D1 (0)H
KE02 MQ 13D1 (0)H
KP14 SUM BUS 14F2 H
KP16 SUM BUS 16F2 H
KE02 MQ 15D1 (0)H
KE02 MQ 17D1 (0)H
KP18 SUM BUS 18F2 H
KP22 L (1)H
-KE04 EAE DIV H

KE04 CMP MQ H
KE03 EN SUM BUS TO MQ H
KE05 EAE SHIFT L H
KE04 EAE SHIFT R H
+3V F19V1 H
KE02 MQ 09D1 (0)H
KP10 SUM BUS 09F2 H
KE01 MQ 08D1 (1)H

KP11 SUM BUS 10F2 H
KE02 MQ 10D1 (0)H
KP13 SUM BUS 12F2 H
KE02 MQ 12D1 (0)H
KP15 SUM BUS 14F2 H
KE02 MQ 14D1 (0)H
KP17 SUM BUS 16F2 H
KE02 MQ 16D1 (0)H

KP05 EAE DIV H
-KE04 Q H
+3V F19V1 H

74H60N E05
74H60N E05

M218
H21
J21

REVISIONS		
CHK	CHANGE NO.	REV.
	KE15-0-01	B

DRN.	DATE	10/14/69
CHK'D. Dan Hebert	DATE	10/16/69
ENG. F. BUHMANN	DATE	
PROJ. ENG.	DATE	
PROD.	DATE	
FIRST USED ON	KP15	
SCALE		
SHEET 1 OF 1		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: B1 DIRECTIONAL SHIFT REG 09-17 (MQ REG)

SIZE	CODE	NUMBER	REV.
D	85	KE15-0-02	B

DIST.

KP18 MI 17 (Ø)H HD1 | KP17 MI 16 (Ø)H HD2 | KP16 MI 15 (Ø)H HE2 | KP15 MI 14 (Ø)H HE1 | KP14 MI 13 (Ø)H HH1 | KP13 MI 12 (Ø)H HJ1

KE03 SC OVER FLO (Ø)H
KE03 COUNT SC H
+3V H

7400N E04 | 7400N E04 | 7400N E06 | 7400N E06 | 7400N E16 | 7400N E16

SC17 74H72N E06 | SC16 74H72N E05 | SC15 74H72N E02 | SC14 74H72N E09 | SC13 74H72N E20 | SC12 74H72N E23 | SC OVER FLO 74H72N E19

KE03 SC17 EI (1)H | KE03 SC16 EI (1)H | KE03 SC15 EI (1)H | KE03 SC14 EI (1)H | KE03 SC13 EI (1)H | KE03 SC12 EI (1)H

HF1 | HF2 | HK1 | HK2 | HL1 | HL2

KE03 SC OVER FLO (Ø)H HP1
KE03 CLR SC OVER FLO L JE2

7400N E04 | 7400N E03 | 7400N E03 | 7400N E06 | 7400N E16 | 7400N E24

7400N E04 | 7400N E03 | 7400N E03 | 7400N E06 | 7400N E16 | 7400N E24

HM1 KE04 LD SC L → 74H00 E07 → HH2 KE03 LD SC H

KE03 SC15 EI (1)H
KE03 SC16 EI (1)H
KE03 SC17 EI (1)H
→ 74H10N E15 → 74H00 E07

KE03 SC14 EI (1)H
KE03 SC13 EI (1)H
→ 7400N E24 → 7400N E24

HA1 KE05 COUNT SC L → 74H40N E01 → KE03 COUNT SC H HB2

KE03 EAE FULL L HJ2

KE03 SC12 (1)H
KE03 SC14 (1)H
KE03 SC17 (1)H
KE03 SC16 (1)H
KE03 SC15 (1)H
KE03 SC13 (1)H
+3V H
→ 74H30N E12 → 74H00N E07 → KE03 FULL H HN1

KE03 FULL H
KE03 COUNT SC H
→ M113 L31 → M133 J01 → KE03 SCOV (1)

KE03 CLR SC OVER FLO L → M133 J01 → KE03 SCOV (Ø)H

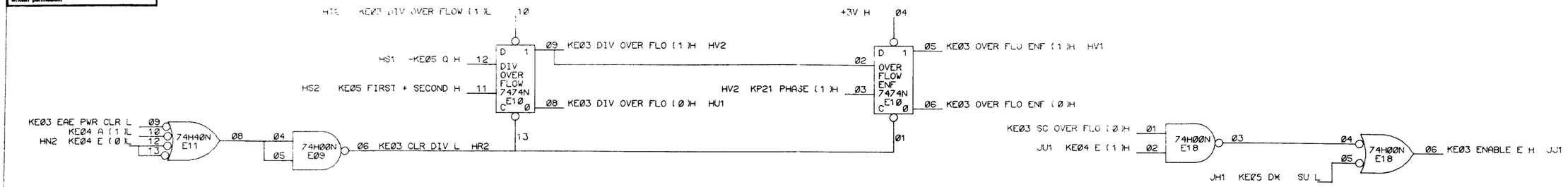
M219
HDV
HJV

REVISIONS				
CHK	CHANGE NO.	REV.		
GH	KP15-00046	C		
	K WALSH 12/9/70			
	F AUMANN 12/9/70			
GH	KP15-00056	D		
	N COTE			
	F AUMANN			
GH	KP15-00058	E		
	N COTE 7/6/71			
	F AUMANN 7/6/71			
	KP15-00062			

KP15-CCCS2 | A

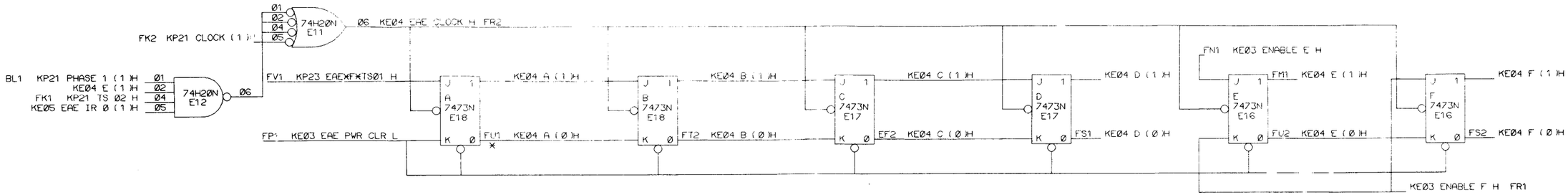
F. DCLL

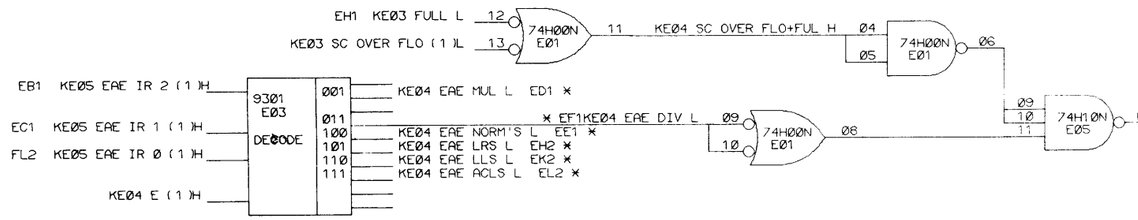
DRN KATHY COTE	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D LOU HOHOS	DATE 10-15-69		
ENG F AUMANN	DATE 10-7-69	TITLE STEP COUNTER AND CONTROL	
PROJ ENG G BUTLER	DATE 10-7-69		
PROD F LASKEY	DATE 10-7-69		
FIRST USED ON KP15		SIZE D / CODE BS / NUMBER KE15-Ø-03 / REV. H	
SCALE		DIST.	
SHEET 1 OF 2			

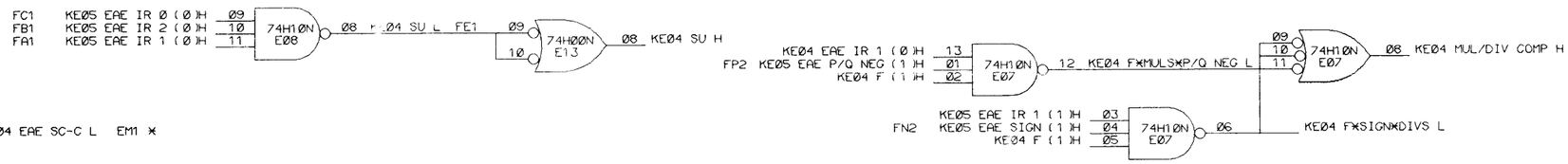


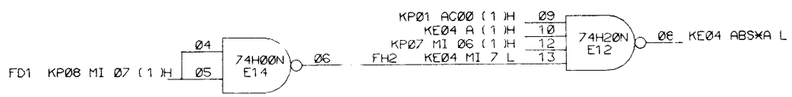
M219
H20
J20

DRN. KATHY COTE	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. LOU HOHOS	DATE 10-15-69	TITLE STEP COUNTER AND CONTROL	
ENG. F HUMANN	DATE 10-7-69		
PROJ. ENG. G BUTLER	DATE 10-7-69		
PROD. F LASKEY	DATE 10-7-69		
FIRST USED ON KP15		SIZE D / CODE BS / NUMBER KE15-0-03 / REV. H	
SCALE		DIST.	
SHEET 2 OF 2			







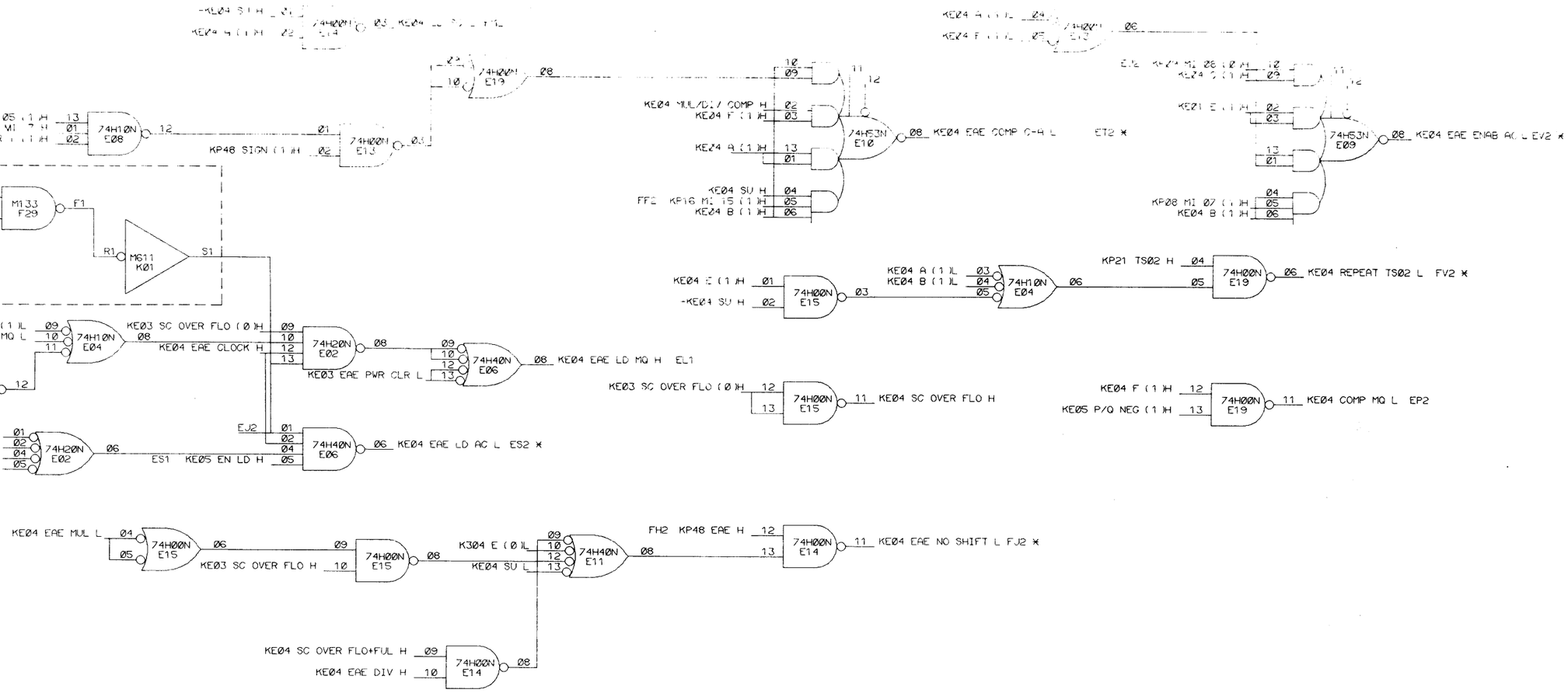


* IF EAE OPTION (KE15) IS NOT INSTALLED, G641 TERMINATOR IS INSERTED AND INDICATED PINS ARE +3V
ALSO APPLIES TO E20N2, E20R2, F20F1

M770
E20
F20

REVISIONS		
CHK	CHANGE NO.	REV.
GH	KP15-00046	C
	K WALSH 12/18/70	
	F AUMANN 12/18/70	
	KP15-00056	C
	[illegible]	
	[illegible]	
25	KP15-00082	D
	R. Dunn 5-21-74	
	F. DOLL	

DRN. KATHY COTE	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. LOU HOHOS	DATE 10-15-69	TITLE EAE CONTROL M770
ENG. F AUMANN	DATE 10-7-69	
PROJ. ENG. G BUTLER	DATE 10-7-69	
PROD. F LASKEY	DATE 10-7-69	
FIRST USED ON KP15		SIZE D CODE BS NUMBER KE15-0-04 REV. D
SCALE		
SHEET 1 OF 2		DIST.



M770
E20
F20

REVISIONS		
CHK	CHANGE NO.	REV.
KM	KP15-00056	C1
	KP15-CCC02	D
	F. DOLL	

DRN. KATHY COTE	DATE 10-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. LOU HOHOS	DATE 10-15-69	
ENG. F AUMANN	DATE 10-7-69	TITLE EAE CONTROL M770
PROJ. ENG. C BUTLER	DATE 10-7-69	
PROD. F LASKEY	DATE 10-7-69	
FIRST USED ON KP15		SIZE D | CODE BS | NUMBER KE15-0-04 | REV. C
SCALE		DIST.
SHEET 2 OF 2		

KE05 TEMP (0)H A1
KP22 L (0)H B1
-KP22 CARRY H C1
M135 H01
D1

KE05 TEMP (0)H E1
KP22 L (1)H F1
KP22 CARRY H H1
M135 H01
J1

KE05 TEMP (1)H K1
KP22 L (1)H L1
-KP22 CARRY H M1
M135 H01
N1

KE05 TEMP (1)H P1
KP22 L (0)H R1
KP22 CARRY H S1
M135 H01
U1

M1 N1 P1 R1
M627 L01
S1 J1
M611 K01
K1 KE05 -Q L H M2

KE04 LD MQ H F1
M611 K01
H1 KE05 LD MQ L

KE04 A (1)L T2
KE04 E (1)H S1
-KE05 LD MQ H R1
FIRST M205 K05
D 1 U2
C 0 V2
P1 KE04 C (1)L

KE04 C (1)L H2
M611 K01
J2 KE05 C H

T2 KE04 A (1)L
KE05 FIRST (1)L D2
KE05 SECOND (1)L F2
M135 H01
H2
S1 R1
SECOND M205 K15
D 1 U2
C 0 V2
P1

KE05 EAE DIV H K2
KE05 EAE CLOCK H L2 M2 N2
M627 L01
P2

R2 S2 T2 U2
M627 L01
V2
KP21 TS02 H

N2 P2 R2
M135 H01
S2 KE05 FIRST + SECOND H

KP07 MI 06 (1)H D2
KE05 EAE IR 1 (1)H E2
KE05 EAE IR 0 (0)H F2
KE05 C H H2
M627 L01
J2

KE04 EAE NORMS L L2
KP30 GRP4*TS02*(F+D) L M2
M133 E02
N2
T2 U2 V2
M135 E24
V1 N2
KP69 USER MODE (0)H
S 1
DISAB INT ACK M240 E29
R 0
P2 DISABLE INT ACK (1)H
R2 DISABLE INT ACK (0)H
-KP48 EAE H H2
KP23 SET FET*TS03*CLK H J2
M133 F01
K2
KP20 PWR CLR L M2 L2

*NOTE: ONE FREE INST. AFTER JMS.CAL.P1 EXCEPT WHEN IN USER MODE
TWO FREE INST. AFTER NORM

OPTIONAL ECO KP15-#50
KE04 EAE NORMS L WILL BE TIED TO
E29N2 IF ECO NOT INSTALLED

KE04 D (1)L L1
M111 E06
-KE04 SU H A1
M1 B1
M133 E02
C1 KE05 D*SU L

KE03 (C+E) TS 02 H A1
KE04 EAE CLOCK H B1
-KE04 SU H C1
-KE03 NORMALIZED H D1
M627 H04
E1 KE05 COUNT SC L

KE04 EAE DIV L V1
M611 K01
U1 KE05 EAE DIV H

KE05 C H H1
KE04 C+E H J1
M112 M15
K1 KE05 C+E L

*NOTE: Q L TO MQ17
TEMP (0)=SUB
TEMP (1)=ADD

KE04 NORMS L N1
M611 K01
P1 KE05 NORMS H

KE03 SC OV (0)H P1
KP21 TIME STATE 1 (0)H R1
M133 E02
S1
T2 U2 V2
M135 H01
V1 KE05 EN LD H
KE05 SC OVER FLO H J2
KE05 TEMP (1)H K2
KE05 EAE DIV H L2
M135 J15
M2
KE04 EAE LD AC L

KE04 EAE LLS L A1
KE04 EAE NORMS L B1
KE04 EAE DIV L C1
+3V L01U1 L D1
M627 L01
F1 KE05 EAE SHIFT LEFT H

KE04 EAE LRS L F1
KE04 EAE MUL L H1
+3V L01U1 L J1
K1
M627 L01
L1 KE05 EAE SHIFT RT H

KE04 EAE MUL L A1
KE04 EAE DIV L B1
M133 J01
C1
D1 KP21 TS 01 H E1
M133 J01
F1 KE05 EAE CLR LINK L

KP48 EAE H L2
KP20 FETCH H M2
M133 E21
N2 KE05 EAE RD RQ L
(TO MEM INTERFACE)

KE04 EAE LD SIGN L D1
M611 K01
E1

KP31 LOAD IR L

+3V E02U1 L C1
KP10 MI 9 (1)H C1
KP31 L D IR H B1
EAE IR0 M216 E01
D 1 E1
C 0 F1

KE03 EAE PWR CLR L A1
EAE IR1 M216 E01
E2 H2
D2 J2
A1

EAE IR2 M216 E01
J1 L1
H1 M1
A1

KP11 MI 12 (1)H F2
KP12 MI 11 (1)H K1

+3V E02U1 L C1
EAE SIGN M216 E01
V1
G2 V2
U2

KE04 ACC0 (1)L K2
K2
K2

KE04 EAE SIGN L M1
N1
P1 R1
P2 R2
FPS NEG M216 E01
C 0 S1

+3V E02U1 L K2
K2
K2

KE04 MQ SIGN H M1
P1 R1
P2 R2
KE05 COMP MQ L K2
K2
L2 KE05 COMP MQ H

KE04 SC OVER FLO (1)H P2
P1 R1
P2 R2
KE05 SC OVER FLO H

REVISIONS		
CHK	CHANGE NO.	REV.
LH	KP15-00038	B
	S GOLDSBY 7/15/70	
	F. AUMANN 7/22/70	
GH	KP15-00050	C
	S GOLDSBY 3/1/71	
	F AUMANN 3/2/71	
	KP15-00056	D

REVISIONS		
CHK	CHANGE NO	REV
	F. DOLL	

DRN. K COTE	DATE 10/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D LOU HOHOS	DATE 10/15/69	
ENG. F AUMANN	DATE 10/7/68	TITLE IR SIGN DIVIDE LOGIC
PROJ. ENG. G BUTLER	DATE 10/7/68	
PROD. F HASKEY	DATE 10/7/68	
FIRST USED ON KF15		SIZE D CODE BS NUMBER KE15-0-05 REV. E
SCALE		
SHEET 1 OF 1		DIST.

SETUP INSTRUCTIONS

EVENT TIMES	CP OPERATIONS	LRS (S) MEM4(1): SIGNED 640500	LLS (S) 640600	ALS (S) 640700	NORM (S) ① 640444	MUL (S) 653122	DIV (S) 640323	IDIV (S) 653323	FRDIV (S) 650323	CP OPERATIONS	EAE NOP 640000	LACQ 641002	LACS 641001	CLQ 650000	ABS 644000	GSM 664000	OSC 640001	OMQ 640002	CMQ 640004	LMQ 652000
						MEM6(1): SIGNEL														
A AC MODIFICATIONS		MEM IN 4 (1)·ACØØ (1): 1→LINK MEM IN 12-17→SC, LOAD SC				MEM IN 12-17 → SC MEM 6 (1)·ACØØ (1): 1→SIGN MEM 6 (1)·L ≠ ACØØ: 1→Q NEG.									AC → C BUS LDAC IF ACØØ(1)=1	AC→C BUS IF ACØØ (1)=1 SET LINK, LD AC				
						MEM6(1)·ACØØ(1): COMP AC			MEM6(1)·ACØØ(1): COMP AC											
B MQ TRANSFERS	FETCH TSØ2	MQ → MQ				SIGN (Ø): AC→MQ SIGN (1): AC→MQ	SIGN(1): COMP MQ	SIGN(1): AC→MQ SIGN(Ø) AC → MQ	Ø→MQ	FETCH TS02	MQ→MQ	MQ→MQ	MQ→MQ	MQ→C BUS LD MQ	MQ→MQ	MQ→MQ	MQ→MQ	MQ→MQ	MQ→C BUS LD MQ	AC→C BUS LD MQ
C AC TRANSFERS		AC → AC				MEM 8 (1): Ø→AC		MEM 8 (1): Ø→AC			AC→AC	MQ→C BUS LD AC	SC→C BUS LD AC	AC→AC	AC→AC	AC→AC	SC→C BUS AC→C BUS LD AC	MQ→C BUS AC→C BUS LD AC	AC→AC	AC→AC
		+1→SC																		
D NO TRANSFERS	FETCH TSØ3 SET EAE						0→TEMP	0→TEMP	0→TEMP	FETCH TSO3 SET FETCH										
E ② SHIFTS	EAE TSØ1 TSØ2 LOOP IN TSØ2 UNTIL SC OVERFLO OR NORMALIZED	LRS DECODED L ACØØ AC$_n$→AC$_n$+1 AC17→MQØØ MQ$_n$→MQ$_n$+1 MQ17→LOST	LLS DECODED L→MQ17 MQ$_n$→MQ$_n$−1 MQØØ→AC17 AC$_n$→AC$_n$−1 ACØØ→LOST	ALS DECODED L→AC17 AC$_n$→AC$_n$−1	NORMS DECDED L—MQ17 MQ$_n$→MQ$_n$−1 MQØØ→AC17 AC$_n$→AC$_n$−1 ACØØ→LOST 1→F WHEN NORMALIZED	MQ17(1): ADD MEM TO AC, SHIFT RT. MQ17(Ø): SHIFT RT. L→ACØØ, MQ17→LOST SUM BUS17→MQØØ. MQ$_n$→MQ$_n$+1 SUM BUS$_n$→AC$_n$+1	CHECK FOR DIVIDE OVERFLOW IF CARRY ON FIRST OR SECOND SUB: 1—OVERFLOW TEMP (1) ADD TEMP (Ø) SUB SHIFT LEFT	SAME AS DIV	SAME AS DIV									
F COMPLEMENTING	EAE TSØ3 SET EXECUTE					P/Q NEG (1): COMP MQ P/Q NEG (1) COMP AC	SIGN (1): COMP AC													

NOTE:

1. AN INTERRUPT IS HELD OFF FOR 2 CYCLES AFTER A NORM INSTRUCTION TO ALLOW A DAC TO STORE THE STEP COUNTER.
2. DURING LRS LLS ALS AND NORM OPERATIONS SHIFTING IS DONE AT TWICE THE NORMAL PULSE RATE. SHIFT AT PHASE 1 AND PHASE 3 TIME

REVISIONS	REV	CHANGE NO.	CHK
	A	KP15-00082	F. DOLL 3-4-77

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —"—

FINISH —"—

DRN. [signature] DATE 12/16/69
CHK'D. DATE
ENG. [signature] DATE 12-5-70
PROJ. ENG. [signature] DATE 12-5-70
PROD. DATE

FIRST USED ON

SCALE —"—

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

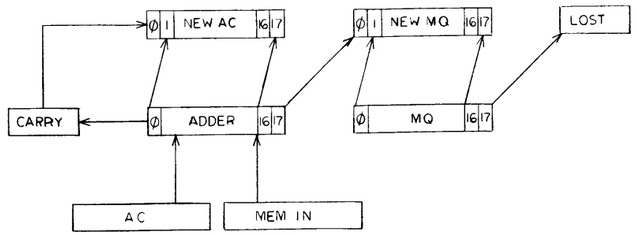
TITLE: EAE FLOW

SIZE D | CODE FD | NUMBER KE15-Ø-Ø6 | REV. A

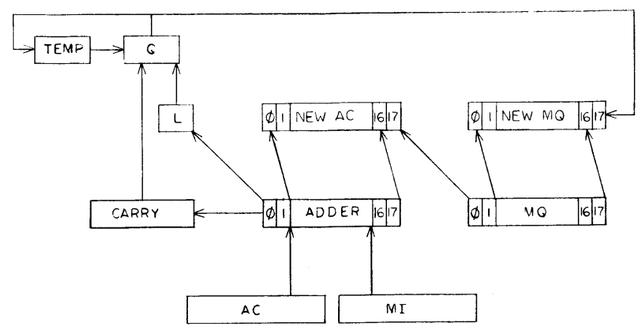
DIST.

SIZE D | CODE FD | NUMBER KE15-Ø-Ø6 | REV A

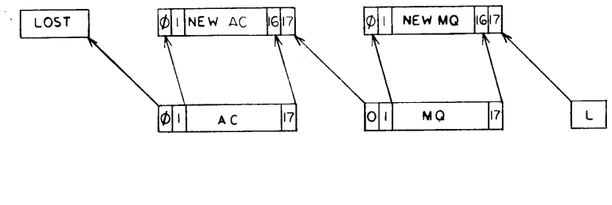
MULTIPLY



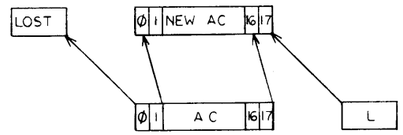
DIVIDE



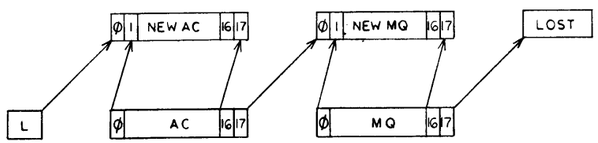
LLS, NORM



ALS



LRS



REVISIONS	REV.	CHANGE NO.	CHK

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

DRN Kent Olsen DATE 12/12/67
CHK'D. DATE
ENG. DATE 2-5-70
PROJ. ENG. DATE 2-5-70
PROD. DATE 2/11

FIRST USED ON KE15

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
DATA FLOW

SIZE	CODE	NUMBER	REV.
D	FD	KE15-0-07	

DIST.

DEC FORM NO DRD 102A

SIZE DMU CODE NUMBER MM15-0-26 REV.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	G821	M904	M904	M622	M622	M622	M149	M149	M149	M113	M113		M133	M133	M627	M312	M311	M248	M248	M248	M133	W714
USAGE	5V REG	CABLE	CABLE																			
A	20 20	19 19	19 19	D2 E2 H2 K2 M2 P2 S2 V2	D2 E2 H2 K2 M2 P2 S2 V2	D2 E2 H2 K2 M2 P2 S2 V2	C1 F1 K1 N1 S1 V1 / F2 K2 N2 S2	C1 F1 K1 N1 S1 V1 / F2 K2 N2 S2	C1 F1 K1 N1 S1 V1 / F2 K2 N2 S2	C1 F1 K1 N1 S1 U1 +3V V1 / F2 K2 N2 S2 V2	C1 F1 K1 N1 S1 U1 +3V V1 / F2 K2 N2 S2 V2		C1 F1 K1 N1 S1 U1 +3V V1 / F2 K2 N2 S2 V2	C1 F1 K1 N1 S1 U1 +3V V1 / F2 K2 N2 S2 V2	E1 L1 P2 S1 U1 +3V V1 / J2 V2	H1 M1 S1	H2 M2 S2	H1 J2	E1 L1 S1	H2 P2 V2	E1 L1 S1	H2 P2 V2	E1 L1 S1	H2 P2 V2	C1 F1 K1 N1 S1 U1 +3V V1 / F2 K2 N2 S2 V2	D2 J2
USAGE	5V REG	CABLE ▲	CABLE ▲	G223	G222	G222	G222	G222	G222	G222	G222	G222	G223	M223	M223	M223	M223	M223			G223*	G222*
B	20 20	19 19	19 19	S2 T2 R1	M1 N1 P1 R1	M2 N2 P2 R2	M1 N1 P1 R1	M2 N2 P2 R2	M1 N1 P1 R1	M2 N2 P2 R2	M1 N1 P1 R1	M2 N2 P2 R2	M1 N1 P1 R1	M2 N2 P2 R2	S2 T2	K1 L1 M1 N1	R2 S2 U2 V2	K1 L1 M1 N1	R2 S2 U2 V2	K1 L1 M1 N1	R2 S2 U2 V2	K1 L1 M1 N1	R2 S2 U2 V2	S2 T2	M1 N1 P1 R1	M2 N2 P2 R2

	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	M627																					
USAGE																						
A	E1 L1 S1 U1 +3V V1 +3V / J2 P2 V2																					
USAGE	G222*	G222*	G222*	G222*	G222*	G222*	G222*	G223*														
B	M1 N1 P1 R1 / M2 N2 P2 R2							S2 T2														

▲ MODULE IS M966
TERMINATOR IF UNIT
IS LAST MM15 ON
MDL LINES

REVISIONS	REV.	CHK	
CHANGE NO. MM15-00018 — REDRAWN + REVISED	C		ALMANN 12-31-70
MM15-00023	D		ALMANN 7-1-71
MM15-00026	E		J SWANSON 4-8-72
MM15-00027	F		F DOLL 7-26-72

FIRST USED ON OPTION/MODEL

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

DRN. D FONTAINE DATE 8-4-69
CHK'D. J MADLEN DATE 8-4-69
ENG. [illegible] DATE [illegible]
PROJ. ENG. [illegible] DATE [illegible]
PROD. E LASKEY DATE [illegible]
NEXT HIGHER ASSY D-UA-FE-15-0-C
SCALE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
MODULE UTILIZATION

SIZE D CODE MU NUMBER MM15-0-26 REV. E
DIST.

DEC FORM NO. DRD 112

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	G822	M901	M901	G100	G100	G100	G613			G614	G100	G100		M627		G825	G823				G100 *	G100 *
USAGE	6V REG	CABLE	CABLE				X AXIS			Y AXIS						12V REG	24V REG					
C	20 20	19 19	19 19	D1 10 E1 10 F1 10 H1 10	D1 10 E1 10 F1 11 H1 11	D1 11 E1 10 F1 11 H1 11	06 0 - 4K			07	D1 12 E1 12 F1 12 H1 12	D1 12 E1 12 F1 24 H1		E1 02 L1 02 S1 02 U1 +3V V1 +3V	J2 02 P2 02 V2 02	20 20	20 20			D1 13 E1 13 F1 13 H1 13	D1 13 E1 13 F1 14 H1 14
D	20 20						06 STACK			07						20 20						

	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	G100 *	G613 *			G614 *	G100	G100 *															
USAGE		X AXIS			Y AXIS																	
C	D1 14 E1 14 F1 14 H1 14	4 — 8K	4 — 8K			D1 15 E1 15 F1 15 H1 15	D1 15 E1 15 F1 24 H1															
D		STACK																				

NOTE * FOR MK15 OPTION
CORE STACKS ARE
3009200-0-1 18 BITS
3009200-0-2 19 BITS (PARITY)

FIRST USED ON OPTION/MODEL

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

	DRN.	DATE
	CHK'D.	DATE
	ENG.	DATE
	PROJ. ENG.	DATE
	PROD.	DATE

NEXT HIGHER ASSY

SCALE

SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

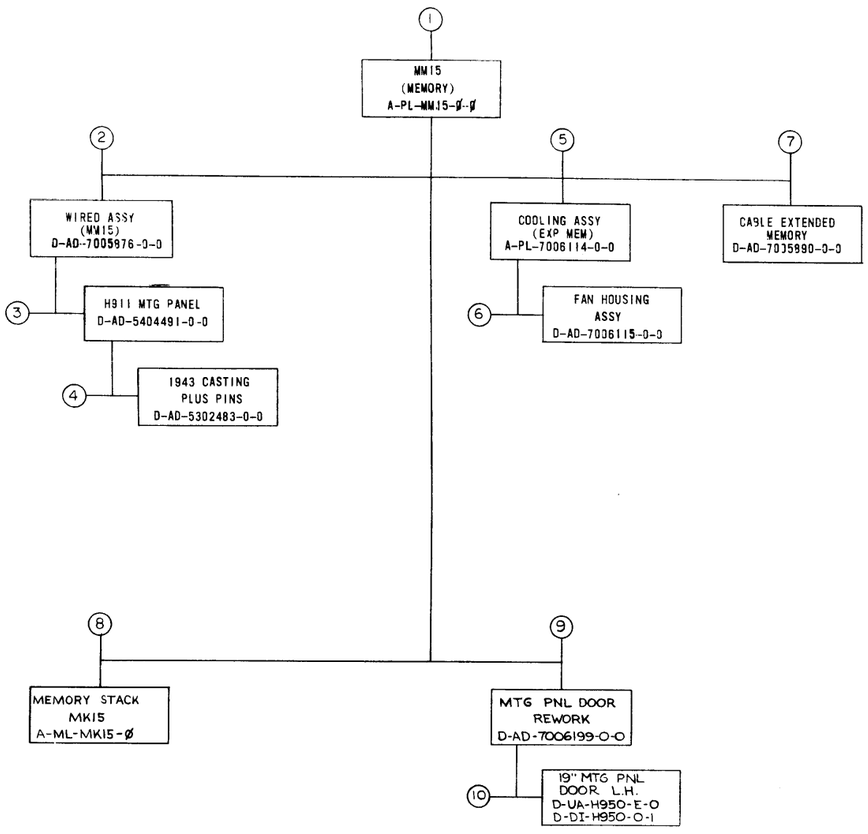
TITLE
MODULE UTILIZATION

SIZE D CODE MU NUMBER MM15-0026 REV F

DIST.

REVISIONS | REV. | CHANGE NO. | CHK

DEC FORM NO. DRD 112



MECHANICAL					
FIND NO.	DESCRIPTION	PART NO	PROD	CUST	F/C
1	MM15 (MEMORY)	A-PL-MM15-Ø-Ø			
	CABLE M917 TO M917	D-IA-7006094-0-0			
	CABLE M918 TO M918	D-IA-7006414-0-0			
	CABLE FLAT CO-AX M9Ø4-M9Ø4	D-IA-BCØ8B-Ø-Ø			
	HARNESS EXT MEMORY	E-IA-7006401-0-0			
	MEMORY STACK (PDP15)(18BIT)	D-SC-3009200-1-0			
	MEMORY STACK (PDP15)(19BIT)	D-SC-3009200-2-0			
	BRACKET CABLE #2	E-MD-7407279-0-0			
	BRACKET CABLE #1	C-MD-7407278-0-0			
	USED FOR M17 COMPRESS[illegible]CARTON	[illegible]			
2.	WIRED ASSY (MM15)	D-AD-7005976-0-0			
	WIRED ASSY (MM15)(P.L.)	A-PL-7005876-0-0			
	LOGIC FRAME DECALS	A-DC-7406371-0-0			
3.	H911 MTG PANEL	D-AD-5404491-0-0			
	H911 MTG PANEL (PL)	A-PL-5404491-0-0			
	238 PIN CONN. BLOCK #H003	E-SC-1205348-0-0			
4.	1943 CASTING PLUS PINS	D-AD-5302483-0-0			
	1943 CASTING PLUS PINS (PL)	A-PL-5302483-0-0			
	1943 FRAME CASTING	E-MD-1202885-0-0			
5.	COOLING ASSY (EXP MEM)	A-PL-7009114-0-0			
	DOOR (EXP MEM)	D-IA-7407294-0-0			
	HINGE, DOOR	C-MD-7406896-0-0			
	ENCLOSURE (EXP MEM)	D-MD-7407293-0-0			
6.	FAN HOUSING ASSY	D-AD-7006115-0-0			
	FAN HOUSING ASSY PL	A-PL-7006115-0-0			
	DECAL, FAN HOUSING	A-DC-7407314-0-0			
	FAN HOUSING	D-IA-7407287-0-0			
7.	CABLE (EXT MEMORY)	D-AD-7005890-0-0			
	CABLE M918 TO M918	C-IA-7006414-2-0			
	CABLE FLAT CO-AX M9Ø4 TO M9Ø4	D-UA-BCØ8B-5-Ø			
8.	MEMORY STACK MK15	A-ML-MK15-Ø			
9.	19" MTG PNL DR REWORK	D-AD-7006199-0-0			
	19" MTG PNL DR REWORK (P.L.)	A-PL-7006199-0-0			
10.	H950-E 19" MTG PNL DR (L.H)	D-UA-H950-E-0			
	H950-E 19" MTG PNL DR (L.H.) (PL)	A-PL-H950-E-0			
	DWG INDEX H950	D-DI-H950-0-1			

ELECTRICAL					
FIND NO	DESCRIPTION	PART NO	PROD	CUST	F/C
1	MM15 (MEMORY)	A-ML-MM15-Ø			
	MEMORY CONTROL	D-BS-MM15-Ø-1			
	MEMORY CONTROL	D-BS-MM15-Ø-2			
	MA & MB REGISTERS Ø-5	D-BS-MM15-Ø-3			
	MA & MB REGISTERS Ø6-11	D-BS-MM15-Ø-4			
	MA & MB REGISTERS 12-17	D-BS-MM15-Ø-5			
	X AXIS (Ø-4K)	D-BS-MM15-Ø-6			
	Y AXIS (Ø-4K)	D-BS-MM15-Ø-7			
	X AXIS (4-8K)	D-BS-MM15-Ø-8			
	Y AXIS (4-8K)	D-BS-MM15-Ø-9			
	SENSE AMP & INH DRIVER (Ø-4K)	D-BS-MM15-Ø-10			
	SENSE AMP & INH DRIVER (Ø-4K)	D-BS-MM15-Ø-11			
	SENSE AMP & INH DRIVER (Ø-4K)	D-BS-MM15-Ø-12			
	SENSE AMP & INH DRIVER (4K-8K)	D-BS-MM15-Ø-13			
	SENSE AMP & INH DRIVER (4K-8K)	D-BS-MM15-Ø-14			
	SENSE AMP & INH DRIVER (4K-8K)	D-BS-MM15-Ø-15			
	MEMORY BUS DRIVERS	D-BS-MM15-Ø-16			
	INDICATOR BUS DRIVERS	D-BS-MM15-Ø-17			
	INDICATOR BUS DRIVER	D-BS-MM15-Ø-18			
	I/O MEMORY CABLES	D-IC-MM15-Ø-19			
	MEMORY POWER REGULATORS	D-BS-MM15-Ø-20			
	TIMING DIAGRAM	D-TD-MM15-Ø-21			
	X DIODE MATRIX	D-BS-MM15-Ø-22			
	Y DIODE MATRIX	D-BS-MM15-Ø-23			
	PARITY BIT	D-BS-MM15-Ø-24			
	WIRE LIST MM15	K-WL-MM15-Ø-27			
	MODULE UTIL (MM15)	D-MU-MM15-Ø-26			
	MEMORY MODULE LIST	A-PL-MM15-0-26			
	GENERAL WIRING SHEET	A-WL-MM15-0-28			
2.	WIRED ASSY (MM15)	D-AD-7005876-0-0			
	WIRED ASSY (MM15)(PL)	A-PL-7005876-0-0			
8.	MK15 MEMORY STACK	A-ML-MK15-Ø			
	~~MODULE UTIL (MK15)~~	~~K-MU-MK15-Ø-1~~			

FIRST USED ON OPTION/MODEL
PDP15

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

PARTS LIST

QTY.	DESCRIPTION	PART NO.	ITEM NO.

REVISIONS				
CHK	CHANGE NO.	REV.		
[illegible]	MM15-00006	A	[illegible]	12-28
D.O'CONNOR			D.O'Connor	15 Jan 70
[illegible]	15-00041	B	[illegible]	1-23-70
B MINOR			B Minor	1-23-70
[illegible]	MM15-00018	C	[illegible]	12-31-70
AUMANN			AUMANN	12-31-70
[illegible]	MM15-00021	D	[illegible]	6-1-71
LAWRENCE			LAWRENCE	6-1-71
[illegible]	MM15-00023	E	[illegible]	7-14-71
AUMANN			AUMANN	7-14-71

DRN.		DATE
CHK'D		DATE 9/22/69
ENG.		DATE
PROJ. ENG.		DATE 6/19/69
PROD.		DATE
NEXT HIGHER ASSY		
SCALE		
SHEET 1 OF 1		

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

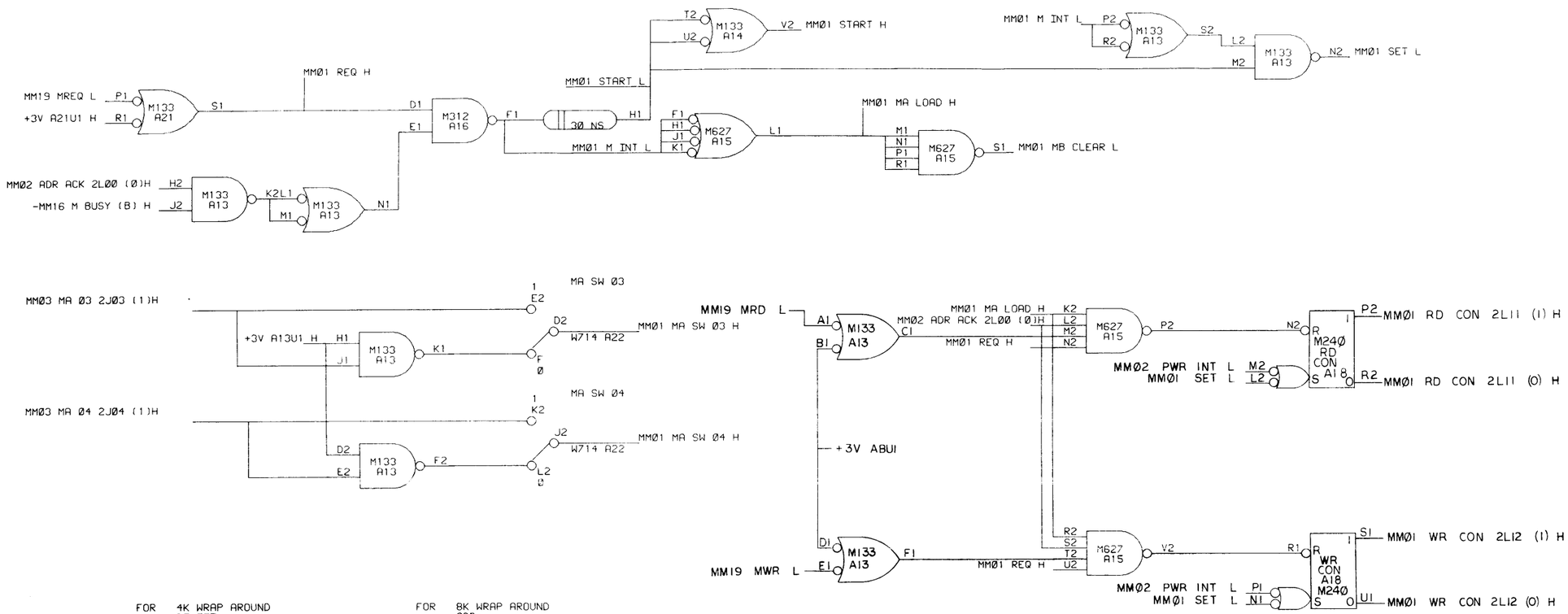
TITLE: DRAWING INDEX (MM15)

SIZE	CODE	NUMBER	REV.
D	DI	MM15 Ø 25	E

DIST.

DEC FORM NO DRD 100

REV E
NUMBER MM15-Ø-25
SIZE D CODE DI



FOR 4K WRAP AROUND
DELETE:
B13D2-B15S1
B15S1-A21P2
A17F2-A14N1

ADD:
A17F2-A23K1
A22D2-A22J2
A22J2-A21V1
C21S1-C21T1
A21P2-B13D2
A21P2-A23U1

REMOVE W714 FROM A22

FOR 8K WRAP AROUND
ADD:
A22D2-A22J2
A22J2-A21V1

REMOVE W714 FROM A22

MEMORY BANK SELECTION		
BANK	UPPER SW MA SW 03	LOWER SW MA SW 04
0-8K	0	0
8-16K	0	1
16-24K	1	0
24-32K	1	1

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV
NR	MM15-0000 1	H		H. LAVOIE 2 21-73	D
	K BOGGS 9/10/69				
	D O'CONNOR 3/18/69				
NR	MM15-00009	B			
	KATHY COTE 2/4/70				
	[illegible]				
NR	MM15-000[illegible]	C			
	[illegible]				
	MM15-00025	D			
	[illegible]				

DRN. E VOWLES	DATE 8/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N RHEAULT	DATE 8/15/69		
ENG. D O'CONNOR	DATE 8/15/69	TITLE MEMORY CONTROL	
PROJ. ENG. D O'CONNOR	DATE 8/15/69		
PROD. F LASKEY	DATE 8/15/69		
FIRST USED ON MM15		SIZE D	CODE BS
SCALE		NUMBER MM15-0-01	REV. D
SHEET 1 OF 1		DIST.	

MM19 M PWR CLR L

MM02 PWR INT L

MM02 ADR ACK 2L00 (1)H

MM02 ADDR ACK 2L00 (0)H

MM02 RDY (1)H

MM02 RDY (0)H

MM02 RDX (1)H

MM02 RDX (0)H

MM02 RD RST 2L02 (1)H

MM02 RD RST 2L02 (0)H

MM02 MRLS ACK 2L04 (0)H

MM02 WR EN (1)H

MM02 WR EN (0)H

MM02 INH (1)H

MM02 INH (0)H

MM02 WR (1)H

MM02 WR (0)H

MM02 INH 4K H

MM02 INH 8K H

+3V A23U1

+5V

A14U1 H2

MM01 MA SW 03 H

MM01 MA SW 04 H

MM03 MA 05 2J05 (0)L

C21S1 NOTE: THIS POINT GND WITH ADDITION OF 8K MODULES

C21T1

50 NS

150 NS

250 NS

200 NS

MM03 MA 00 2J00 (0)H

MM03 MA 01 2J01 (0)H

MM03 MA 02 2J02 (0)H

MM01 START H

MM01 RD CON 2L11 (1)H

MM02 WR EN 2L03 (1)H

MM02 MRLS ACK2L04 (1)H

MM01 WR CON 2L12 (1)H

MM02 WR EN 2L03 (1)H

MM01 WR CON 2L12 (0)H

25 NS

225 NS

200 NS

50

MM02 WR DONE (1)H

MM02 RDX (1)L

MM02 WR DONE (0)H

MM02 BUS DONE (1)H

MM02 MRLS ACK 2L04 (1)L

MM02 BUS DONE (0)H

MM02 MA HOLD (1)H

MM01 START L

MM01 M INT L

MM02 MA HOLD (0)H

MM02 WR EN 2L03 (1)L

MM02 MA HOLD (0)L

MM02 PWR INT L

MM02 MRLS ACK EN (1)H

-MM19 MRLS H

MM02 MRLS ACK2L04 (1)H

MM02 MRLS ACK2L04 (0)H

MM02 PWR INT L

MM19 DATA ACK L

MM02 PWR INT L

MM02 BUS EN 2L01 (1)H

MM02 BUS EN 2L01 (0)H

MM01 WR CON 2L12 (1)H

MM02 MB LOAD H

MM02 WR DONE (0)L

MM02 BUS DONE (0)L

MM02 ADR ACK 2L00 (1)L

MM02 M BUSY 2L05 H

MM02 M BUSY L

MM02 STROBE 4K 0-3 H

MM02 STROBE 4K 4-11 H

MM02 STROBE 4K 12-18 H

MM02 STROBE 8K 0-7 H

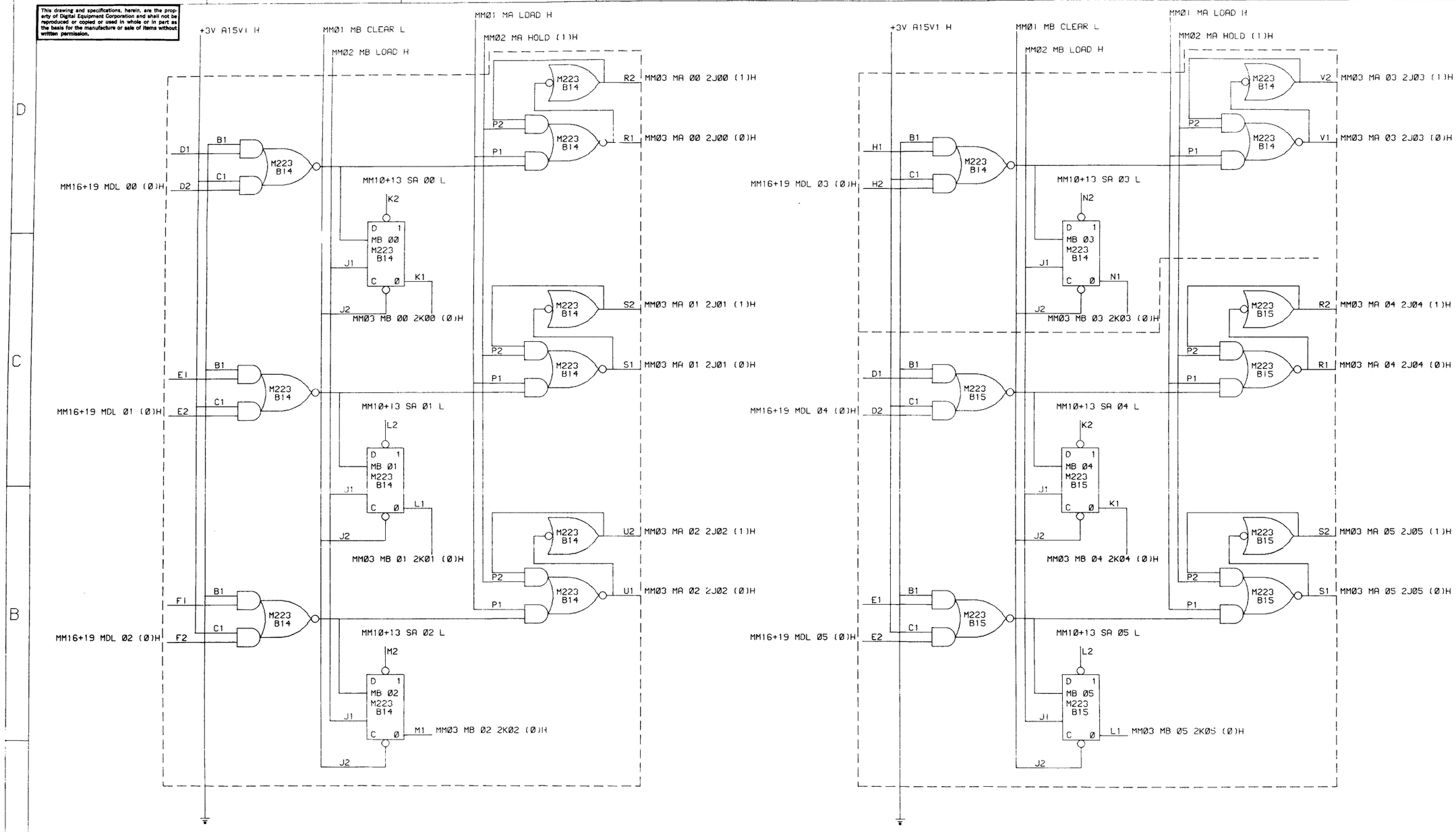
MM02 STROBE 8K 8-11 H

MM02 STROBE 8K 12-18 H

+3V C14U1 H

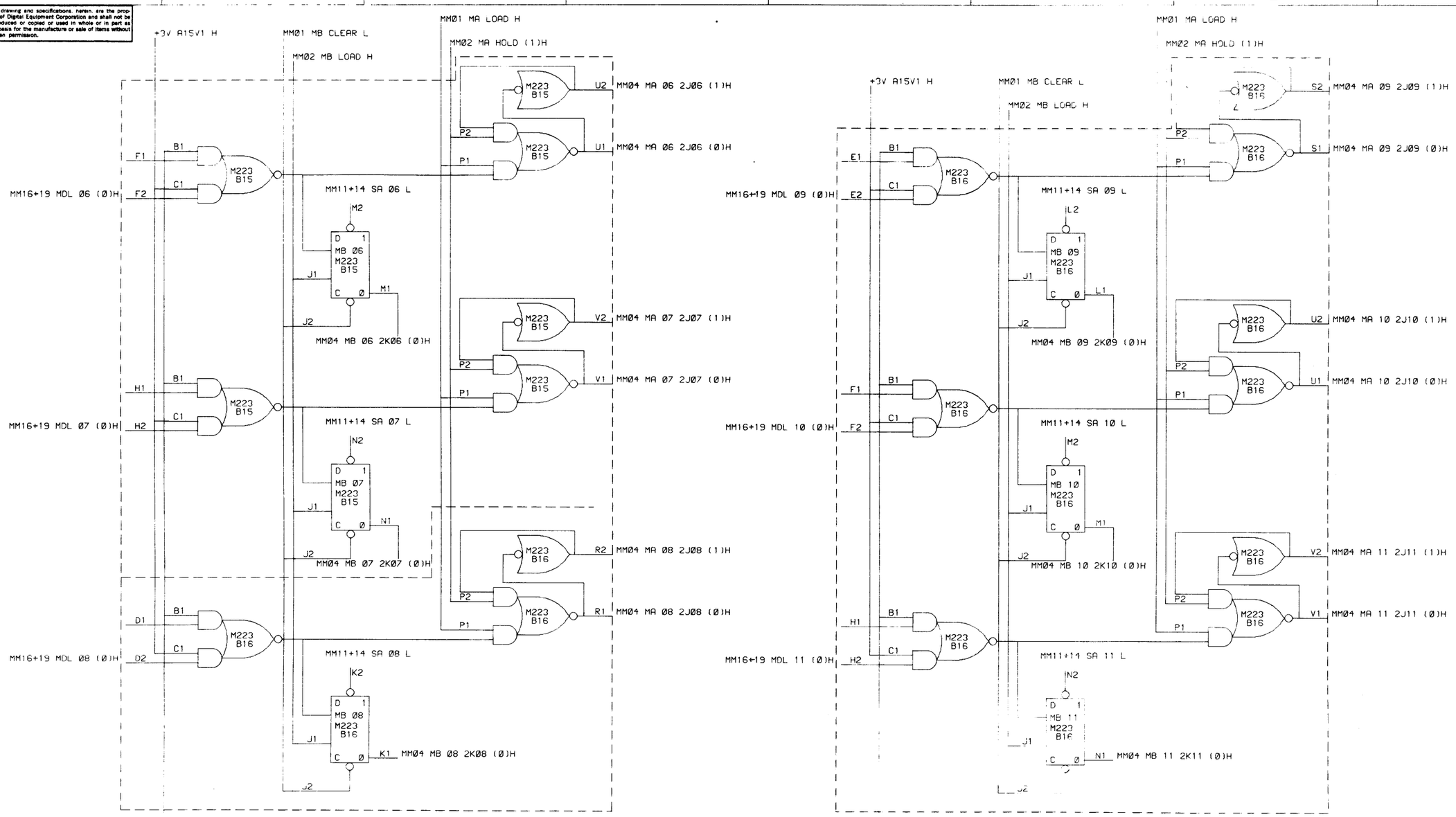
REVISIONS		
CHK	CHANGE NO.	REV.
NR	MM15-00005	A
	A WASHINGTON 1/14/70	
	S O'CONNOR 1/15/70	
NR	MM15-00205	B
	[illegible]	

DRN. E VOWLES	DATE 8/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 8/15/69	
ENG. D O'CONNOR	DATE 8/15/69	TITLE MEMORY CONTROL
PROJ. ENG. D O'CONNOR	DATE 8/15/69	
PROD. F LASKEY	DATE 8/15/69	
FIRST USED ON MM15		SIZE D CODE BS NUMBER MM15-0-2 REV. C
SCALE		DIST.
SHEET 1 OF 1		



REVISIONS		
CHK	CHANGE NO.	REV.

DRN. E VOWLES	DATE 8-14-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. W RHEAULT	DATE 8-15-69	
ENG. D E CONNOR	DATE 8-15-69	TITLE MA+MB REGISTERS 0-5
PROJ. ENG. D E O'CONNOR	DATE 8-15-69	
PROD. F LASHEY	DATE 8-15-69	
FIRST USED ON MM15		SIZE D / CODE BS / NUMBER MM15-0-3 / REV. 00
SCALE		
SHEET 1 OF 1		DIST.



REVISIONS		
CHK	CHANGE NO.	REV.

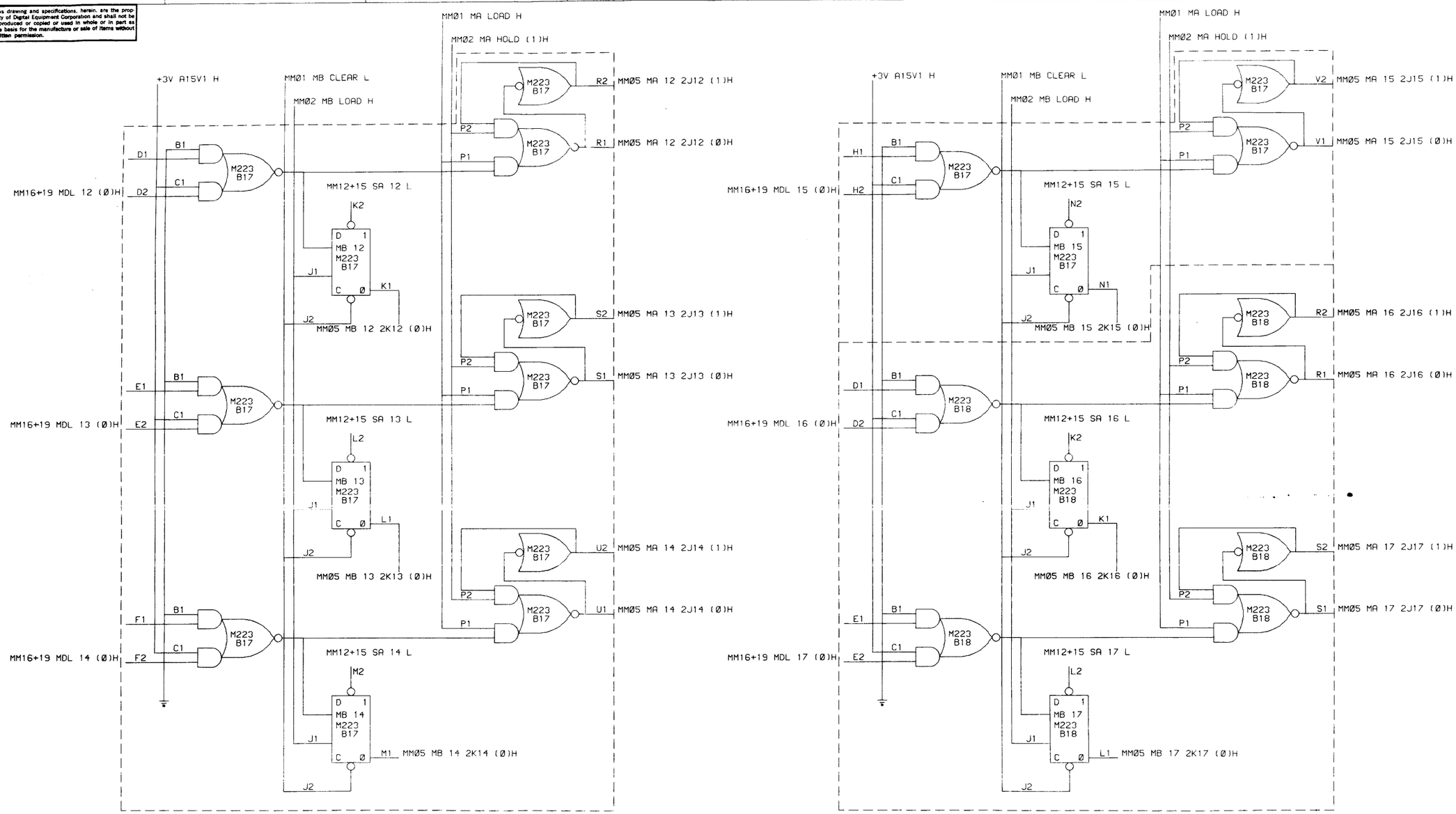
QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON	
MM15	
SCALE	
SHEET 1 OF 1	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
MA+MB REGISTERS 06-11

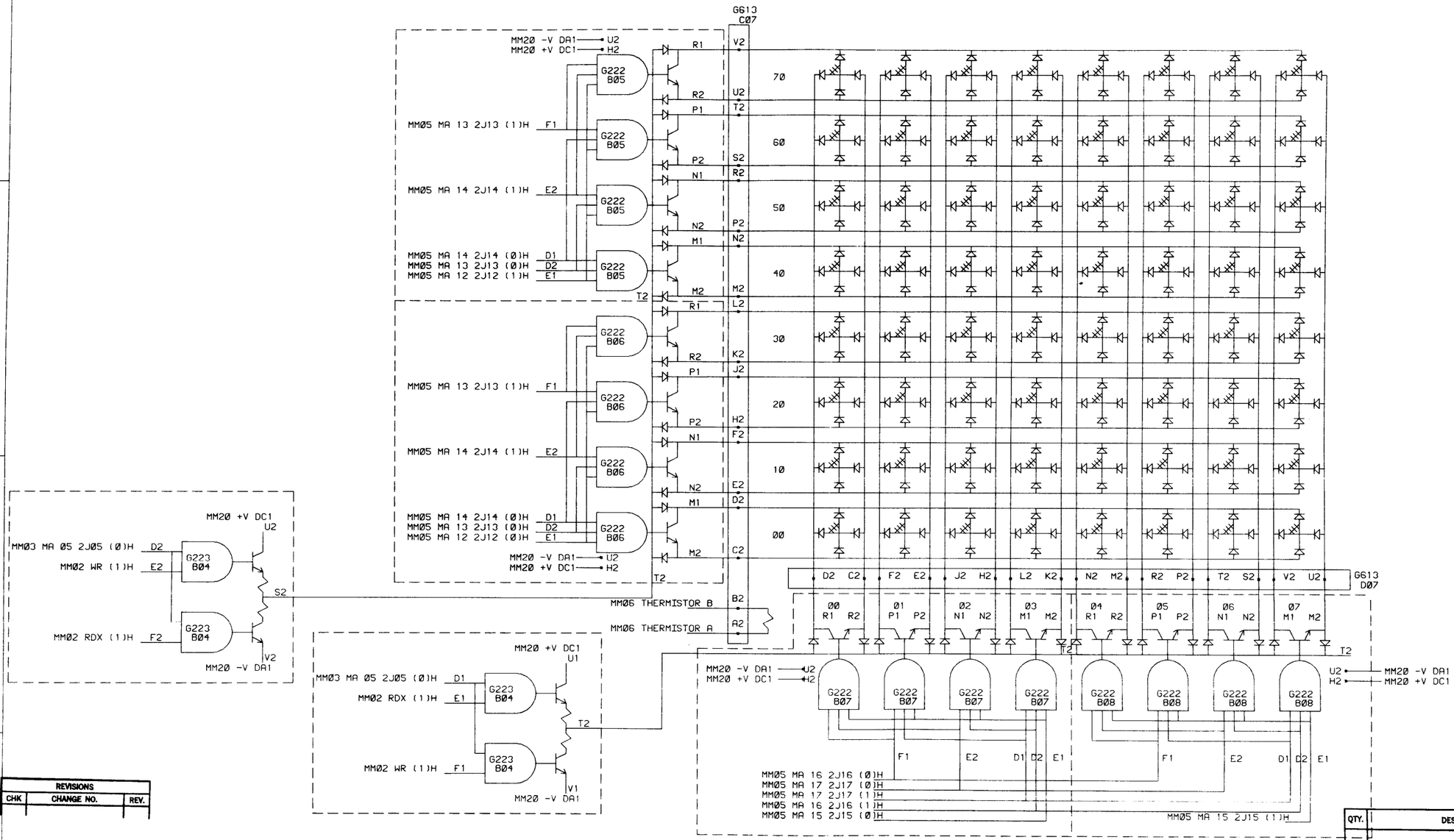
SIZE	CODE	NUMBER	REV.
D	BS	MM15-0-4	00
DIST.			



REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

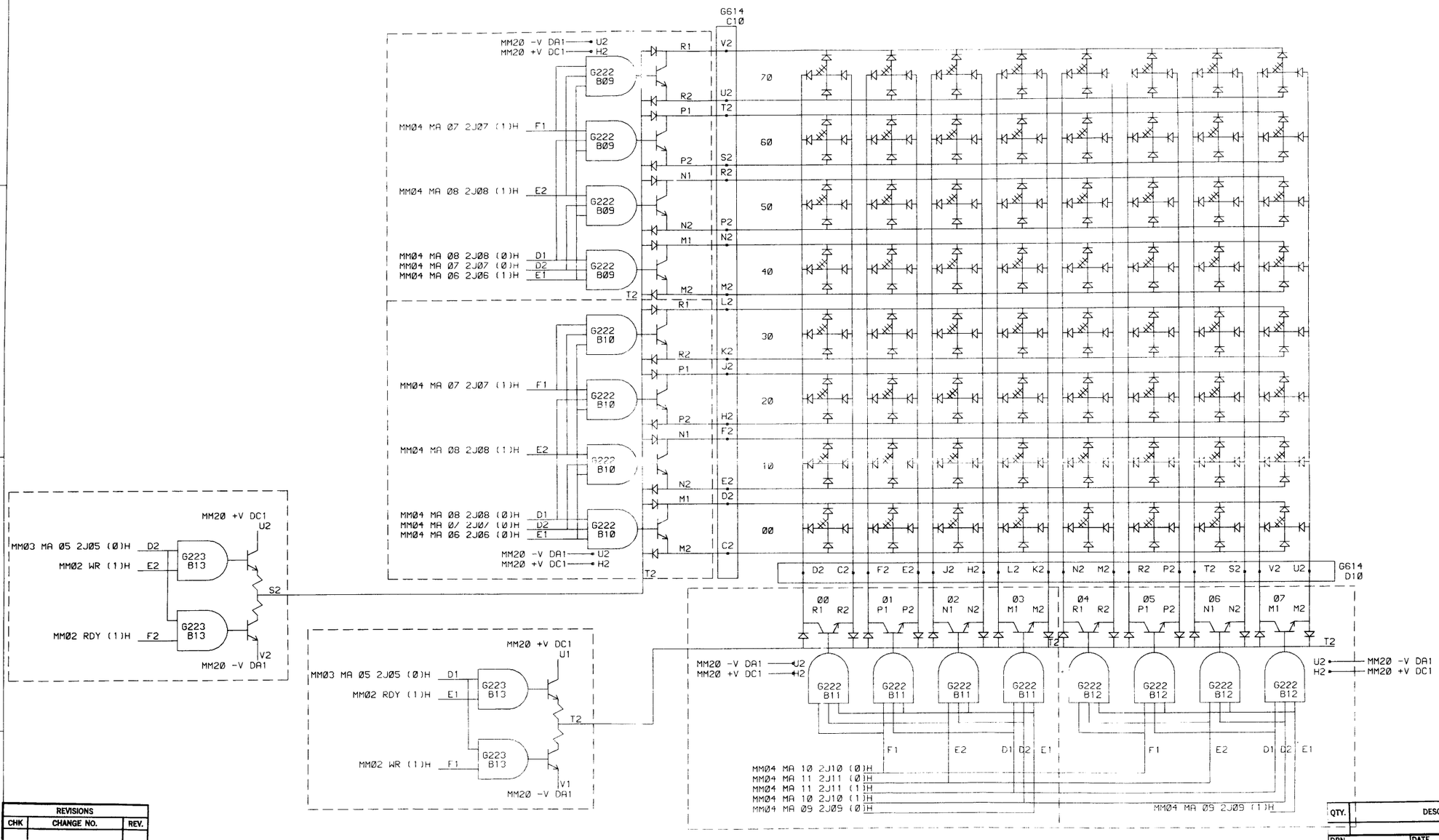
DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D.	DATE		
ENG.	DATE	TITLE: MA+B REGISTERS 12-17	
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON: MM15		SIZE: D; CODE: BS; NUMBER: MM15-Ø-5; REV.: ØØ	
SCALE			
SHEET OF		DIST.	



REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D.	DATE		
ENG.	DATE	TITLE: X AXIS (0-4K)	
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON: MM15		SIZE: D	CODE: BS
SCALE		NUMBER: MM15-0-6	REV: 00
SHEET 1 OF 1		DIST.	



REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

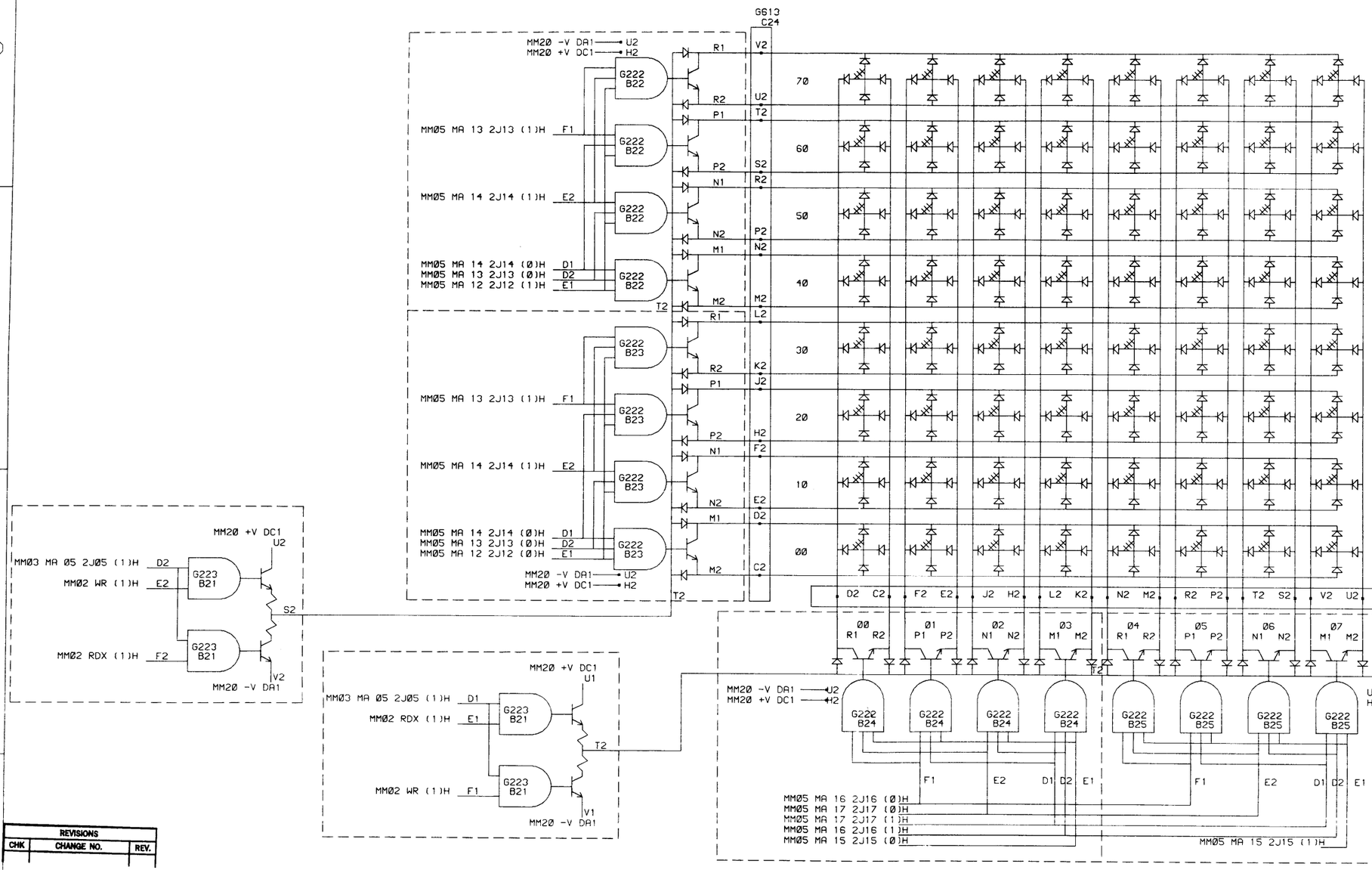
DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON MM15	
SCALE	
SHEET OF	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
Y AXIS (0-4K)

SIZE	CODE	NUMBER	REV.
D	BS	MM15-0-7	00

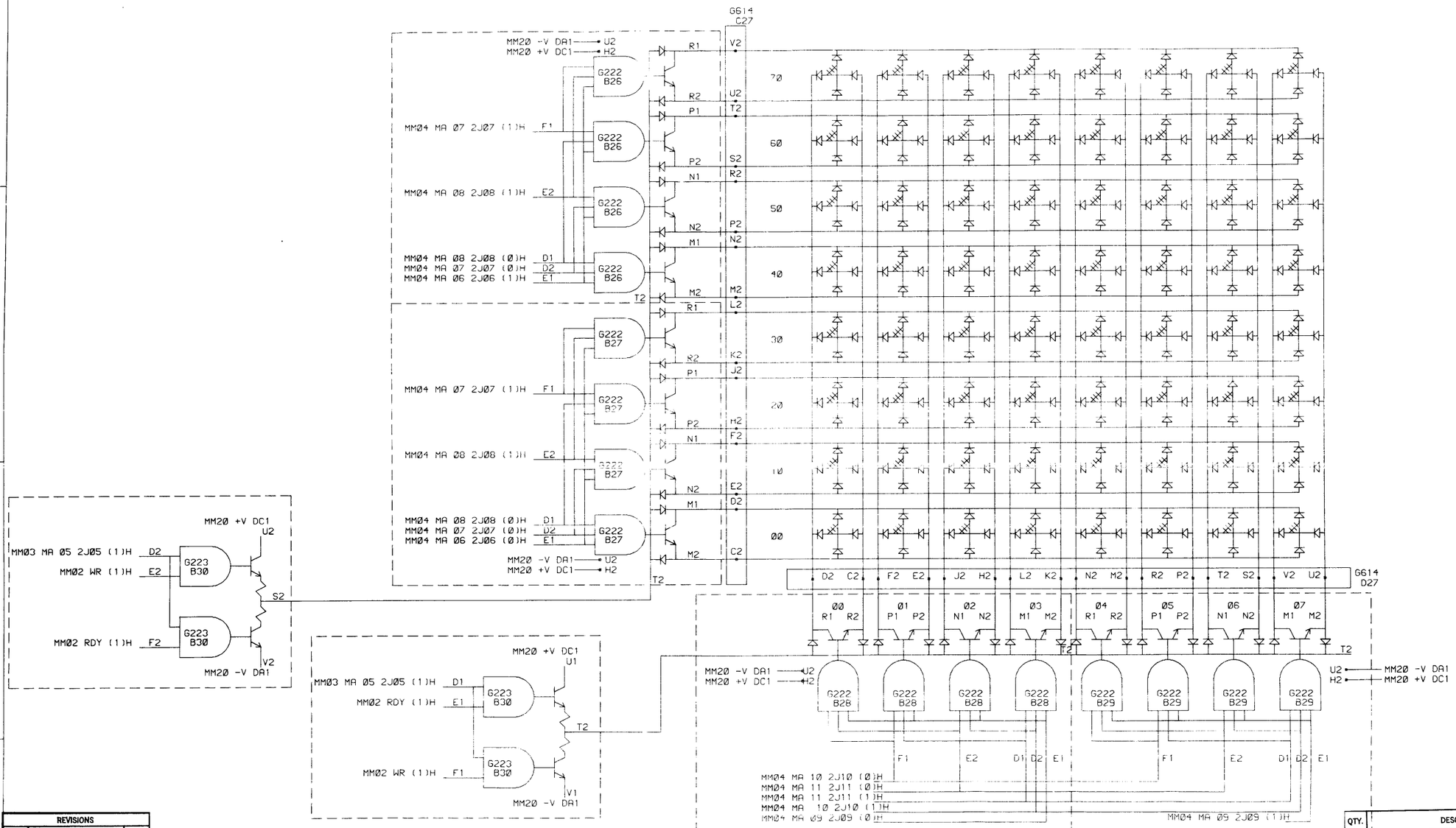
DIST.



REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D.	DATE		
ENG.	DATE	TITLE: X AXIS (4-8K)	
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON: MM15		SIZE: D / CODE: BS / NUMBER: MM15-Ø-8 / REV.: Ø0	
SCALE			
SHEET 1 OF 1		DIST.	



REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

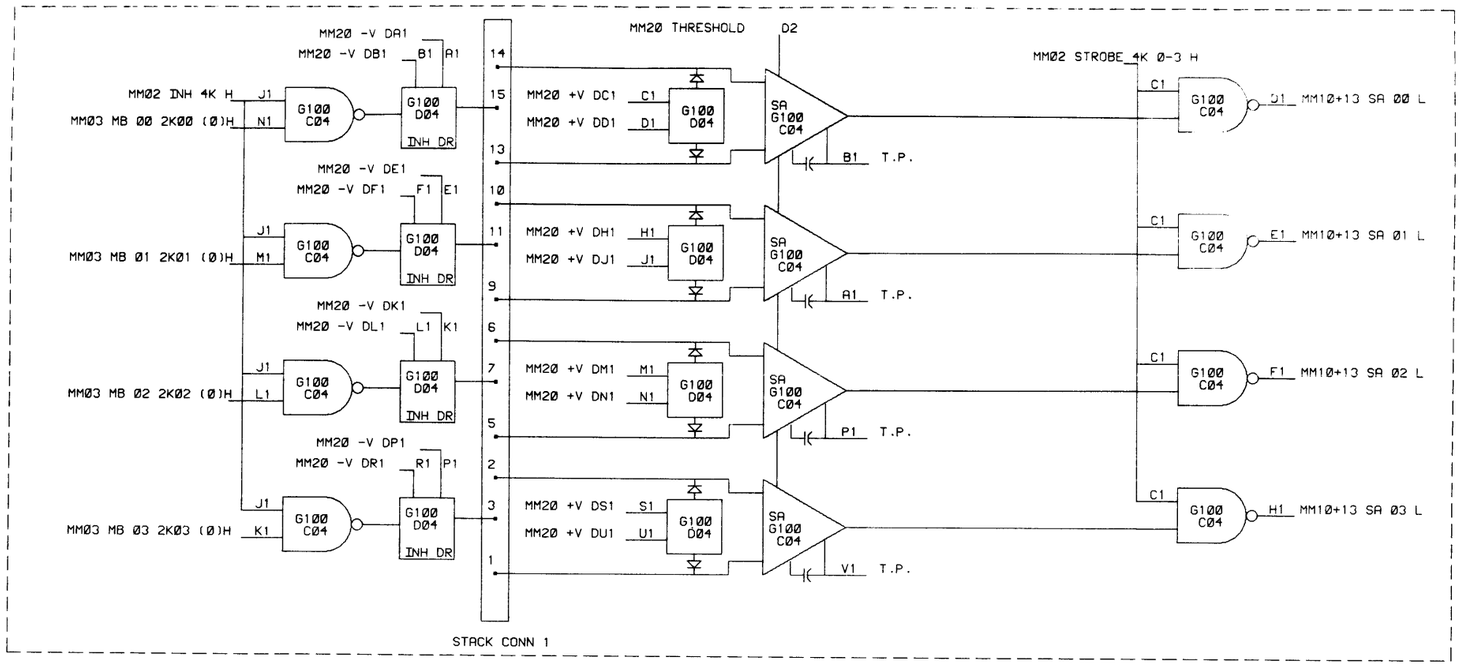
DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON	MM15
SCALE	
SHEET 1 OF 1	

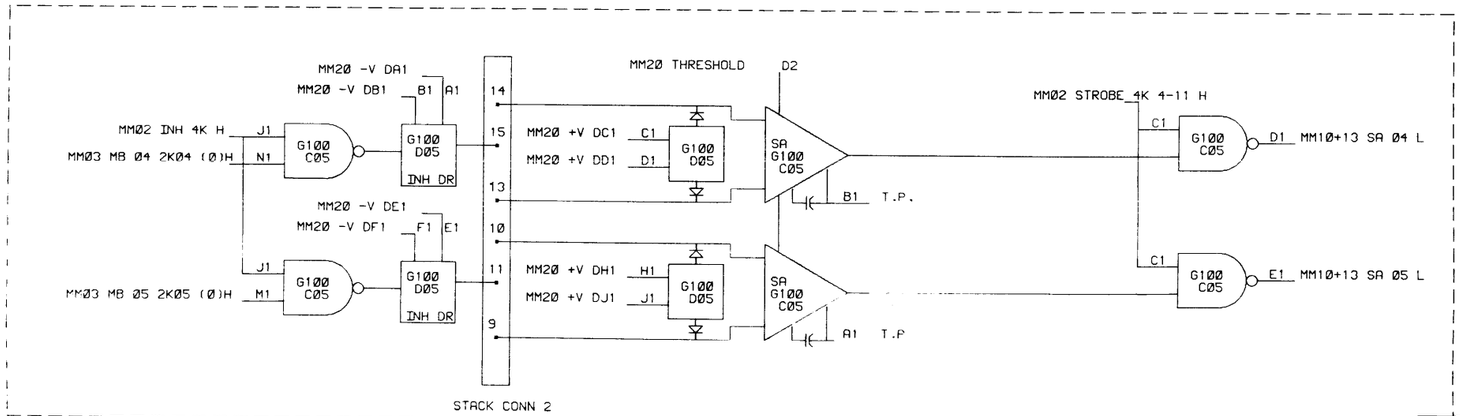
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
Y AXIS (4-8K)

SIZE	CODE	NUMBER	REV.
D	BS	MM15-0-Y	00

DIST.



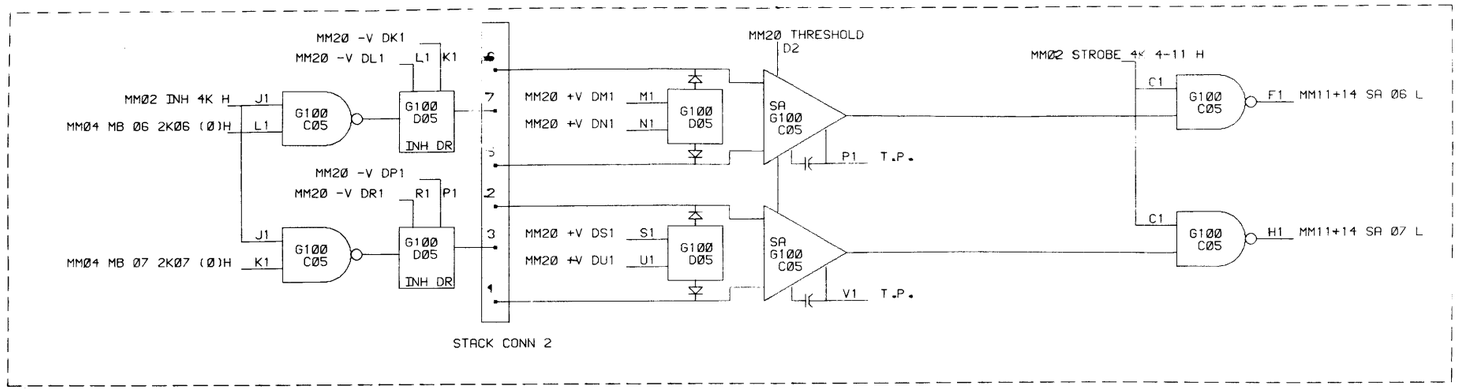


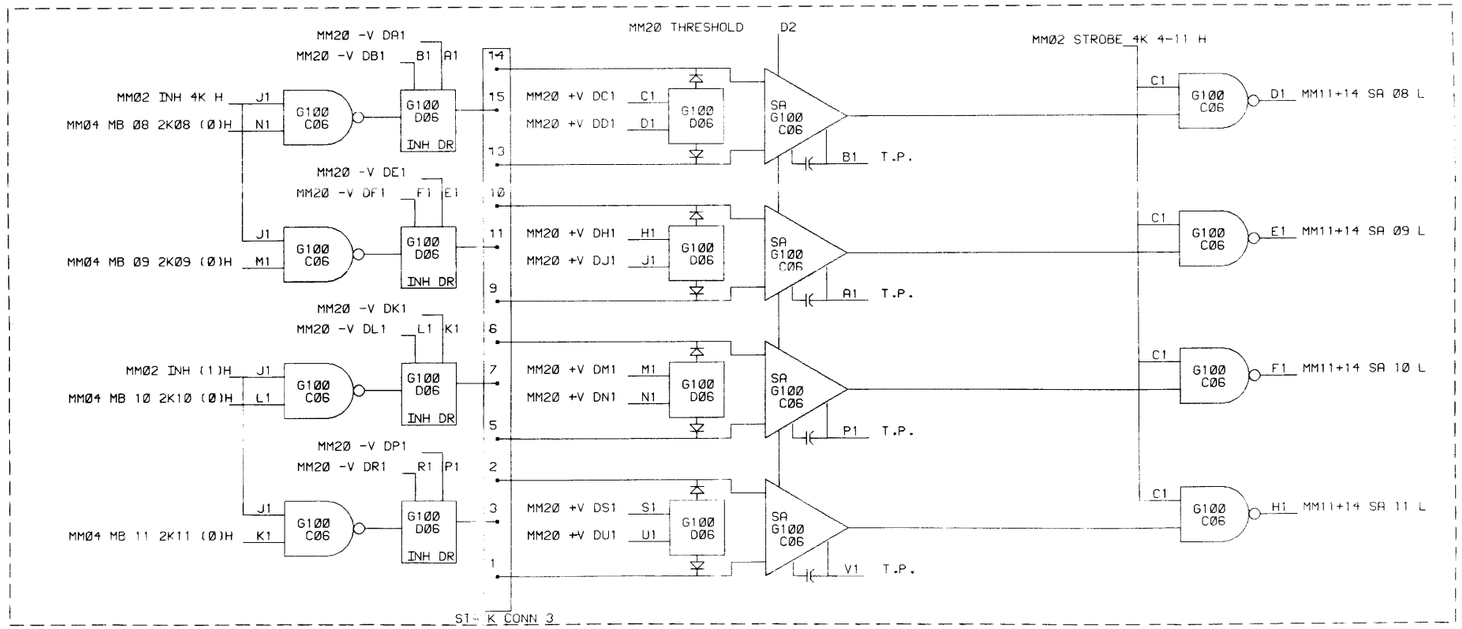
REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D.	DATE		
ENG.	DATE	TITLE: SENSE AMP + INH DRIVER (0-4K)	
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON: MM15		SIZE: D / CODE: BS / NUMBER: MM15-0-10 / REV: 00	
SCALE		SHEET 1 OF 1 / DIST.	

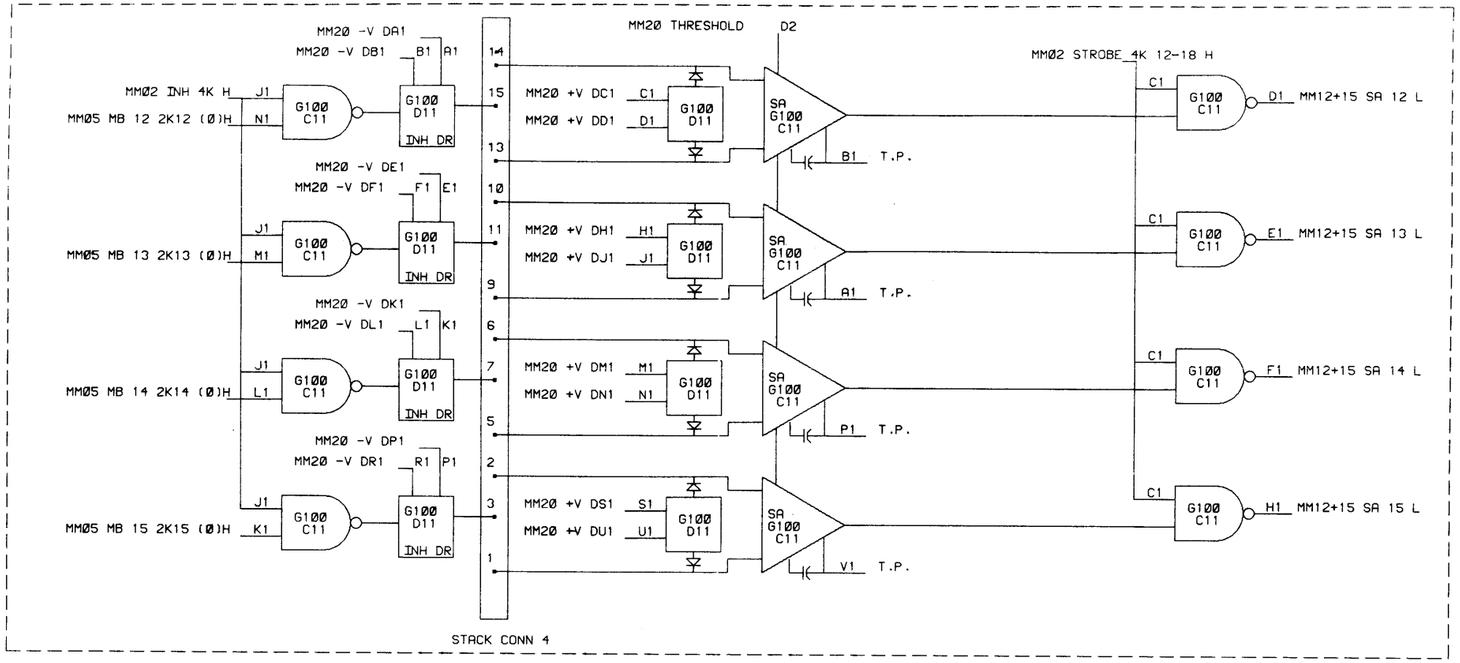


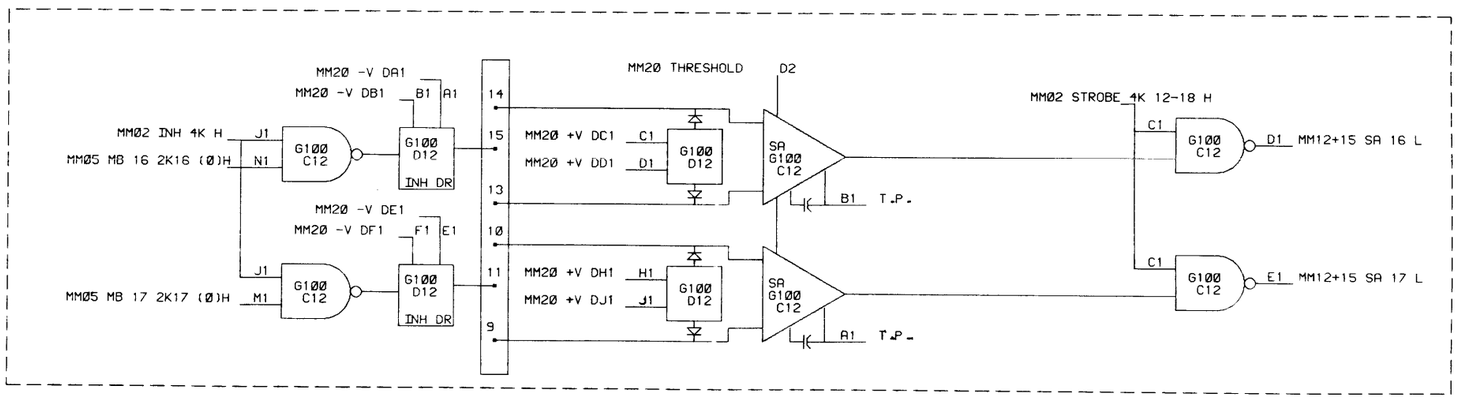


REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D.	DATE		
ENG.	DATE	TITLE: SENSE AMP + INH DRIVER (0-4K)	
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON: MM15		SIZE: D / CODE: BS / NUMBER: MM15-0-11	REV: 00
SCALE			
SHEET 1 OF 1		DIST.	





REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

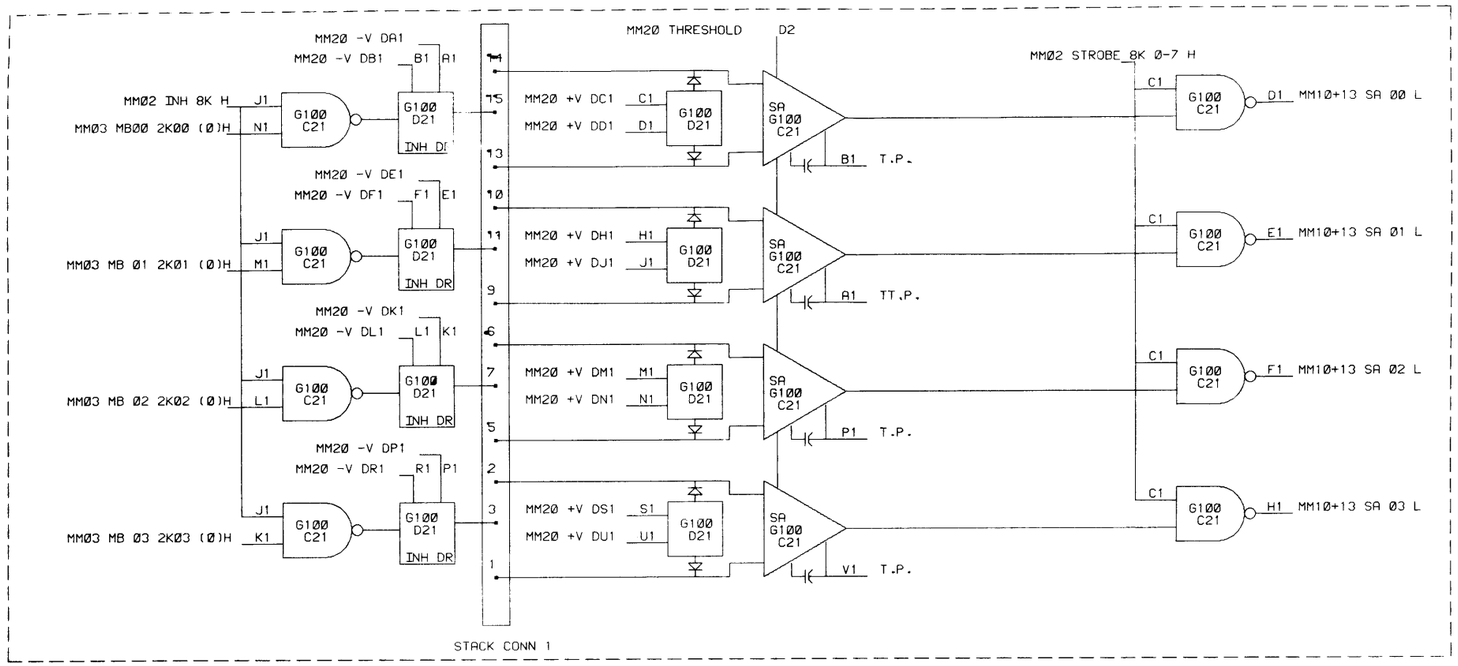
DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON	MM15
SCALE	
SHEET 1 OF 1	

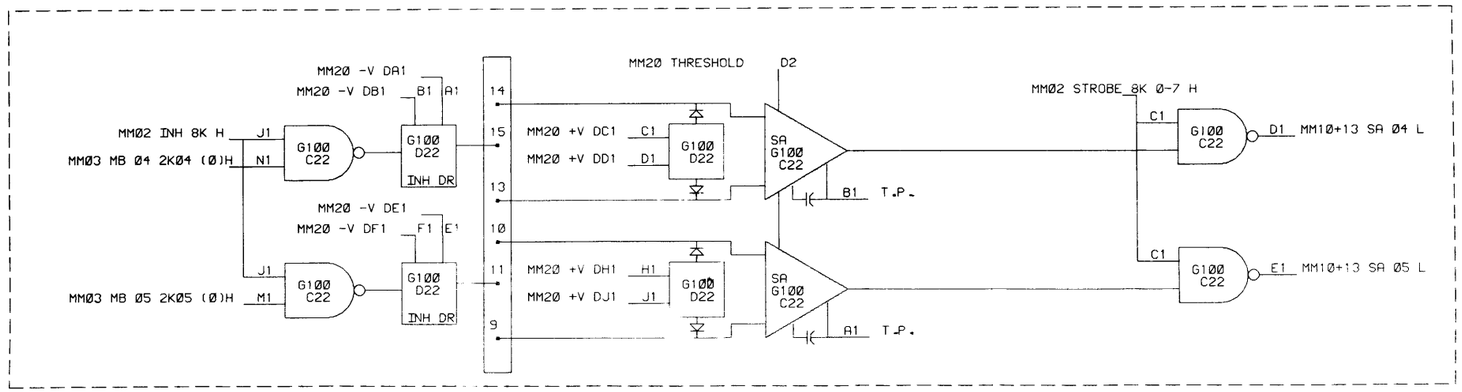
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
SENSE AMP + INH DRIVER (0-4K)

SIZE	CODE	NUMBER	REV.
D	BS	MM15-0-12	00

DIST.





REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

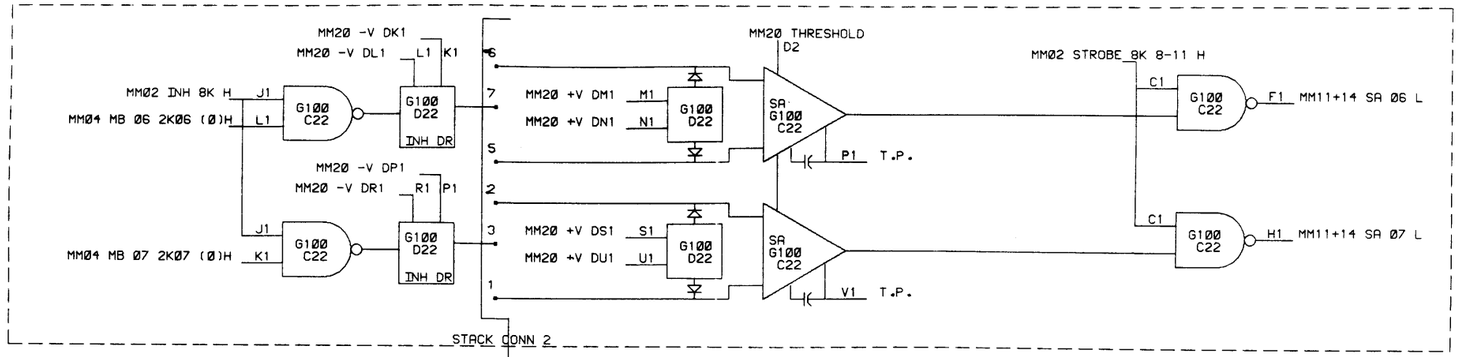
DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON: MM15	
SCALE	
SHEET OF	

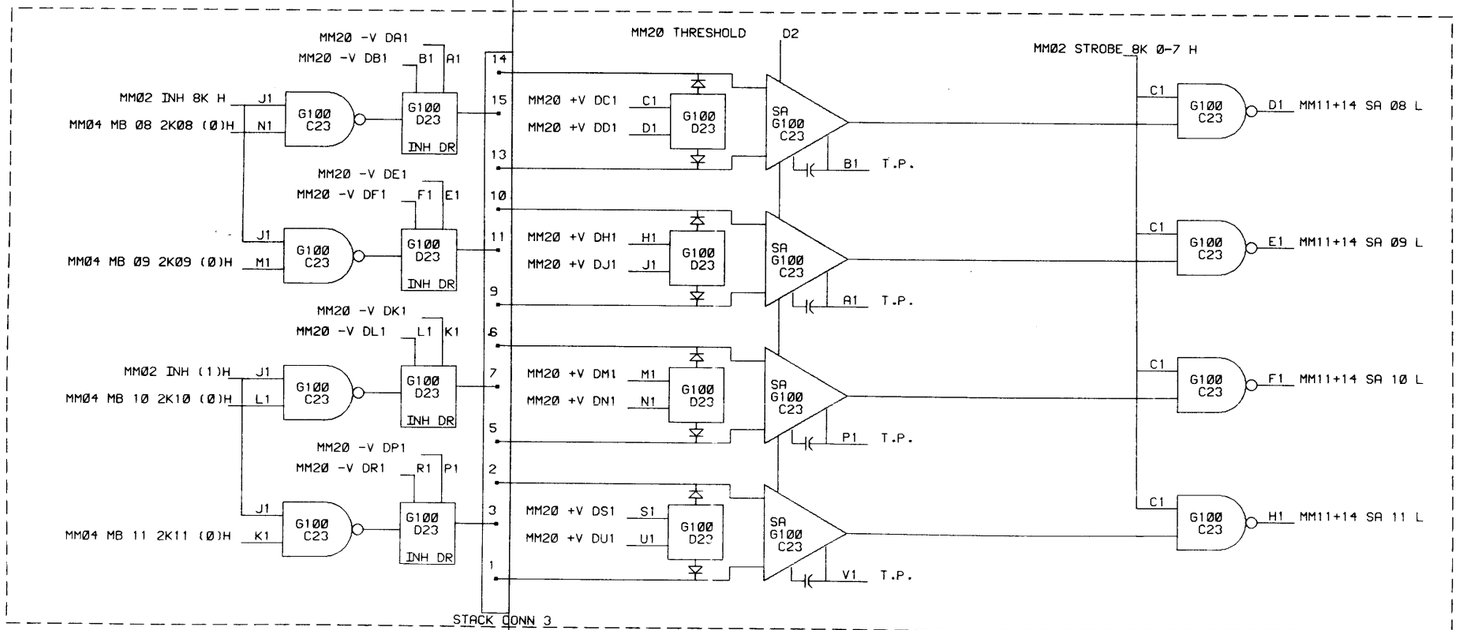
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: SENSE AMP + INH DRIVER (4-8K)

SIZE	CODE	NUMBER	REV.
D	BS	MM15-Ø-13	ØØ

DIST.





REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

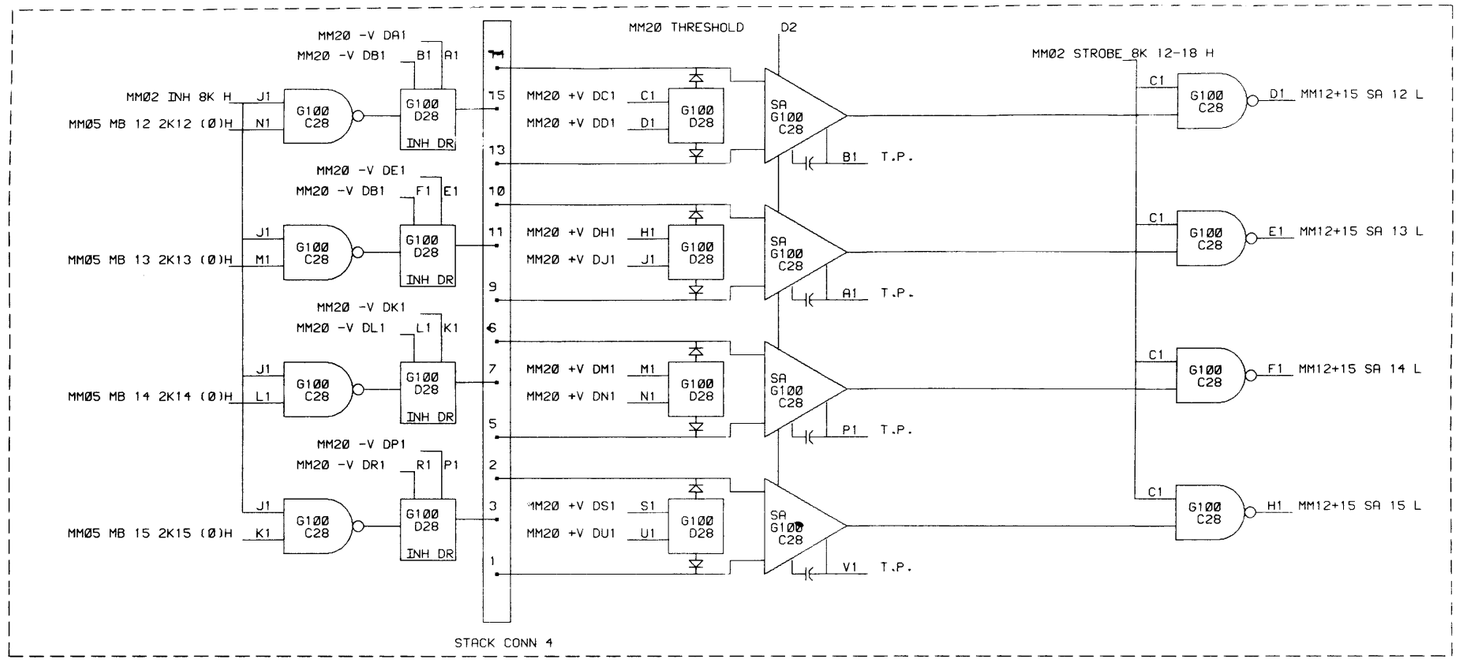
DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON: MM15	
SCALE	
SHEET 1 OF 1	

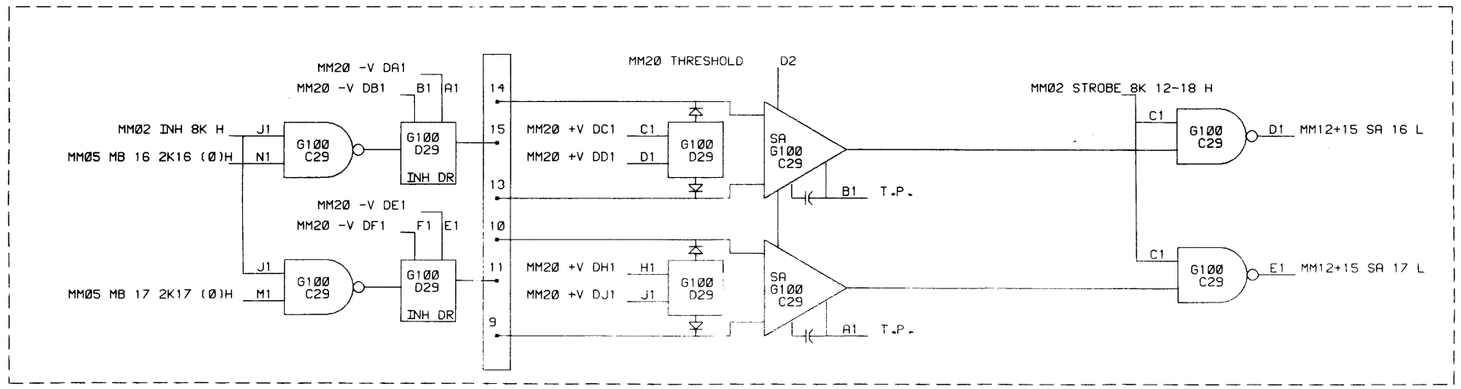
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: SENSE AMP + INH DRIVER (4-8K)

SIZE	CODE	NUMBER	REV.
D	BS	MM15-0-14	00

DIST.

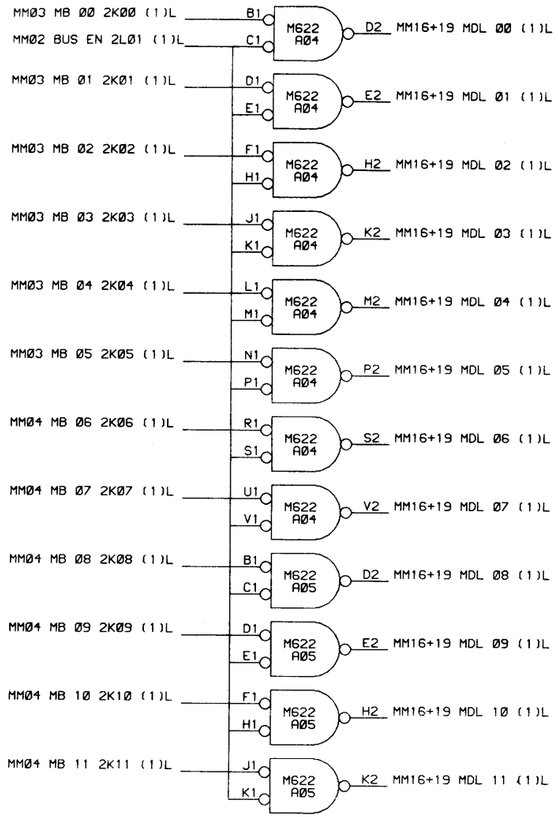


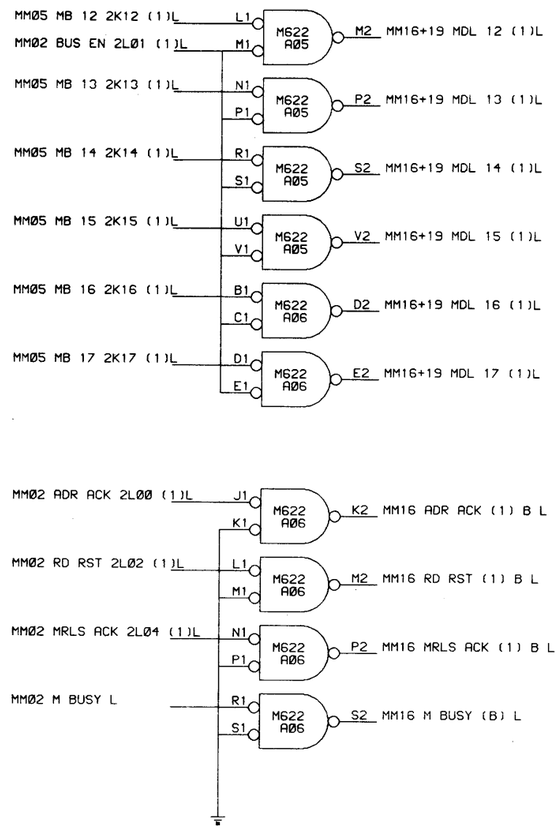


REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D.	DATE		
ENG.	DATE	TITLE: SENSE AMP + INH DRIVER (4-8K)	
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON: MM15		SIZE: D | CODE: BS | NUMBER: MM15-Ø-15 | REV: ØØ	
SCALE			
SHEET 1 OF 1		DIST.	



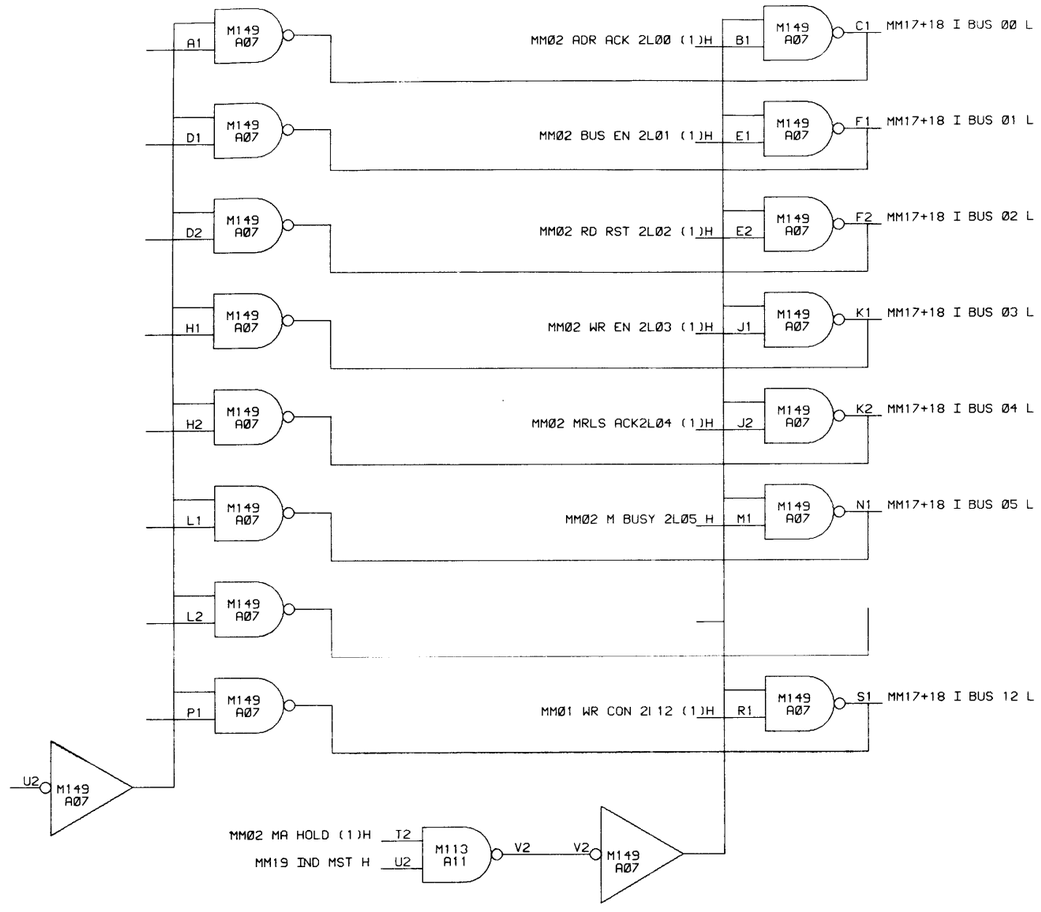


NOTE: GND PINS C2,F2,J2,L2,N2,R2,U2,T1 ON ALL M622

REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D.	DATE		
ENG.	DATE	TITLE: MEMORY BUS DRIVERS	
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON: MM15		SIZE: D / CODE: BS / NUMBER: MM15-0-16 / REV.: 00	
SCALE			
SHEET 1 OF 1		DIST.	



MM01 RD CON 2L11 (1)H M2 — M149 A07 — N2 MM17+18 I BUS 11 L

REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON: MM15	
SCALE	
SHEET 1 OF 1	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: INDICATOR BUS DRIVERS

SIZE	CODE	NUMBER	REV.
D	BS	MM15-0-17	00

DIST.

MM03 MB 00 2K00 (1)L — M113 A10 — C1 — M149 A08 — MM03 MA 00 2J00 (1)H — M149 A08 — MM17+18 I BUS 00 L
MM03 MB 01 2K01 (1)L — M113 A10 — F1 — M149 A08 — MM03 MA 01 2J01 (1)H — M149 A08 — MM17+18 I BUS 01 L
MM03 MB 02 2K02 (1)L — M113 A10 — F2 — M149 A08 — MM03 MA 02 2J02 (1)H — M149 A08 — MM17+18 I BUS 02 L
MM03 MB 03 2K03 (1)L — M113 A10 — K1 — M149 A08 — MM03 MA 03 2J03 (1)H — M149 A08 — MM17+18 I BUS 03 L
MM03 MB 04 2K04 (1)L — M113 A10 — K2 — M149 A08 — MM03 MA 04 2J04 (1)H — M149 A08 — MM17+18 I BUS 04 L
MM03 MB 05 2K05 (1)L — M113 A10 — N1 — M149 A08 — MM03 MA 05 2J05 (1)H — M149 A08 — MM17+18 I BUS 05 L
MM04 MB 06 2K06 (1)L — M113 A10 — N2 — M149 A08 — MM04 MA 06 2J06 (1)H — M149 A08 — MM18 I BUS 06 L
MM04 MB 07 2K07 (1)L — M113 A10 — S1 — M149 A08 — MM04 MA 07 2J07 (1)H — M149 A08 — MM18 I BUS 07 L
MM04 MB 08 2K08 (1)L — M113 A10 — S2 — M149 A08 — MM04 MA 08 2J08 (1)H — M149 A08 — MM18 I BUS 08 L
+3V A10U1 H

MM02 MA HOLD (1)H — M113 A10 — V2 U2 — M149 A08
MM19 IND MMB L

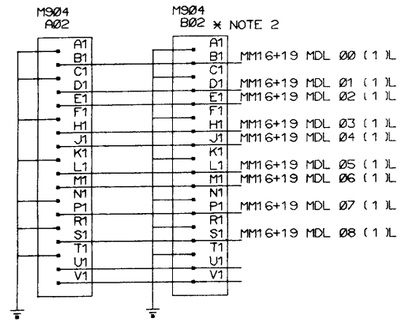
MM02 MA HOLD (1)H, MM19 IND MMA H — M123 A13 — S1 — M149 A08

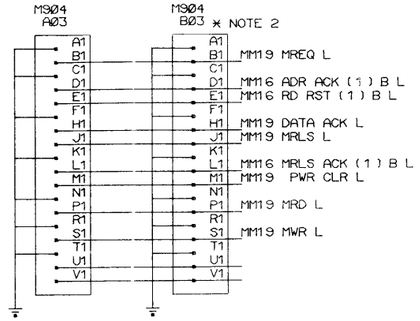
MM04 MB 09 2K09 (1)L — M113 A11 — C1 — M149 A09 — MM04 MA 09 2J09 (1)H — M149 A09 — MM18 I BUS 09 L
MM04 MB 10 2K10 (1)L — M113 A11 — F1 — M149 A09 — MM04 MA 10 2J10 (1)H — M149 A09 — MM18 I BUS 10 L
MM04 MB 11 2K11 (1)L — M113 A11 — F2 — M149 A09 — MM04 MA 11 2J11 (1)H — M149 A09 — MM17+18 I BUS 11 L
MM05 MB 12 2K12 (1)L — M113 A11 — K1 — M149 A09 — MM05 MA 12 2J12 (1)H — M149 A09 — MM17+18 I BUS 12 L
MM05 MB 13 2K13 (1)L — M113 A11 — K2 — M149 A09 — MM05 MA 13 2J13 (1)H — M149 A09 — MM18 I BUS 13 L
MM05 MB 14 2K14 (1)L — M113 A11 — N1 — M149 A09 — MM05 MA 14 2J14 (1)H — M149 A09 — MM18+24 I BUS 14 L
MM05 MB 15 2K15 (1)L — M113 A11 — N2 — M149 A09 — MM05 MA 15 2J15 (1)H — M149 A09 — MM18 I BUS 15 L
MM05 MB 16 2K16 (1)L — M113 A11 — S1 — M149 A09 — MM05 MA 16 2J16 (1)H — M149 A09 — MM18 I BUS 16 L
MM05 MB 17 2K17 (1)L — M113 A11 — S2 — M149 A09 — MM05 MA 17 2J17 (1)H — M149 A09 — MM18 I BUS 17 L
+3V A11U1 H

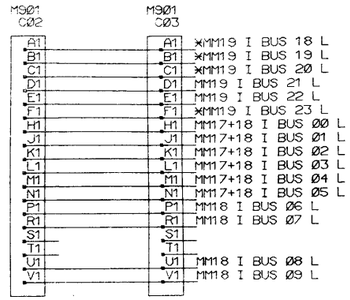
U2 — M149 A09
V2 — M149 A09

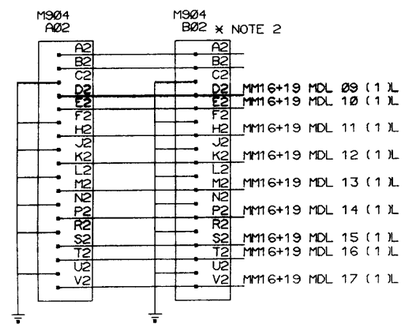
REVISIONS		
CHK	CHANGE NO.	REV.
NR	MM15-00001	A
	K. BOGGS 9/16/69	
	D. O'CONNOR 9/18/69	
	MM15-00022	B

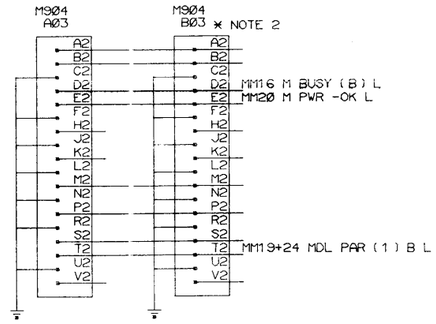
DRN. E. VOWLES	DATE 8/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N. RHEAULT	DATE 8/15/69	
ENG. D. O'CONNOR	DATE 8/15/69	TITLE INDICATOR BUS DRIVERS
PROJ. ENG. D. O'CONNOR	DATE 8/15/69	
PROD. F. LASKEY	DATE 8/15/69	
FIRST USED ON MM15		SIZE D | CODE BS | NUMBER MM15-0-18 | REV. B
SCALE		DIST.
SHEET 1 OF 1		

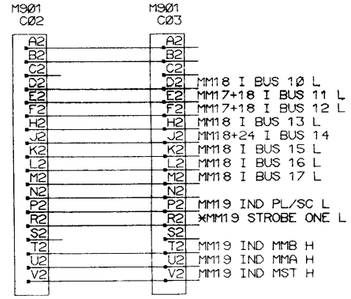












NOTE:
1. SIGNALS PREFIXED MM19 COME FROM EXTERNAL SOURCE

   SIGNALS MARKED WITH * NOT USED IN MM15

2. TERMINATE MDL LINES IN LAST MEMORY WITH TWO M966 MODULES.

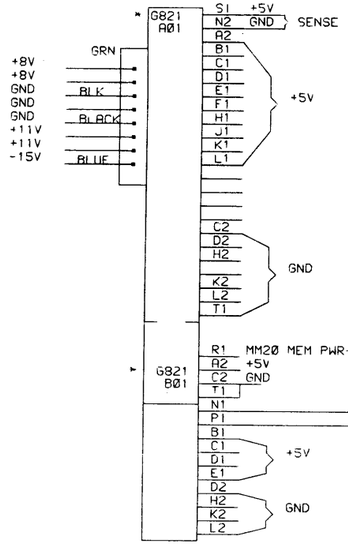
REVISIONS		
CHK	CHANGE NO.	REV.
NR	MM15-ØØØØ5	A
	A WASHINGTON 1/14/70	
	D O'CONNOR 1/19/70	
NR	MM15-ØØØ15	B
	KATHY COTE	
	D. O'CONNOR	
5	MM15-ØØ123	C

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

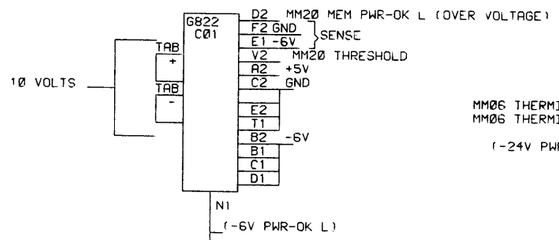
DRN. E VOWLES	DATE 8/15/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
CHK'D. N.RHEAULT	DATE 8/15/69		
ENG. D.O CONNOR	DATE 8/15/69	TITLE I/O MEMORY CABLES	
PROJ. ENG. D.O'CONNOR	DATE 8/15/69		
PROD. F LASKEY	DATE 8/15/69		
FIRST USED ON MM15		SIZE D / CODE IC / NUMBER MM15-Ø-19 / REV. C	
SCALE			
SHEET 1 OF 1		DIST.	

* MUST BE G929 IN MM15-AD.-BD.-CD. OR -DD. MOUNTED IN H963-N CABINET.

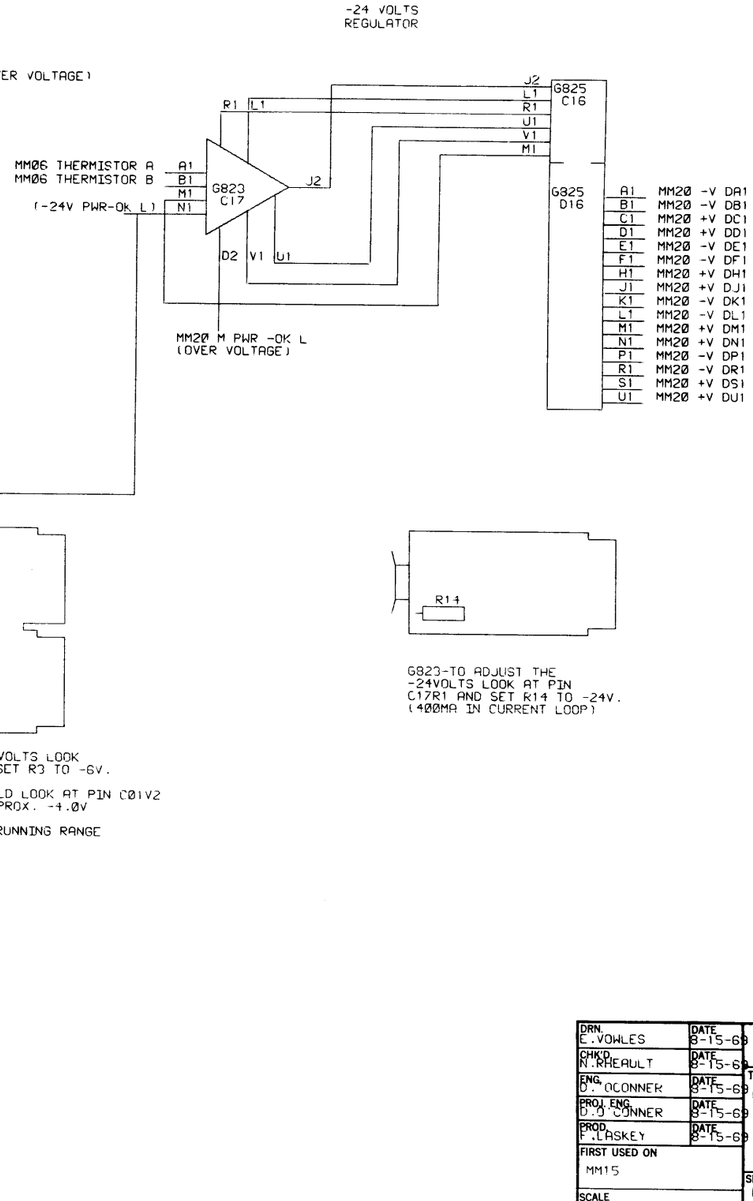
+5 VOLT REGULATOR



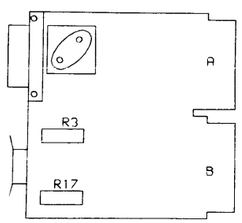
-6 VOLT REGULATOR



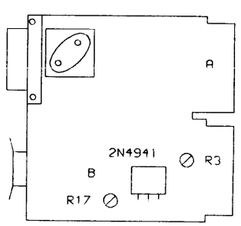
-24 VOLTS REGULATOR



G821 REV D AND LATER



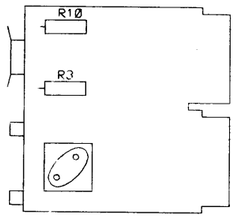
G821 REV C



G821-TO ADJUST POWER OK-SET +5V TO 4.75V (PIN A01A2 AND VARY R3).TURN R17 C.C.W. UNTIL PANEL LIGHT RESPECTIVE TO MODULE BEING ADJUSTED TURNS OFF.OR OBSERVE PIN BR1 RESPECTIVE TO MODULE GO TO GROUND.

THEN TURN R17 C.W. UNTIL THE SAME LIGHT TURNS ON,OR PIN BR1 GOES HIGH.

TO ADJUST +5 VOLTS LOOK AT PIN A01A2 AND VARY R3 ADJUST TO +5V.



G822-TO ADJUST -6VOLTS LOOK AT PIN C01B2 AND SET R3 TO -6V.

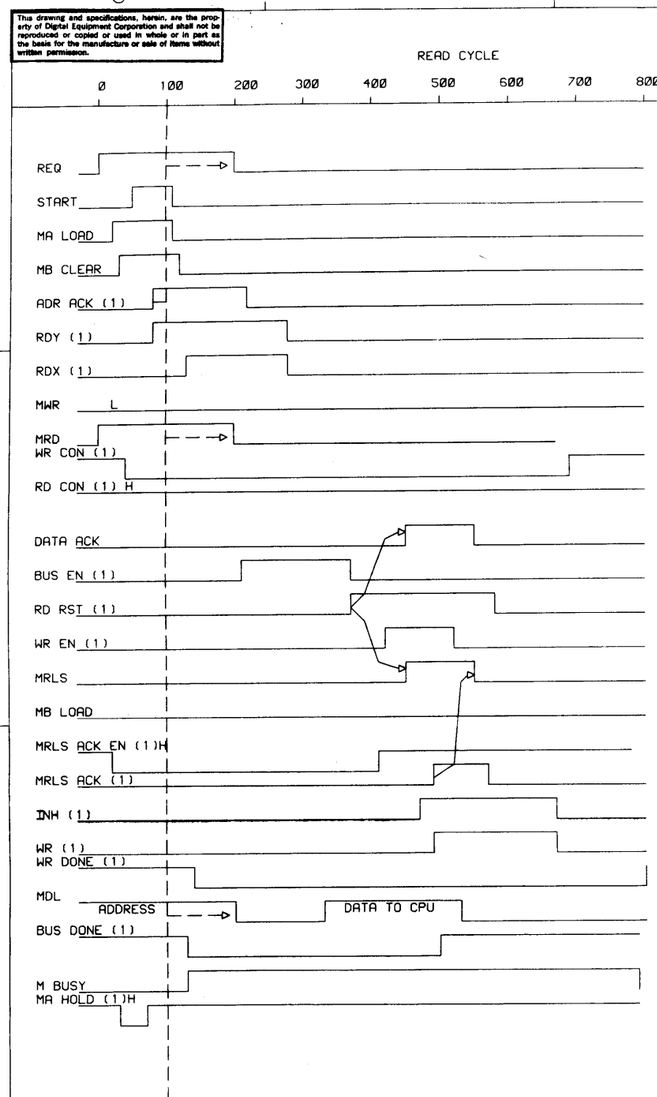
TO ADJUST THRESHOLD LOOK AT PIN C01V2 AND SET R10 TO APPROX. -4.0V

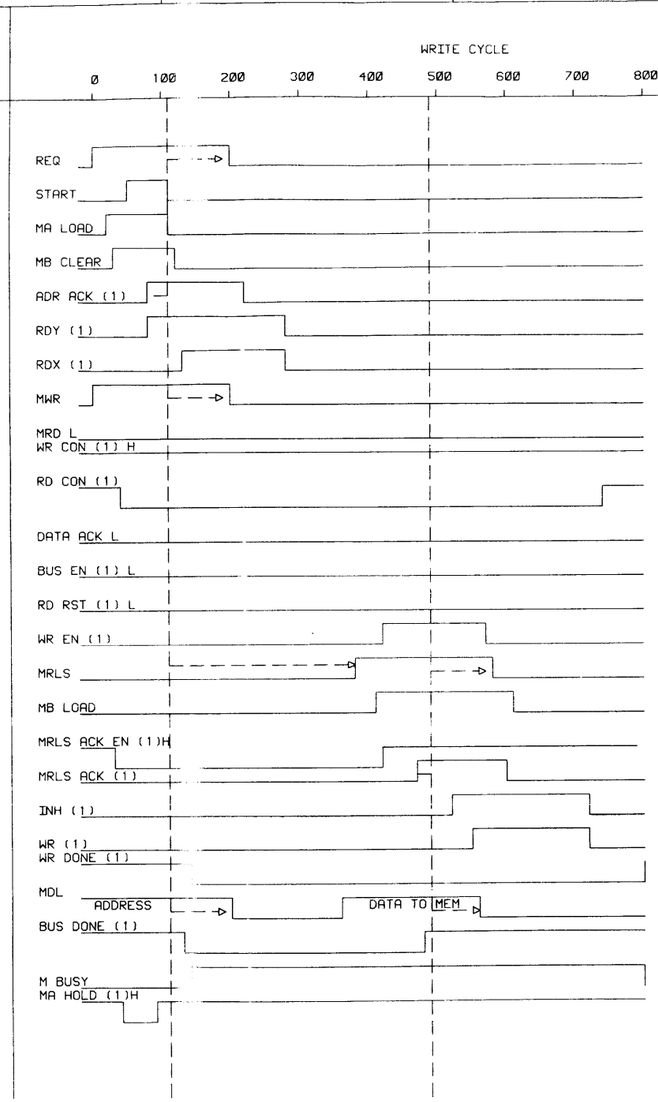
SET IN CENTER OF RUNNING RANGE

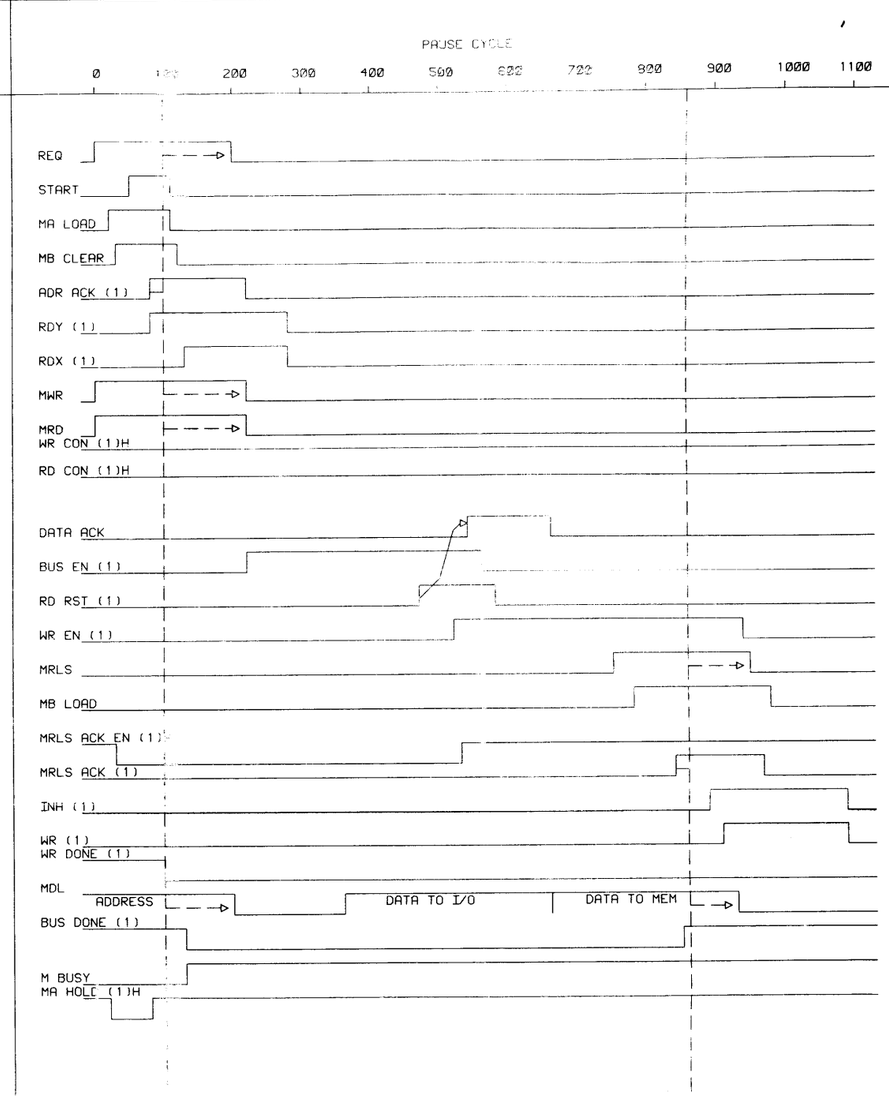
G823-TO ADJUST THE -24VOLTS LOOK AT PIN C17R1 AND SET R14 TO -24V. (400MA IN CURRENT LOOP)

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
		A	GH	MM15-00017	E
				K WALSH 9-1-70	
				F AUMANN 9-15-70	
NR	MM15-00007	B		KP15-00046	F
	G WASHINGTON				
	D.O'CONNER				
FV	MM15-00012	C			
	K. BOSSE				
	C. O'CONNER				
FV	MM15-00013	D			
	K KRYSIAK				
	F AUMANN 5-29-73				

DRN. E.VOHLES	DATE 8-15-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D N.RHEAULT	DATE 8-15-69	TITLE MEMORY POWER REGULATORS	
ENG. D. OCONNER	DATE 8-15-69		
PROJ. ENG. D.O'CONNER	DATE 8-15-69		
PROD. F.LASKEY	DATE 8-15-69		
FIRST USED ON MM15		SIZE D / CODE 85 / NUMBER MM15-0-20 / REV. F	
SCALE			
SHEET 1 OF 1		DIST.	







NOTE:

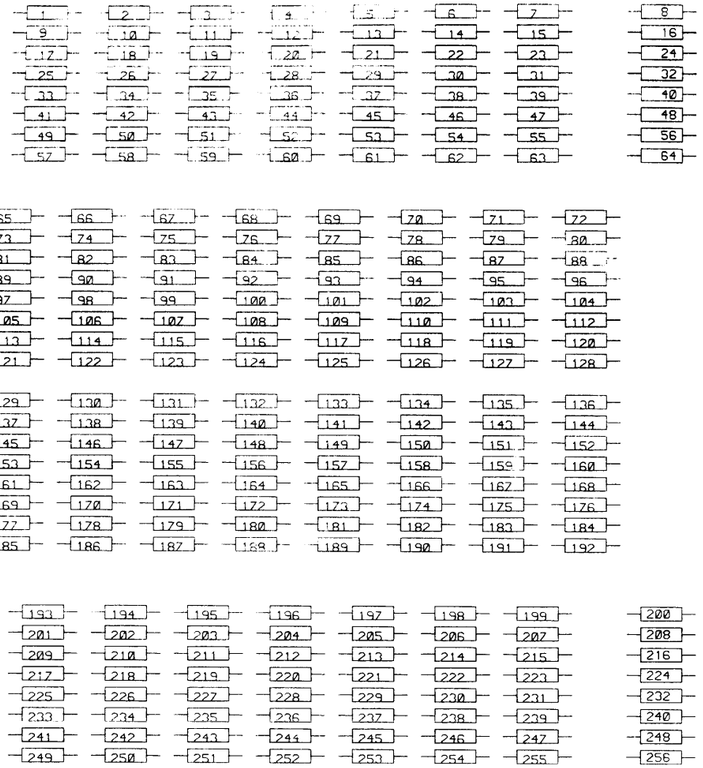
1. ALL SIGNALS SHOWN POSITIVE FOR ASSERTION
2. ARROWS INDICATE MEM BUS DELAY

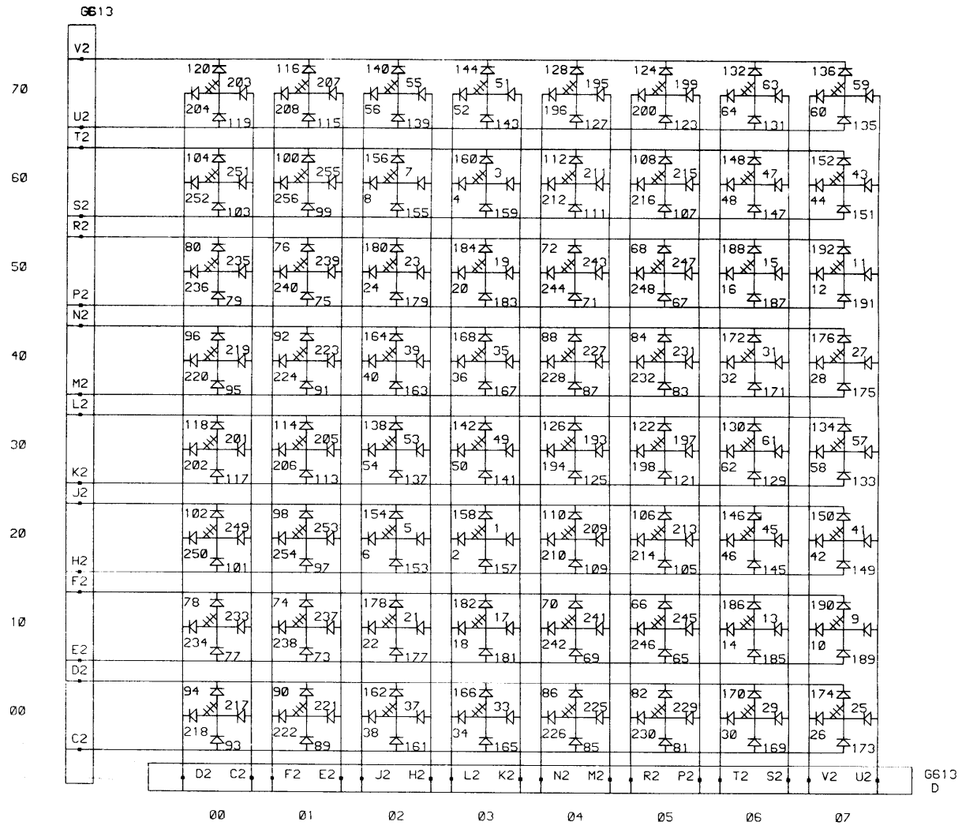
REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D.	DATE	
ENG.	DATE	TITLE: TIMING DIAGRAM
PROJ. ENG.	DATE	
PROD.	DATE	
FIRST USED ON: MM15		SIZE: D; CODE: BS; NUMBER: MM15-0-21; REV.: 00
SCALE		
SHEET 1 OF 1		D'ST.

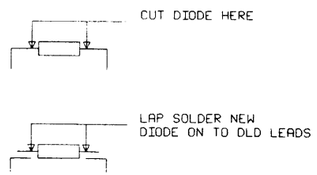
SIDE 1





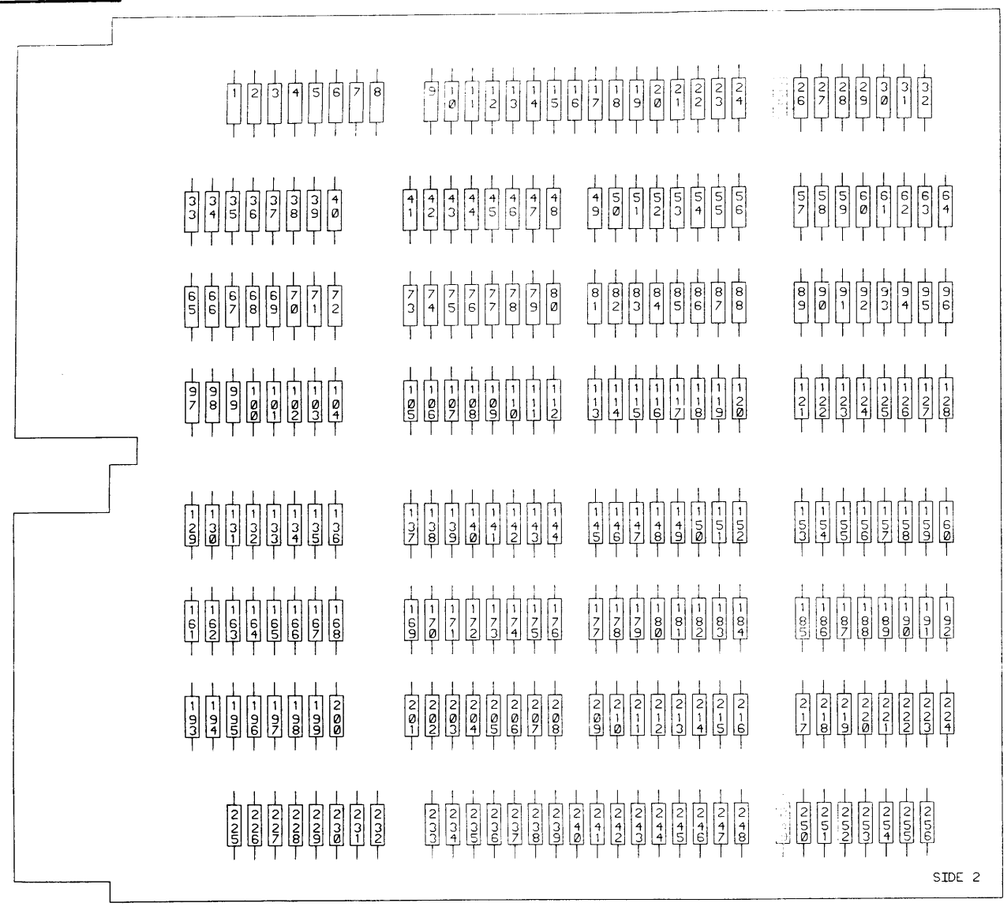
DIODE REPLACEMENT PROCEDURE:

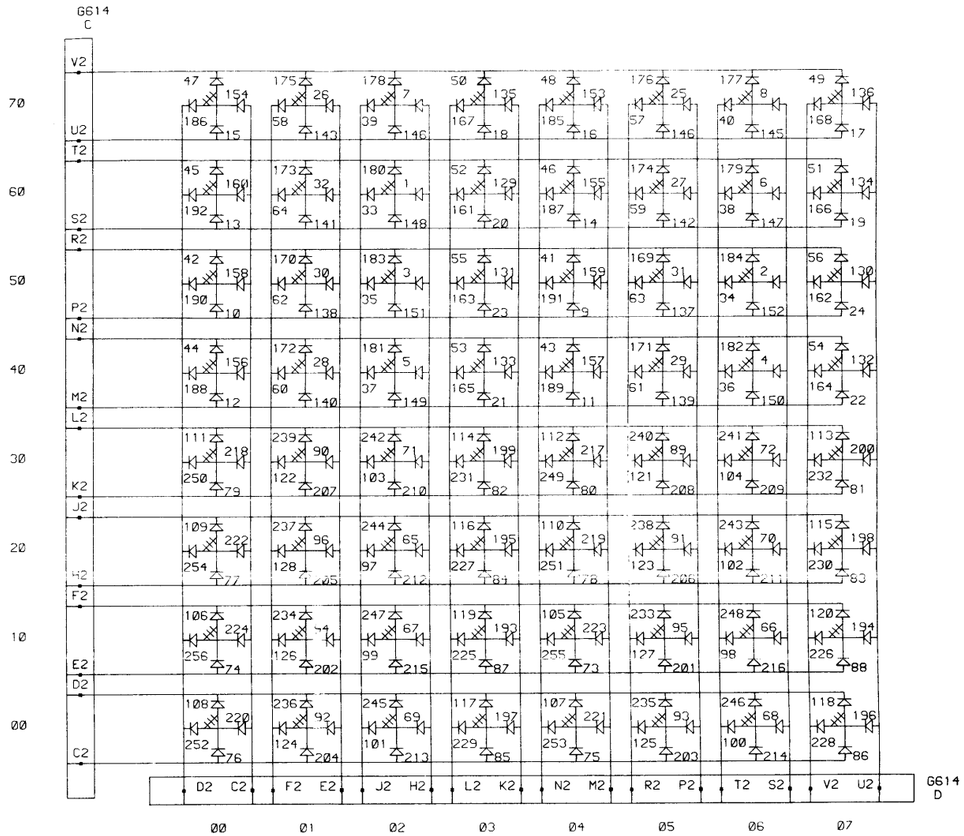
1. DETERMINE WHICH DIODE IS DEFECTIVE IN MATRIX
2. USING DIODE NUMBERS FIND ITS PHYSICAL LOCATION ON BOARD
3. CLIP OUT DEFECTIVE DIODE. DO NOT UNSOLDER LEADS
4. TACK SOLDER NEW DIODE INTO PLACE ON OLD LEADS



REVISIONS		
CHK	CHANGE NO.	REV.
ABC	MM15-00015	A

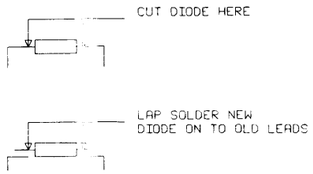
DRN. E VOWLES	DATE 8/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N RHEAULT	DATE 8/15/69	
ENG. D O'CONNOR	DATE 8/15/69	TITLE X DIODE MATRIX
PROJ. ENG. D O'CONNOR	DATE 8/15/69	
PROD. F LASKEY	DATE 8/15/69	
FIRST USED ON MM15		SIZE D · CODE 88 · NUMBER MM15-0022 · REV. A
SCALE		
SHEET 1 OF 1		DIST.





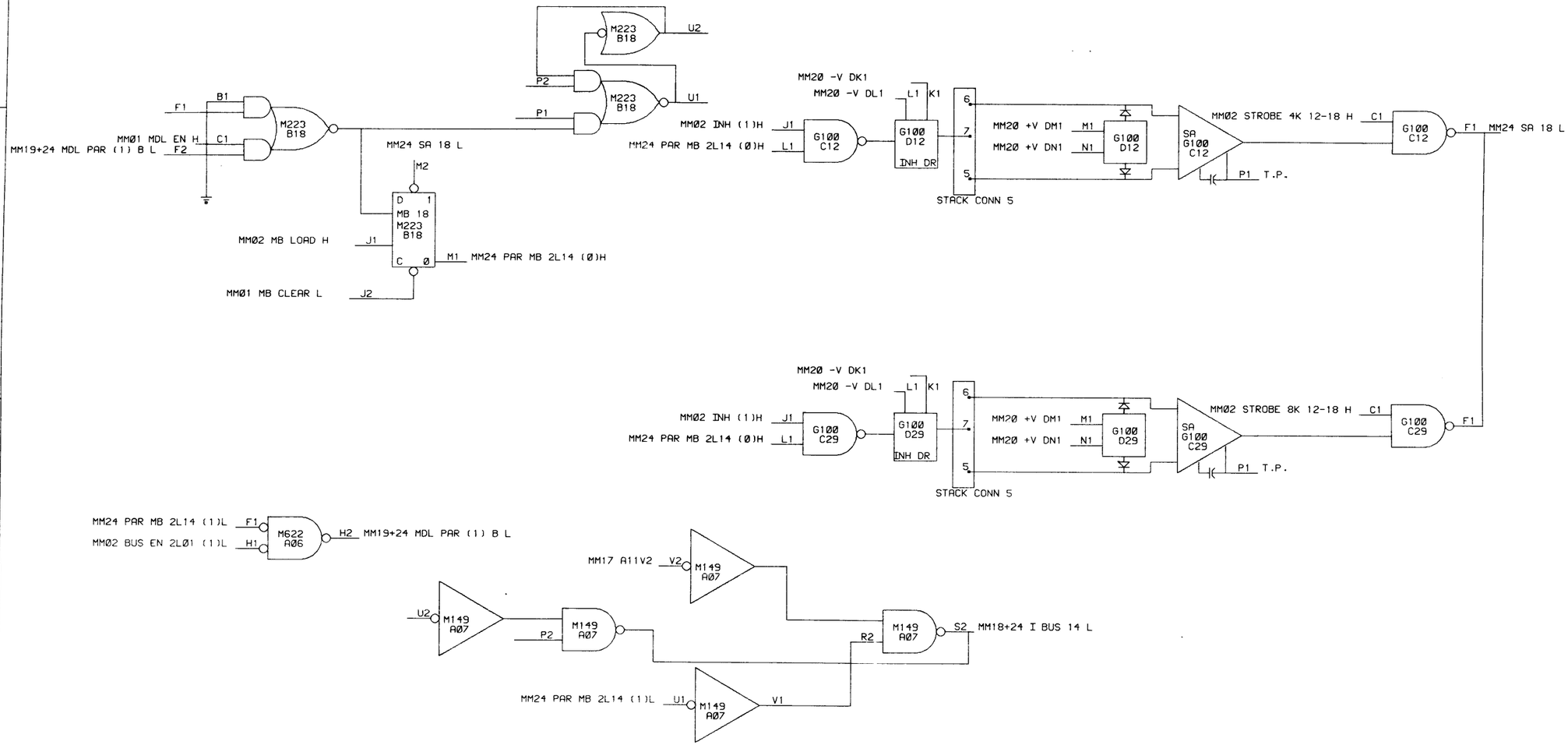
DIODE REPLACEMENT PROCEDURE:

1. DETERMINE WHICH DIODE IS DEFECTIVE IN MATRIX
2. USING DIODE NUMBERS FIND ITS PHYSICAL LOCATION ON BOARD
3. CLIP OUT DEFECTIVE DIODE. DO NOT UNSOLDER LEADS
4. TACK SOLDER NEW DIODE INTO PLACE ON OLD LEADS



REVISIONS		
CHK	CHANGE NO.	REV.
MH	MM15-00015	A

DRN. E VOWLES	DATE 8/15/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N RHEAULT	DATE 8/15/69	TITLE Y DIODE MATRIX
ENG. D O'CONNOR	DATE 8/15/69	
PROJ. ENG. D O'CONNOR	DATE 8/15/69	
PROD. F LASKEY	DATE 8/15/69	
FIRST USED ON MM15		SIZE D | CODE BS | NUMBER MM15-0-23 | REV. A
SCALE		
SHEET 1 OF 1		DIST.



REVISIONS		
CHK	CHANGE NO.	REV.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

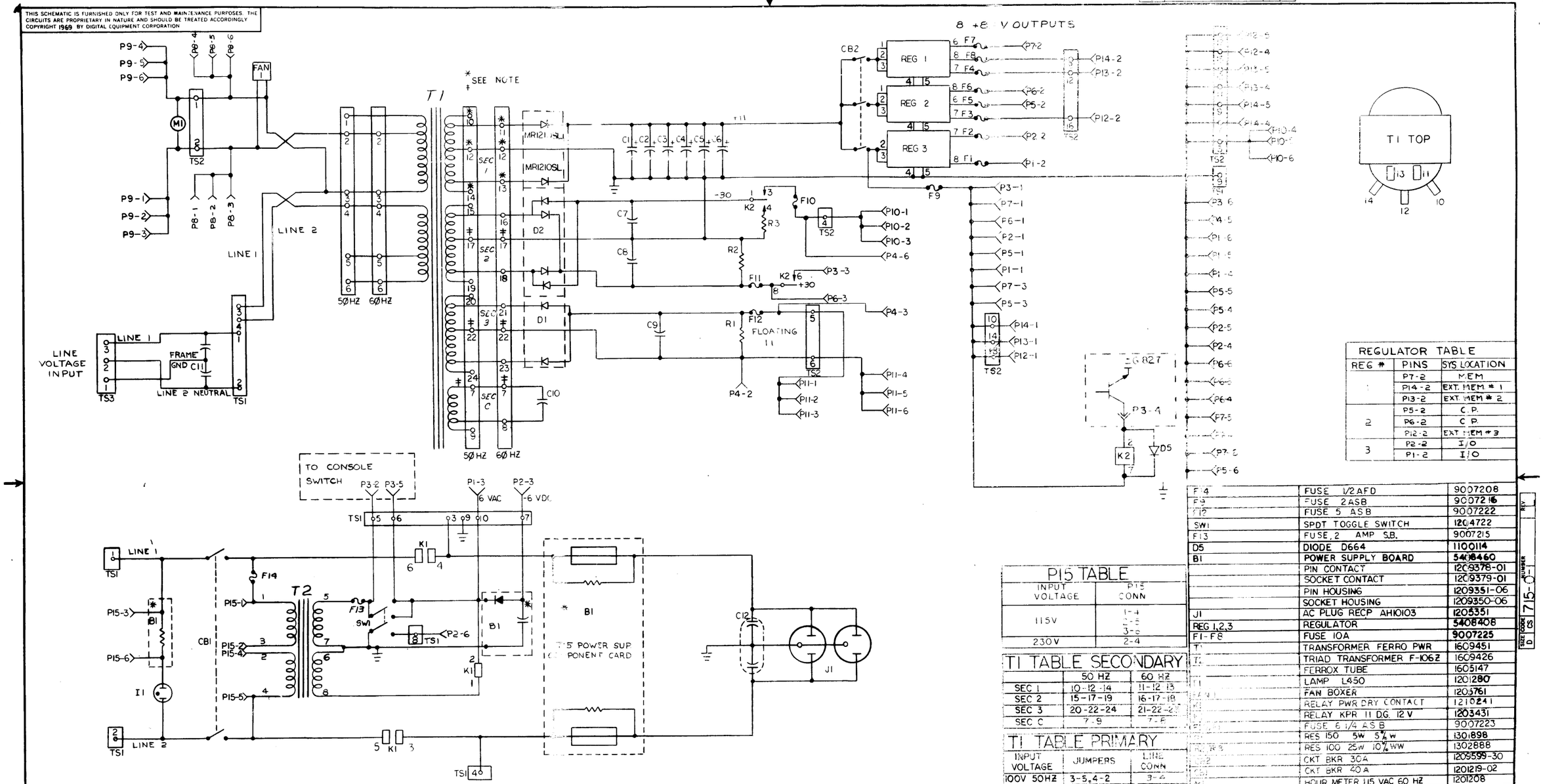
DRN.	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE
FIRST USED ON	MM15
SCALE	
SHEET 1 OF 1	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
PARITY BIT

SIZE	CODE	NUMBER	REV.
D	BS	MM15-0-24	00

DIST



NOTE:

* INDICATES LUGS ON TRANSFORMER NOT CONNECTED TO JONES STRIP.

‡ INDICATES WIRES FROM TRANSFORMER NOT CONNECTED TO JONES STRIP.

REGULATOR TABLE		
REG #	PINS	SYS LOCATION
1	P7-2	MEM
	P14-2	EXT. MEM # 1
	P13-2	EXT. MEM # 2
2	P5-2	C.P.
	P6-2	C.P.
	P12-2	EXT. MEM # 3
3	P2-2	I/O
	P1-2	I/O

P15 TABLE	
INPUT VOLTAGE	PT5 CONN
115V	1-4, 2-5, 3-6
230V	2-4

TI TABLE SECONDARY		
	50 HZ	60 HZ
SEC 1	10-12-14	11-12-13
SEC 2	15-17-19	16-17-18
SEC 3	20-22-24	21-22-23
SEC C	7-9	7-8

TI TABLE PRIMARY		
INPUT VOLTAGE	JUMPERS	LINE CONN
100V 50HZ	3-5, 4-2	3-2
115V 50HZ	3-6, 4-1	3-1
200V 50HZ	2-5	3-5
215V 50HZ	2-6	3-4
230V 50HZ	1-6	3-6
120V 60HZ	3-5, 2-4	3-4
240V 60HZ	2-5	3-5
50 HZ AUTO TAP	8 AMP	1-3
60 HZ AUTO TAP	10 AMP	1-3

REF DESIGNATION	DESCRIPTION	PART NO.
F4	FUSE 1/2 AFD	9007208
F9	FUSE 2 ASB	9007216
F10	FUSE 5 ASB	9007222
SW1	SPDT TOGGLE SWITCH	1204722
F13	FUSE, 2 AMP S.B.	9007215
D5	DIODE D664	1100114
B1	POWER SUPPLY BOARD	5408460
	PIN CONTACT	1209378-01
	SOCKET CONTACT	1209379-01
	PIN HOUSING	1209351-06
	SOCKET HOUSING	1209350-06
J1	AC PLUG RECP AH10103	1205351
REG 1,2,3	REGULATOR	5408408
F1-F8	FUSE 10A	9007225
T2	TRANSFORMER FERRO PWR	1609451
T1	TRIAD TRANSFORMER F-1062	1609426
	FERROX TUBE	1605147
I1	LAMP L450	1201280
	FAN BOXER	1203761
K1	RELAY PWR DRY CONTACT	1210241
	RELAY KPR 11 DG 12 V	1203431
F14	FUSE 6 1/4 AS B	9007223
R1	RES 150 5W 5% WW	1301898
R2,R3	RES 100 25W 10% WW	1302888
CB2	CKT BKR 30A	1209599-30
CB1	CKT BKR 40A	1201219-02
M1	HOUR METER 115 VAC 60 HZ	1201208
D3,D4	DIODE 80A 50V MR1210	1109425
D2	DIODE 10A-100V	1105397
D1	DIODE 10A-50V	1102933
C11,C12	CAP .1 MFD 440 VDC	1002153
C10 (SUPPLIED W/TRANS)	CAP 18 MFD 600 VDC	
C7,C8,C9	CAP 57,000 MFD 50VDC	1004875
C1,C2,C3,C4,C5,C6	CAP 160,000 MFD 20VDC	1004874

PARTS LIST

TRANSISTOR & DIODE CONVERSION CHART

DRN	DATE
CHK	DATE
ENG	DATE
PROD	DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE 715 POWER SUP.

SIZE D | CODE CS | NUMBER 715-0-1 | REV L

PRINTED CIRCUIT REV

SHEET 1 OF 2

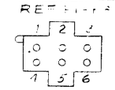
SIZE CODE D CS | 715-0 NUMBER | REV L

DEC FORM NO. DRD 101

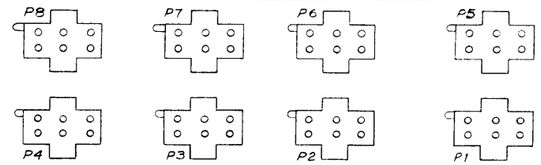
P. CON-1-0[illegible] AND PANELS

PIN TABLE

TOP VIEW

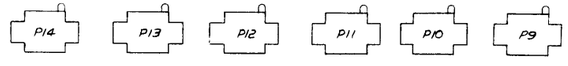


APPLIES FOR 120V 60~ INPUT ONLY



PINS	LEVEL	PINS	LEVEL	PINS	LEVEL
P1-1	+11V	P2-1	+11V	P3-1	+11V
P1-2	+8.1V	P2-2	+8.1V	P3-2	6V A-C
P1-3	6V A-C	P2-3	-6V	P3-3	+30V
P1-4	GND	P2-4	GND	P3-4	GND
P1-5	GND	P2-5	GND	P3-5	CON. SW.
P1-6	GND	P2-6	LOCK	P3-6	GND
P4-2	+11V FLOATING	P5-1	+11V	P6-1	+11V
P4-3	-11V FLOATING	P5-2	+8.1V	P6-2	+8.1V
P4-5	GND	P5-3	+11V	P6-3	+30V
P4-6	-30V	P5-4	GND	P6-4	GND
		P5-5	GND	P6-5	GND
		P5-6	GND	P6-6	GND
P7-1	+11V	P8-1	HOT	P9-1	HOT
P7-2	+8.1V	P8-2	HOT	P9-2	HOT
P7-3	+11V	P8-3	HOT	P9-3	HOT
P7-4	GND	P8-4	NEUTRAL	P9-4	NEUTRAL
P7-5	GND	P8-5	NEUTRAL	P9-5	NEUTRAL
P7-6	GND	P8-6	NEUTRAL	P9-6	NEUTRAL
P10-1	-30V	P11-1	FLOATING -11V	P12-1	+11V
P10-2	-30V	P11-2	FLOATING -11V	P12-2	+8.1V
P10-3	-30V	P11-3	FLOATING -11V	P12-4	GND
P10-4	GND	P11-4	FLOATING +11V	P12-5	GND
P10-5	GND	P11-5	FLOATING +11V		
P10-6	GND	P11-6	FLOATING +11V		
P13-1	+11V	P14-1	+11V		
P13-2	+8.1V	P14-2	+8.1V		
P13-4	GND	P14-4	GND		
P13-5	GND	P14-5	GND		

REF.
P9-P14
TOP VIEW



QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

REVISIONS	REV.	CHANGE NO.	CHK

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN. KELLY	DATE 6-24-69	
CHK'D. MADDEN	DATE 7-18-69	
ENG. O'CONNOR	DATE	
PROJ. ENG. O'CONNOR	DATE	
PROD. LASKEY	DATE 7-18-69	
FIRST USED ON		
SCALE		
SHEET 2 OF 2		

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

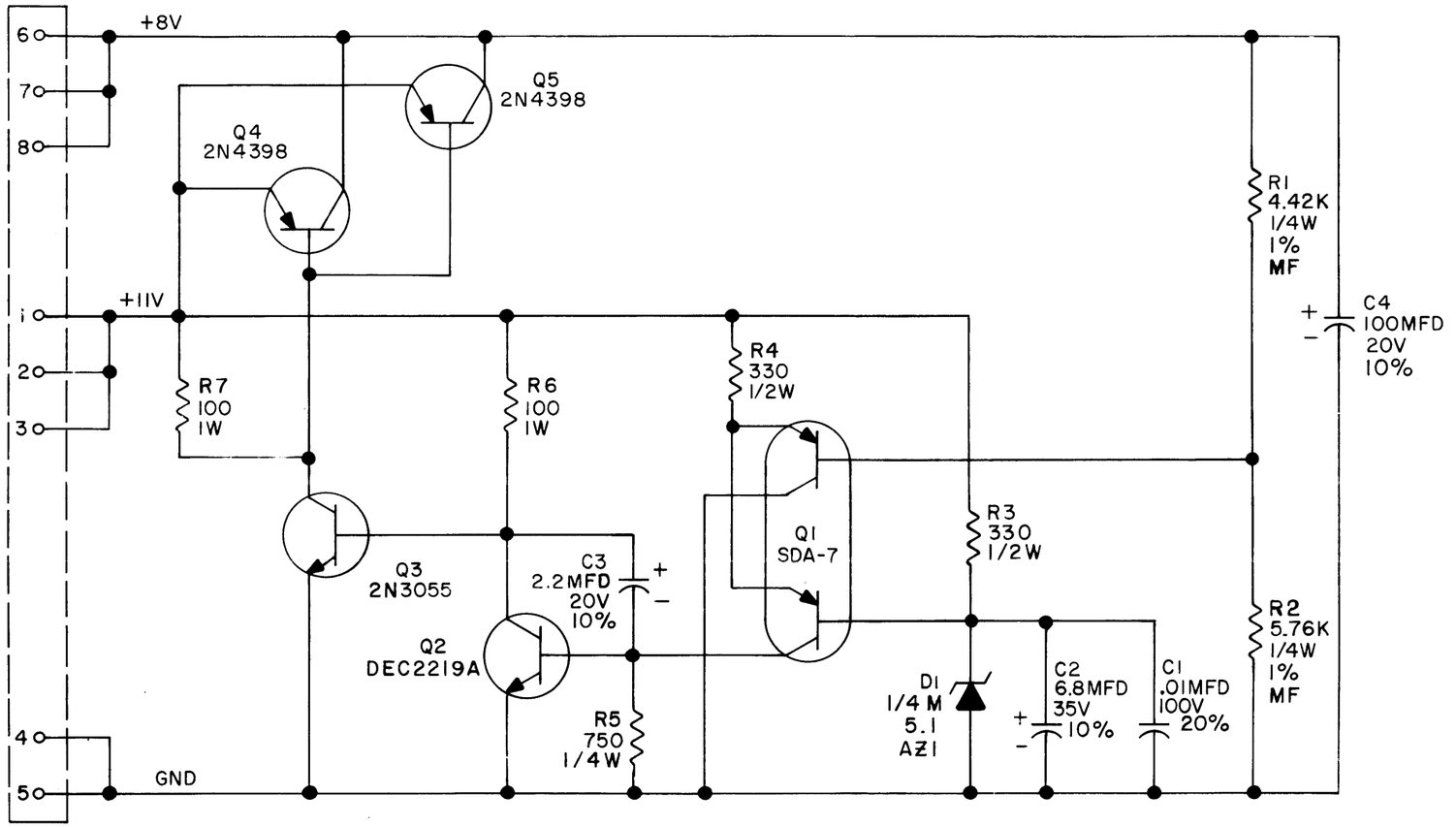
TITLE

715 POWER SUPPLY

SIZE	CODE	NUMBER	REV.
D	CS	715 0 1	L

DIST.

DEC FORM NO. DRD 102A



UNLESS OTHERWISE INDICATED:
RESISTORS ARE 5%

REVISIONS			
REV.	B	C	
CHG NO.	00001	00002	
CHK	MP	[illegible]	

DRN.	BUTLER	DATE 8/1/69
CHK'D	[signature]	DATE 8/26/69
ENG.	[signature]	DATE 12/4/69
PROD.		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA
1/4M 5.1 AZI	SAME		
DEC2219	2N2219		
2N4398	NONE		
2N3055	NONE		
SDA-7	SAME		

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

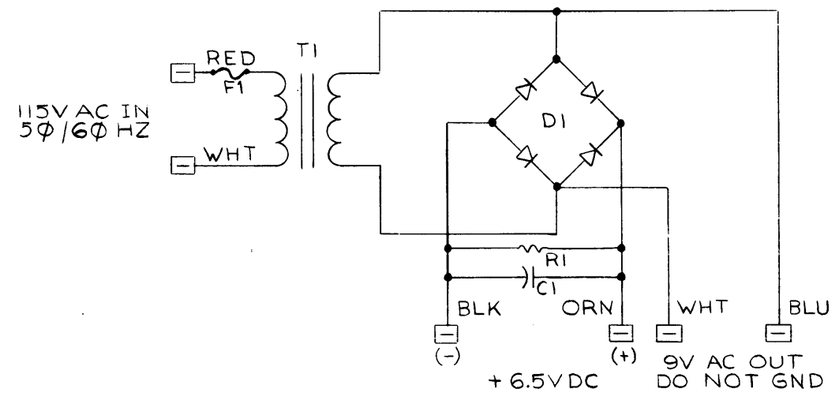
TITLE BULK REGULATOR
5408408

SIZE	CODE	NUMBER	REV.
B	CS	5408408-0-1	C

PRINTED CIRCUIT REV. B

DEC FORM NO.
DRB 102

DIST; 304, 424, 436, 3



REF DESIGNATION	DESCRIPTION	PART NO.
	PARTS LIST	
D1	DIODE PACK DM-2	1105397
T1	XMFR*F64-U TRIAD	1609588
	PARTS LIST	D-UA-716-0-0
C1	18000MFD 10V DC CAP	1009437
R1	5ohm 25W RES	1300165
F1	1/2 AMP S.B. FUSE	9007209

PARTS LIST

REVISIONS	CHK	CHG NO.	REV.
716000001 A			
RE DR/RE V			
WAS 'B' SIZE			
DR 716004 B			
CH 716006 C			

DRN. RAIMONDI	DATE	6-18-69
CHK'D HEALY	DATE	6-25-69
ENG. VONADA	DATE	7-21-69
PROD. ANTONUCCIO	DATE	7-25-69

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE CIRCUIT SCHEMATIC 716

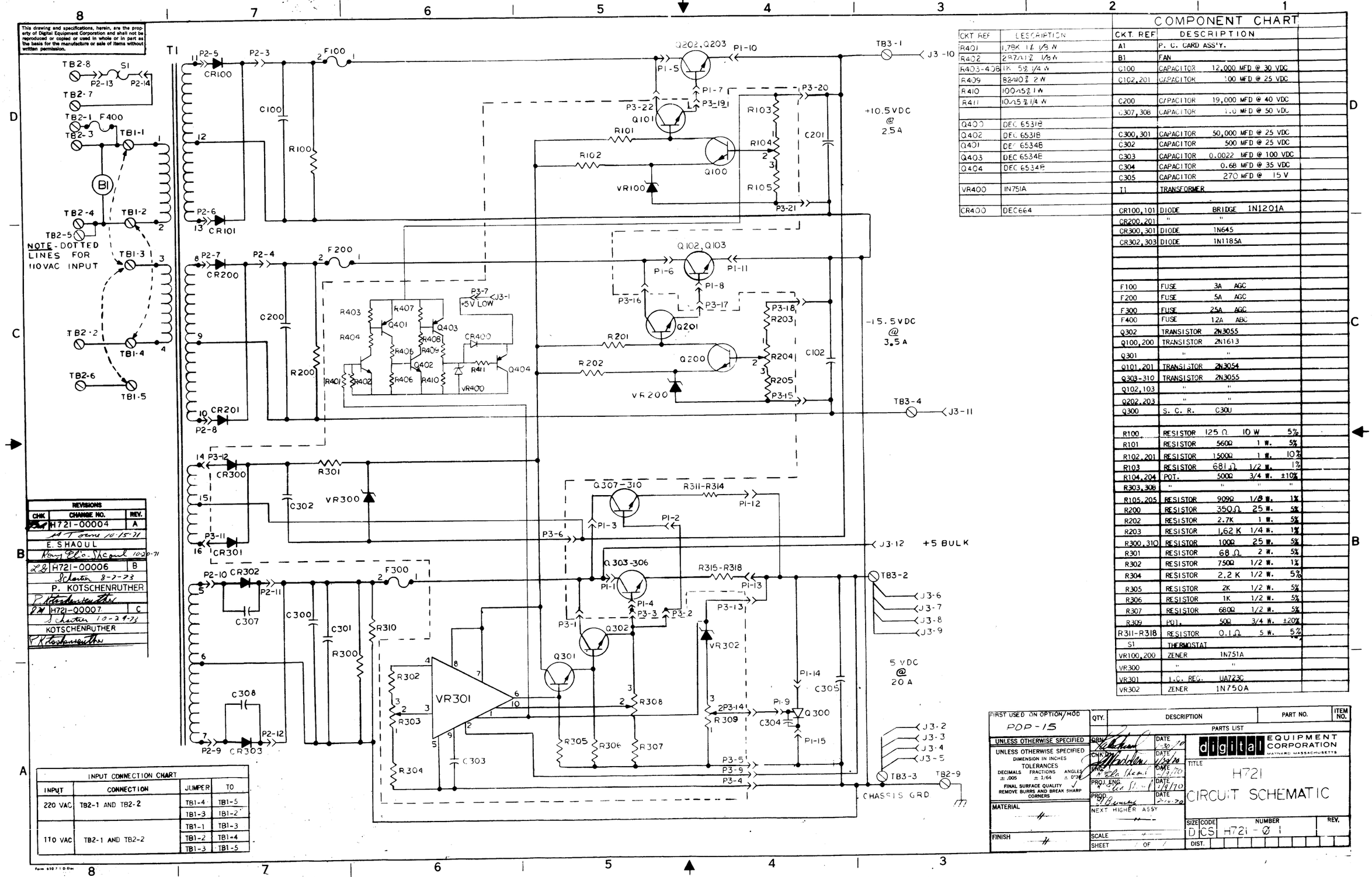
SIZE	CODE	NUMBER	REV.
C	CS	716-0-1	C

PRINTED CIRCUIT REV.

DEC FORM NO. DRC 102

Pink

SIZE C | CODE CS | NUMBER 716-0-1 | REV. C



CKT REF	DESCRIPTION
R401	1.78K 1% 1/8 W
R402	287.1Ω 1% 1/8 W
R403-408	1K 5% 1/4 W
R409	82Ω 5% 2 W
R410	100Ω 5% 1 W
R411	10Ω 5% 1/4 W
Q400	DEC 6531B
Q402	DEC 6531B
Q401	DEC 6534B
Q403	DEC 6534B
Q404	DEC 6534B
VR400	IN751A
CR400	DEC664

COMPONENT CHART

CKT. REF	DESCRIPTION
A1	P. C. CARD ASS'Y.
B1	FAN
C100	CAPACITOR 12,000 MFD @ 30 VDC
C102, 201	CAPACITOR 100 MFD @ 25 VDC
C200	CAPACITOR 19,000 MFD @ 40 VDC
C307, 308	CAPACITOR 1.0 MFD @ 50 VDC
C300, 301	CAPACITOR 50,000 MFD @ 25 VDC
C302	CAPACITOR 500 MFD @ 25 VDC
C303	CAPACITOR 0.0022 MFD @ 100 VDC
C304	CAPACITOR 0.68 MFD @ 35 VDC
C305	CAPACITOR 270 MFD @ 15 V
T1	TRANSFORMER
CR100, 101	DIODE BRIDGE 1N1201A
CR200, 201	" "
CR300, 301	DIODE 1N645
CR302, 303	DIODE 1N1185A
F100	FUSE 3A AGC
F200	FUSE 5A AGC
F300	FUSE 25A AGC
F400	FUSE 12A ABC
Q302	TRANSISTOR 2N3055
Q100, 200	TRANSISTOR 2N1613
Q301	" "
Q101, 201	TRANSISTOR 2N3054
Q303-310	TRANSISTOR 2N3055
Q102, 103	" "
Q202, 203	" "
Q300	S. C. R. C30U
R100	RESISTOR 125 Ω 10 W 5%
R101	RESISTOR 560Ω 1 W. 5%
R102, 201	RESISTOR 1500Ω 1 W. 10%
R103	RESISTOR 681Ω 1/2 W. 1%
R104, 204	POT. 500Ω 3/4 W. ±10%
R303, 306	" " " "
R105, 205	RESISTOR 909Ω 1/8 W. 1%
R200	RESISTOR 350Ω 25 W. 5%
R202	RESISTOR 2.7K 1 W. 5%
R203	RESISTOR 1.62 K 1/4 W. 1%
R300, 310	RESISTOR 100Ω 25 W. 5%
R301	RESISTOR 68 Ω 2 W. 5%
R302	RESISTOR 750Ω 1/2 W. 1%
R304	RESISTOR 2.2 K 1/2 W. 5%
R305	RESISTOR 2K 1/2 W. 5%
R306	RESISTOR 1K 1/2 W. 5%
R307	RESISTOR 680Ω 1/2 W. 5%
R309	POT. 50Ω 3/4 W. ±20%
R311-R318	RESISTOR 0.1Ω 5 W. 5%
S1	THERMOSTAT
VR100, 200	ZENER 1N751A
VR300	" "
VR301	I.C. REG. UA723C
VR302	ZENER 1N750A

REVISIONS		
CHK	CHANGE NO.	REV.
	H721-00004	A
	E. SHAOUL	
		B
	H721-00006	B
	P. KOTSCHENRUTHER	
	H721-00007	C
	KOTSCHENRUTHER	

INPUT CONNECTION CHART			
INPUT	CONNECTION	JUMPER	TO
220 VAC	TB2-1 AND TB2-2	TB1-4	TB1-5
		TB1-3	TB1-2
110 VAC	TB2-1 AND TB2-2	TB1-1	TB1-3
		TB1-2	TB1-4
		TB1-3	TB1-5

FIRST USED ON OPTION/MOD: PDP-15

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

PARTS LIST

QTY.	DESCRIPTION	PART NO.	ITEM NO.

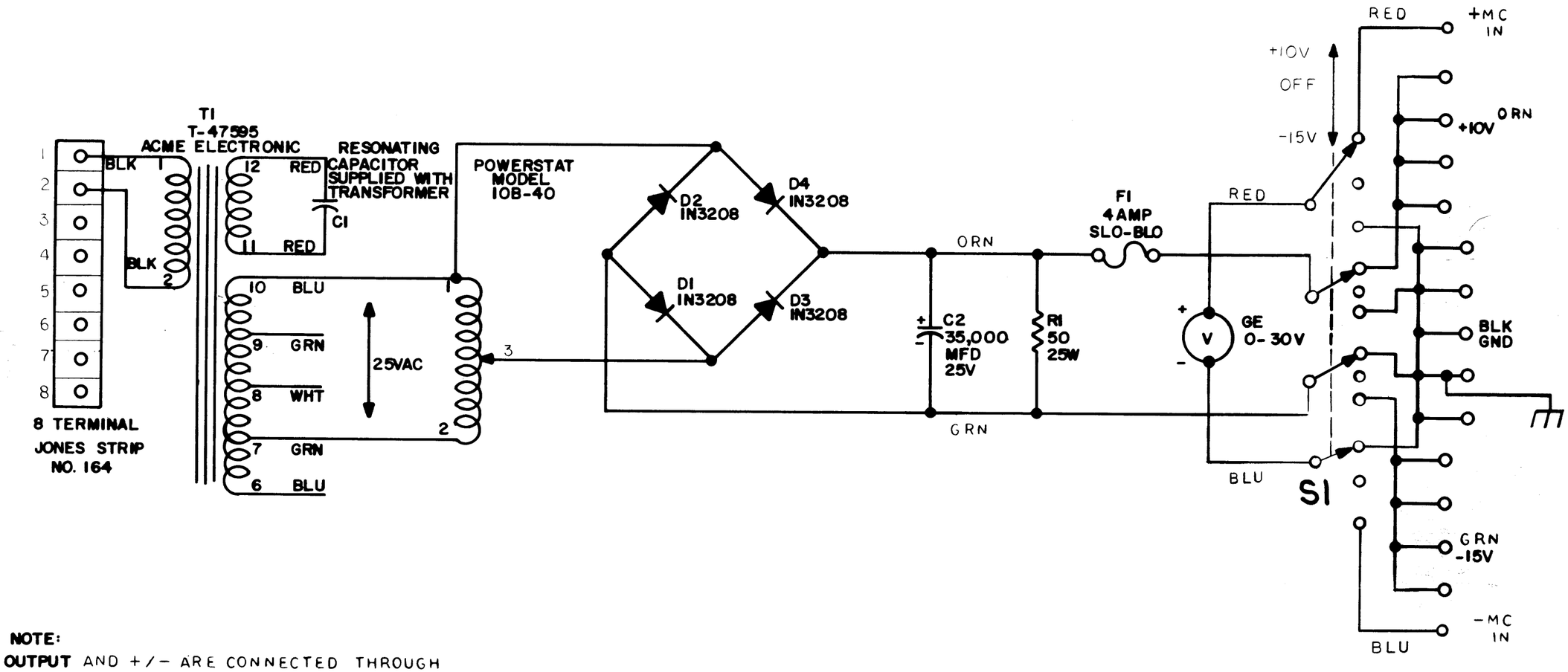
DRN — DATE 1-30-70
CHK'D — DATE 1-30-70
ENG — DATE 2-4-70
PROJ. ENG. — DATE 2-16-70
PROD — DATE 2-20-70
NEXT HIGHER ASSY —
SCALE —
SHEET OF

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
H721
CIRCUIT SCHEMATIC

SIZE D | CODE | NUMBER DCS H721-01 | REV.
DIST.

Form 650 7 1 0-Elec



NOTE:
OUTPUT AND +/- ARE CONNECTED THROUGH **HEYMAN TAB TERMINALS**

FOR PARTS LIST REFER TO DWG
A-PL-734D-0-0

REVISIONS			
REV.	A		
CHG NO	00001		
CHK			

DRN.		DATE 11/14/69
CHK'D.		DATE 12-8-69
ENG.		DATE 12/9/69
PROD.		DATE

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: VARIABLE POWER SUPPLY 734D

SIZE	CODE	NUMBER	REV.
B	CS	734D-0-1	A

PRINTED CIRCUIT REV.

DEC FORM NO.
DRB 102

PINK

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK
DATE 11/13/68
ENG
DATE 12/9/69
CHECKED Kahusha
DATE 12-8-68
PROD
DATE
SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO./PART NO. CL BASIC VAR.	DESCRIPTION	QTY/VAR 734D	734E	UNIT COST	UNIT QUANTITY	QUANTITY ISSUED
REF	B-CS-734D-Ø-1	VARIABLE POWER SUPPLY 734D	1	-			
REF	B-CS-734E-Ø-1	VARIABLE POWER SUPPLY 734E	-	1			
1	E-MD-5303671-0-0	CHASSIS 734D & E	1	1			
2	9007236	BUSH JUN TERM #DC-202-1 (GRN) HEYMAN	4	4			
3	9007238	CONN TAP #T-202-S HEYMAN	15	15			
4	9007232	BUSH JUN TERM #DC-202-1 (BLU) HEYMAN	1	1			
5	9006056-1	SCR MACH HD PAN #1/4-20 X 1/2 LG SST	4	4			
6	9007889	NUT KEPS #1/4-20 SST	4	4			
7	B-MD-5303355-0-0	PROTECTION PLATE (8 TERM)	1	1			
8	9006023-1	SCR MAC HD PAN #6-32 X 1" LG SST	2	2			
9	9006833	WASH INT TOOTH #6 HOLE	6	6			
10	9006851	SPACER 1/4 AF X 1/2 LG X #6-32	2	2			
11	9006024-1	SCR MAC HD PAN #6-32 X 1/2 LG SST	13	13			
12	9006560	NUT KEPS #6-32 SST	6	6			
13	1100138	DIODE #1N3208 MOTOROLA	4	4			
14	9006994	FUSE EXTRACTOR POST #342001 "A" LITTLE FUSE	1	1			
15	9007229	FUSE SLO-BLO TYPE MDX-4AMP FUSETRON	1	1			
16	A-DC-5303671-0-0	DECALS 734D POWER SUPPLY	1	-			
17	9007615	CONN SOLDERLESS #3000C27 INS ARK-LESS	2	2			
18	1000098	CAP #FA 792-1LP-35000 MFD 25WV C.D.	1	1			
19	9006023-1	SCR MAC HD PAN 10-32 X 1/2 LG SST	6	6			
20	9006563	NUT KEPS #10-32 SST	2	2			

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO
VARIABLE POWER SUPPLY 734D	D-UA-734D-Ø-Ø	A	PL	734D-Ø-Ø	A	734D - 00002
	SHEET 1 OF 3	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK
DATE 11/13/68
ENG
DATE 12/9/69
CHECKED Kahusha
DATE 12-8-68
PROD
DATE
SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO./PART NO. CL BASIC VAR.	DESCRIPTION	QTY/VAR 734D	734E	UNIT COST	UNIT QUANTITY	QUANTITY ISSUED
21	12-9-13	SW TOGGLE 4PDT 3POS C.H.	1	1			
22	1100281	VAR AUTO XFMR #10B-40 SUPERIOR ELECT	1	1			
23	1100291	XFMR DEC #130-16-1025 TRIADE	1				
24	A-DC-5303670-0-0	DECALS 734E POWER SUPPLY	-	1			
25	1201.82	METER D.C. TYPE DO-91 #518 X 4 G.E.	1	1			
26	1201.69	KNOB #1930-2 H. DAVIS MOLD CO.	1	1			
27	9007231	BUSH JUN TERM #DC-202-1 (RED) HEYMAN	1	1			
28	9007234	BUSH JUN TERM #DC-202-1 (ORN) HEYMAN	4	4			
29	9007237	BUSH JUN TERM #DC-202-1 (BLK) HEYMAN	5	5			
30	1300212	RES FIXED #25F50 500 OHMS 25W LEONARD	1	1			
31	9007658-1	SCR MAC HD PAN #6-32 X 2 3/4 LG SST	1	1			
32	B-MD-5302605-0-0	JUNCTION TERMINAL BRACKET	1	1			
33	9006852	SPACER 1/4 AF X 1" LG X #6-32	4	4			
34	9107[illegible]	BUSS WIRE #14 AWG STRD	A/R	A/R			
35	9107[illegible]	WIRE #14 AWG STRD TEF INS BLK	A/R	A/R			
36	9107[illegible]	WIRE #14 AWG STRD TEF INS RED	A/R	A/R			
37	9107[illegible]	WIRE #14 AWG STRD TEF INS ORN	A/R	A/R			
38	9107370-[illegible]	WIRE #14 AWG STRD TEF INS GRN	A/R	A/R			
39	9107[illegible]	WIRE #14 AWG STRD TEF INS BLU	A/R	A/R			
40	9107[illegible]	TY-SHRING TUB 1/2 LG RED	A/R	A/R			
41	9007[illegible]	TIE WRAP SST-2-B PANDUIT	A/R	A/R			
42	9008[illegible]	CONN #2104 SHAKEPROOF	3	3			

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO
VARIABLE POWER SUPPLY 734D	D-UA-734D-Ø-Ø	A	PL	734D-Ø-Ø	A	
	SHEET 2 OF 3	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

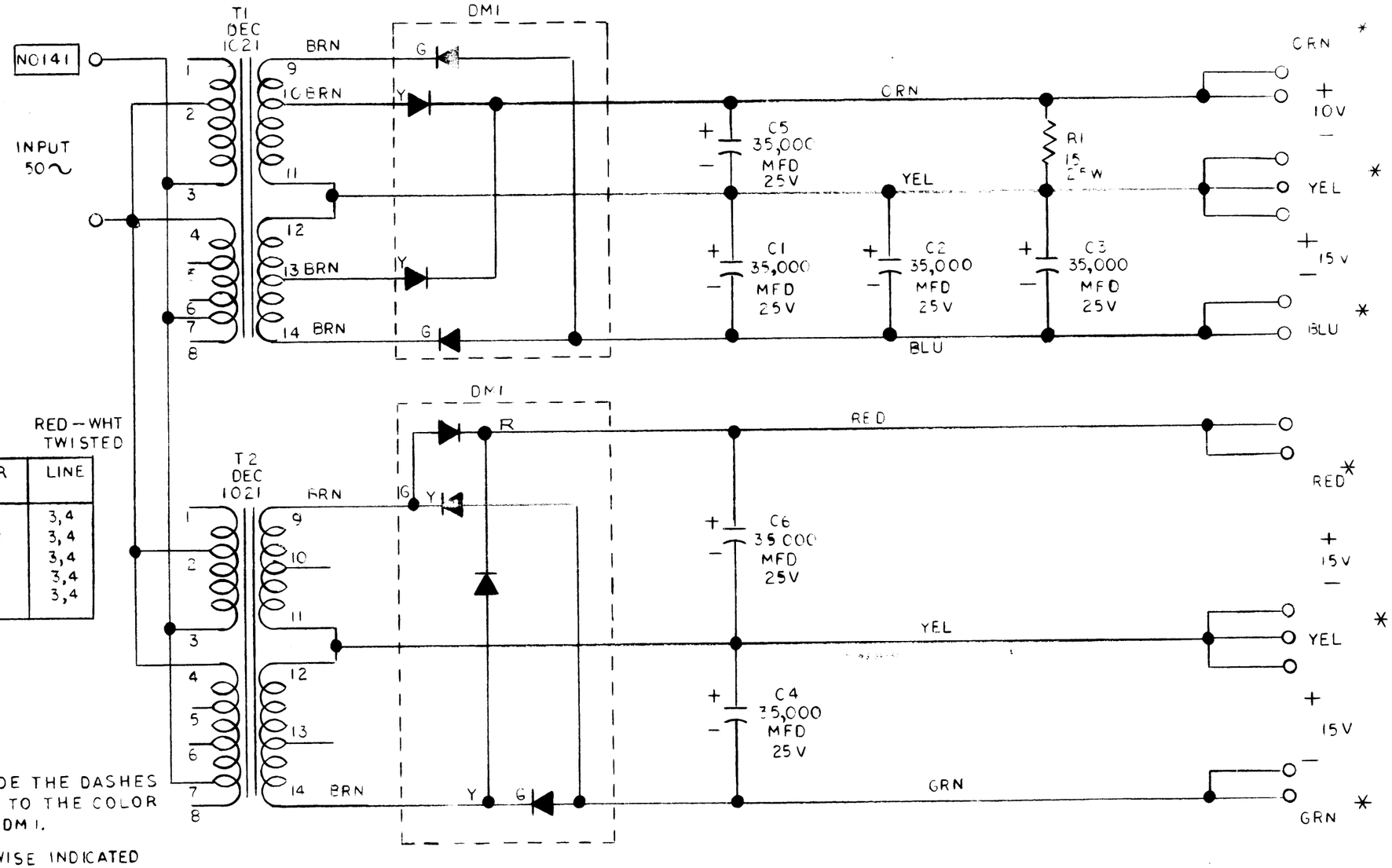
PARTS LIST

MADE BY KEN GULICK	CHECKED [illegible]	SECTION 1
DATE 11/13/69	DATE 12/8/69	
ENG [signature]	PROD	ISSUED SECT. 1
DATE 12/9/69	DATE	

ITEM NO.	DWG NO./PART NO. CL BASIC VAR.	DESCRIPTION	QTY/VAR 734D	734E			UNIT COST		UNIT QUANTITY	QUANTITY ISSUED
43	9007919	CONN SOLDERLESS #50905 ARKLES	6	6						
44	9007925	CONN SOLDERLESS#3000-3121A ARKLES	2	2						
45	9007595	SOLDER ALPHA 63/37	A/R	A/R						
46	9107370-11	WIRE #14 AWG STRD TEF INS (BRN)	A/R	A/R						
47	9107370-99	WIRE #14 AWG STRD TEF INS (WHT)	A/R	A/R						
48	1602545	XFMR DEC 16-1026	-	1						
49	MD-C-01558	CAPACITOR MTG BRACKET	1	1						
50	9006674	WASH 916-CORE 2A WARD LEN	1	1						
51	9006831	SPACER 1/2 AF X 1/2 LG X #10 HOLE	1	1						
52	A-DC-5308703-0-0	LABLE PWR SUPPLY 734E	1	1						
53	9006635	WASH INT TOOTH #10 HOLE	4	4						
54	1202356	SCR SHOULDER #10-32 x 9/32 LG	4	4						
55	D-MD-5309646-0-1	SHIELD PLEXIGLAS	1	1						
56	9009062	SPACER HEX 1/2AF x 5 LG x #10-32	4	4						

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
VARIABLE POWER SUPPLY 734D	D-UA-734D-Ø-Ø	A	PL	734D-Ø-Ø	A	
	SHEET 3 OF 3	DIST.	G			

DEC FORM NO. 16-1027
DRA 123



RED — WHT TWISTED

NOTE:

INPUT VOLTAGE	JUMPER	LINE
112.5V 10%	2-4,3-7	3,4
123.5V 10%	1-4,3-8	3,4
195 V 10%	1-5	3,4
220V 10%	1-6	3,4
235 V 10%	2-8	3,4

NOTE:

1. LETTERS INSIDE THE DASHES CORRESPONDS TO THE COLOR DOTS ON THE DM1.

UNLESS OTHERWISE INDICATED
* HEYMAN MFG CO TAB-TERMINAL IN PLASTIC BUSHING

CINCH JONES TERMINAL STRIP

REVISIONS				
CHK	CHG NO.	REV		
	799A-00002	A	J. Pontas 12-10-68	GERELDS

DRN. P. LeBlanc	DATE 10-18-68	
CHK'D EAM	DATE 11-5-68	
ENG.	DATE 11-7-68	
PROD.	DATE	

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
POWER SUPPLY 799-A

SIZE	CODE	NUMBER	REV.
B	CS	799-A-1	A

PRINTED CIRCUIT REV.

DIST. PINK

FC FORM NO. 3 103

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY STAN POITRAS	CHECKED E.A.MILEWSKI	SECTION
DATE 10/30/68	DATE 11/5/68	1
ENG	PROD	ISSUED SECT.
DATE	DATE	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION 799-A-0
	B-CS-799-A-1	POWER SUPPLY-799-A	
1	D-IA-7406925-0-0	CHASSIS (798-799)	1
2	D-MD-728-0-1-0-3	CAP HOLD DOWN BRACKET	2
	9006509	POP RIVET	4
4	9006565	KEPS HEX NUT #10-32 SST	4
5	C-MD-728A-0-1-2	JUNCTION TERMINAL BRACKET	2
6	9007238	TAB T-202-S	14
7	9007236	JUNCTION TERM BUSH DC-202-2 GRN	1
8	9007233	JUNCTION TERM BUSH DC-202-2 YEL	2
9	9007231	JUNCTION TERM BUSH DC-202-2 RED	1
10	A-DC-7406953-0-0	779-A-POWER SUPPLY (LABEL)	1
11	1300181	FIXED RESISTOR 15-OHM 25WF15	1
12	9006050	SCR PH P#6-32x2 3/4 LG SST	1
13		CENTERING WASHER #916 CORE TYPE 2A	2
		(WARD LEONARD)	
14	9006831	SPACER 1/2 OD x 3/16 ID x 1/2 LG	1
15	9107305	HY SHRINK TUBE RED #14x1/2 LG	AR
16	9007649	WASH EXT TOOTH #6	9
17	9007234	JUNCTION TERMINAL BUSH #DC-202-2 ORN	1
18	9007232	JUNCTION TERMINAL BUSH #DC -202-2 BLU	1
19	9006586	NUT C-30110-1032-4 TINNERMAN	8
20	9006073	SCR PH TRUSS P #10-32x1/2 LG SST	8

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY 799-A	D-UA-799-A-0	A	PL	799-A-0	A	00002
	SHEET 1 OF 2	DIST.	6	434	324	432	436

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

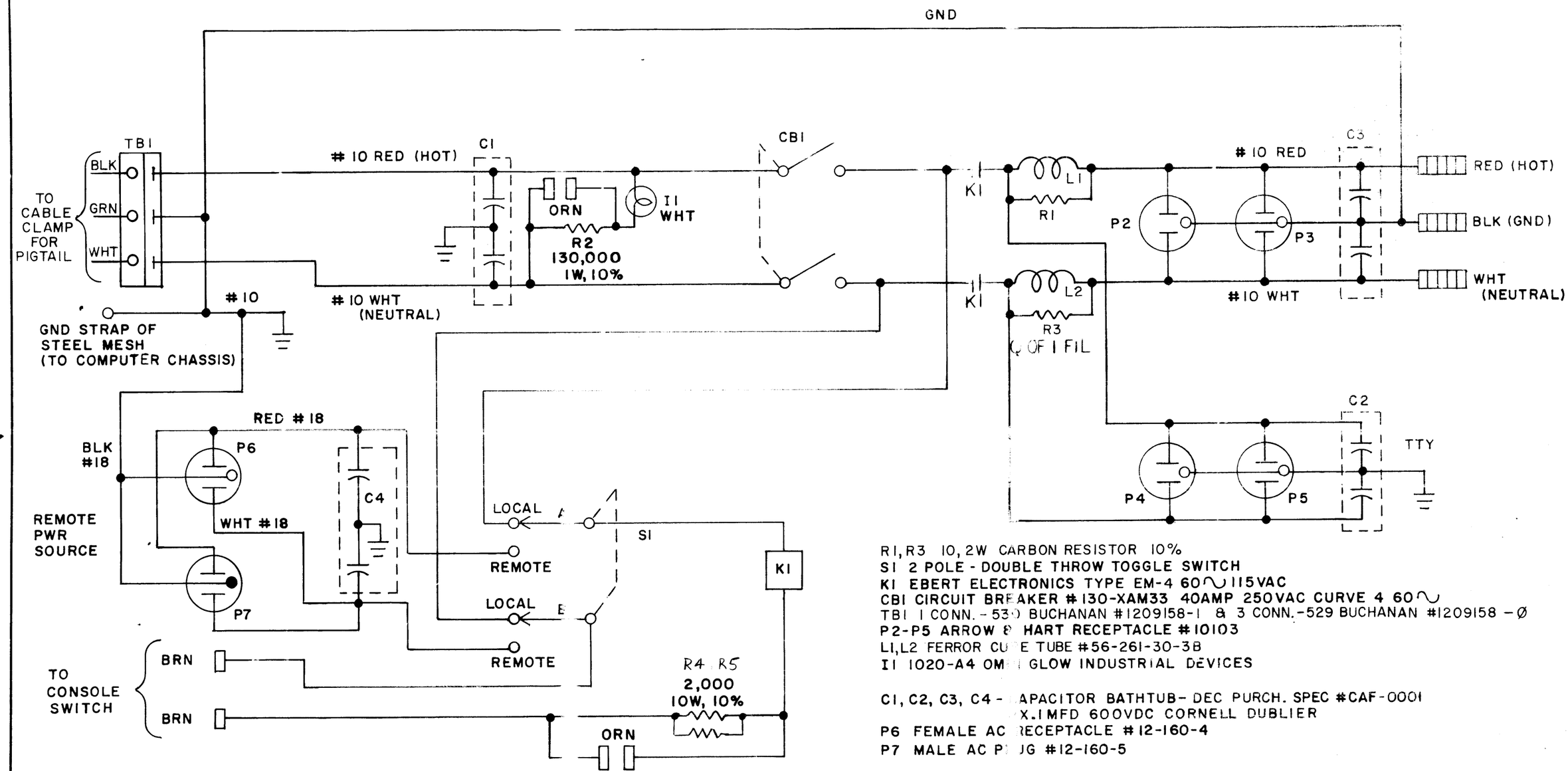
PARTS LIST

MADE BY STAN POITRAS	CHECKED E.A.MILEWSKI	SECTION
DATE 10/30/68	DATE 11/5/68	1
ENG	PROD	ISSUED SECT.
DATE	DATE	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION 799-A-0
21	9006444	SLOTTED HEX HD SEMS SCR #10-32x3/8 LG	6
22	9007651	LOCKWASHER EXT #10	6
23	1000098	CAPACITOR, 10-35K MFD 25V DC	6
24	9007035	CATERPILLAR GROMMET 7-3/4" LG	2
25	161733	TRANSFORMER POWER	2
26	9006776	SOLDERLESS CONN	23
27	9007132	JUMPER #141J (HOWARD B. JONES)	2
28	9006022	SCR PH H PAN #6-32x3/8 LG SST	4
29	9006656	WASHER #6	8
30	9006862	SPACER 1/4 OD x #6 HOLE 1" LONG	4
31	9006025	SCR PH H PAN #6-32x5/8 LG SST	4
32	9006633	WASH INT TOOTH #6	4
33	9006997	AMP TERMINAL	50
34	1102933	DM-1 RECTIFIER	2
35	9006029-1	SCR PH H #6-32x1¼LG	4
36	9007649	#6 EXT TOOTH LOCKWASHER	12

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY 799-A	D-UA-799-A-Ø	A	PL	799-A-0	A	00002
	SHEET 2 OF 2	DIST.	6								

DEC FORM NO.
DRA 110



R1, R3 10, 2W CARBON RESISTOR 10%
SI 2 POLE - DOUBLE THROW TOGGLE SWITCH
K1 EBERT ELECTRONICS TYPE EM-4 60∿115VAC
CB1 CIRCUIT BREAKER #130-XAM33 40AMP 250VAC CURVE 4 60∿
TB1 1 CONN. - 530 BUCHANAN #1209158-1 & 3 CONN.-529 BUCHANAN #1209158-Ø
P2-P5 ARROW & HART RECEPTACLE #10103
L1, L2 FERROR CUBE TUBE #56-261-30-3B
I1 1020-A4 OMEGLOW INDUSTRIAL DEVICES

C1, C2, C3, C4 - CAPACITOR BATHTUB- DEC PURCH. SPEC #CAF-0001
.1MFD 600VDC CORNELL DUBLIER
P6 FEMALE AC RECEPTACLE #12-160-4
P7 MALE AC PLUG #12-160-5

REVISIONS	REV	CHG NO	CHK
	A	6	
		10-14	

DRN	M. Miller	DATE 2-17-69
CHK		DATE
ENG		DATE 2-25-69
PROD		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: POWER CONTROL 841B

SIZE	CODE	NUMBER	REV.
B	CS	841-B-1	6

PRINTED CIRCUIT REV

DEC FORM NO. ORB 102

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY K. GULICK	CHECKED DICK REILLY	SECTION
DATE 9/13/68	DATE 2/19/69	1
ENG [illegible]	PROD [illegible]	ISSUED SECT.
DATE [illegible]	DATE 3/[illegible]/69	1

QUANTITY VARIATION

ITEM NO	DWG NO PART NO.	DESCRIPTION	841-B	841-C
1	E-IA-5308295-0-0	CHASSIS-841-B	1	1
2	9007231	BUSH TERM DC-202-1 RED	5	5
3	9007238	TAB SOLDER T-202-S	15	15
4	9007237	BUSH TERM DC-202-1 BLK	5	5
5	9007235	BUSH TERM DC-202-1 WHT	5	5
6	9107560-5	WIRE #14 AWG SOLID BUSSING	A/R	A/R
7	B-IA-5304373-0-0	RECEPTACLE ASSEMBLY	2	2
8	9006024-1	SCR PHL H PAN 6-32 x ½ SST	10	10
9	9006633	WASH INT TOOTH LOCK	12	12
10	10-02153	CAP-BATH 1000VDC 440 AC 2 x .1 MFD	4	4
11	9006022-1	SCR PHL H PAN 6-32 x 3/8 SST	18	18
12	9006560	NUT KEPS ~~HEX~~ 6-32	16	16
13	9007089	CLAMP 3/4 NYLON	1	1
14	1209158-0	BARRIER STRIP 3 BUCHANNAN 529 MD	3	3
15	9006556	WASH FLAT #6	2	2
16	9008283	ARK #50918-1	55	55
17	9007113	TERMINAL #1290 [illegible]MP	2	2
18	1201219-02	CIR BREAKER AM33MG6 40 AMP 250V	1	1
19	12-05303	LAMP #1020A4 (WHT) OMNI GLOW	1	1
20	1204816	SW TOGGLE 7592K9 CUTLER HAM	1	1
21	9007633	BUSH TERM DC-202-1 BRN	2	2
22	9007239	TAB DOUB MALE T-202-D	6	6

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV
POWER CONTROL 841-B&C	D-UA-841B	A	PL	841-B-Ø	K
	SHEET 1 OF 3	DIST.			

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY K. GULICK	CHECKED D. REILLY	SECTION
DATE 9/13/68	DATE 2/19/69	1
ENG K. Mangeon	PROD [illegible]	ISSUED SECT.
DATE 3/[illegible]/69	DATE [illegible]	1

QUANTITY VARIATION

ITEM NO	DWG NO PART NO.	DESCRIPTION	841-B	841-C
[illegible]	B-DC-5308302-0-0	DECAL 841-B + 841-C	1	1
2	D-MD-5308214-0-0	COVER	1	1
[illegible]	9007035	GROMMET CATERPILAR 1/16	A/R	A/R
[illegible]	1201252	PLUG #160-5 AMPHENOL	1	1
[illegible]	1201251	RECP #160-4 AMPHENOL	1	1
[illegible]	9107440-4	WIRE #10 RED & WHT STRD	A/R	A/R
[illegible]	9107370-1	WIRE #10 BLK STRD	A/R	A/R
[illegible]	9107278-10	TUBING #18 WHITE	A/R	A/R
[illegible]	1305603	RESISTOR 2K 10W 10%	2	
32	1305604	RESISTOR 130K 1W 5%	1	1
33	9107360-3	WIRE #18 RED STRD	A/R	A/R
34	9107360-10	WIRE #18 WHT STRD	A/R	A/R
~~35~~	~~9107255~~	~~SHRINK TUBING WHT~~	~~A/R~~	~~A/R~~
36	9107430-2	WIRE #18 RED & WHT STRD	A/R	A/R
37	12-05768	RELAY EM-4 120 VAC	1	-
38	9006071-1	PHL H PAN 10-32 x 3/8 SST	2	2
39	9006565	NUT KEPS HEX 10-32	2	2
40	1300172	RESISTOR 10 OHMS 2W 10%	2	2
41	1605147	FERRITE CUBE TUBE #56-261-30-3B	2	2
42	9007234	BUSH TERM DC-202-1 ORN	[illegible]	4
43	9107278-3	TUBING #18 RED	A/R	A/R
44	9007015	GROMMET #1043-M	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV
POWER CONTROL 841-B&C	D-UA-841B	A	PL	841-B-Ø	
	SHEET 2 OF 3	DIST.			

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

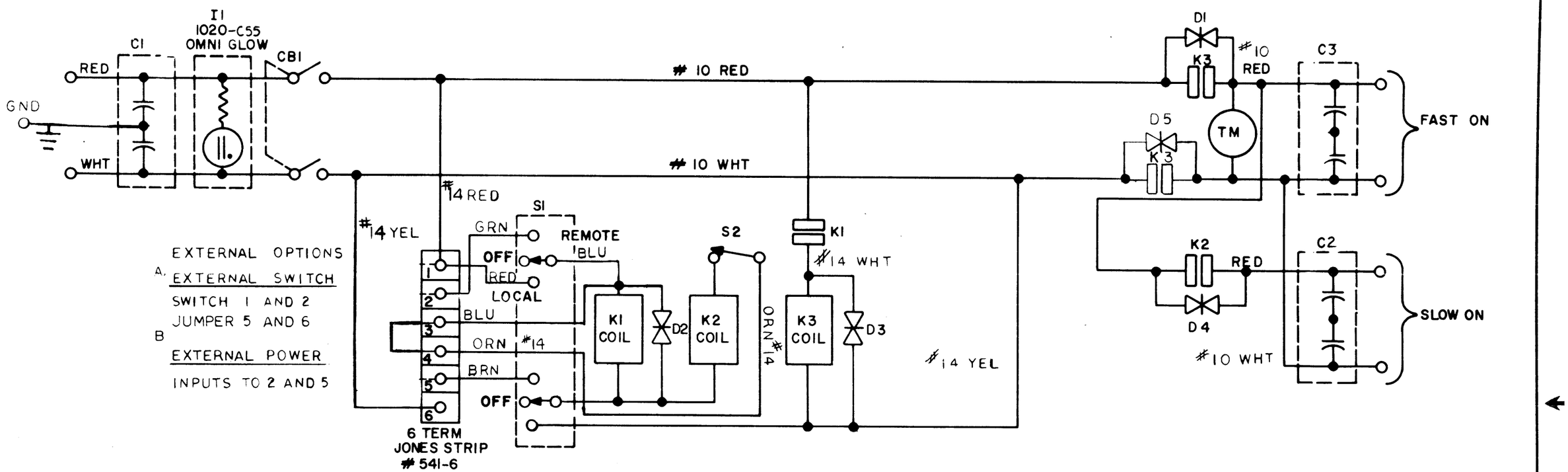
MADE BY K. GULICK	CHECKED D. REILLY	SECTION	
DATE	DATE 2/19/69	1	
ENG. K. [illegible]	PROD	ISSUED SECT	
DATE [illegible]	DATE [illegible]	1	

ITEM NO	DWG NO. / PART NO	DESCRIPTION	841-B	841-C
45	1209158-1	BARRIER STRIP BUCHANNAN 530	1	1
~~46~~	~~9007920~~	~~TERMINAL ARK-LRS .090-.7~~	~~6~~	~~6~~
47	9107390-1	WIRE #10 BLK STRD	A/R	A/R
48	1209406-1	CONTACTOR 30A 2P OR USE-03	-	1
49	9007055	DOT FASTENER # BS 48150	5	5
50	9006782	CONN AMP 34071	1	1
51	9007917	CONN AMP	22	22
52	A-PI-3700059-0-0	841 POWER CONTROL INTERPLANT	1	1
		SHIPPING PACKAGE		
53	9007930	TERMINAL	-	2

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
POWER CONTROL, 841-B&C	D-UA-841-B-Ø	A	PL	841-B-Ø	K	
	SHEET 3 OF 3	DIST.				

DEC FORM NO.
DRA 110

SIZE	CODE	NUMBER	REV.
B	CS	853F-0-1	A



NOTES:
D1,D2,D3,D4,D5 THYRECTOR G.E. 20SP4B4, 115V
C1,C2,C3 CAPACITOR (BATH) 2 X .1 MFD
1000 VDC

S1 TOGGLE SWITCH DPDT 7563K6 C.H. 3POS CENTER OFF
S2 TOGGLE SWITCH DPST 7590K9
K1 RELAY #1040-8-687 NORMALLY OPEN 115 VAC COIL 3-5 SEC DELAY QUICK OPERATE, SLOW RELEASE.
K2 RELAY #1040-8-58 NORMALLY OPEN 115 VAC COIL 3-5 SEC DELAY SLOW OPERATE, QUICK RELEASE.
K3 RELAY # EM-4 115 VAC EBERT ELECTRONICS.
CB1 CIRCUIT BREAKER #190-230-104 30 AMPS. 250V, 60 CYC-CURVE 4
TM HOBBS TIME METER TYPE M11906 120V 60 CYC-CURVE 4

REVISIONS			DRN	DATE
REV	A		Robert Mutrale	12/13/68
CHG NO	00001		CHK'D R.P. Carnell	DATE 12/23/68
CHK	MC		ENG	DATE 1-2-69
			PROD	DATE 1-3-69

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE POWER CONTROL 853-F (115 VOLT DUAL OUTPUT)

SIZE	CODE	NUMBER	REV
B	CS	853F-0-1	A

PRINTED CIRCUIT REV

DEC FORM NO
DRB 102

DIST. 324 434 1135 1136 PINA

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY ROBERT HUTNAK	CHECKED R. CARVELLI	SECTION
DATE 12/6/68	DATE 12/16/68	
ENG S.W. GERELDS	PROD L. PRENTICE	ISSUED SECT.
DATE 1/2/69	DATE 1/3/69	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION
REF	B-CS-853-F-1	POWER CONT 853-F	
1	D-MD-5308193-0-0	CHASSIS	1
2	9006071-1	SCR PHL PAN HD #10-32 x 3/8 LG SST	4
3	9006635	WASHER INT TOOTH #10	4
	B-D-5308224-0	DECALS 853-F PWR CONT	1
	1205867	SWITCH DPDT CENT OFF CH7563K6	1
6	1201703	METER ML 1906 120V 60 CY HOBBS	1
7	9006011-1	SCR PHL PAN HD #4-40 x 3/8 LG SST	3
	9006567	NUT, KEPS #4-40 SST	3
9	9007112	TERM, OFFSET # 6045-1 AMP	3
10	1204722	SWITCH DIST 7590K9 C.C.	1
11	9007071-1	SCR PHL PAN HD #6-32 x 3/8 LG SST	16
12	9006566	NUT KEPS #6-32 SST	20
13	1202153	CAPACITOR (BATH) 2 x .1 MFD 1000V D.C.	3
14	1205458	LAMP, #1020C55 DEV. INC	1
15	1201216-00	CKT BKR, 20 AMP 2 PL 4 CURVE	1
16	[illegible]	SCR PHL PAN HD #6-32 x 1/4 LG SST	4
17	9006562	WASHER INT TOOTH #6	4
18	1203793	RELAY EMC 115V	1
19	1202287	RELAY #10570-3-53 ADAMS & WESTLAKE	1
20	1201134	RELAY #1060-3-337 ADAMS & WESTLAKE	1
21	9006881	SPACER HEX #10-32 3/4 AF X 3 LG	4

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
853-F POWER CONTROL	D-UA-853 F-0-0	A	PL	853F-0-0	B	00002
	SHEET 1 OF 3	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY ROBERT HUTNAK	CHECKED R. CARVELLI	SECTION
DATE 12/6/68	DATE 12/16/68	
ENG S.W. GERELDS	PROD L. PRENTICE	ISSUED SECT.
DATE 1/2/69	DATE 1/3/69	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION
	1103256	SCR SLLD #10-32 x 7/16 LG SST	4
	C-MD-5308177-0-0	SHIELD	1
4	9006110	LUG, #41237 AMP	1
	9007596	ADAPTER #3000M446 ARKLES	1
	9007594	CONN #50906-7 ARKLES	12
	9006564	SCR PHL PAN HD #6-32 x 3/4 LG SST	4
3	9007204	TERM STRIP #2-141 CINCH JONES	1
	9007589	JUMPER 141-J CINCH JONES	1
	9007253	AMP LUG 45	6
	9007194	TERM ADAPTOR #3000S5-1 ARKLES	1
	9107 7[illegible]-55	WIRE, #14 AWG STRD TEF INS GRN	A/R
	1100166	RECTIFIER SRS205P4B4 G.E. 115V	5
4	9107370-66	WIRE, #14 AWG STRD TEF INS BLU	A/R
	9006779	CONN., #42509 AMP	2
	9007199	WIRE SPLICER 34071	2
	9007919	CONN SLD #50906 ARKLES	24
	9107[illegible]-33	WIRE, #14 AWG STRD TEF INS ORN	A/R
	9[illegible]	CONN, #34142 AMP	7
	9107[illegible]-22	WIRE, #10 AWG STRD TEF INS RED	A/R
4	9007032	TIE WRAP #SST-2-B	A/R
	9107[illegible]-99	WIRE, #10 AWG STRD TEF INS WHT	A/R
	9107370-44	WIRE, #14 AWG STRD TEF INS YEL	A/R

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
853-F POWER CONTROL	D-UA-853 F-0-	A	PL	853F-0-0	B	00002
	SHEET 2 OF 3	DIST.				

DEC FORM NO.
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

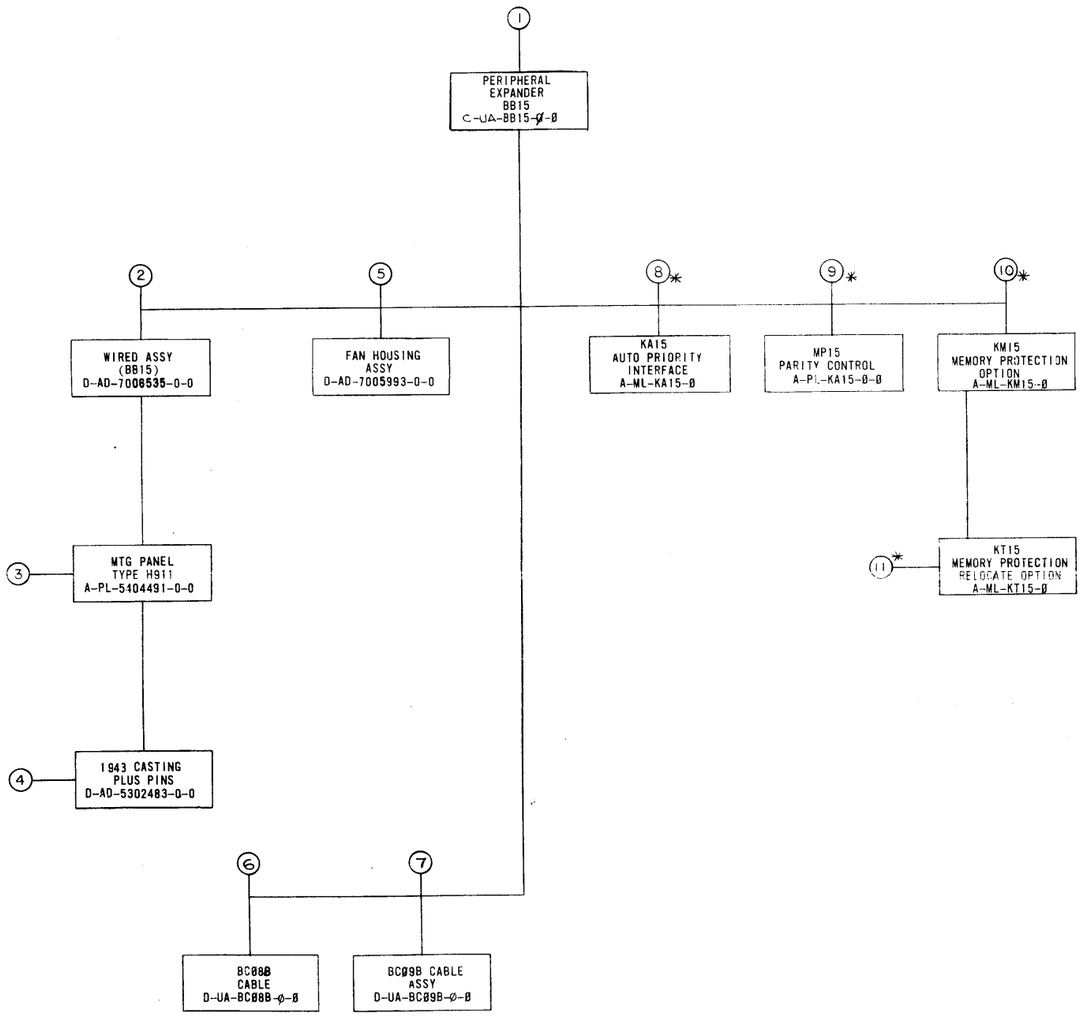
MADE BY ROBERT KUTNAK	CHECKED R. CARVELLI	SECTION
DATE 12/6/68	DATE 12/12/68	
ENG J. W. GERELDS	PROD L. PRENTICE	ISSUED SECT.
DATE 1/3/69	DATE 1/3/69	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION
44	9107370-11	WIRE, #14 AWG STRD TEF INS BRN	A/R
45	9107370-22	WIRE, #14 AWG STRD TEF INS RED	A/R
46	9107367-02	TUBING #20 AWG TEF RED	A/R
47	9007634	CONN, #350742 AMP	4
48	9107370-99	WIRE, #14 AWG STRD TEF INS WHT	A/R

TITLE: 853-F POWER CONTROL	ASSY NO.: D-UA-853-F-0-0	SIZE: A	CODE: PL	NUMBER: 853F-0-0	REV.: B	ECO NO: 853F 00002
	SHEET 3 OF 3	DIST.				

DEC FORM NO.
DRA 110

NOTE
1 ITEMS INDICATED WITH (ASTERISK) * ARE OPTIONAL



FIND NO	MECHANICAL DESCRIPTION	PART NO	DEPT USAGE PROD	CUST	F C
1	PERIPHERAL EXPANDER PERIPHERAL EXPANDER (PL) RET BLOCKS HARNESS (BB15)	C-UA-BB15-Ø-Ø A-PL-BB15-Ø-Ø C-MD-7407127-0-0 E-TA-7006539-0-0			
2	WIRED ASSY (BB15) WIRED ASSY (BB15)(PL) LOGIC FRAME DECALS	D-AD-7006535-0-0 A-PL-7006535-0-0 A-DC-7405371-0-0			
3	MTG PANEL TYPE H911 MTG PANEL TYPE H911 (PL) 288 PIN CONN BLOCK TYPE #H805	D-AD-5404491-0-0 A-PL-5404491-0-0 E-SC-1205348-0-0			
4	1943 CASTING PLUS PINS 1943 CASTING PLUS PINS (PL) 1943 FRAME CASTING	D-AD-5302483-0-0 A-PL-5302483-0-0 E-MD-1202885-0-0			
5	FAN HOUSING ASSY FAN HOUSING ASSY (PL) FAN HOUSING DECAL FAN HOUSING	D-AD-7005993-0-0 A-PL-7005993-0-0 D-TA-7406892-0-0 A-DC-7407314-0-0			
6	BCØ8B CABLE BCØ8B CABLE (PL) CLAMP CABLE	D-UA-BCØ8B-Ø-0 A-PL-BCØ8B-Ø-0 B-MD-5508088-0-0			
7	BCØ9B CABLE ASSY BCØ9B CABLE ASSY (PL) SCR MODULE RET CABLE CLAMP MODULE HOLDER	D-UA-BCØ9B-Ø-Ø A-PL-BCØ9B-Ø-Ø C-MD-7405642-0-0 C-MD-7405639-0-0 D-SC-1209377-1-0			
8*	KA15 AUTO PRIORITY INTERFACE CABLE DUAL MYLAR M922-M922	A-PL-KL15-Ø-Ø C-TA-7006437-0-0			
9*	MP15 PARITY CONTROL	A-PL-MP15-Ø-Ø			
10*	KM15 MEMORY PROTECTION OPTION	A-PL-KM15-Ø-Ø			
11*	KT15 MEMORY PROTECTION RELOCATE OPTION	A-PL-KT15-Ø			

FIND NO	ELECTRICAL DESCRIPTION	PART NO	DEPT USAGE PROD	CUST	F C
1	PERIPHERAL EXPANDER SIGNAL WIRING	A-ML-BB15-Ø D-IC-BB15-Ø-1			
2.	WIRED ASSY (BB15) WIRED ASSY (BB15)(PL)	D-AD-7006535-0-0 A-PL-7006535-0-0			
5.	FAN HOUSING ASSY FAN HOUSING ASSY (PL)	D-AD-7005993-0-0 A-PL-7005993-0-0			
8*	KA15 AUTO PRIORITY INTERFACE	A-ML-KA15-Ø			
9*	MP15 PARITY CONTROL	A-ML-KA15-Ø			
10*	KM15 MEMORY PROTECTION OPTION	A-ML-KM15-Ø			
11*	KT15 MEMORY PROTECTION RELOCATE OPTION	A-ML-KT15-Ø			
*	EQUIPMENT LAYOUT PDP 15	D-AR-PDP15-Ø-2			

FOR UNIT ASSY TO A-PL-BB15-Ø-Ø

REVISIONS	REV.	CHK	CHANGE NO.
	A		BB15-00001

D. SWANSON 1/3/72

FIRST USED ON OPTION/MODEL 4963-E

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

		DATE
DRN.		
CHK'D		DATE
ENG.		DATE
PROJ. ENG.		DATE 4/12/61
PROD.		DATE

NEXT HIGHER ASSY

SCALE

SHEET OF

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE DRAWING INDEX LIST (BB15)

SIZE	CODE	NUMBER	REV.
D	DI	BB15-Ø-1	A

DIST. G

GEC FORM DRD 100

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	C821	M904	M904	M922	M966	C728	M926	M622	M622	M622	M510	M518	M182	M133	M311	M121	M112	SPARE	M714	M611	M205	M205
USAGE	BB	MP,KM,KT	MP,KM,KT	KA	MP,KM,KT	MP,KM,KT	MP,KM,KT	KT	KT	KM	MP	MP	MP	MP	MP	MP	MP		MP,KM,KT	KM	KM	KM
A	REGULAR	MEM DATA LINES	FROM B15 TO MEM	I BUS	B1 D1 E1 H1 J1 L1 M1 P1 S1	D2 E2 H2	B1 D1 E1 H1 J1 L1 M1 P1 S1 D2 E2 K2	MDL 01 / 01 / MDL 02 / 02 / MDL 03 / 03 / MDL 04 / 04	MDL 05 / 05 / MDL 06 / 06 / MDL 07 / 07 / MDL 08	M REQ / SKP / M REQ / SKP / M REQ / INH / INH / 10 ADDR 16 / SKP / PROG	OUT / REQ / OUT / REQ / OUT / MRDS / RD RST / RD RST / RQ / INT RQ / API	P MDL 08 / P MDL 09 / P MDL 10 / P MDL 11 / P MDL 12 / P MDL 13 / P MDL 14 / P MDL 15	PMRLS / ACK	K1 L1 / U2 U2	C1 / F1 / K1 / N1 / H1 / J1 / V2	F2 / K2 / N2	E1 / J2	C1 / F1 / K1	F2 / K2		TOP SWITCH PARITY & "UP" INTRPT ON ERROR "DOWN" HLT ON ERROR	BOT SWITCH PROT & RELOC "UP" P MODE "DOWN" P MODE	B1 / E1 / H1 / K1 / M1 / P1 / S1 / U1	F2 / J2 / L2 / R2 / T2 / V2	IR00 IR01	IR02 IR03 IR04	IR12 IR15	MEM OK / NEXM / TRAP
B	TCS	MEM DATA LINES	FROM B15 TO CP	I BUS	K1 5 AND K M15	CONTROL CABLE	CARD CONFIGURATION	MDL 01 / 02 / 03 / 04 / 05 / 06 / 07 / 08	MDL 09 / 09 / MDL 09 / MDL 09 / MDL RQ / PROG INT RQ / API	PAR / MRLS / PD RST / PD RST / 10 ADDR 16 RQ / INT RQ / 00 RQ	P MDL 00 / 01 / 02 / 03 / 04 / 05 / 06 / 07	P MDL 16 / 17 / 18 / P MRD / P MWR / PM REQ / P PWR CLR / P RD RST	K1 L1 / U2 V2	K1 L1 / U2 V2	SPE / CPE / FWP	RD PAR / WR PAR	PAR ERR / RESET WRNG PAR / WRNG PAR	F2	M WRITE / STROBE / IR05	B1 / E1 / H1 / K1 / M1 / S1 / U1	J2 / L2 / R2 / S2 / T2 / V2	BR 01 / BR 02 / BR 03 / BR 04 / BR 05 / BR 06 / BR 07 / BR 08 / BR 09	E1 / L1 / S1	J2 / P2 / V2

	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	M205	M112	M119	M112	M611	M311	M306	M214	M214	G775 *												
USAGE	KM	KM	KM	KM	KM	KM	KM	KT	KT	MP												
A	PRE / UM	PV / XCT 01 / XCT 02	J2 / P2 / V2	C1 F1 K1 N1 S1 / F2 K2 N2 S2 V1	B1 E1 H1 K1 M1 P1 S1 U1 / F2 J2 L2 R2 T2 V2	H1 J2	T2	RA 01 / RA 02 / RA 03 / RA 04 / RA 05 / RA 06 / RA 07 / RA 08 / RA 09		PARITY / INDICATOR CABLE													
B	E1 L1 S1 / J2	F1 K1 N1 S1 / F2 K2 N2 S2 V2	E1 L1 S1 / J2 P2 V2	E1 L1 S1 / J2 P2 V2	IOT 1701 IOT 1702 IOT 1703 / K1 N1	IOT 1741 IOT 1742 IOT 1744 / K1 N1	H1 J2	RR01 RR02 / RR03 RR04 RR05	PR06 RR07 / RR08 RR09 MEM -CP	PROTECT & RELOCATE / INDICATOR CABLE												

REVISIONS			
CHK	CHANGE NO	REV.	
[illegible]	BB15 00007	A	[illegible] 7-8-70 ELSBREE
[illegible]	BB15-00010	B	[illegible] 8-3-70 ELSBREE
[illegible]	BB15-00012	C	[illegible] 8-4-70 ELSBREE
[illegible]	BB15-00014	D	[illegible] 10-16-70 ELSBREE
[illegible]	BB15-00015	E	[illegible] 1-26-71 ELSBREE
[illegible]	BB15-00016	F	[illegible] 6-15-71 ELSBREE
[illegible]	BB15-00017	H	[illegible] 8-31-71 ELSBREE
[illegible]	BB15-00019	J	[illegible] 11-13-73 J. ELSBREE
[illegible]	BB15-00020	K	[illegible] 11-23-73 F. DOLL

DEC FORM NO. DRD 112

FIRST USED ON OPTION/MODEL
PDP15

* WHEN THIS OPTION IS INSTALLED A JUMPER WIRE MUST BE PLACED ON THE REAR OF THE G775 MODULE. ON G775B THIS INVOLVES SOLDERING THE JUMPER ACROSS THE CUT ETCH ON BOTH SIDES OF THE BOARD. ON G775C AND LATER THE JUMPER IS PLACED AND SOLDERED IN THE HOLES PROVIDED.
▲M205 IS NECCESSARY FOR MP15 AND/CR KM15

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

DRN	M Moden	DATE 3/23/70
CHK'D	[illegible]	DATE 3/24/70
ENG	C Eldredge	DATE 3/26/70
PROJ. ENG.	[illegible]	DATE 4/7/70
PROD.	[illegible]	DATE [illegible]

NEXT HIGHER ASSY
A-ML-BB15-0
SCALE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
MODULE UTILIZATION

SIZE DMU | CODE | NUMBER BB15-0-4 | REV. K
DIST.

SIZE DMU | CODE | NUMBER BB15-0-4 | REV. K

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
G821	M912	M912	M912	M912	M621	M621	M621	A149	M510	M510	M111	M121	M113	M621	M119	M112	M112	M216	M216	M111	M113
USAGE 1 BB 2	1 BB 2	1 BB 2	1 BB 2	1 BB 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 BB 2	1 BB 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2	1 KA 2
C +5 V REGULA	I/O BUS CABLE	I/O BUS CABLE	I/O BUS CABLE	I/O BUS CABLE	I/O BUS Ø0	I/O BUS Ø6	I/O BUS	I BUS DRIVER	I/O BUS Ø6	I/O BUS Ø8	B1 D2	E1 J2	C1 F2	E1 J2	J2	C1 F2	C1 F2	RQ FQ Ø0 Ø1	RQ FQ Ø6 Ø7	B1 D2	C1
					I/O BUS Ø1	I/O BUS Ø7	I/O BUS		I/O BUS Ø1	I/O BUS Ø9	E1 F2		F1 K2	L1 KAØ4		F1 K2	F1 K2			E1 F2	K2
					I/O BUS Ø2	I/O BUS Ø8	I/O BUS		I/O BUS Ø2	I/O BUS 10	H1 J2	L1 P2	K1 N2		P2	K1 N2	K1 N2	RQ FQ Ø2 Ø3	RQ FQ Ø4 Ø5	K1 L2	K1 N2
					I/O BUS Ø3	I/O BUS Ø9	I/O BUS		I/O BUS Ø3	I/O BUS 11	K1 L2		N1 S2			N1 S2	N1 S2		API Ø4 RQ API Ø5 RQ	M1 N2	
					I/O BUS Ø4	I/O BUS 16	I/O BUS		I/O BUS Ø4	I/O BUS 12	M1 N2		S1 V2		V2	S1 V2	S1 V2	FQ Ø4 FQ Ø5	API Ø6 RQ API Ø7 RQ	P1 R2	N1 S2
					I/O BUS Ø5	I/O BUS 11	I/O BUS		I/O BUS Ø5	I/O BUS 13	R2									S1 T2	S1 V2
					I/O BUS Ø6	I/O BUS 14	I/O BUS		I/O BUS Ø6	I/O BUS 14	S1 T2									U1 V2	
					I/O BUS Ø7	I/O BUS 15	I/O BUS		I/O BUS Ø7	I/O BUS 15	J1 V2										
D TOR	FROM CP TO BB15	FROM CP TO BB15	FROM BB15 TO BA15	FROM BB15 TO BA15	M622 KA 2	M622 KA 2	M622 KA 2		M510 BB 2	M510 BB 2	M510 BB 2	M216 KA 2	M611 KA 2	M112 KA 2	M112 KA 2	M216 KA 2	M216 KA 2	M112 KA 2	M119 KA 2	M113 KA 2	M112 KA 2
					I/O A 12	API Ø2 GP	API Ø2 RQ		I/O BUS 16	DS Ø1	API Ø1 RQ	PLØØ PLØ2	B1 J2	C1 F2	C1 F2	PL Ø6 PL Ø7	API Ø0 GRANT API Ø1 GRANT	C1 F2		C1 F2	C1 F2
					I/O A 13	API Ø3 GR	API Ø3 RQ		I/O BUS 17	DS Ø2	API Ø2 RQ		E1	F1 K2	F1 K2			F1 K2	J2	F1 K2	F1 K2
					I/O A 14	API Ø0 EN	SKP RQ		I/O SYNC	DS Ø3	API Ø3 RQ	PL01 PL03	H1 K1	K1 N2	K1 N2	API ENABLE	API Ø2 GRANT API Ø3 GRANT	K1 N2		K1 N2	K1 N2
					I/O A 15		RQ		IOP 1	DS Ø4			P1	N1 S2	N1 S2			N1 S2	P2	N1	S2
					I/O A 16				IOP 2	DS Ø5			S1 P2	S1 V2	S1 V2			S1 V2	V2	S1 V2	S1 V2
					I/O A 17	API Ø3 EN			IOP 4	SC Ø0		PL04 PL05	U1								
					API Ø0 GR	API Ø0 RQ			PWF CLR	SD Ø1											
					API Ø1 GR	API Ø1 RQ			DS Ø0	API Ø0 RQ											

23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
M115	M113	M112	M611	M627	M103				G775 *												
USAGE 1 KA 2	1 KA 2	1 KA 2	1 KT 2	1 KT 2	1 KT 2	1 2	1 2	1 2	1 API 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
C D1 J1 N1 U1 V1 H2 M2 S2	C1 F2 F1 K2 K1 N2 N1 S2 S1 V2	C1 F2 F1 K2 K1 N2 N1 S2 S1 V2	B1 E1 H1 K1 M1 P1 S1 F2 J2 L2 R2 T2	E1 J2 L1 P2 S1 V2	10T 1724				API INDICATOR CABLE												
USAGE 1 KA 2	1 KA 2	1 KA 2	1 KA 2																		
D TRQ Ø0 TRQ Ø1 TRQ Ø2 TRQ Ø3 DIS BRK	PF API RQ A PF API RQ B RTC API RQ A RTC API RQ B	B1 D1 E1 H1																			

FIRST USED ON OPTION/MODEL: PDP15

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

		DATE
DRN	M MARDEN	3/28/70
CHK	[illegible]	3/28/70
ENG	[illegible]	3/24/70
PROJ ENG	[illegible]	3/27/70
PROD		DATE

NEXT HIGHER ASSY: A-ML-RB15-Ø

SCALE —

SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: MODULE UTILIZATION

SIZE D | CODE MJ | NUMBER BB15-Ø-4 | REV. K

DIST.

REVISIONS: REV. | CHANGE NO. | CHK

DEC FORM NO. DRD 112

SIZE CODE NUMBER DMJ BB15-Ø-4 REV. K

+3V C14V1 H
KA08 API Ø0 RQ L
KA04 SET API RQ H
KA08 API Ø1 RQ L
KA08 API Ø2 RQ L
KA08 API Ø3 RQ L
KA01 API Ø4 RQ (1) L
KA01 API Ø5 RQ (1) L
KA01 API Ø6 RQ (1) L
KA01 API Ø7 RQ (1) L
KA02 API PWR CLR L
KA01 API Ø4 RQ (1)H
KA08 I/O B06 H
KA02 RQ SYNC Ø1 L
KA02 RQ SYNC Ø2 L
KA02 RQ SYNC Ø3 L
KA04 ISA H
KA02 API PWR CLR H
+3V D15U1 H
KA01 RQ SYNC Ø1 H
KA01 RQ SYNC Ø2 H
KA01 RQ SYNC Ø3 H
KA01 RQ SYNC Ø0 H
KA07 API SYNC (B) H
KA02 RQ SYNC Ø0 L
KA04 API STROBE L
KA03 RQ SYNC Ø4 L
KA07 TIME Ø3 H
KA08 I/O B07 H
KA01 API Ø5 RQ (1)H
KA03 RQ SYNC Ø5 L
KA08 I/O B08 H
KA01 API Ø6 RQ (1)H
KA03 RQ SYNC Ø6 L
KA08 I/O B09 H
KA01 API Ø7 RQ (1)H
KA03 RQ SYNC Ø7 L
+3V D15V1 H
KA08 I/O B Ø0 H
KA04 ISA H
KA02 API PWR CLR L

REVISIONS		
CHK	CHANGE NO.	REV.
	BB15-00004	A

DRN. K COTE	DATE 9/20/7	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. P DAIGNEAULT	DATE 9/20/7		
ENG. J ELSBREE	DATE 9/25/7	TITLE REQUESTS	
PROJ. ENG. F AUMANN	DATE 9/25/7		
PROD. E LASKEY	DATE 9/27/7		
FIRST USED ON KA15		SIZE D	CODE 83 NUMBER KA15-0-01 REV. A
SCALE			
SHEET 1 OF 1		DIST	

KA01 RQ Ø0 (1)H
KA01 RQ Ø1 (1)H
KA01 RQ Ø2 (1)H
KA01 RQ Ø3 (1)H
KA02 RQ SYNC Ø0 L
KA02 RQ SYNC Ø1 L
KA02 RQ SYNC Ø2 L
KA02 RQ SYNC Ø3 L
M113 C14
KA02 PL Ø0 EN H
KA02 PL Ø1 EN H
KA02 PL Ø2 EN H
KA02 PL Ø3 EN H
KA02 PL X EN L
KA02 PL Ø0 EN L
KA02 PL Ø1 EN L
KA02 PL Ø2 EN L
KA02 PL Ø3 EN L
+3V C17U1 H
M111 C12
M112 D15
KA07 DBK H
KA07 DBK H
M112 D15
M611 D14
KA02 DBR V DBK H
PL Ø0 M216 D13
PL Ø1 M216 D13
PL Ø2 M216 D13
PL Ø3 M216 D13
-KA02 PL Ø0 EN L
KA02 PL Ø2 (1)L
-KA02 PL Ø1 EN L
M112 D16
KA02 PL Ø3 (1) L
-KA02 PL Ø2 EN L
KA07 PI SYNC H
M111 C21
M112 C25
KA02 API PWR CLR L
KA02 API PWR CLR H
KA08 API PWR CLR L
KA02 PL Ø0 (1)L
+3V C17U1 H
KA08 I/O B 10 L
KA01 RQ Ø0 (1) L
M121 C13
+3V C17U1 H
KA08 I/O B 11 L
KA02 PL Ø0 EN L
KA01 RQ Ø1 (1) L
KA02 PL Ø0 EN H
KA08 I/O B 12 L
KA02 PL Ø1 EN L
KA01 RQ Ø2 (1)L
KA02 PL Ø1 EN H
KA08 I/O B 13 L
KA02 PL Ø2 EN L
KA01 RQ Ø3 (1)L
KA02 PL Ø2 EN H
KA04 API STROBE L
KA04 ISA H

REVISIONS		
CHK	CHANGE NO.	REV.

DRN.		DATE 3-12-70
CHKD.		DATE 3-13-70
ENG.		DATE 3/25/70
PROJ. ENG.		DATE 3/25/70
PROD.		DATE 3/27/70
FIRST USED ON	KA15	
SCALE		
SHEET 1 OF 1		

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
PRIORITY LEVELS Ø-3

SIZE	CODE	NUMBER	REV.
D	BS	KA15-Ø-Ø2	

DIST.

KA03 RQ SYNC 07 L
KA03 RQ SYNC 06 L
KA03 RQ SYNC 05 L
KA03 RQ SYNC 04 L
KA02 RQ SYNC 03 L
KA02 RQ SYNC 02 L
KA02 RQ SYNC 01 L
KA02 RQ SYNC 00 L
M113 C16 → J2 KA03 CP API RQ H

KA01 RQ 04 (1)H → M113 C14 → V2 KA03 RQ SYNC 04 L
KA01 RQ 05 (1)H → M113 C14 → K1 KA03 RQ SYNC 05 L
KA01 RQ 06 (1)H → M113 C14 → N1 KA03 RQ SYNC 06 L
KA01 RQ 07 (1)H → M113 C24 → N2 KA03 RQ SYNC 07 L

KA03 CP API RQ H → M113 C14 → S2 KA03 CP API RQ L

KA03 PL 04 EN H
KA03 PL 05 EN H
KA03 PL 06 EN H

KA02 PL 03 EN L → M112 D15 → V2 H2 → M111 C12 → KA03 PL 04 EN L
KA03 PL 04 EN L → M112 C18 → F2 → M111 C12 → KA03 PL 05 EN L
KA03 PL 05 EN L → M112 C18 → K2 → M111 C12 → KA03 PL 06 EN L
KA03 PL 06 EN L → M112 C18 → N1 KA03 PL 07 EN H

KA01 API ENABLE (1)L → M112 C25 → K2
*KA05 DIS BRK (Ø)H → M113 D21 → S1
- KM12 TRAP H

KA03 PL 04 (1)L
-KA02 PL 03 EN L
M112 D16 → PL 04 M216 D13

KA03 PL 05 (1)L
-KA03 PL 04 EN L
M112 C17 → PL 05 M216 D13

KA03 PL 06 (1)L
-KA03 PL 05 EN L
M112 C17 → PL 06 M216 D17

KA03 PL 07 (1)L
-KA03 PL 06 EN L
M112 C17 → PL 07 M216 D17

KA02 API PWR CLR L
KA02 DBR V DBK H

KA04 SET PL 04 L → M113 C24 → M111 C12

KA08 I/O B 14 L
KA02 PL 03 EN L
KA01 RQ 04 (1)L
M112 D16 / M112 C17 → M121 C13 → S1
KA02 PL 03 EN H

KA08 I/O B 15 L
KA03 PL 04 EN L
KA01 RQ 05 (1)L
M112 C17 / M112 C17 → M121 C13 → V2
KA03 PL 04 EN H

KA08 I/O B 16 L
KA05 PL 05 EN L
KA01 RQ 06 (1)L
M112 C17 / M112 C17 → M121 C15 → E1
KA03 PL 05 EN H

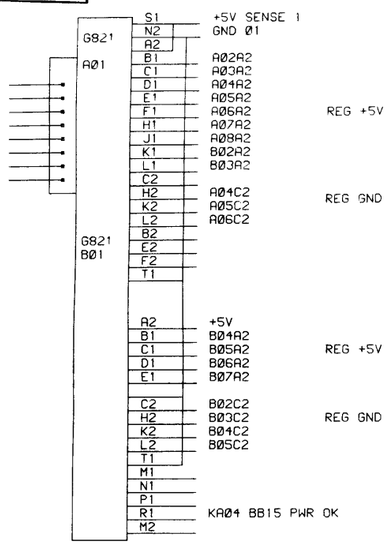
KA08 I/O B 17 L
KA03 PL 06 EN L
KA01 RQ 07 (1)L
M112 C17 / M112 C17 → M121 C15 → J2
KA03 PL 06 EN H

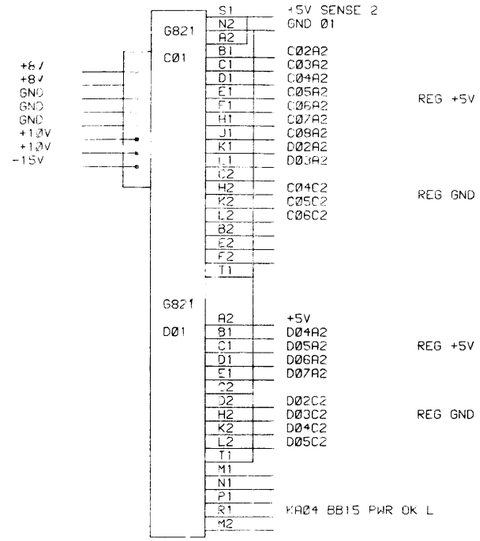
KA04 ISA H
KA04 API STROBE L

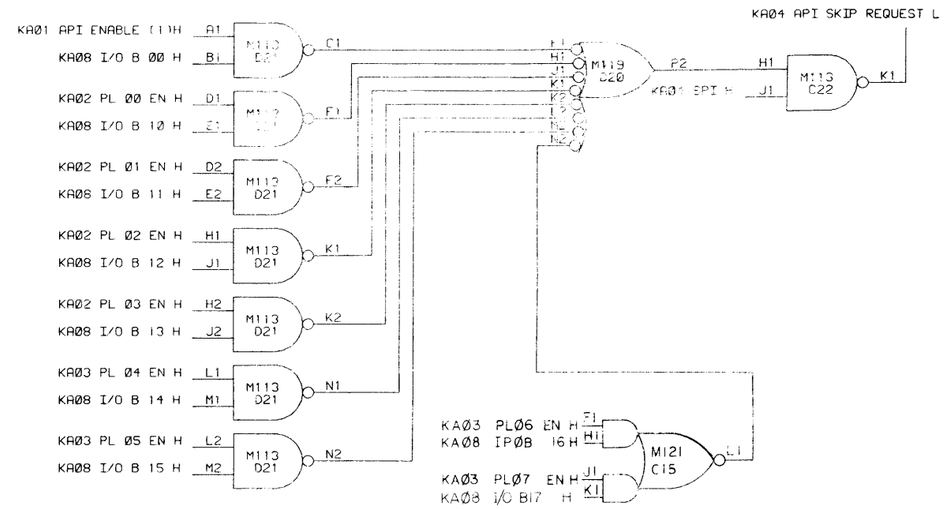
* IF BB15 ECO#12 IS NOT INSTALLED, THIS POINT IS -5V (521Ω)

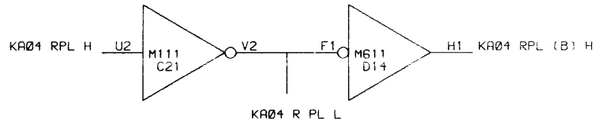
REVISIONS		
CHK	CHANGE NO.	REV.
ANN	BB15-00012	A
	Engineering Release 3/16/71	
	BB15-0-020	E

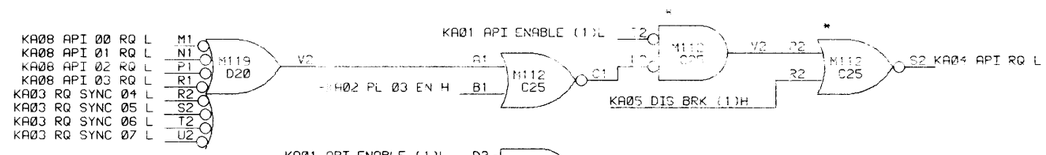
DRN. K COTE	DATE 3/13/70	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. P DAIGNEAULT	DATE 3/13/70	
ENG. J ELSBREE	DATE 3/25/70	TITLE: PRIORITY LEVELS 04-07
PROJ. ENG. F AUMANN	DATE 3/25/70	
PROD. F LASKEY	DATE 3/27/70	
FIRST USED ON: KA15		SIZE D · CODE BS · NUMBER KA15-0-03 · REV. B
SCALE		
SHEET 1 OF 1		DIST.

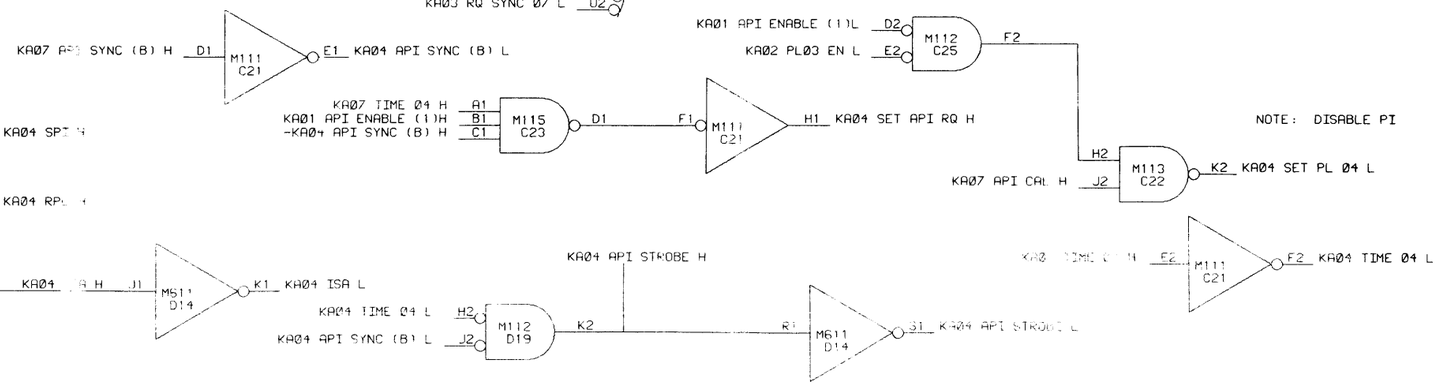








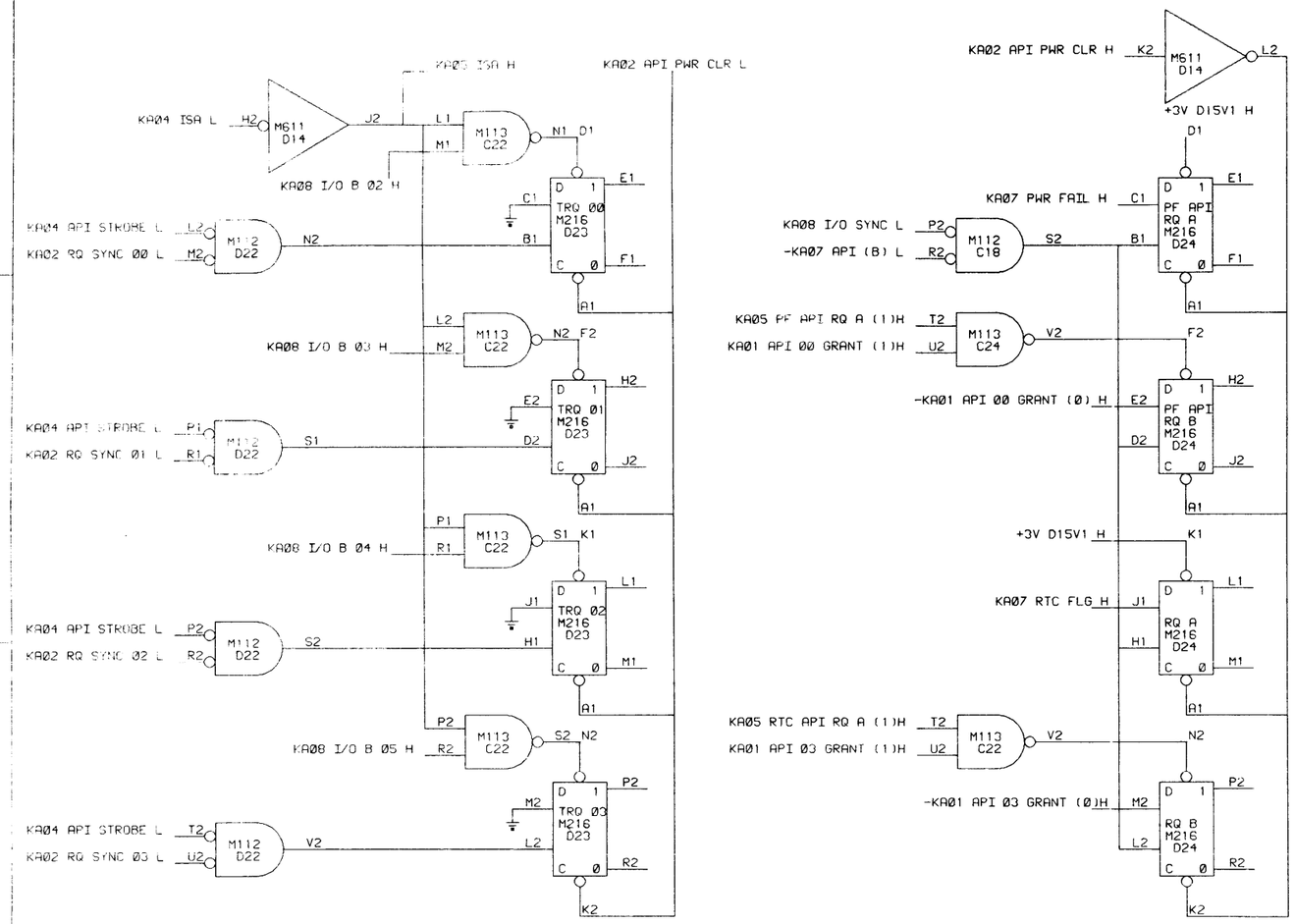


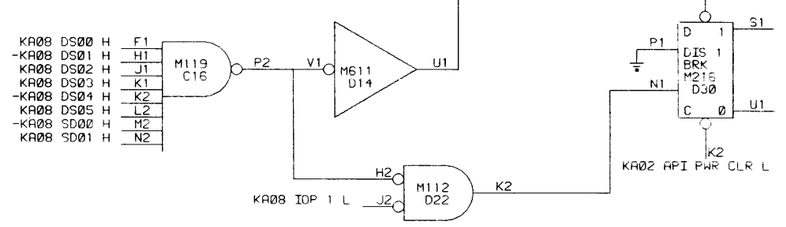


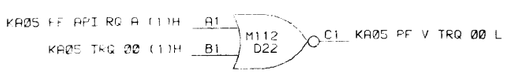
* ADDED BY OPTIONAL BB15 ECO#12

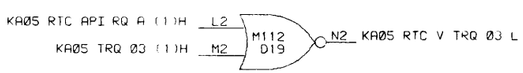
REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO	REV
AC	BB15-00004	A		BB15-00020	E
	D.SOUTHER 4-23-70			B.Thibodeau 6-22-73	
	J.ELSBREE 5-4-70			F. DOLL	
MH	BB15-00007	B			
	I.PETERS 7-6-72				
	J.ELSBREE				
RH	BB15-00009	C			
	I.PETERS 7-8-72				
	J.ELSBREE 7-9-72				
	BB15-00011	D			

DRN. K COTE	DATE 3/13/70	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
CHKD. E DAVIS/HOLT	DATE 3/13/70		
ENG. J ELSBREE	DATE 3/25/70	TITLE API CONTROL	
PROJ. ENG F AUMAN	DATE 3/25/70		
PROD. T LASKEY	DATE 3/26/70		
FIRST USED ON		SIZE D	CODE 85
SCALE		NUMBER KA15-0-04	REV. E
SHEET 1 OF 1		DIST.	









NOTE: ADDED BY OPTIONAL BB15 ECO#12
REQUIRED FOR REENTRANT PROGRAMMING.

REVISIONS		
CHK	CHANGE NO.	REV.
	BB15-00012	A

DRN. K COTE	DATE 3/20/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. P DAIGNEAULT	DATE 3/20/70	
ENG. J ELSBREE	DATE 3/25/70	TITLE: TEST REQUEST
PROJ. ENG. F HUMANN	DATE 3/25/70	
PROD. F LASKEY	DATE 3/26/70	
FIRST USED ON: KA15		SIZE D · CODE 85 · NUMBER KA15-0-05 · REV. A
SCALE		
SHEET 1 OF 1		DIST.

KA03 RQ SYNC 04 L
KA03 RQ SYNC 05 L
M115 C23
M111 C21
M115 C23
M111 C21
N2 KA06 API I/O A 12 L

KA01 RQ SYNC 00 H
KA03 RQ SYNC 06 L
KA03 RQ SYNC 07 L
KA05 TRQ 00 (1)L
KA05 PF API RQ B (1)L
M113 C24
M113 C24
M115 C23
M111 C21

-MP10 P ENA (1) B H
KA05 RTC API RQ B (0) H
KA05 PF API RQ B (0) H
M113 D20
+3V D15V1 H
2 KA06 API I/O A 13 L

KA01 RQ SYNC 01 H
KA05 TRQ 01 (1)H
M113 C24
M115 C23
M111 C21

KA01 RQ SYNC 02 H
KA05 TRQ 02 (1)H
M113 C24
M115 C23
M111 C21
S1 KA06 API I/O A 14 L

KA06 API I/O A 15 L

M113 C22
MP10 P ENA (1) B L
M111 C21
M112 D22
M115 C23
M111 C21
R2 KA06 API I/O A 16 L

KA02 RQ SYNC 03 L
KA05 TRQ 03 (1)H
KA05 RTC API RQ B (1)H
M112 D22
M112 D22
M115 C23
M111 C21
T2 KA06 API I/O A 17 L

REVISIONS		
CHK	CHANGE NO.	REV.

DRN. K Cate	DATE 3/13/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHKD. J Bourgeault	DATE 3-13-70	
ENG. L Gilbree	DATE 3/25/70	TITLE I/O ADDRESS GATING
PROJ ENG. V J Clemann	DATE 3/25/70	
PROD.	DATE 3/27/70	
FIRST USED ON KA15		SIZE D | CODE 65 | NUMBER KA15-0-06 | REV.
SCALE		DIST.
SHEET 1 OF 1		

M912 C02

B1	KA07 I/O BUS 00 L
D1	KA07 I/O BUS 01 L
E1	KA07 I/O BUS 02 L
H1	KA07 I/O BUS 03 L
J1	KA07 I/O BUS 04 L
L1	KA07 I/O BUS 05 L
M1	KA07 I/O BUS 06 L
P1	KA07 I/O BUS 07 L
S1	KA07 I/O BUS 08 L

M912 C02

D2	KA07 I/O BUS 09 L
E2	KA07 I/O BUS 10 L
H2	KA07 I/O BUS 11 L
K2	KA07 I/O BUS 12 L
L2	KA07 I/O BUS 13 L
M2	KA07 I/O BUS 14 L
P2	KA07 I/O BUS 15 L
S2	KA07 I/O BUS 16 L
V2	KA07 I/O BUS 17 L

M912 C03

B1	KA07 I/O SYNC H
D1	KA07 IDP 1 H
E1	KA07 IDP 2 H
H1	KA07 IDP 4 H
J1	KA07 SKIP RQ L
L1	MP10 PROG INT RQ L
M1	KA09 RD RQ L
P1	KA07 RD STATUS H
S1	KA07 I/O PWR CLR H

M912 C03

D2	KA07 DS00 H
E2	KA07 DS01 H
H2	KA07 DS02 H
K2	KA07 DS03 H
M2	KA07 DS04 H
P2	KA07 DS05 H
S2	KA07 SIN CY BK RQ L
T2	KA07 SD 00 H
V2	KA07 SD 01 H

M912 C04

B1	KA07 I/O BUS 00 L
D1	KA07 I/O BUS 01 L
E1	KA07 I/O BUS 02 L
H1	KA07 I/O BUS 03 L
J1	KA07 I/O BUS 04 L
L1	KA07 I/O BUS 05 L
M1	KA07 I/O BUS 06 L
P1	KA07 I/O BUS 07 L
S1	KA08 I/O BUS 08 L

M912 C04

D2	KA07 I/O BUS 09 L
E2	KA07 I/O BUS 10 L
H2	KA07 I/O BUS 11 L
K2	KA07 I/O BUS 12 L
M2	KA07 I/O BUS 13 L
P2	KA07 I/O BUS 14 L
S2	KA07 I/O BUS 15 L
T2	KA07 I/O BUS 16 L
V2	KA07 I/O BUS 17 L

M912 C05

B1	KA07 I/O SYNC H
D1	KA07 IDP 1 H
E1	KA07 IDP 2 H
H1	KA07 IDP 4 H
J1	KA09 SKP RQ L
L1	MP10 PROG INT RQ L
M1	KA09 RD RQ L
P1	KA07 RD STATUS H
S1	KA07 I/O PWR CLR H

M912 C05

D2	KA07 DS00 H
E2	KA07 DS01 H
H2	KA07 DS02 H
K2	KA07 DS03 H
M2	KA07 DS04 H
P2	KA07 DS05 H
S2	KA07 SIN CY BK RQ L
T2	KA07 SD 00 H
V2	KA07 SD 01 H

M912 D02

B1	KA07 I/O RUN H
D1	KA07 DATA OFLO H
E1	KA07 I/O OFLO H
H1	KA07 I/O ADDR 03 L
J1	KA07 I/O ADDR 04 L
L1	KA07 I/O ADDR 05 L
M1	KA07 I/O ADDR 06 L
P1	KA07 I/O ADDR 07 L
S1	KA07 I/O ADDR 08 L

M912 D02

D2	KA07 I/O ADDR 09 L
E2	KA07 I/O ADDR 10 L
H2	KA07 I/O ADDR 11 L
K2	KA07 I/O ADDR 12 L
M2	KA07 I/O ADDR 13 L
P2	KA07 I/O ADDR 14 L
S2	KA07 I/O ADDR 15 L
T2	KA07 I/O ADDR 16 L
V2	KA07 I/O ADDR 17 L

M912 D03

B1	KA07 WR RQ L
D1	KA07 INC MB L
E1	KA07 INH CA L
H1	KA09 API 00 RQ L
L1	KA09 API 00 EN H
M1	KA09 API 01 RQ L
S1	KA07 API 01 EN H

M912 * D03

D2	KA09 API 02 RQ L
H2	KA09 PWR FAIL API RQ H
K2	KA09 API 03 RQ L
P2	KA09 CLK API RQ H
S2	KA07 DCH RQ L
T2	KA07 DCH GR H
V2	KA07 DCH EN H

M912 D04

B1	KA07 I/O RUN H
D1	KA07 DATA OFLO H
E1	KA07 I/O OFLO H
H1	KA07 I/O ADDR 03 L
J1	KA07 I/O ADDR 04 L
L1	KA07 I/O ADDR 05 L
M1	KA07 I/O ADDR 06 L
P1	KA07 I/O ADDR 07 L
S1	KA07 I/O ADDR 08 L

M912 D04

D2	KA07 I/O ADDR 09 L
E2	KA07 I/O ADDR 10 L
H2	KA07 I/O ADDR 11 L
K2	KA07 I/O ADDR 12 L
M2	KA07 I/O ADDR 13 L
P2	KA07 I/O ADDR 14 L
S2	KA07 I/O ADDR 15 L
T2	KA07 I/O ADDR 16 L
V2	KA07 I/O ADDR 17 L

M912 D05

B1	KA07 WR RQ L
D1	KA07 INC MB L
E1	KA07 INH CA L
H1	KA09 API 00 RQ L
J1	KA09 API 00 GR H
L1	KA09 API 00 EN H
M1	KA09 API 01 RQ L
P1	KA09 API 01 GR H
S1	KA07 API 01 EN H

M912 * D05

D2	KA09 API 02 RQ L
E2	KA09 API 02 GR H
H2	KA07 API 02 EN H
K2	KA09 API 03 RQ L
M2	KA09 API 03 GR H
P2	KA09 API 03 EN H
S2	KA07 DCH RQ L
T2	KA07 DCH GR H
V2	KA07 DCH EN H

M904 B05

B1	KA03 CP API RQ L
D1	KA07 DBK H
E1	KA07 DBR H
H1	KA07 TIME 04 H
J1	KA04 API RQ L
L1	KA07 API SYNC (B) H
M1	KM12 NEXM L
P1	KA07 API CAL H
S1	KA07 API (B) H

M904 B05

D2	KA07 CP ACT H
E2	KA07 SET FETCH H
H2	KA07 PI SYNC H
K2	KA07 INT+API ST H
M2	KA07 RESTORE UM L
P2	KM12 USER MODE L
S2	KA07 TIME 03 H
T2	KA07 PWR FAIL H
V2	KA07 RTC FLG H

G775 C32

A1	KA01 RQ 00 (1)H
B1	KA01 RQ 01 (1)H
C1	KA01 RQ 02 (1)H
D1	KA01 RQ 03 (1)H
E1	KA01 RQ 04 (1)H
F1	KA01 RQ 05 (1)H
H1	KA01 RQ 06 (1)H
J1	KA01 RQ 07 (1)H
L1	KA01 API ENABLE (1)H
M1	KA02 PL 00 EN H
N1	KA02 PL 01 EN H
P1	KA02 PL 02 EN H
R1	KA02 PL 03 EN H
S1	KA02 PL 04 EN H
T1	KA03 PL 05 EN H
U1	KA03 PL 06 EN H
V1	KA03 PL 07 EN H

G775 C32

A2	KA05 TRQ 00 (1)H
B2	KA05 TRQ 01 (1)H
C2	KA05 TRQ 02 (1)H
D2	KA05 TRQ 03 (1)H
H2	KA05 PF API RQ A (1)H
J2	KA05 PF API B (1)H
K2	KA05 RTC API RQ A (1)H
L2	KA05 RTC API RQ B (1)H
M2	KA01 RQ SYNC 00 H
N2	KA01 RQ SYNC 01 H
P2	KA01 RQ SYNC 02 H
R2	KA01 RQ SYNC 03 H
S2	KA01 API 00 GRANT (1)H
T2	KA01 API 01 GRANT (1)H
U2	KA01 API 02 GRANT (1)H
V2	KA01 API 03 GRANT (1)H

API INDICATOR CABLE

M910 D25

B1	KA09 API 00 GR H
D1	KA09 API 01 GR H
E1	KA09 API 02 GR H
H1	KA09 API 03 GR H
J1	KA07 API 02 EN H
L1	KA09 API 03 EN H

M910 D25

B2	
C2	
D2	
E2	
F2	
H2	
J2	
K2	
L2	
M2	
N2	
P2	
R2	
S2	
T2	
U2	
V2	

*NOTE: IF BB15 IS INSTALLED WITHOUT API (KA15) ADD THE FOLLOWING WIRES:
D03H2 - D05H2
D03P2 - D05P2

REVISIONS		
CHK	CHANGE NO.	REV.
	BB15-00011	A

DRN. K COTE	DATE 1/13/78	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. P DAIGNEAULT	DATE 1/13/78	
ENG. J ELSBREE	DATE 1/25/78	TITLE API CABLES
PROJ. ENG. F AUMANN	DATE 1/25/78	
PROD. F LASKEY	DATE 1/27/78	
FIRST USED ON KA15		SIZE D · CODE BS · NUMBER KA15-0-07 · REV. A
SCALE		DIST.
SHEET 1 OF 1		

KA07 I/O BUS 00 L — D2 — M510 C10 — C1 KA08 I/O B 00 L; D1 KA08 I/O B 00 H

KA07 I/O BUS 01 L — H2 — M510 C10 — F1 KA08 I/O B 01 L; H1 KA08 I/O B 01 H

KA07 I/O BUS 02 L — K2 — M510 C10 — J1 KA08 I/O B 02 L; K1 KA08 I/O B 02 H

KA07 I/O BUS 03 L — M2 — M510 C10 — L1 KA08 I/O B 03 L; M1 KA08 I/O B 03 H

KA07 I/O BUS 04 L — P2 — M510 C10 — N1 KA08 I/O B 04 L; P1 KA08 I/O B 04 H

KA07 I/O BUS 05 L — R2 — M510 C10 — U2 KA08 I/O B 05 L; T2 KA08 I/O B 05 H

KA07 I/O BUS 06 L — S2 — M510 C10 — R1 KA08 I/O B 06 L; S1 KA08 I/O B 06 H

KA07 I/O BUS 07 L — U1 — M510 C10 — V1 KA08 I/O B 07 L; V2 KA08 I/O B 07 H

KA07 I/O BUS 08 L — D2 — M510 C11 — C1 KA08 I/O B 08 L; D1 KA08 I/O B 08 H

KA07 I/O BUS 09 L — H2 — M510 C11 — F1 KA08 I/O B 09 L; H1 KA08 I/O B 09 H

KA07 I/O BUS 10 L — K2 — M510 C11 — J1 KA08 I/O B 10 L; K1 KA08 I/O B 10 H

KA07 I/O BUS 11 L — M2 — M510 C11 — L1 KA08 I/O B 11 L; M1 KA08 I/O B 11 H

KA07 I/O BUS 12 L — P2 — M510 C11 — N1 KA08 I/O B 12 L; P1 KA08 I/O B 12 H

KA07 I/O BUS 13 L — R2 — M510 C11 — U2 KA08 I/O B 13 L; T2 KA08 I/O B 13 H

KA07 I/O BUS 14 L — S2 — M510 C11 — R1 KA08 I/O B 14 L; S1 KA08 I/O B 14 H

KA07 I/O BUS 15 L — U1 — M510 C11 — V1 KA08 I/O B 15 L; V2 KA08 I/O B 15 H

KA07 I/O BUS 16 L — D2 — M510 D10 — C1 KA08 I/O B 16 L; D1 KA08 I/O B 16 H

KA07 I/O BUS 17 L — H2 — M510 D10 — F1 KA08 I/O B 17 L; H1 KA08 I/O B 17 H

KA07 I/O SYNC H — K2 — M510 D10 — K1 KA08 I/O SYNC L; J1 KA08 I/O SYNC H

KA07 IOP 1 H — M2 — M510 D10 — M1 KA08 IOP 1 L; L1 KA08 IOP 1 H

KA07 IOP 2 H — P2 — M510 D10 — P1 KA08 IOP 2 L; N1 KA08 IOP 2 H

KA07 IOP 4 H — R2 — M510 D10 — T2 KA08 IOP 4 L; U2 KA08 IOP 4 H

KA07 I/O PWR CLR H — S2 — M510 D10 — S1 KA08 API PWR CLR L; R1 KA08 API PWR CLR H

KA07 DS00 H — U1 — M510 D10 — V2 KA08 DS00 L; V1 KA08 DS00 H

KA07 DS01 H — D2 — M510 D11 — D1 KA08 DS01 L; C1 KA08 DS01 H

KA07 DS02 H — H2 — M510 D11 — H1 KA08 DS02 L; F1 KA08 DS02 H

KA07 DS03 H — K2 — M510 D11 — K1 KA08 DS03 L; J1 KA08 DS03 H

KA07 DS04 H — M2 — M510 D11 — M1 KA08 DS04 L; L1 KA08 DS04 H

KA07 DS05 H — P2 — M510 D11 — P1 KA08 DS05 L; N1 KA08 DS05 H

KA07 SD 00 H — R2 — M510 D11 — T2 KA08 SD 00 L; U2 KA08 SD 00 H

KA07 SD 01 H — S2 — M510 D11 — S1 KA08 SD 01 L; R1 KA08 SD 01 H

KA09 API 00 RQ L — U1 — M510 D11 — V1 KA08 API 00 RQ L; V2 KA08 API 00 RQ H

KA09 API 01 RQ L — D2 — M510 D12 — C1 KA08 API 01 RQ L; D1 KA08 API 01 RQ H

KA09 API 02 RQ L — H2 — M510 D12 — F1 KA08 API 02 RQ L; H1 KA08 API 02 RQ H

KA09 API 03 RQ L — K2 — M510 D12 — J1 KA08 API 03 RQ L; K1 KA08 API 03 RQ H

REVISIONS		
CHK	CHANGE NO.	REV.

DRN. K Cote	DATE 2-12-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D K Kingsbury	DATE 3-13-70	TITLE: I/O BUS RECEIVERS
ENG. G Glabrea	DATE 3/25/70	
PROJ. ENG. W C Clausmann	DATE 3/25/70	
PROD. T. L. S	DATE 3/31/70	
FIRST USED ON: KA15		SIZE D; CODE BS; NUMBER KA15-0-08; REV.
SCALE		
SHEET 1 OF 1		DIST.

KA05 API I/O A 12 L — B1
KA04 API SYNC (B) L — C1
M622 D06 → L2 KA09 I/O ADDR 12 L

KA06 API I/O A 13 L — D1, E1
M622 D06 → E2 KA09 I/O ADDR 13 L

KA06 API I/O A 14 L — F1, H1
M622 D06 → H2 KA09 I/O ADDR 14 L

KA06 API I/O A 15 L — J1, K1
M622 D06 → K2 KA09 I/O ADDR 15 L

KA06 API I/O A 16 L — L1, M1
M622 D06 → M2 KA09 I/O ADDR 16 L

KA06 API I/O A 17 L — N1, P1
M622 D06 → P2 KA09 I/O ADDR 17 L

KA05 PF V IRQ 00 L — R1, S1
M622 D07 → S2 KA09 API 00 RQ L

KA05 IRQ 01 (1) L — U1, V1
M622 D07 → V2 KA09 API 01 RQ L

KA05 IRQ 02 (1) L — B1, C1
M622 D08 → D2 KA09 API 02 RQ L

KA05 RTC V IRQ 03 L — D1, E1
M622 D08 → E2 KA09 API 03 RQ L

KA04 API SKIP REQUEST L — F1, H1
M622 D09 → H2 KA09 [illegible]

MP10 EN OUT H — F1, H1
M622 D07 → H2 KA09 API 00 EN H

KA05 PF API RQ A (10) H — J1, K1
M622 D07 → K2

KA04 RPL L — J1, K1
M622 D08 → K2 KA09 RD RQ L

KA05 RTC API RQ A (0) H — N1, P1
M622 D07 → P2 KA09 API 03 EN H

KA01 API 00 GRANT (1) H — R1, S1
M622 D06 → S2 KA09 API 00 GR H

KA01 API 01 GRANT (1) H — U1, V1
M622 D06 → V2 KA09 API 01 GR H

KA01 API 02 GRANT (1) H — B1, C1
M622 D07 → D2 KA09 API 02 GR H

KA01 API 03 GRANT (1) H — D1, E1
M622 D07 → E2 KA09 API 03 GR H

KA05 PF API RQ A (11) H — L1, M1
M622 D08 → M2 KA09 PWR FAIL API RQ H

KA05 RTC API RQ A (11) H — N1, P1
M622 D08 → P2 KA09 CLK API RQ H

REVISIONS		
CHK	CHANGE NO.	REV.
AW	BB15-00011	A

DRN. K COTE	DATE 3/13/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. P DAIGNEAULT	DATE 3/13/70	
ENG. J ELSBREE	DATE 3/25/70	TITLE MISC DRIVERS
PROJ. ENG. F AUMANN	DATE 3/25/70	
PROD. F LASKEY	DATE 3/27/70	
FIRST USED ON KA15		SIZE D · CODE BS · NUMBER KA15-0-09 · REV. A
SCALE		DIST.
SHEET 1 OF 1		

KA08 API 00 RQ H — A1 — M149 D09
KA08 API 01 RQ H — D1 — M149 D09
KA08 API 02 RQ H — D2 — M149 D09
KA08 API 03 RQ H — H1 — M149 D09
KA01 API 04 RQ (1)H — H2 — M149 D09
KA01 API 05 RQ (1)H — L1 — M149 D09
KA01 API 06 RQ (1)H — L2 — M149 D09
KA01 API 07 RQ (1)H — P1 — M149 D09
P2 — M149 D09 — U2 — M149 D09

KA03 PL 05 (1)H — E1 — M149 D09 — F1
KA03 PL 06 (1)H — E2 — M149 D09 — F2
KA03 PL 07 (1)H — J1 — M149 D09 — K1
KA01 API ENABLE (1)H — J2 — M149 D09 — K2
M1 — M149 D09 — N1
M2 — M149 D09 — N2
R1 — M149 D09 — S1
KA03 PL 04 (1)H — R2 — M149 D09 — S2
V2 — M149 D09

KA02 PL 00 (1)H — A1 — M149 C09 — C1
KA02 PL 01 (1)H — D1 — M149 C09 — F1
KA02 PL 02 (1)H — D2 — M149 C09 — F2
KA02 PL 03 (1)H — H1 — M149 C09 — K1
H2 — M149 C09 — J2 — K2
L1 — M149 C09 — M1 — N1
L2 — M149 C09 — M2 — N2
P1 — M149 C09 — R1 — S1
P2 — M149 C09 — R2 — S2
+3V C14V1 H — U2 — M149 C09
V2 — M149 C09

M901 A04 — M901 B04

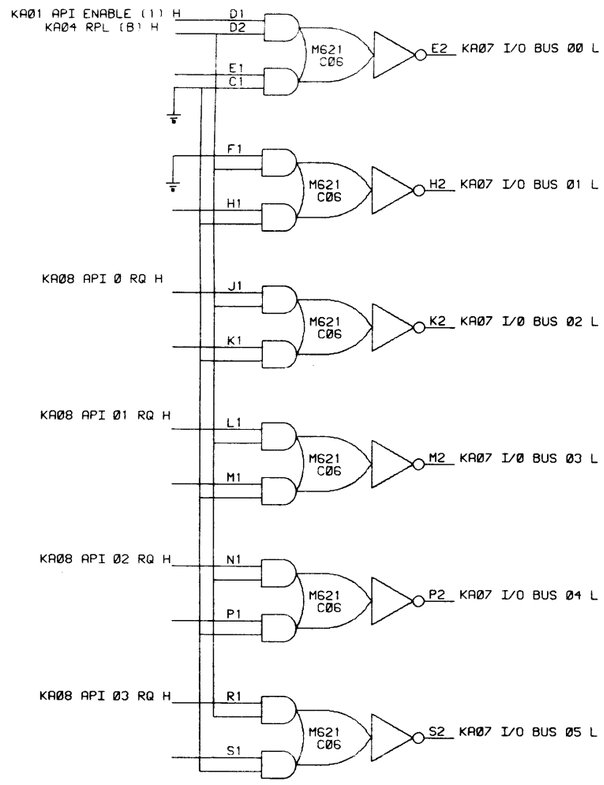
C1	KA10 I BUS 20 L
D1	KA10 I BUS 21 L
E1	KA10 I BUS 22 L
F1	KA10 I BUS 23 L
H1	KA10 I BUS 00 L
J1	KA10 I BUS 01 L
K1	KA10 I BUS 02 L
L1	KA10 I BUS 03 L
M1	KA10 I BUS 04 L
N1	KA10 I BUS 05 L
P1	KA10 I BUS 06 L
R1	KA10 I BUS 07 L

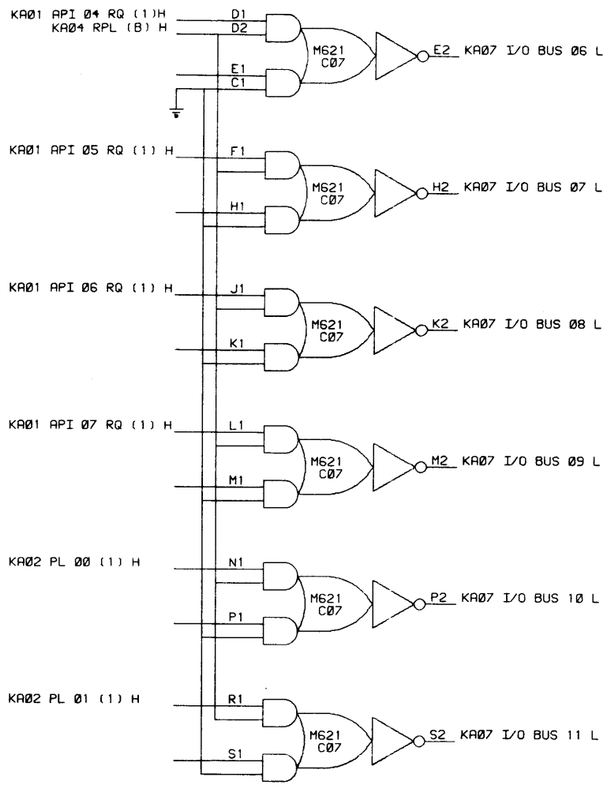
M901 A04 — M901 B04

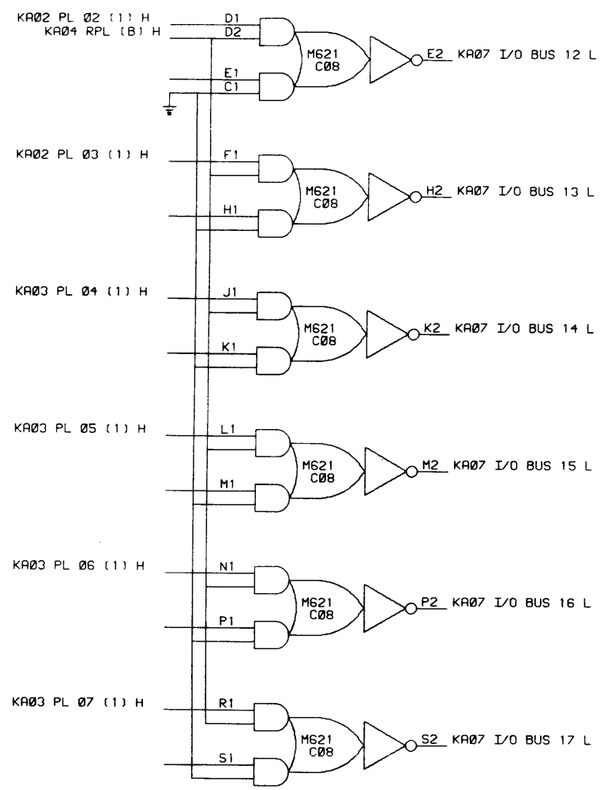
N2	KA10 STROBE 00 L
P2	KA10 IND PL/SC L

REVISIONS		
CHK	CHANGE NO.	REV.
AQC	CA15-00004	A
	Released initial 4-24-70	
	Revised: 5-1-70	

DRN K COTE	DATE 3/20/70	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D P DAIGNEAULT	DATE 3/20/70	
ENG J ELSBREE	DATE 3/25/70	TITLE I BUS DRIVERS
PROJ ENG P AUMANN	DATE 3/25/70	
PROD P CASKEY	DATE 3/27/70	
FIRST USED ON KA15		SIZE D / CODE 15S / NUMBER KA15-0-10 / REV. H
SCALE		
SHEET 1 OF		DIST







REVISIONS		
CHK	CHANGE NO.	REV.

DSN. K Cate	DATE 3-13-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHKD. [illegible]	DATE 3-13-70	TITLE I/O BUS DRIVERS
ENG. [illegible]	DATE 3/24/70	
PROJ. ENG. [illegible]	DATE 3/25/70	
PROD. [illegible]	DATE 3/26/70	
FIRST USED ON KA15		SIZE D | CODE 85 | NUMBER KA15-0-11 | REV.
SCALE		
SHEET OF		DIST.

+3V A24U1 H — KM12 MDL 00 (1) B H — KM12 MDL OUT 01 (1) B H — KM12 MDL OUT 02 (1) B H — KM12 MDL OUT 03 (1) B H — KM12 MDL OUT 04 (1) B H — KM12 MDL 12 (1) B H — KM12 MDL 15 (1) B H

IR 00 M205 A21 — IR 01 M205 A21 — IR 02 M205 A16 — IR 03 M205 A21 — IR 04 M205 A21 — IR 12 M205 A22 — IR 15 M205 A22

KM11 IOT 1742 L

KA07 SET FETCH H — KM10 TRAP (0) H — M103 B28 — M103 B28

M112 A24 — KM10 STROBE IR 1 H

M112 A24 — KM10 STROBE IR 2 H

+3V B18U1 H — M133 B24 — MP11 P RD RST H — STROBE M205 B18 — KM12 STROBE XCT L

KM10 SET PV * TRAP L — TRAP M205 A22

KA07 RESTORE UM L — +3V A24U1 H — KM11 IOT 1742 H — PRE M205 A23 — UM M205 A23 — KM11 PWR CLR L

KT15 RA CARRY 01 L — M133 B24

+3V A24U1 H — MEM OK M205 A22 — KM11 INT M REQ H — NEXM M205 A22 — KM10 SET NEXM H

KM11 PWR CLR H — KA07 INT + API ST H — M112 A24

KM12 ADR ACK H — KM11 PWR CLR H — M112 A24

KM11 INT + API ST L — KM12 CAL L — M627 B25 — M611 A27

KM12 ADR ACK H — KA07 CP ACT H — M103 B27

KA07 INT + API ST L — M112 A24

KA07 RESTORE UM L — KM11 PWR CLR L — M103 B27 — KM11 IOT 1744 H — M112 A24

KM13 CARRY L — KM11 XCT 02 (1) L — M627 B25

KM10 PRE (1) H — KM10 UM (1) H — M627 B25 — KM10 SET PV * TRAP L

KM10 OAS H — KM10 HLT H — M112 A26

PV M205 A23 — KA07 RESTORE UM L

KM10 IOT H — M112 A26

KM11 IOT 1702 H — KM11 PWR CLR H — M112 A24

KM10 NEXM (1) L — KM10 MEM OK (1) L — M112 A26

KM10 OPR L — KM10 IR 12 (1) L — M112 A26 — KM10 HLT H

KM10 OPR L — KM10 IR 15 (1) L — M112 A26 — KM10 OAS H

KM10 IR 00 (1) H — KM10 IR 01 (0) H — KM10 IR 02 (0) H — KM12 IR 03 (0) H — M627 B25 — KM10 XCT L

KM10 XCT L — M611 A27 — KM10 XCT H

+3V B18U1 H — IR05 M205 B18 — KM11 MDL OUT 05 (1) B H — KM10 STROBE IR 1 H — KM11 IOT 1742 L

KM10 IR 00 (1) H — KM10 IR 01 (1) H — KM10 IR 02 (1) H — KM10 IR 03 (1) H — KM10 IR 04 (0) H — KM12 STROBE XCT H — +3V A26U1 H — M119 A25 — KM10 OPR L

KM10 IOT L — M611 A27 — KM10 IOT H

KM10 IR 00 (1) H — KM10 IR 01 (1) H — KM10 IR 02 (1) H — KM10 IR 03 (0) H — KM10 IR 04 (0) H — KM12 STROBE XCT H — KM10 IR05 (0) H — +3V A26U1 H — M119 A25 — KM10 IOT L

M611 A20 — KM10 SET NEXM H

KM11 INT M REQ H — M133 B24 — KM11 INT M REQ L — +3V A26U1 H — M306 A29

* SET TIME OUT PERIOD TO 3 μSEC UNLESS AN MX15A IS IN THE SYSTEM.
SET TIME OUT PERIOD TO 40 μSEC IF MX15A IS IN THE SYSTEM AND THE MX IS JUMPERED FOR EQUAL PRIORITY.
SET TIMEOUT PERIOD TO A VALUE GREATER THAN THE TIME THE PROCESSOR CAN BE HELD OFF IF THE MX IS JUMPERED FOR ABSOLUTE PRIORITY.

REVISIONS		
CHK	CHANGE NO.	REV.
GH	BB15-00012	A
	S.GOLDSBY 2-17-71	
	J.ELSBREE 2-18-71	
GH	BB15-00015	B
	G.WYATT 6-13-71	
	J.ELSBREE 6-15-71	
GH	BB15-00017	C
	BB15-00018	D
	ELSBREE	

DRN A WASHINGTON	DATE 3/23/70	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D P DAIGNEAULT	DATE 3/23/70	
ENG J ELSBREE	DATE 3/25/70	TITLE CONTROL
PROJ ENG F HOFMANN	DATE 3/25/70	
PROD T LASKEY	DATE 3/27/70	
FIRST USED ON KM15		SIZE D | CODE BS | NUMBER KM15-0-10 | REV. J
SCALE		
SHEET 1 OF 1		DIST.

KA08 IOP 1 H P2 — M103 B27 — B1 KM11 IOT 1701 L, A1
KA08 IOP 2 H R2 — M103 B27 — D1, C1 KM11 IOT 1702 H
KA08 IOP 4 H S2 — M103 B27 — F1, E1 KM11 IOT 1704 H
-KA08 DS00 H D2, -KA08 DS01 H E2, KA08 DS02 H F2, KA08 DS03 H H2, KA08 DS04 H J2, KA08 DS05 H K2, -KA08 SD00 H L2, -KA08 SD01 H N2 — M103 B27 — V2; U2 +3V A26U1 H

KM11 IOT 1704 H H2, KT10 R MODE H J2 — M112 A26 — K2, P2 — M611 B19 — R2 KM11 R MODE + IOT 1704 H

KA08 IOP 1 H P2 — M103 B28 — B1 KM11 IOT 1741 L, A1
KA08 IOP 2 H R2 — M103 B28 — D1, C1 KM11 IOT 1742 H
KA08 IOP 4 H S2 — M103 B28 — F1, E1 KM11 IOT 1744 H
-KA08 DS00 H D2, -KA08 DS01 H E2, KA08 DS02 H F2, KA08 DS03 H H2, KA08 DS04 H J2, KA08 DS05 H K2, KA08 SD00 H L2, -KA08 SD01 H N2 — M103 B28 — V2; U2 +3V A26U1 H

KA08 API PWR CLR H E2 — M611 A27 — F2 KM11 PWR CLR L
KM11 PWR CLR L H2 — M611 A27 — J2 KM11 PWR CLR H

KM11 IOT 1701 L D1, KM10 PV (1)L E1 — M622 A10 — E2 KA09 SKP RQ L
KM11 IOT 1741 L F1, KM10 NEXM (1)L H1 — M622 A10 — H2

KM10 TRAP (1)H T2, MP11 PMWR H U2 — M133 B24 — V2
KM10 TRAP (1)H P2, KM10 NEXM (1)H R2 — M133 B24 — S2
KM11 M REQ IN H K2, L2, M2, N2 — M627 B26 — P2

KM12 P MODE H A1, B1, -KM13 CARRY H C1, D1 — M627 B26 — E1
J1, K1 — M622 A10 — K2 KM11 M REQ OUT L

KT10 R MODE H K2, L2, M2, N2 — M627 C27 — P2
M627 B25 V1 — L1, M1 — M622 A10 — M2

KM15 M REQ IN L D2, +3V A26U1 H E2, F2, H2 — M311 A28 — J2
DELAY: K2 L2 M2 N2 P2 / R2 S2 T2 U2 V2

KM11 M REQ IN H
KM11 KT IN L L2, M2 — M112 A24 — N2 — M133 B24 L1 — N1

MP11 P MWR L M1, MP11 B24S2 L N1, KM12 P MODE H P1, R1 — M627 B26 — S1
+3V A26U1 H F1, KM10 UM (0)L H1, -KA07 CP ACT L J1, K1 — M627 B26 — L1 — M611 A27 — V2
N1, P1 — M622 A10 — P2

KM12 P MODE H P1, -KM11 IOT 1704 H R1 — M133 B24 — S1 — R1 — M611 A27 — S1 KM11 P MODE *-IOT 1704 H

+3V C27V1 H S2 — M611 C26 — T2 — M627 B25 — U1 — M2 — M133 B24 — L2 — N2 — B1, C1 — M622 A10 — D2
KM11 KT IN L
KM15 M REQ IN L

+3V A24U1 H H2 — P2
KM10 XCT H F2, KM12 STROBE XCT H E2 — XCT Ø1 M205 A23 — D1, J2, K2, D2
XCT Ø2 M205 A23 — N2, M2, S2, L2

KM10 XCT L P2, KM12 STROBE XCT L R2 — M112 A24 — S2

KM10 UM (Ø)H V1 — M611 A27 — U1

KM11 IOT 1704 H C1, +3V A26U1 H D1, E1, F1 — M311 A28 — H1 — DELAY: J1 K1 L1 M1 N1 / P1 R1 S1 U1 V1

N1 — M611 A27 — P1 KM11 IOT 1704 DLYD H

KM11 M REQ OUT L D1 — M611 A20 — E1 KM11 INT M REQ H

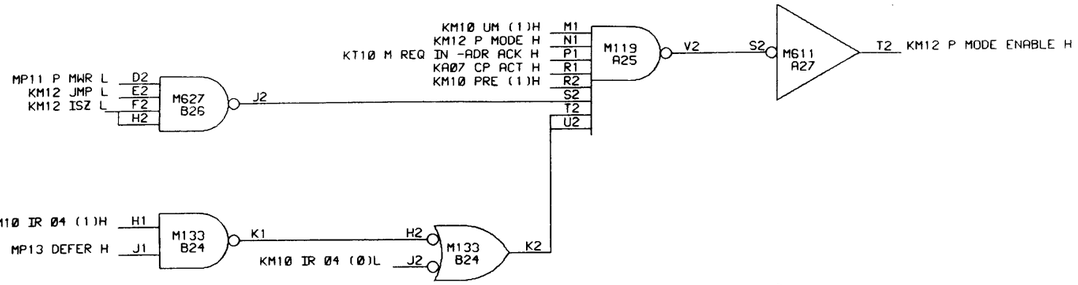
KM15 MDL OUT Ø5 (1)L V1 — M611 A20 — U1 KM11 MDL Ø5 (1)B H

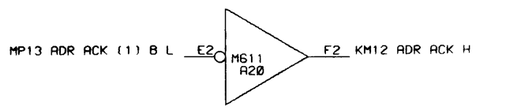
KM11 INT M REQ H F1 — M611 A20 — H1 KM11 INT M REQ L

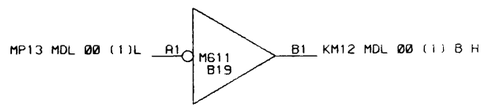
KA07 INT + API ST H J1 — M611 A27 — K1 KM11 INT + API ST L

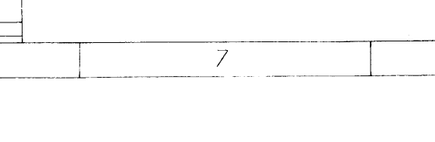
REVISIONS		
CHK	CHANGE NO.	REV.
AC	BB15-00009	A
	I PETERS 7/16/70	
	J ELSBREE 7/17/70	
GH	BB15-00012	B
	S.GOLDSEY 2-17-71	
	J.ELSBREE 2-18-71	
RC	BB15-00017	C
RM	BF[illegible]	D
	[illegible]	

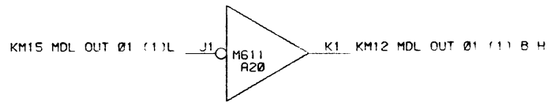
DRN. A.WASHINGTON	DATE 3/23/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CH'K'D. P.DAIGNEAULT	DATE 3/23/70	
ENG. J.ELSBREE	DATE 3/25/70	TITLE: IOT & CONTROL
PROJ. ENG. F.AUMANN	DATE 3/25/70	
PROD. F.LASKEY	DATE 3/27/70	
FIRST USED ON: KM15		SIZE D; CODE BS; NUMBER KM15-0-11; REV. D
SCALE		
SHEET 1 OF 1		DIST.

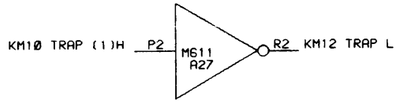


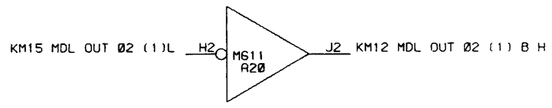


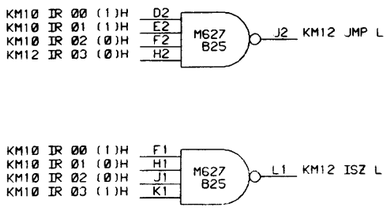


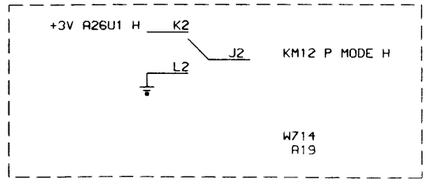


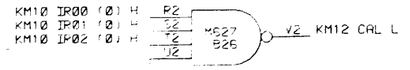


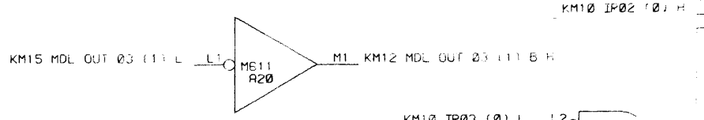


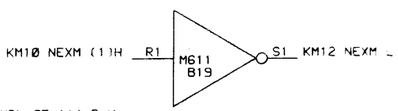


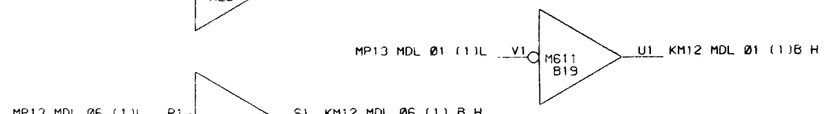


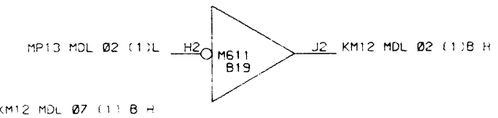


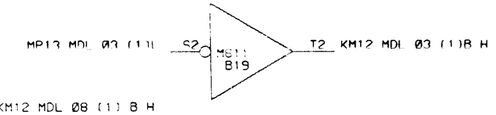


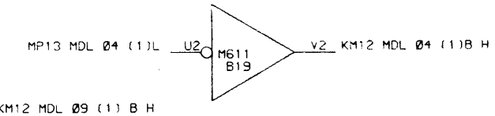


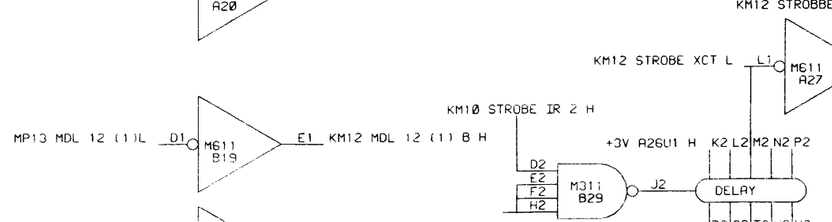












REVISIONS		
CHK	CHANGE NO.	REV.
KAN	BB15-00012	A

DRN. A WASHINGTON	DATE 3/23/70	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. P DRIGNEAULT	DATE 3/23/70	TITLE P MODE ENABLE
ENG. J ELSBREE	DATE 3/25/70	
PROJ. ENG. F AUMANN	DATE 3/25/70	
PROD. F LASKEY	DATE 3/27/70	
FIRST USED ON KM15		SIZE D / CODE 05 / NUMBER KM15-0-12 / REV. A
SCALE		DIST
SHEET 1 OF 1		

KM13 BR Ø1 (1)H
KM13 BR Ø2 (1)H
KM13 BR Ø3 (1)H
KM13 BR Ø4 (1)H
KM13 BR Ø5 (1)H
KM13 BR Ø6 (1)H

D 1 BR Ø1 C Ø — E2
D 1 BR Ø2 C Ø — E1
D 1 BR Ø3 C Ø — K1
D 1 BR Ø4 C Ø — M1
D 1 BR Ø5 C Ø — U2
D 1 BR Ø6 C Ø — V1

KM11 IOT 1704 DLYD H V2

KM13 CARRY L D1

Σ Σ Σ Σ Σ Σ U1

KM14 CARRY Ø1 L

KM11 P MODE *-IOT 1704 H

KM11 R MODE + IOT 1704 H

R1 H2 M2 — F2 — L2 — L1 — S2 — T2

-KT13 I/O B OR BR Ø1 H
-KT13 I/O B OR BR Ø2 H
-KT13 I/O B OR BR Ø3 H
-KT13 I/O B OR BR Ø4 H
-KT13 I/O B OR BR Ø5 H
-KT13 I/O B OR BR Ø6 H

KM12 P MODE ENABLE H

KT1Ø R MODE ENABLE H

R2 B2 H1 A1 — C1 D2 — K2 J2 — J1 F1 — F2 N2 — P1 N1

MP13 MDL Ø1 (1)L
MP13 MDL Ø2 (1)L
MP13 MDL Ø3 (1)L
MP13 MDL Ø4 (1)L
MP13 MDL Ø5 (1)L
MP13 MDL Ø6 (1)L

KM12 MDL Ø1 (1) B H
KM12 MDL Ø2 (1) B H
KM12 MDL Ø3 (1) B H
KM12 MDL Ø4 (1) B H
KM12 MDL Ø5 (1) B H
KM12 MDL Ø6 (1) B H

M214
B20

REVISIONS		
CHK	CHANGE NO.	REV.

DSN P. Washington	DATE 1-23-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. [illegible]	DATE 3-23-70	
ENG. [illegible]	DATE 3/25/70	TITLE: BOUNDARY REQ 1-6
MOD. ENG. [illegible]	DATE 3/25/70	
PROD [illegible]	DATE 3/27/70	
FIRST USED ON: KM15		SIZE D · CODE BS · NUMBER KM15-Ø-13 · REV. ØØ
SCALE		DIST.
SHEET 1 OF 1		

KM14 BR Ø7 (1)H

KM14 BR Ø8 (1)H

KM14 BR Ø9 (1)H

D 1 BR Ø7 C Ø — E2

D 1 BR Ø8 C Ø — E1

D 1 BR Ø9 C Ø — K1

D 1 M1

D 1 U2

D 1 V1

KM11 IOT 1704 DLYD H V2

KM14 CARRY Ø1 L

D1

Σ

U1 +3V A24V1 H

KM11 P MODE ~-IOT 1704 H

KM11 R MODE + IOT 1704 H

R1
H2
M2

F2

L2

L1

S2

T2

-KT13 I/O B OR BR Ø7 H

-KT13 I/O B OR BR Ø8 H

-KT13 I/O B OR BR Ø9 H

KM12 P MODE ENABLE H

K110 R MODE ENABLE H

R2
B2
H1
A1

C1
D2

K2
J2

J1
F1

P2
N2

P1
N1

MP13 MDL Ø7 (1)L

MP13 MDL Ø8 (1)L

MP13 MDL Ø9 (1)L

KM12 MDL Ø7 (1) B H

KM12 MDL Ø8 (1) B H

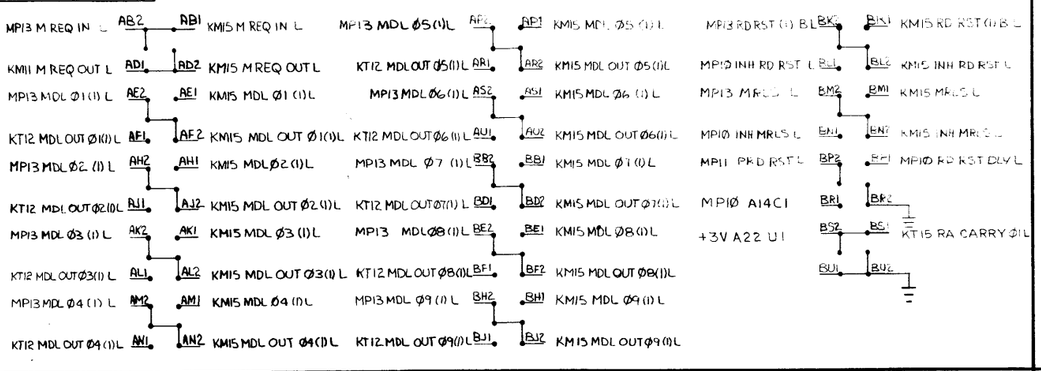
KM12 MDL Ø9 (1) B H

M214
B21

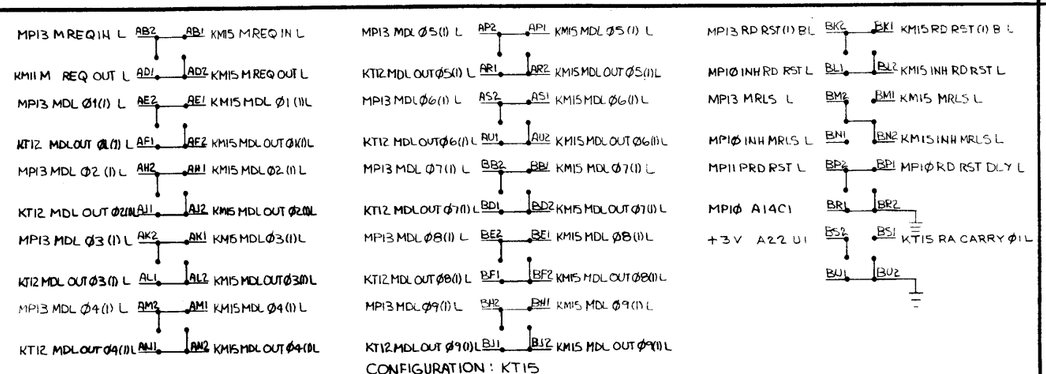
REVISIONS		
CHK	CHANGE NO.	REV.

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D	DATE	
ENG.	DATE 3/25/70	TITLE
PROJ. ENG.	DATE 3/25/70	
PROD.	DATE	
FIRST USED ON KM11-F		SIZE D / CODE 85 / NUMBER / REV.
SCALE		
SHEET OF		DIST.

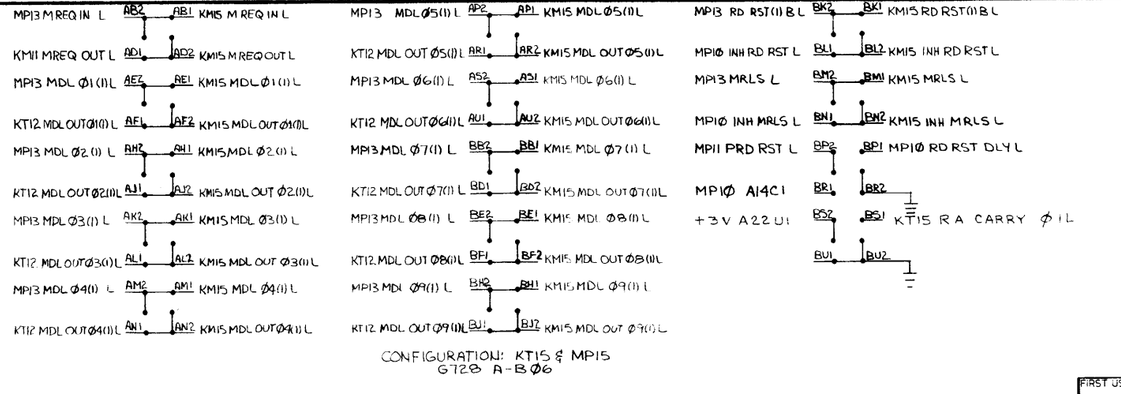
CONFIGURATION: KM15
G728 A-BØ6



CONFIGURATION: KT15
G728 A-BØ6



CONFIGURATION: KM15 & MP15
G728 A-BØ6



CONFIGURATION: KT15 & MP15
G728 A-BØ6

REVISIONS			
CHK	CHANGE NO	REV	
FV	BB15-0004	A	T. Quill 4-27-70 ELSBREE 5/4/70
	BB15-0001 2	B	T. Quill 12-16-71 ELSBREE 12/16/71
DRN D	BB15-00019	C	J. Healy 2/16/73 2 F Healy 4-17-73
			J. ELSBREE 4-23-73

FIRST USED ON OPTION / MODEL: PDP15	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005, FRACTIONS ± 1/64, ANGLES ± 0°30' FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL				
FINISH				

DRN [signature] DATE 11/7/Ø
CHK D. [signature] DATE
ENG [signature] DATE 5-25-76
PROJ ENG [signature] DATE 5/25/76
PROD DATE
NEXT HIGHER ASSY A-ML-BB15-Ø
SCALE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: BB15 JUMPER CARD CONFIGURATION

SIZE	CODE	NUMBER	REV
D	BS	KM15-0-15	C

DIST

REV C
NUMBER KM15-0-15
SIZE D CODE BS

SEE FORM NO DRD 102A

KT10 R MODE H A1
KM10 UM (1)H B1
KM10 PRE (1)H C1
+3V C26U1 H D1
M627 C27
E1
P2
M611 C26
R2
-KM11 M REQ IN L H1
-KA07 CP ACT L J1
+3V C27U1 H K1
M627 C27
L1
M1
N1
P1
R1
M627 C27
S1 KT10 MDL-MDL L

KT10 RA MDL L K2
M611 B19
L2 KT10 R MODE ENABLE H

KT10 MEM -CP (1)H R2
-MP13 DATA ACK H S2
T2
+3V C27U1 H U2
M627 C27
V2 KT10 BUS SWITCH L

R1
M611 C26
S1 KT10 STROBE RA H

KM10 UM (1)L H1
KM10 PRE (1)L J1
M112 A26
K1 KT10 UM*PRE (1)H
D2
E2
KA07 CP ACT H F2
KT10 R MODE H H2
M627 C27
J2 KT10 RA-MDL L

KM11 M REQ IN H C1
KT10 R MODE H D1
KT10 UM*PRE (1)H E1
KA07 CP ACT H F1
M311 B29
H1
DELAY
J1 K1 L1 M1 N1
P1 R1 S1 U1 V1

KM15 M REQ IN L P2
-KM12 ADR ACK L R2
M112 A26
S2 KT10 M REQ IN -ADR ACK L

KA08 IOP 1 H P2
M103 C28
B1
A1

KA08 IOP 2 H R2
M103 C28
D1
C1

KA08 IOP 4 H S2
M103 C28
F1
E1 KT10 IOT 1724 H

-KA08 DS00 H D2
-KA08 DS01 H E2
KA08 DS02 H F2
KA08 DS03 H H2
KA08 DS04 H J2
KA08 DS05 H K2
-KA08 SD00 H L2
KA08 SD01 H N2
M103 C28
V2
U2
+3V C27U1 H

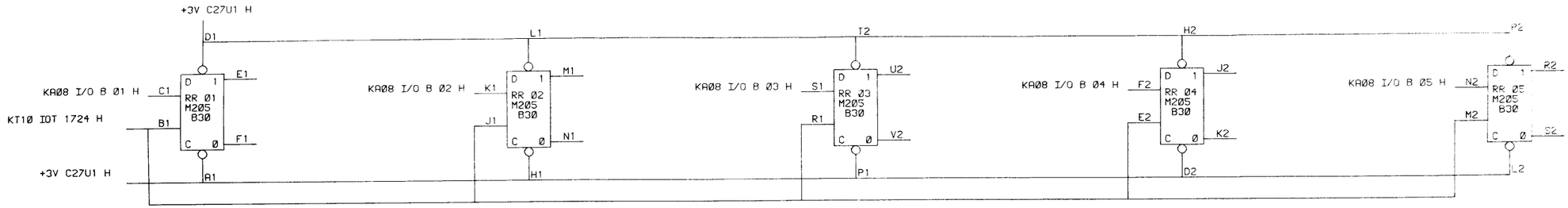
KM12 P MODE H J1
M611 B19
K1 KT10 R MODE H

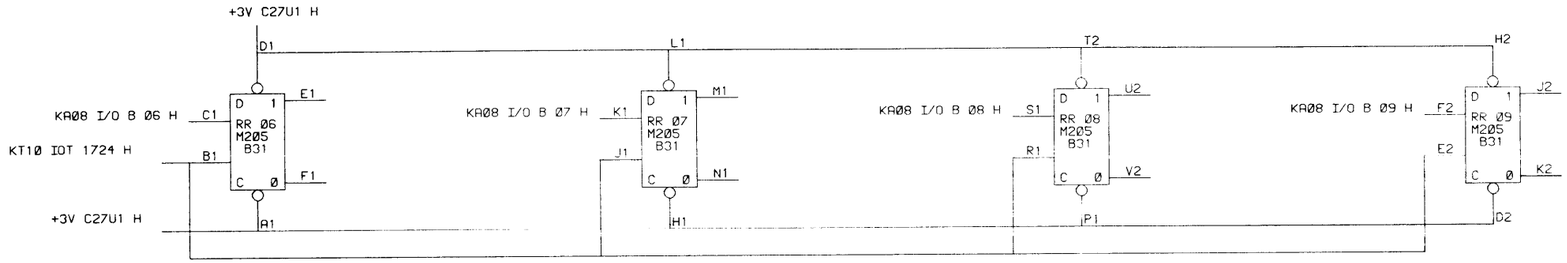
+3V B31U1 H P2
MP11 P MRD H N2
KM12 ADR ACK H M2
D 1
MEM -CP M205 B31
C 0
R2 KT10 MEM -CP (1)H
S2
L2

MP13 DATA ACK L L1
M611 B19
M1
KM11 PWR CLR H U2
T2
M112 A26
V2

REVISIONS		
CHK	CHANGE NO.	REV.

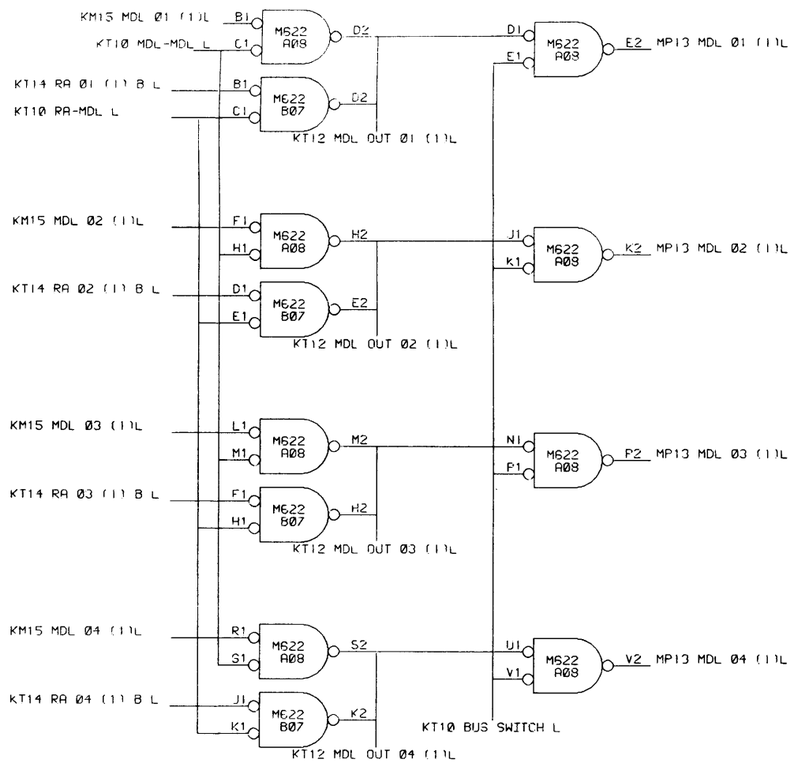
DRN.	DATE 3-23-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHKD.	DATE 3-23-70	
ENG.	DATE 3/25/70	TITLE MDL CONTROL
PROJ. ENG.	DATE 3/25/70	
PROD.	DATE 3/25/70	
FIRST USED ON KT15		SIZE D | CODE BS | NUMBER KT15-0-10 | REV.
SCALE		
SHEET 1 OF 1		DIST

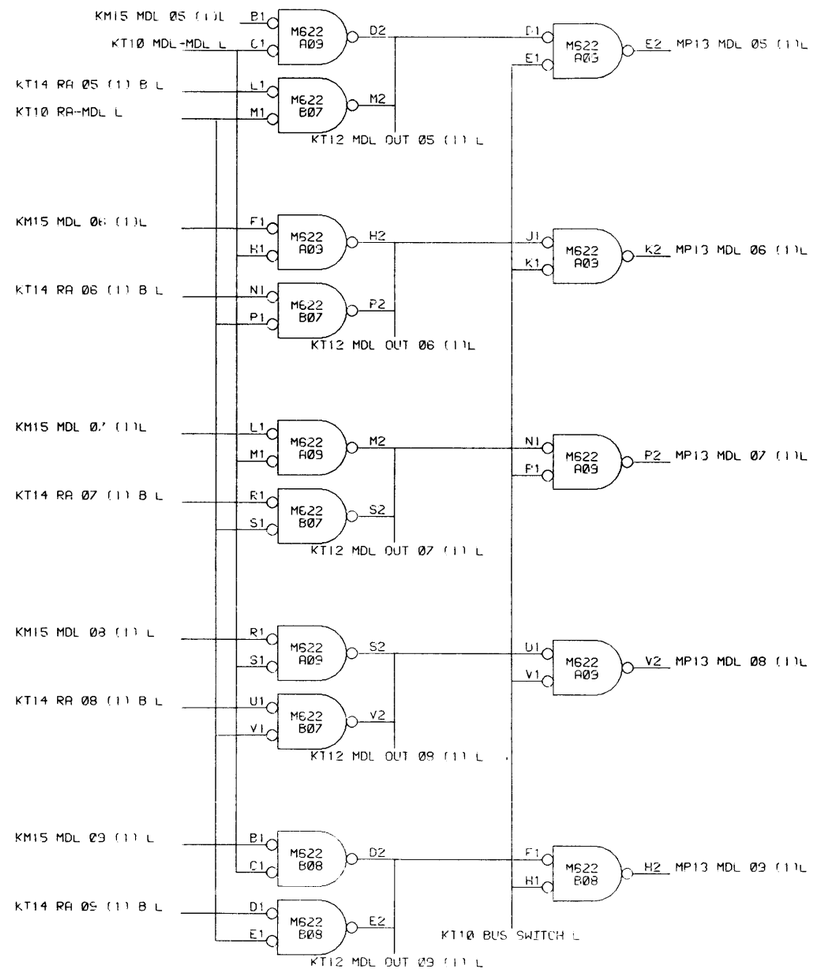




REVISIONS		
CHK	CHANGE NO.	REV.

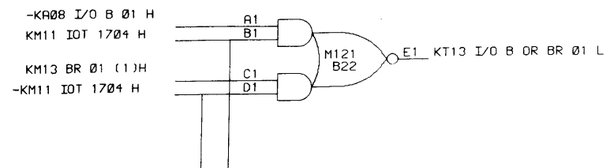
DRN D. Washington	DATE 1-23-70	digital EQUIPMENT CORPORATION
CHK'D R. Beaudet	DATE 1-23-70	
ENG. A. Edelbrock	DATE 3/25/70	TITLE RELOCATION REGISTER
~~PROJ ENG.~~ M. Chapman	DATE 3/25/70	
PROD.	DATE	
FIRST USED ON KT15		SIZE D | CODE 85 | NUMBER KT15-0-11 | REV. 00
SCALE		
SHEET 1 OF 1		DIST.

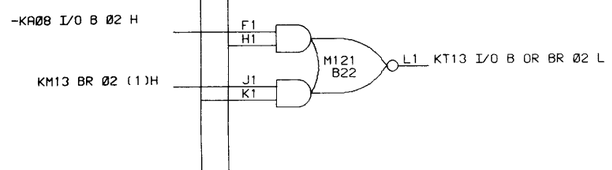


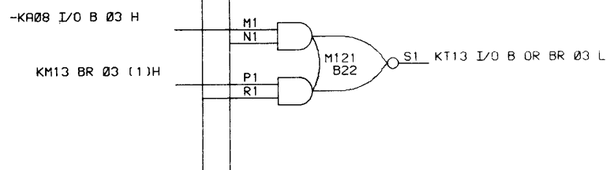


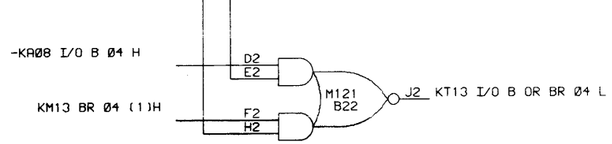
REVISIONS		
CHK	CHANGE NO.	REV.

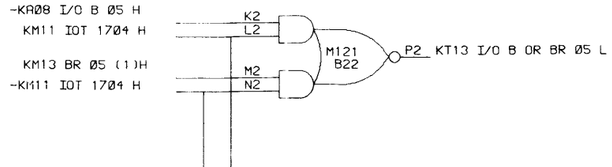
DSN. W. Washington	DATE 3-23-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. D. Daigneault	DATE 3-23-70	TITLE RELOCATE MDL'S
ENG. J. Clabrese	DATE 3/25/70	
PROJ. ENG. T. Neumann	DATE 3/25/70	
PROD.	DATE	
FIRST USED ON KT15		SIZE D CODE BS NUMBER KT15-0-12 REV.
SCALE		
SHEET 1 OF 1		DIST.

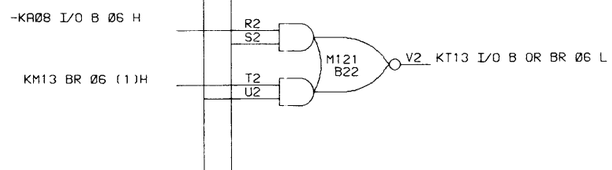


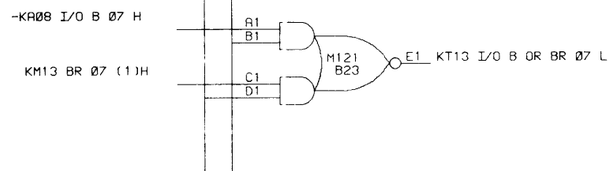


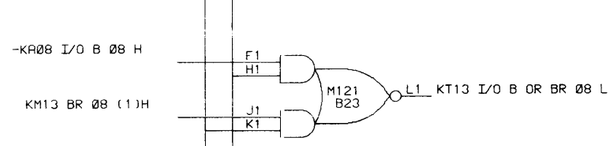


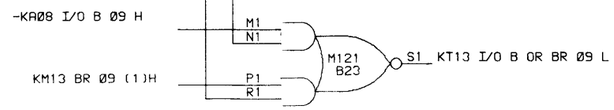












REVISIONS		
CHK	CHANGE NO.	REV.

DRN. W. Matthiesen	DATE 3-27-70	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHKD. R. Vaquenault	DATE 3-27-70	
ENG. J. Silvera	DATE 3/25/70	TITLE I/O BUS OR BR
PROJ. ENG. J. C. Ulmann	DATE 3/25/70	
PROD. G. Parker	DATE 3/27/70	
FIRST USED ON KT15		SIZE D | CODE BS | NUMBER KT15-0-13 | REV. 00
SCALE		
SHEET 1 OF 1		DIST

KT15 RA Ø1 (1)H — A1 — M611 C26 — B1 — KT14 RA Ø1 (1) B L

KT15 RA Ø2 (1)H — D1 — M611 C26 — E1 — KT14 RA Ø2 (1) B L

KT15 RA Ø3 (1)H — F1 — M611 C26 — H1 — KT14 RA Ø3 (1) B L

KT15 RA Ø4 (1)H — E2 — M611 C26 — F2 — KT14 RA Ø4 (1) B L

KT15 RA Ø5 (1)H — J1 — M611 C26 — K1 — KT14 RA Ø5 (1) B L

KT15 RA Ø6 (1)H — H2 — M611 C26 — J2 — KT14 RA Ø6 (1) B L

KT16 RA Ø7 (1)H — L1 — M611 C26 — M1 — KT14 RA Ø7 (1) B L

KT16 RA Ø8 (1)H — K2 — M611 C26 — L2 — KT14 RA Ø8 (1) B L

KT16 RA Ø9 (1)H — N1 — M611 C26 — P1 — KT14 RA Ø9 (1) B L

M966 A05

A1	
B1	KM15 MREQ IN L
C1	
D1	KM15 MDL Ø1 (1)L
E1	KM15 MDL Ø2 (1)L
F1	
H1	KM15 MDL Ø3 (1)L
J1	KM15 MDL Ø4 (1)L
K1	
L1	KM15 MDL Ø5 (1)L
M1	KM15 MDL Ø6 (1)L
N1	
P1	KM15 MDL Ø7 (1)L
R1	
S1	KM15 MDL Ø8 (1)L
T1	
U1	
V1	

M966 A05

A2	
B2	
C2	
D2	KM15 MDL Ø9 (1)L
E2	MP10 INH RD RST L
F2	
H2	KM15 MRLS L
J2	
K2	
L2	
M2	
N2	
P2	
R2	
S2	
T2	
U2	
V2	

M966 A07

A1	
B1	KM11 MREQ OUT L
C1	
D1	KT12 MDL OUT Ø1 (1)L
E1	KT12 MDL OUT Ø2 (1)L
F1	
H1	KT12 MDL OUT Ø3 (1)L
J1	KT12 MDL OUT Ø4 (1)L
K1	
L1	KT12 MDL OUT Ø5 (1)L
M1	KT12 MDL OUT Ø6 (1)L
N1	
P1	KT12 MDL OUT Ø7 (1)L
R1	
S1	KT12 MDL OUT Ø8 (1)L
T1	
U1	
V1	

M966 A07

A2	
B2	
C2	
D2	KT12 MDL OUT Ø9 (1)L
E2	KM15 RD RST (1) B L
F2	
H2	MP10 INH MRLS L
J2	
K2	MP13 MDL PAR (1) B L
L2	
M2	
N2	
P2	
R2	
S2	
T2	
U2	
V2	

REVISIONS		
CHK	CHANGE NO.	REV.
GH	BB15-ØØØ14	A
	S.GOLDSBY 4-10-71	
	J.ELSBREE 4-10-71	
	BB15-ØØØ16	B

DRN. A WASHINGTON	DATE 3/23/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. P DAIGNEAULT	DATE 3/23/70	
ENG. J ELSBREE	DATE 3/25/70	TITLE: RA BUFFERS AND MDL TERMINATORS
PROJ. ENG. F AUMANN	DATE 3/25/70	
PROD. F LASKEY	DATE 3/27/70	
FIRST USED ON: KT15		SIZE D · CODE BS · NUMBER KT15-Ø-14 · REV. B
SCALE		D'ST.
SHEET 1 OF 1		

KT15 RA Ø1 (1)H
KT15 RA Ø2 (1)H
KT15 RA Ø3 (1)H
KT15 RA Ø4 (1)H
KT15 RA Ø5 (1)H
KT15 RA Ø6 (1)H

D 1 RA Ø1 C Ø — E2
D 1 RA Ø2 C Ø — E1
D 1 RA Ø3 C Ø — K1
D 1 RA Ø4 C Ø — M1
D 1 RA Ø5 C Ø — U2
D 1 RA Ø6 C Ø — V1

KT1Ø STROBE RA H — V2

KT15 RA CARRY Ø1 L — D1

Σ Σ Σ Σ Σ Σ — U1 — KT16 RA CARRY L

KT1Ø R MODE H

V2, R1, H2, M2 — KT11 RR Ø1 (1)H
F2 — KT11 RR Ø2 (1)H
L2 — KT11 RR Ø3 (1)H
L1 — KT11 RR Ø4 (1)H
S2 — KT11 RR Ø5 (1)H
T2 — KT11 RR Ø6 (1)H

KT1Ø R MODE ENABLE H

R2, B2, H1, A1 — KM12 MDL Ø1 (1) B H
C1, D2 — KM12 MDL Ø2 (1) B H
K2, J2 — KM12 MDL Ø3 (1) B H
J1, F1 — KM12 MDL Ø4 (1) B H
P2, N2 — KM12 MDL Ø5 (1) B H
P1, N1 — KM12 MDL Ø6 (1) B H

M214
A3Ø

REVISIONS		
CHK	CHANGE NO.	REV.

DRN J. Wilmington	DATE 3-23-70
CHK'D J. Vaccaro	DATE 3-23-70
ENG. J. Gilmore	DATE 3/25/70
PROJ. ENG. J. Ullmann	DATE 3/25/70
PROD	DATE
FIRST USED ON KT15	
SCALE	
SHEET 1 OF 1	

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: RELOCATION ADDR REG 1-6

SIZE	CODE	NUMBER	REV.
D	BS	KT15-Ø-15	

DIST.

KT16 RA Ø7 (1)H

KT16 RA Ø8 (1)H

KT16 RA Ø9 (1)H

KT10 STROBE RA H

V2

KT16 RA CARRY L

D1

+3V C27U1 H

U1

KT1Ø R MODE H

KT11 RR Ø7 (1)H

KT11 RR Ø8 (1)H

KT11 RR Ø9 (1)H

KT1Ø R MODE ENABLE H

KM12 MDL Ø7 (1) B H

KM12 MDL Ø8 (1) B H

KM12 MDL Ø9 (1) B H

M214
A31

REVISIONS		
CHK	CHANGE NO.	REV.

DRN G. Whitmore	DATE 3-23-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. P. Haywood	DATE 3-23-70	
ENG. L. Gabbes	DATE 3/25/70	TITLE RELOCATION ADDR REG 7-9
PROJ. ENG. W. Clausmann	DATE 3/25/70	
PROD. [illegible]	DATE 3/27/70	
FIRST USED ON KT15		SIZE D · CODE BS · NUMBER KT15-Ø-16 · REV.
SCALE		
SHEET 1 OF 1		DIST.

MP10 ADR ACK H → M133 A14 L2, M2 → N2 MP10 ADR ACK L

MP12 ODD H, -MP11 P MDL 18 (1)H → M121 A16 A1, B1
MP11 P MDL 18 (1)H, MP12 -ODD H → M121 A16 C1, D1 → E1

MP11 P RD RST L, +3V B16U1 H → M311 A15 D2, E2, F2, H2 → J2
DELAY: K2 L2 M2 N2 P2 / R2 S2 T2 U2 V2
150NS, 175NS
M133 A14 D1, E1 → F1 MP10 RD RST DLY L

125NS
MP10 M WRITE (1)H → M133 A14 L1, M1 → N1 MP10 PRE MRLS DLY L

KM15 MRLS L, +3V B16U1 H → M311 A15 C1, D1, E1, F1 → H1
DELAY: J1 K1 L1 M1 N1 / P1 R1 S1 U1 V1
MP10 PRE MRLS DLY L → M133 A14 H1, J1 → K1 MP10 PRE MRLS DLY H
MP10 M WRITE (0) H, MP10 M WRITE (1) H → M121 A16 D2, E2, F2, H2 → J2 MP10 MRLS DLY L
175NS

MP10 PAR ERR (1)H → M112 A17 D2, E2 → F2
+3V B16U1 H → PAR ERR M205 B16 D2
M112 A17 F2 → PAR ERR M205 B16 E2
PAR ERR M205 B16 K2 → MP10 PAR ERR (1)H
PAR ERR M205 B16 J2 → H2

MP10 CPE H, KA08 API PWR CLR H → M112 A17 D1, E1 → F1

MP11 PM REQ L, MP11 PM WR L → M112 A17 H2, J2 → K2 MP11 PMRLS ACK L

+3V B16U1 H → RESET WRNG PAR M205 B16 P2
RESET WRNG PAR M205 B16: N2, M2, R2, S2, L2
M112 A17 A1, B1 → C1
MP10 FWP L → WRNG PAR M205 B16 T2
WRNG PAR M205 B16: S1, R1, U2, V2, P1
M112 A17 H1, J1 → K1 KA08 API PWR CLR H

+3V B16U1 H → RD PAR M205 B16 D1
RD PAR M205 B16: E1, C1, B1, F1, A1
MP11 PMDL 18 (1)H, MP11 P RD RST H
+3V B16U1 H → WR PAR M205 B16 L1
WR PAR M205 B16: M1, K1, J1, N1, H1
MP12 ODD H, MP10 PRE MRLS DLY H
MP10 ADR ACK L

W714 A26: UP E2 D2, DN F2, +3V B16U1 H SW
MP10 PAR ERR (1)H → M133 A14 D2, E2 → F2 MP10 PAR HLT L

MP10 PAR ERR (1)L, MP10 MP API RQ (1)L → M622 B09 R1, S1 → S2 MP10 PROG INT RQ L

MP10 P ENA (1)H → M133 A14 T2, U2 → V2 MP10 P ENA (1) B L

KA08 I/O SYNC H, KA08 API PWR CLR H, KA09 API 00 GR H, MP10 CLR REQ L, KA05 PF API RQ A (0)H, MP10 PAR ERR (1)H → M104 B15 H1, N1, E2, F2, H2, S2
M104 B15 → E1, F1, P1 MP10 P ENA (1)H, S1 MP10 P ENA (1)L, J2 MP10 MP API RQ (0)H, M2 MP10 EN OUT H, U2 MP10 MP API RQ (1)H

PARITY API ADDRESS=53

KA07 CP ACT H → M133 A14 A1, B1 → C1

MP10 MRLS DLY L, KM15 MRLS L → M622 B09 D1, E1 → E2 MP10 INH MRLS L

MP10 RD RST DLY L → M622 B09 F1 → H2 MP10 INH RD RST L
MP11 P RD RST L, -KA07 CP ACT L → M622 B09 J1, K1 → K2

MP10 P ENA (1)L → M622 B09 L1, M1 → M2 KA09 I/O ADDR 16 L

MP10 MP API RQ (1)L → M622 B09 U1, V1 → V2 KA09 API 00 RQ L

MP10 SPE L, MP10 PAR ERR (1)L → M622 B09 N1, P1 → P2 KA09 SKP RQ L

MP10 P ENA (1)L → M602 B17 H2, J2, K2 → F2 MP10 CLR REQ L
M602 B17 E2, D2

MP13 ADR ACK (0) B H, +3V A14U1 H → M133 A14 H2, J2 → K2 → B1
MP11 P MWR H → M WRITE M205 B18 C1
M WRITE M205 B18: D1, E1 MP10 M WRITE (1)H, F1 MP10 M WRITE (0)H
MP10 ADR ACK H, MP11 P PWR CLR L → A1

KA08 IOP 1 H → M103 B14 P2 → B1 MP10 SPE L, A1 MP10 SPE H
KA08 IOP 2 H → M103 B14 R2 → D1 MP10 CPE L, C1 MP10 CPE H
KA08 IOP 4 H → M103 B14 S2 → F1 MP10 FWP L, E1 MP10 FWP H
-KA08 DS00 H, KA08 DS01 H, -KA08 DS02 H, KA08 DS03 H, KA08 DS04 H, KA08 DS05 H, +3V B14V1 H → M103 B14 D2, E2, F2, H2, J2, K2, L2, N2
M103 B14 V2 → +3V B14V1 H U2
+3V B18U1 H → D1

REVISIONS		
CHK	CHANGE NO.	REV.
	KA15-00003	A
	Tom Souther 4-22-76	
	[illegible] 4-22-76	

DRN. D. SOUTHER	DATE 3/26/76	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. R. DAIGNEAULT	DATE 3/26/76	
ENG. J. ELSBREE	DATE 3/27/76	TITLE: PARITY CONTROL
PROJ. ENG. F. AUMANN	DATE 3/27/76	
PROD. F. LASKEY	DATE 3/27/76	
FIRST USED ON: MP15		SIZE D, CODE 85, NUMBER MP15-0-10, REV. A
SCALE		
SHEET 1 OF 1		DIST.

MP13 MDL 00 (1)L — D2 — M510 B10 — C1 MP11 P MDL 00 (1)L; D1 MP11 P MDL 00 (1)H

MP13 MDL 01 (1)L — H2 — M510 B10 — F1 MP11 P MDL 01 (1)L; H1 MP11 P MDL 01 (1)H

MP13 MDL 02 (1)L — K2 — M510 B10 — J1 MP11 P MDL 02 (1)L; K1 MP11 P MDL 02 (1)H

MP15 MDL 03 (1)L — M2 — M510 B10 — L1 MP11 P MDL 03 (1)L; M1 MP11 P MDL 03 (1)H

MP13 MDL 04 (1)L — P2 — M510 B10 — N1 MP11 P MDL 04 (1)L; P1 MP11 P MDL 04 (1)H

MP13 MDL 05 (1)L — R2 — M510 B10 — U2 MP11 P MDL 05 (1)L; T2 MP11 P MDL 05 (1)H

MP13 MDL 06 (1)L — S2 — M510 B10 — R1 MP11 P MDL 06 (1)L; S1 MP11 P MDL 06 (1)H

MP13 MDL 07 (1)L — U1 — M510 B10 — V1 MP11 P MDL 07 (1)L; V2 MP11 P MDL 07 (1)H

MP13 MDL 08 (1)L — D2 — M510 A11 — C1 MP11 P MDL 08 (1)L; D1 MP11 P MDL 08 (1)H

MP13 MDL 09 (1)L — H2 — M510 A11 — F1 MP11 P MDL 09 (1)L; H1 MP11 P MDL 09 (1)H

MP13 MDL 10 (1)L — K2 — M510 A11 — J1 MP11 P MDL 10 (1)L; K1 MP11 P MDL 10 (1)H

MP13 MDL 11 (1)L — M2 — M510 A11 — L1 MP11 P MDL 11 (1)L; M1 MP11 P MDL 11 (1)H

MP13 MDL 12 (1)L — P2 — M510 A11 — N1 MP11 P MDL 12 (1)L; P1 MP11 P MDL 12 (1)H

MP13 MDL 13 (1)L — R2 — M510 A11 — U2 MP11 P MDL 13 (1)L; T2 MP11 P MDL 13 (1)H

MP13 MDL 14 (1)L — S2 — M510 A11 — R1 MP11 P MDL 14 (1)L; S1 MP11 P MDL 14 (1)H

MP13 MDL 15 (1)L — U1 — M510 A11 — V1 MP11 P MDL 15 (1)L; V2 MP11 P MDL 15 (1)H

MP13 MDL 16 (1)L — D2 — M510 B11 — C1 MP11 P MDL 16 (1)L; D1 MP11 P MDL 16 (1)H

MP13 MDL 17 (1)L — H2 — M510 B11 — F1 MP11 P MDL 17 (1)L; H1 MP11 P MDL 17 (1)H

MP13 MDL PAR (1) B L — K2 — M510 B11 — J1 MP11 P MDL 18 (1)L; K1 MP11 P MDL 18 (1)H

MP13 MRD L — M2 — M510 B11 — L1 MP11 P MRD L; M1 MP11 P MRD H

MP13 MWR L — P2 — M510 B11 — N1 MP11 P MWR L; P1 MP11 P MWR H

MP13 M REQ IN L — R2 — M510 B11 — U2 MP11 P M REQ L; T2 MP11 P M REQ H

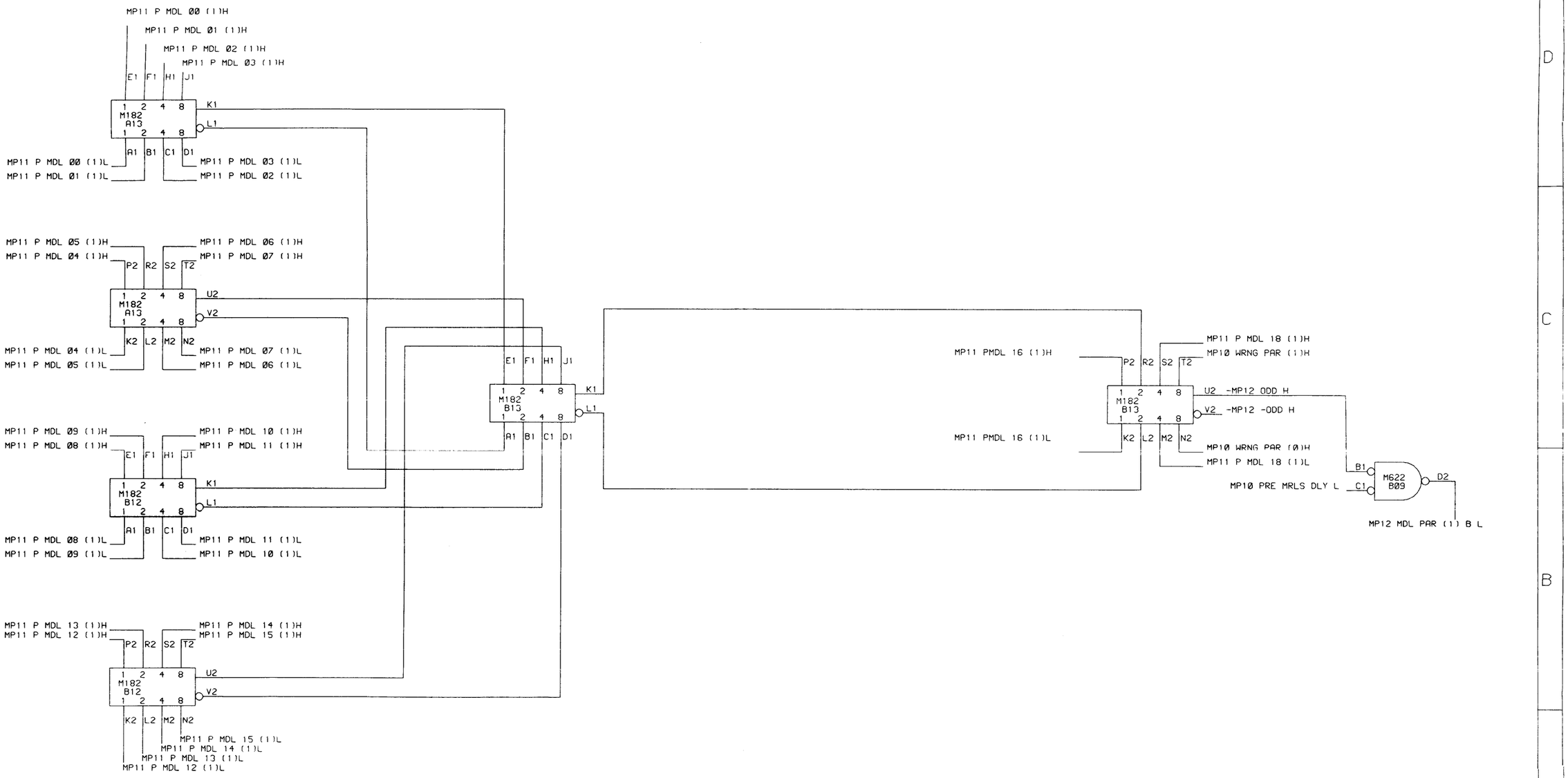
MP13 M PWR CLR L — S2 — M510 B11 — R1 MP11 P PWR CLR L; S1 MP11 P PWR CLR H

MP13 RD RST (1) B L — U1 — M510 B11 — V1 MP11 P RD RST L; V2 MP11 P RD RST H

MP13 MRLS ACK L — H2 — M510 A12 — F1 MP11 P MRLS ACK L; H1 MP11 P MRLS ACK H

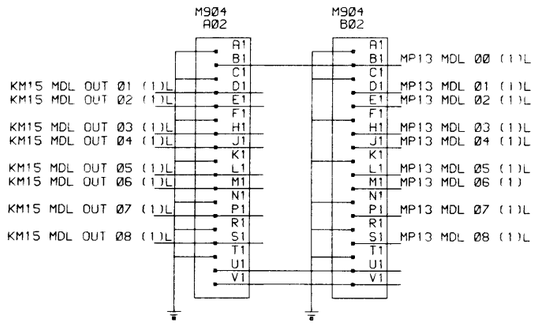
REVISIONS		
CHK	CHANGE NO.	REV.
JA	KA15-00003	A

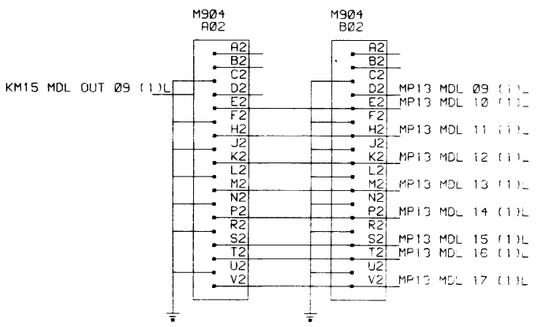
DRN. D. SOUTHER	DATE 3/23/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R. DAIGNEAULT	DATE 3/23/70	TITLE: PARITY INPUT INTERFACE
ENG. J. SBREE	DATE 3/25/70	
PROJ. ENG. E. AUMANN	DATE 3/25/70	
PROD. J. LASKEY	DATE 3/27/70	
FIRST USED ON MP15		SIZE D; CODE BS; NUMBER MP15-0-11; REV. A
SCALE		DIST.
SHEET 1 OF 1		

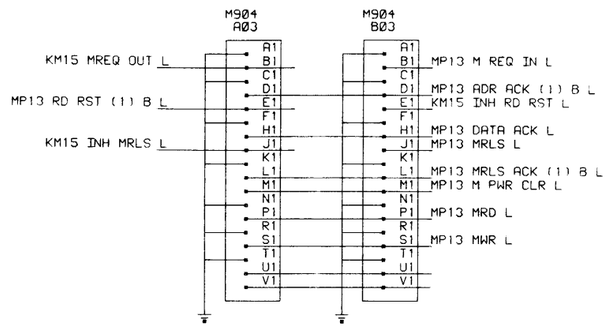


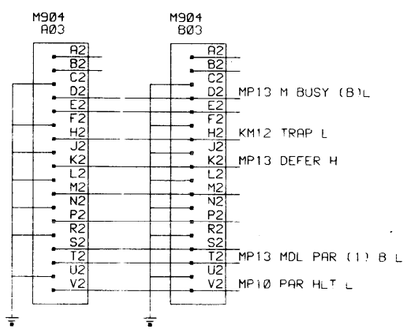
REVISIONS		
CHK	CHANGE NO.	REV.

DRN. Glenn Sumner	DATE 3-23-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CH'D D.Daigneault	DATE 3-23-70	TITLE PARITY DECODER & PARITY GEN
ENG. J.Holmes	DATE 3/25/70	
2nd ENG. D.C.Rimmer	DATE 3/25/70	
PROD.	DATE	
FIRST USED ON MP15		SIZE D CODE BS NUMBER MP15-Ø-12 REV.
SCALE		DIST.
SHEET 1 OF 1		

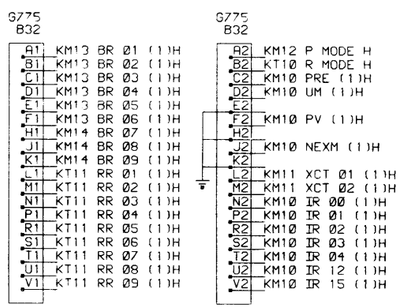




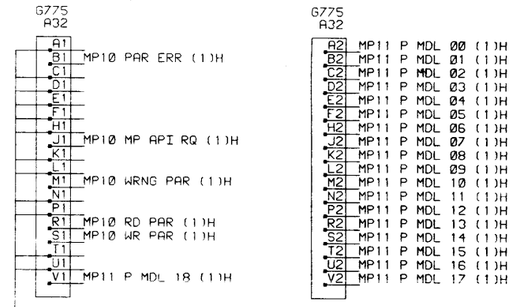




MEMORY PROTECT IND CABLE



MEMORY PARITY IND CABLE



REVISIONS		
CHK	CHANGE NO.	REV.
MW	BB15-0002	A
	BB15-0019	B

DRN. D SOUTHER	DATE 3/23/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D P DRIGNEAULT	DATE 3/23/70	TITLE PARITY-MEM BUS CONNECTIONS
ENG. J ELSBREE	DATE 3/25/70	
PROJ. ENG. F AUMANN	DATE 3/25/70	
PROD. F LASKEY	DATE 3/27/70	
FIRST USED ON MP15		SIZE C | CODE IC | NUMBER MP15-0-13 | REV. B
SCALE		
SHEET 1 OF 1		DIST.

SIZE DMU CODE NUMBER — REV. F

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	G829	M912	M912	M912	M912	M622	M622	M510	M510	M149	M149	M117	M002	M002	M111	M104	M103	M103	A607	A607	M717	M776
USAGE	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BS 2	BA 2	BA 2	BA 2	VP 2	VP 2	VP 2	VP 2	VP 2	VP 2	PC 2
	+5V REGULATOR	I/O BUS 00 THRU I/O BUS 08	I/O BUS 09 THRU I/O BUS 17	I/O SYNC IOP 1,2,4 SKIP RQ PROG INT RQ RD RQ RD STATUS PWR CLR	DS00 THRU DS05 SD00 SD01	I/O BUS 00 THRU I/O BUS 17	I/O BUS 00 THRU I/O BUS 07	PROG INT RQ SKIP RQ API 3 EN OUT API 3 RQ RD RQ I/O BUS 08 I/O BUS 09	API 2 EN API 2 GR API 3 EN API 3 GR	RD STATUS I/O SYNC IOP 1 IOP 2 IOP 4 IO BUS 08 IO BUS 09 PWR CLR	BA BIT 00 BA BIT 01 BA BIT 03 BA BIT 05 BA BIT 08 PUN NO TAPE; BA BIT 02 BA BIT 04 BA BIT 06 BA BIT 09	BA BIT 07 BA BIT 10 BA BIT 12 BA BIT 14 BA BIT 16 PUN FLAG; BA BIT 11 BA BIT 13 BA BIT 15 BA BIT 17	BA I/O ADDR 12-14 BA I/O ADDR 13 SKIP RQ; BA I/O ADDR 15 SKIP RQ PROG INT RQ			TT 00 TT 02 TT 03 TT 05 TT 07 I/O A13 13 I/O AD 15; TT 01 TT 04 TT 06 I/O AD 12-14 PROG INT RQ RD RQ SKIP RQ	DISPLAY API CONTROL API LEVEL 2	IOT 05X1 05X2 05X4	IOT 07X1 07X2 07X4	DIGITAL TO ANALOG CONVERTER	DIGITAL TO ANALOG CONVERTEP	DISPLAY CONTROL	READER CONTROL
	G829	M912	M912	M912	M912	M622	M510	M510	M622	M104	M113	M103	M903	M606	M103	G919	M103		A607	A607	M717	M776
USAGE	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	BA 2	PC 2	BA 2	PC 2	PC 2	PC 2	PC 2	2	VP 2	VP 2	VP 2	VP 2	VP 2	PC 2
		I/O RUN DATA OFLO I/O OFLO I/O AD 03 THRU I/O AD 08; I/O AD 09 THRU I/O AD 17	WRITE RQ INC MB +1- CA INH API 0 RQ API 0 GR API 0 EN API 1 RQ API 1 GR API 1 EN; API 2 RQ API 2 GR API 2 EN API 3 RQ API 3 GR API 3 EN DCH RQ DCH GR DCH EN	I/O RUN DATA OFLO I/O OFLO I/O AD 03 THRU I/O AD 08; I/O AD 09 THRU I/O AD 17	WRITE RQ INC MB +1- CA INH API 0 RQ API 0 GR API 0 EN API 1 RQ API 1 GR API 1 EN; API 2 RQ API 2 GR API 2 EN API 3 RQ API 3 GR API 3 EN DCH RQ DCH GR DCH EN	I/O BUS 10 THRU I/O BUS 17	DS 00 DS 01 DS 02 DS 03 DS 04 SD 00 SD 01 DS 05	I/O BUS 11 I/O BUS 12 I/O BUS 13 I/O BUS 14 I/O BUS 15 I/O BUS 17 I/O BUS 10 I/O BUS 16	API 2 EN OUT API 2 RQ I/O AD 12 I/O AD 13 THRU I/O AD 17	READER API CONTROL API LEVEL 2	HOLE 3 HOLE 7; HOLE 7	IOT 0101 0102 0104	PUNCH CABLE	CLR PUN BUF	IOT 0201 0202 0204		IOT 06X1 06X2 06X4	DISPLAY CABLE			

	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	M104	M103	M706	M707	M452	M311	M901		M229	M229												
USAGE	LT 2	LT 2	LT 2	LT 2	LT 2	PC 2	BA 2	2	VPM 2	VPM 2	2	2	2	2	2	2	2	2	2	2	2	2
	TRANSMITTER API CONTROL API LEVEL 3	IOT 4001 4002 4004	TELETYPE RECEIVER	TELETYPE TRANSMITTER	TELETYPE CLOCK		RB 00 PROG INT RQ SKIP RQ RDR API VP09API KBD API TTY API PRINTER PUN FLG VP15 INT RQ KBD FLG TTY FLG I/O AD 12-14 I/O AD 13 THRU RB 17 I/O AD 12-14 I/OAD15		DISPLAYS 0-4	DISPLAYS 5-7												
	M104	M103	M706	M707	W078	M903	M113	M113	A221	M908												
USAGE	LT 2	LT 2	LT 2	LT 2	LT 2	PC 2	BA 2	BA 2	VP-M 2	VP-M 2	2	2	2	2	2	2	2	2	2	2	2	2
	RECEIVER API CONTROL API LEVEL 3	IOT 4101 4102 4104			TTY CABLE	READER CABLE	RI SKIP; IOT 07X4; BA API 3; BA API REQ 2	BA IO ADDR 17; IOT 07 04/24; BA API REQ 2; PUN FLAG	DISPLAY DRIVERS	DISPLAY CABLE												
							TELE. FLAG; IND KBD API 3; BA API 3; RDR NO TAPE															
							BA SKIP REQ; IND RDR API 2; IND VP09 API 2															
							RI START; KBD FLAG; IND KBD API 3															

REVISIONS	REV.	CHK	
CHANGE NO.			
BA15-00010 ORIGINATED	B		
BA15-00012 Revision 1-27-71 AUMANN	C		
BA15-0003 3-2-71	D		
BA15-00019 3/5/71 HALIC	E		
BA15-00020 4-1-71 AUMANN	F		

FIRST USED ON OPTION/MODEL: BA15

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

		DATE
DRN	[illegible]	1-19-70
CHK'D	[illegible]	DATE
ENG	[illegible]	DATE
PROJ. ENG.		DATE
PROD.		DATE
NEXT HIGHER ASSY		
SCALE		
SHEET	OF	

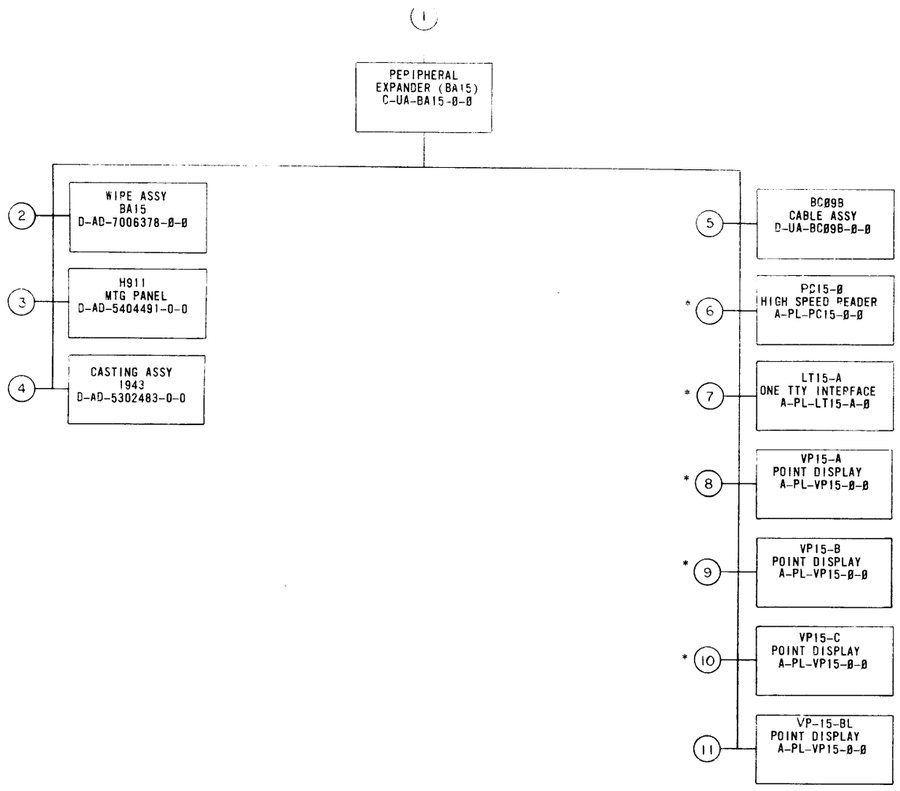
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: MODULE UTILIZATION

SIZE D CODE MU NUMBER BA15-0-07 REV. F

DIST.

DEC FORM NO. DRD 112



✱ DENOTES OPTIONAL ITEMS

MECHANICAL			DEPT USAGE		
FIND NO.	DESCRIPTION	PART NO.	PROD	CUST	F/C
1	PERIPHERAL EXPANDER BA15 PERIPHERAL EXPANDER BA15 (PL) RETAINER BLOCK	C-UA-BA15-0-0 A-PL-BA15-0-0 C-MD-7407127-0-0			
2.	WIRED ASSY BA15 WIRED ASSY BA15 (PL) LOGIC FRAME DECALS	D-AD-7006378-0-0 A-PL-7006378-0-0 A-DC-7406371-0-0			
3.	MTG PANEL TYPE H911 MTG PANEL TYPE H911 (PL) 288 PIN CONN BLOCK	D-AD-5404491-0-0 A-PL-5404491-0-0 E-SC-1205348-0-0			
4.	CASTING ASSY (1943) CASTING ASSY (1943) (PL) 1943 FRAME CASTING	D-AD-5302483-0-0 A-PL-5302483-0-0 E-MD-1202885-0-0			
5.	BC09B CABLE ASSY	D-UA-BC09B-0-0			
6.✱	HIGH SPEED READER PC15	A-PL-PC15-0-0			
7.✱	ONE TTY INTERFACE LT15-A	A-PL-LT15-A-0			
8.✱	POINT DISPLAY VP15-A	A-PL-VP15-0-0			
9.✱	POINT DISPLAY VP15-B	A-PL-VP15-0-0			
10.✱	POINT DISPLAY VP15-C	A-PL-VP15-0-0			
11.	POINT DISPLAY VP15-BL	A-PL-VP15-0-0			

ELECTRICAL			DEPT USAGE		
FIND NO	DESCRIPTION	PART NO.	PROD	CUST	F/C
1	PERIPHERAL EXPANDER (BA15) WIRE LIST (BA15) I/O BUS INTERFACE BA15 LINE RECEIVERS LINE DRIVERS I/O MIXER I/O MULTIPLEXER MODULE UTILIZATION MODULE UTILIZATION (PL) INDICATOR CABLE BA15 [illegible]	A-ML-BA15-0 K-WL-BA15-0-09 D-BS-BA15-0-1 D-BS-BA15-0-2 C-BS-BA15-0-3 C-BS-BA15-0-4 C-BS-BA15-0-5 D-MU-BA15-0-07 A-PL-BA15-0-07 [illegible] [illegible]			
2	WIRED ASSY (BA15) WIRED ASSY (BA15) (PL)	D-AD-7006378-0-0 A-PL-7006378-0-0			
6	HIGH SPEED RDR (PC15)	A-ML-PC15-C			
7	ONE TTY INTERFACE (LT15-A)	A-ML-LT15-A			
8	POINT DISPLAY (VP15-A)	A-ML-VP15-A			
9	POINT DISPLAY (VP15-B)	A-ML-VP15-B			
10	POINT DISPLAY (VP15-C)	A-ML-VP15-C			
11	POINT DISPLAY (VP15-BL)	A-ML-VP15-BL			

REVISIONS			
CHK	CHANGE NO	REV	
	BA15-0001O	A	REDRAWN & REVISED Raymond 7-13-70 AUMANN
	BA15-0001 21	B	R. Aumann 7-12-71 AUMANN Raymond 7-12-71

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

FIRST USED ON OPTION/MODEL: BA15

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 | FRACTIONS ± 1/64 | ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

DRN.	R. THELLEN	DATE 7/15/67
CHK'D.	COOK	DATE 8/13/67
ENG.	AUMANN	DATE 12-8-67
PROJ. ENG.	AUMANN	DATE 12-8-67
PROD.	JACKEL	DATE 1-5-68

NEXT HIGHER ASSY: C-UA-BA15-0-0

SCALE —

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DRAWING INDEX UNIT BA15

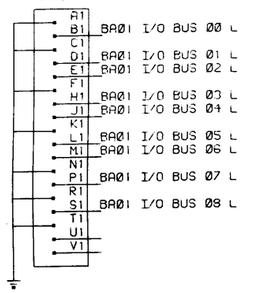
SIZE	CODE	NUMBER	REV
D	DI	BA15-0-8	F

DIST.

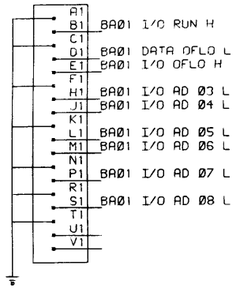
SIZE D | CODE DI | NUMBER BA15-0-8 | REV B

DEC FORM NO DPD 100

M912 A02



M912 B02



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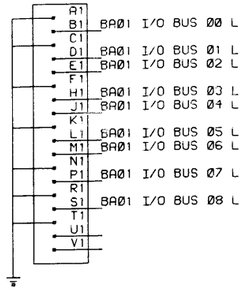

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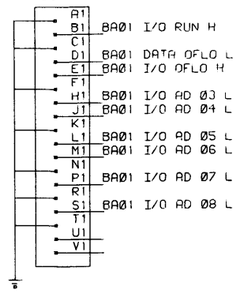

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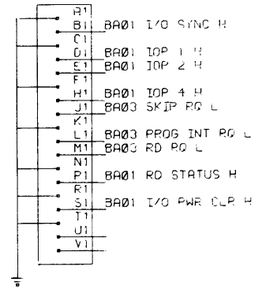

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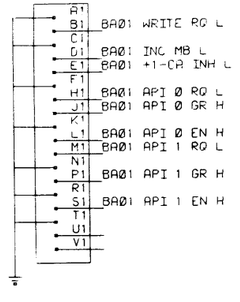

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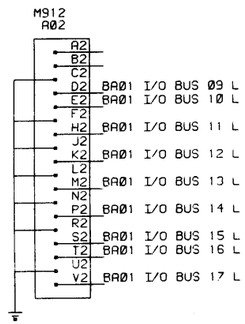

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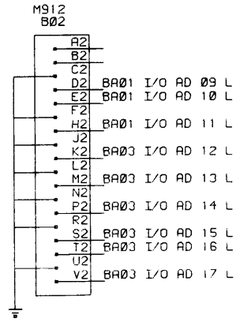
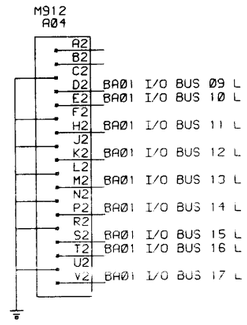


M912 A04



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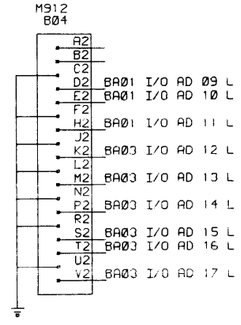

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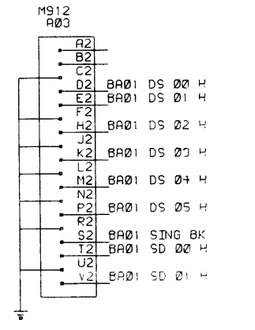

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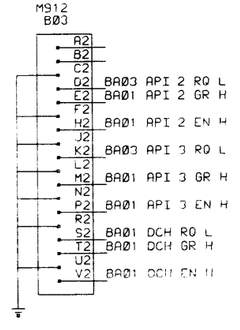

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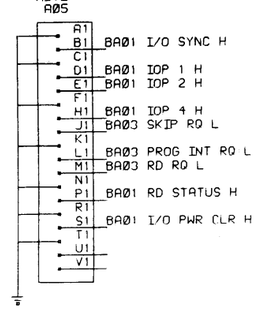

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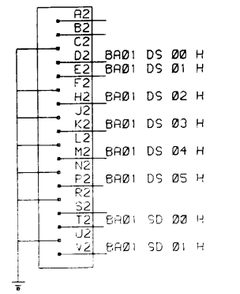

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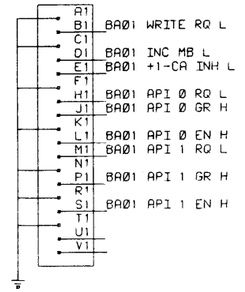
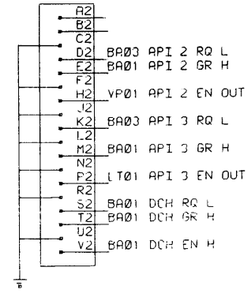


M912 B05



NOTE: PINS A1,C1,F1,K1,N1,AND R1 ARE GROUNDED

NOTE: PINS F2,J2,L2,N2,P2,AND U2 ARE BUSSED TO GROUND

REVISIONS		
CHK	CHANGE NO.	REV.
NR	BA15-00001	A
	K COTE 2/17/70	
	F AUMANN 2/20/70	
	BA15-00008	B

DRN M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D N RHERAULT	DATE 11/12/69	
ENG E NEWMYER	DATE 12/3/69	TITLE I/O BUS INTERFACE
PROJ. ENG F AUMANN	DATE 12/3/69	
PROD F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D CODE 10 NUMBER BA15-0-01 REV. B
SCALE		
SHEET 1 OF 1		DIST.

BA01 I/O BUS 08 L — S2 — M510 A09 — R1 BA02 BA I/O BUS 09 L; S1 BA02 BA I/O BUS 08 H

BA01 I/O BUS 16 L — R2 — M510 B09 — U2 BA02 BA I/O BUS 16 L; T2 BA02 BA I/O BUS 16 H

BA01 DS 00 H — D2 — M510 B07 — D1 BA02 BA DS 00 L; C1 BA02 BA DS 00 H

BA01 I/O BUS 09 L — U1 — M510 A09 — V1 BA02 BA I/O BUS 09 L; V2 BA02 BA I/O BUS 09 H

BA01 I/O BUS 17 L — S2 — M510 B08 — R1 BA02 BA I/O BUS 17 L; S1 BA02 BA I/O BUS 17 H

BA01 DS 01 H — H2 — M510 B07 — H1 BA02 BA DS 01 L; F1 BA02 BA DS 01 H

BA01 API 2 GR H — H2 — M510 A08 — H1 BA02 BA API 2 GR L; F1 BA02 BA API 2 GR H

BA01 I/O BUS 10 L — U1 — M510 B08 — V1 BA02 BA I/O BUS 10 L; V2 BA02 BA I/O BUS 10 H

BA01 RD STATUS H — D2 — M510 A09 — D1 BA02 BA RD STATUS L; C1 BA02 BA RD STATUS H

BA01 DS 02 H — K2 — M510 B07 — K1 BA02 BA DS 02 L; J1 BA02 BA DS 02 H

BA01 I/O BUS 11 L — D2 — M510 B08 — C1 BA02 BA I/O BUS 11 L; D1 BA02 BA I/O BUS 11 H

BA01 I/O SYNC H — H2 — M510 A09 — H1 BA02 BA I/O SYNC L; F1 BA02 BA I/O SYNC H

BA01 DS 03 H — M2 — M510 B07 — M1 BA02 BA DS 03 L; L1 BA02 BA DS 03 H

BA01 API 3 GR H — M2 — M510 A08 — M1 BA02 BA API 3 GR L; L1 BA02 BA API 3 GR H

BA01 I/O BUS 12 L — H2 — M510 B08 — F1 BA02 BA I/O BUS 12 L; H1 BA02 BA I/O BUS 12 H

BA01 IOP 1 H — K2 — M510 A09 — K1 BA02 BA IOP 1 L; J1 BA02 BA IOP 1 H

BA01 DS 04 H — P2 — M510 B07 — P1 BA02 BA DS 04 L; N1 BA02 BA DS 04 H

BA01 I/O BUS 13 L — K2 — M510 B08 — J1 BA02 BA I/O BUS 13 L; K1 BA02 BA I/O BUS 13 H

BA01 IOP 2 H — M2 — M510 A09 — M1 BA02 BA IOP 2 L; L1 BA02 BA IOP 2 H

BA01 DS 05 H — R2 — M510 B07 — T2 BA02 BA DS 05 L; U2 BA02 BA DS 05 H

BA01 I/O BUS 14 L — M2 — M510 B08 — L1 BA02 BA I/O BUS 14 L; M1 BA02 BA I/O BUS 14 H

BA01 IOP 4 H — P2 — M510 A09 — P1 BA02 BA IOP 4 L; N1 BA02 BA IOP 4 H

BA01 SD 00 H — S2 — M510 B07 — S1 BA02 BA SD 00 L; R1 BA02 BA SD 00 H

BA01 I/O BUS 15 L — P2 — M510 B09 — N1 BA02 BA I/O BUS 15 L; P1 BA02 BA I/O BUS 15 H

BA01 I/O PWR CLR H — R2 — M510 A09 — T2 BA02 BA PWR CLR L; U2 BA02 BA PWR CLR H

BA01 SD 01 H — U1 — M510 B07 — V2 BA02 BA SD 01 L; V1 BA02 BA SD 01 H

REVISIONS		
CHK	CHANGE NO.	REV.
PD	BA15-00005	A
	K COTE	
	F AUMANN	
	BA15-00008	B

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 11/12/69	
ENG. E NEWMYER	DATE 12/3/69	TITLE BA15 LINE RECEIVERS
PROJ. ENG. F AUMANN	DATE 12/3/69	
PROD. F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D; CODE BS; NUMBER BA15-0-02; REV. B
SCALE		
SHEET 1 OF 1		DIST.

BA04 BA BIT 00 L — B1, C1 — M622 A06 — D2 — BA01 I/O BUS 00 L

BA04 BA BIT 01 L — D1, E1 — M622 A06 — E2 — BA01 I/O BUS 01 L

BA04 BA BIT 02 L — F1, H1 — M622 A06 — H2 — BA01 I/O BUS 02 L

BA04 BA BIT 03 L — J1, K1 — M622 A06 — K2 — BA01 I/O BUS 03 L

BA04 BA BIT 04 L — L1, M1 — M622 A06 — M2 — BA01 I/O BUS 04 L

BA04 BA BIT 05 L — N1, P1 — M622 A06 — P2 — BA01 I/O BUS 05 L

BA04 BA BIT 06 L — R1, S1 — M622 A06 — S2 — BA01 BUS 06 L

BA04 BA BIT 07 L — U1, V1 — M622 A06 — V2 — BA01 I/O BUS 07 L

BA04 BA BIT 08 L — R1, S1 — M622 A07 — S2 — BA01 I/O BUS 08 L

BA04 BA BIT 09 L — U1, V1 — M622 A07 — V2 — BA01 I/O BUS 09 L

BA04 BA BIT 10 L — B1, C1 — M622 B06 — D2 — BA05 I/O BUS 10 L

BA04 BA BIT 11 L — D1, E1 — M622 B06 — E2 — BA01 I/O BUS 11 L

BA04 BA BIT 12 L — F1, H1 — M622 B06 — H2 — BA01 I/O BUS 12 L

BA04 BA BIT 13 L — J1, K1 — M622 B06 — K2 — BA01 I/O BUS 13 L

BA04 BA BIT 14 L — L1, M1 — M622 B06 — M2 — BA01 I/O BUS 14 L

BA04 BA BIT 15 L — N1, P1 — M622 B06 — P2 — BA01 I/O BUS 15 L

BA04 BA BIT 16 L — R1, S1 — M622 B06 — S2 — BA01 I/O BUS 16 L

BA04 BA BIT 17 L — U1, V1 — M622 B06 — V2 — BA01 I/O BUS 17 L

VP01 VP09 SKIP L, BA05 BA SKIP RQ L, BA03 RI SKIP L — M1, N1, P1, R1 — M117 A12 — S1 — BA03 SKIP H — U2 — M111 A15 — V2 — M002 A13 — N2, F1, H1 — M622 A07 — H2 — BA03 SKIP RQ L

PC03 READ IN FIN H — A1, B1 — M113 B29 — C1 — BA03 RI SKIP L

BA05 BA PROG INT RQ L — D1, E1 — M622 A07 — E2 — BA03 PROG INT RQ L

PC02 IOT 0102 L — H2, J2 — M113 B11 — K2 — S2 — M111 A15 — T2 — M002 A14 — S2, N1, P1 — M622 A07 — P2 — BA03 RD RQ L

LT01 IOT 4102 L

+5V — M002 A14 — V2 — BA05 BA I/O AD 12-14 L — U2 — M622 B09 — H2 — BA03 I/O AD 12 L

+5V — M002 A14 — V2 — BA05 BA I/O AD 13 L — L1, M1 — M622 B09 — M2 — BA03 I/O AD 13 L

BA05 BA I/O AD 12-14 L — N1, P1 — M622 B09 — P2 — BA03 I/O AD 14 L

+5V — M002 A14 — E2 — BA05 BA I/O AD 15 L — R1, S1 — M622 B09 — S2 — BA03 I/O AD 15 L

+5 — M002 A14 — F2 — LT01 RECVR ADDR L — U1, V1 — M622 B09 — V2 — BA03 I/O AD 17 L

+5 — M002 A14 — J2 — PC02 BA API 2 RQ L — D1, E1 — M622 B09 — E2 — BA03 API 2 RQ L

+5 — M002 A14 — L2 — LT01 BA API 3 RQ L — L1, M1 — M622 A07 — M2 — BA03 API 3 RQ L

REVISIONS		
CHK	CHANGE NO.	REV.
NR	BA15-00001	A
	K COTE	
	F AUMANN	
PD	BA15-00002	B
	K COTE 3/25/70	
	F AUMANN 3/26/70	
	BA15-00003	C

PARTS LIST		
DRN M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N KNEAULT	DATE 11/12/69	
ENG E NEWMYER	DATE 12/3/69	TITLE: LINE DRIVERS
PROJ. ENG F AUMANN	DATE 12/3/69	
PROD E LASKEY	DATE 12/6/69	
FIRST USED ON: BA15		SIZE D, CODE BS, NUMBER BA15-0-03, REV. C
SCALE		
SHEET 1 OF 1		DIST.

PC03 RB 00 H — A1 — M149 A10 — B1 — M149 A10 — C1 — BA04 BA BIT 00 L

PC03 RB 01 H — D1 — M149 A10 — E1 — M149 A10 — F1 — BA04 BA BIT 01 L
PC03 RDR INTER H

PC03 RB 02 H — D2 — M149 A10 — E2 — M149 A10 — F2 — BA04 BA BIT 02 L
BA04 PUN FLAG H

PC03 RB 03 H — H1 — M149 A10 — J1 — M149 A10 — K1 — BA04 BA BIT 03 L

PC03 RB 04 H — H2 — M149 A10 — J2 — M149 A10 — K2 — BA04 BA BIT 04 L

PC03 RB 05 H — L1 — M149 A10 — M1 — M149 A10 — N1 — BA04 BA BIT 05 L
VP01 VP09 INT RQ H

PC03 RB 06 H — L2 — M149 A10 — M2 — M149 A10 — N2 — BA04 BA BIT 06 L

PC03 RB 08 H — P1 — M149 A10 — R1 — M149 A10 — S1 — BA04 BA BIT 08 L
RDR NO TAPE H

PC03 RB 09 H — P2 — M149 A10 — R2 — M149 A10 — S2 — BA04 BA BIT 09 L
BA04 PUN NO TAPE H

+5 — M002 A14 — M2 U2 — M149 A10
PC02 IOT 0102 L

BA02 BA RD STATUS L — V2 — M149 A10

PC01 PUN OUT OF TAPE L — U1 — M149 A10 — V1 — BA04 PUN NO TAPE H

PC03 RB 07 H — A1 — M149 A11 — B1 — M149 A11 — C1 — BA04 BA BIT 07 L

PC03 RB 10 H — D1 — M149 A11 — E1 — M149 A11 — F1 — BA04 BA BIT 10 L
LT01 TT00 H

PC03 RB 11 H — D2 — M149 A11 — E2 — M149 A11 — F2 — BA04 BA BIT 11 L
LT01 TT01 H

PC03 RB 12 H — H1 — M149 A11 — J1 — M149 A11 — K1 — BA04 BA BIT 12 L
LT01 TT02 H

PC03 RB 13 H — H2 — M149 A11 — J2 — M149 A11 — K2 — BA04 BA BIT 13 L
LT01 TT03 H

PC03 RB 14 H — L1 — M149 A11 — M1 — M149 A11 — N1 — BA04 BA BIT 14 L
LT01 TT04 H

PC03 RB 15 H — L2 — M149 A11 — M2 — M149 A11 — N2 — BA04 BA BIT 15 L
LT01 TT05 H

PC03 RB 16 H — P1 — M149 A11 — R1 — M149 A11 — S1 — BA04 BA BIT 16 L
LT01 TT06 H

PC03 RB 17 H — P2 — M149 A11 — R2 — M149 A11 — S2 — BA04 BA BIT 17 L
LT01 TT07 H

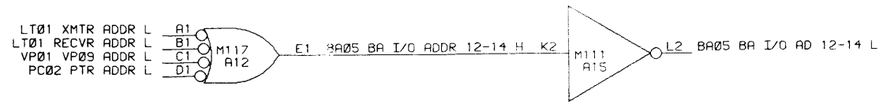
M002 A14 — N2 U2 — M149 A11
PC02 IOT 0102 L

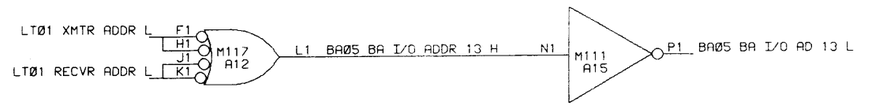
M002 A14 — P2 V2 — M149 A11
LT01 IOT 4102 L

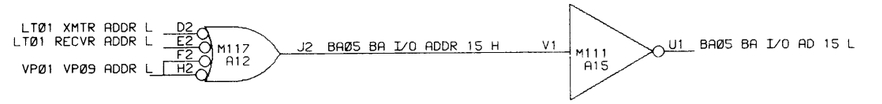
PC01 PUN FLAG L — U1 — M149 A11 — V1 — BA04 PUN FLAG H

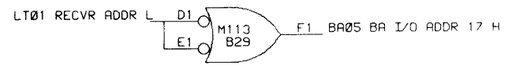
REVISIONS		
CHK	CHANGE NO.	REV.
NR	BA15-00001	A
	K COTE	
	F AUMANN	
PU	BA15-00002	B
	K COTE 2/25/70	
	F AUMANN 2/26/70	
	BA15-00003	C

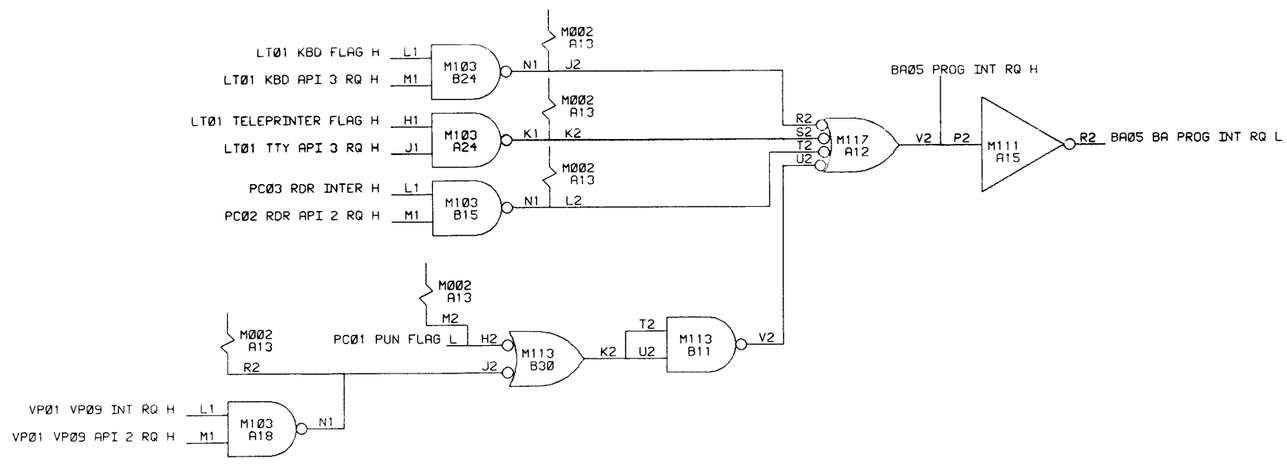
DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 11/12/69	TITLE I/O MIXER
ENG. E NEWMYER	DATE 12/3/69	
PROJ. ENG. F AUMANN	DATE 12/3/69	
PROD. E LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D CODE AS NUMBER BA15-0-04 REV. C
SCALE		
SHEET 1 OF 1		DIST.

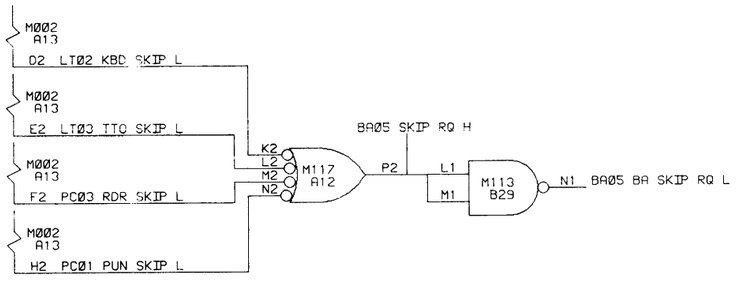












REVISIONS		
CHK	CHANGE NO.	REV.
	BA15-00001	A
	K COTE	
	F AUMANN	
	BA15-00002	B

DRN M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D R KHERULT	DATE 11/12/69	TITLE MULTIPLEXER
ENG E NEWMYER	DATE 12/3/69	
PROJ. ENG F AUMANN	DATE 12/3/69	
PROD F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D / CODE BS / NUMBER BA15-0-05 / REV. B
SCALE		
SHEET 1 OF 1		DIST

M901
A29

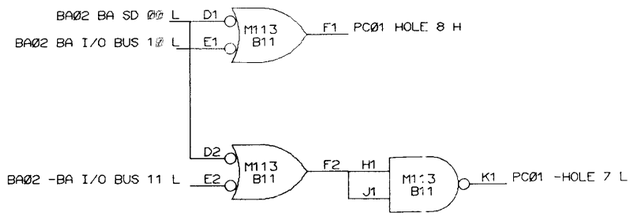
A2	BA05 PROG INT RQ H
B2	BA05 SKIP H
C2	PC02 IND RDR API 2 H
D2	PC02 IND VP09 API 2 H
E2	LT01 IND KBD API 3 H
F2	LT01 IND TTY API 3 H
H2	PC03 RDR INTER H
J2	BA04 PUN FLG H
K2	VP01 VP09 INT RQ H
L2	LT01 KBD FLG H
M2	LT01 TELEPRINTER FLG H
N2	
P2	BA05 BA I/O ADDR 12-14 H
R2	BA05 BA I/O ADDR 13 H
S2	BA05 BA I/O ADDR 12-14 H
T2	BA05 BA I/O ADDR 15 H
U2	
V2	BA05 BA I/O ADDR 17 H

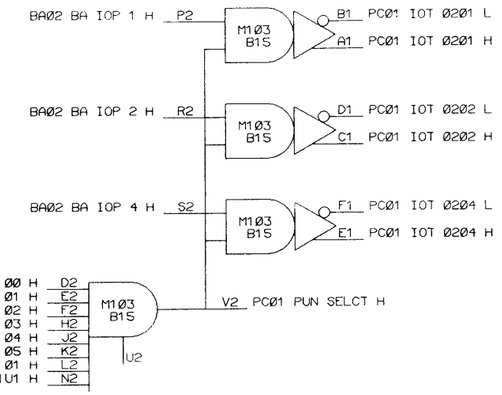
M901
A29

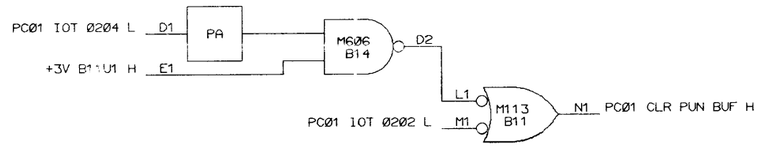
A1	PC03 RB 00 H
B1	PC03 RB 01 H
C1	PC03 RB 02 H
D1	PC03 RB 03 H
E1	PC03 RB 04 H
F1	PC03 RB 05 H
H1	PC03 RB 06 H
J1	PC03 RB 07 H
K1	PC03 RB 08 H
L1	PC03 RB 09 H
M1	PC03 RB 10 H
N1	PC03 RB 11 H
P1	PC03 RB 12 H
R1	PC03 RB 13 H
S1	PC03 RB 14 H
T1	PC03 RB 15 H
U1	PC03 RB 16 H
V1	PC03 RB 17 H

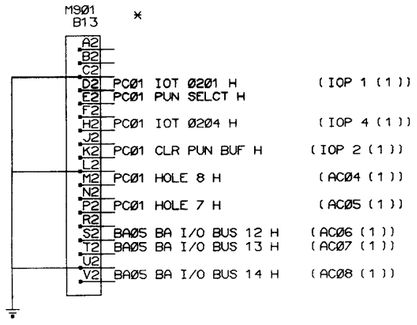
REVISIONS		
CHK	CHANGE NO.	REV.
MQ	BA15-00001	A
	K COTE	
	F AUMANN	
	BA15-00002	B

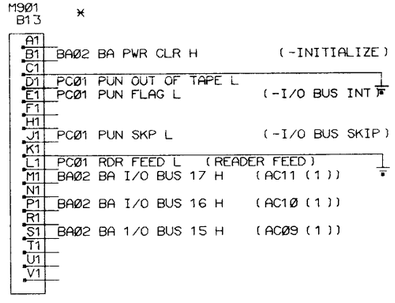
DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CH'KD. N RHEAULT	DATE 11/12/69	TITLE INDICATOR CABLE
ENG. E NEWMYER	DATE 12/3/69	
PROJ. ENG. F AUMANN	DATE 12/3/69	
PROD. E LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D / CODE IC / NUMBER BA15-0-06 / REV. B
SCALE		
SHEET 1 OF 1		DIST.







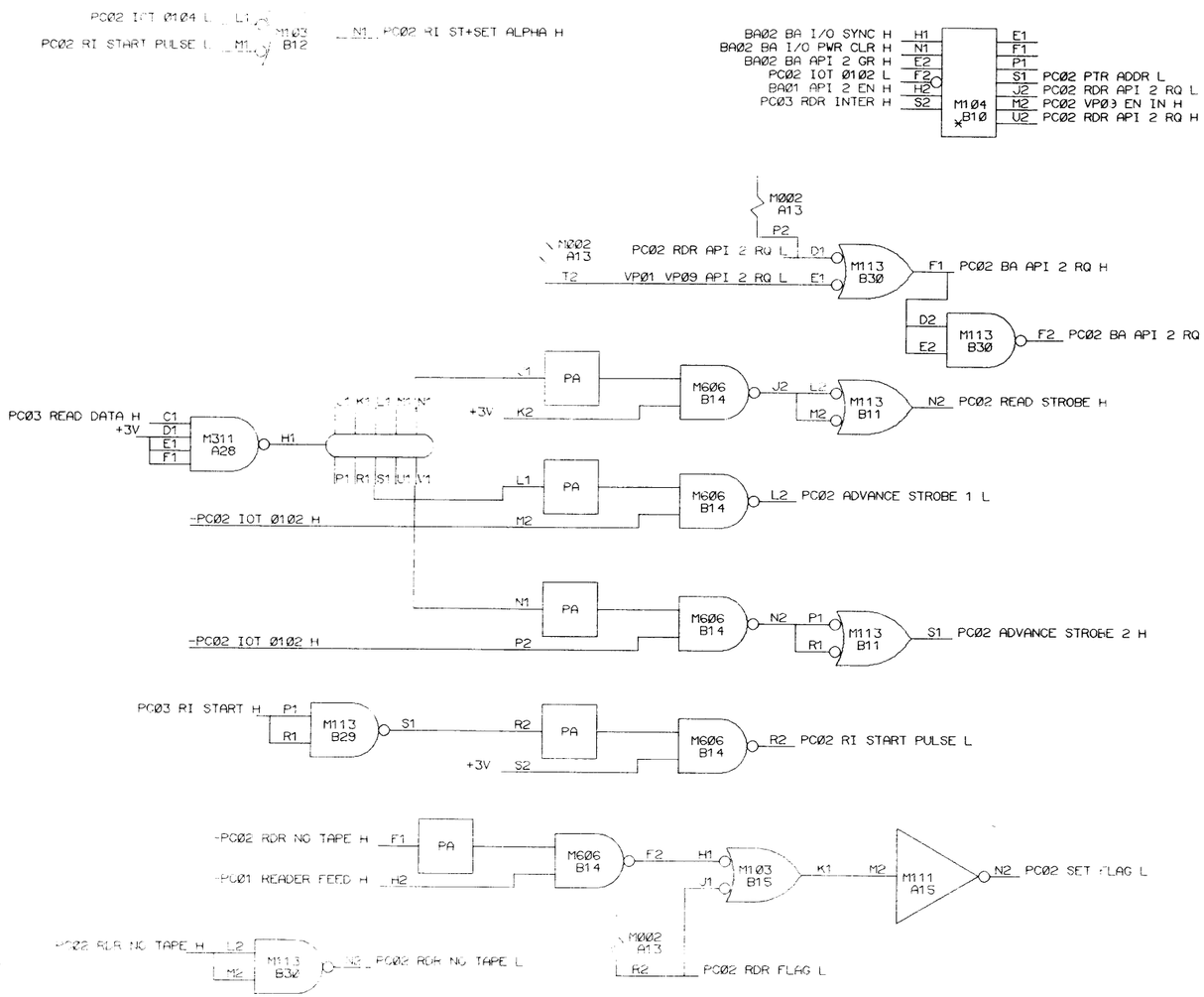


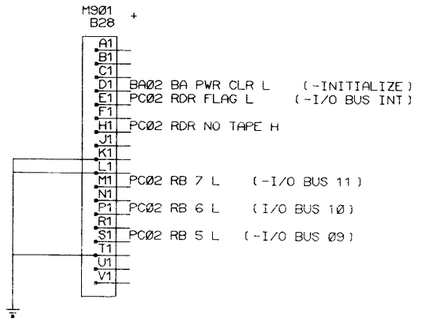


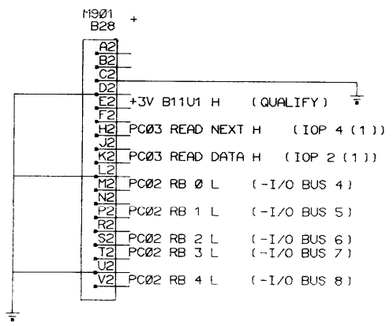
* PC05 SIGNAL
NAMES INDICATED IN
PARENTHESES IF DIFFERENT

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
NR	BA15-00001	A	WM	BA15-00014	E
	K COTE			K WALSH 3/30/71	
	F AUMANN			F AUMANN 3/31/71	
PD	BA15-00002	B		BA15-00020	F
	K COTE				
	F AUMANN				
PJ	BA15-00003	C			
	K COTE 4/9/70				
	F AUMANN 4/13/70				
GH	BA15-00012	D			
	R SOFKA 2-17-71				
	F AUMANN 2-22-71				

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N RHEAULT	DATE 11/12/69		
ENG. E NEWMYER	DATE 12/3/69	TITLE HIGH SPEED PUNCH CONTROL	
PROJ. ENG. F AUMANN	DATE 12/3/69		
PROD. F LASKEY	DATE 12/6/69		
FIRST USED ON BA15		SIZE D / CODE BS / NUMBER PC15-0-01 / REV. F	
SCALE			
SHEET 1 OF 1		DIST.	





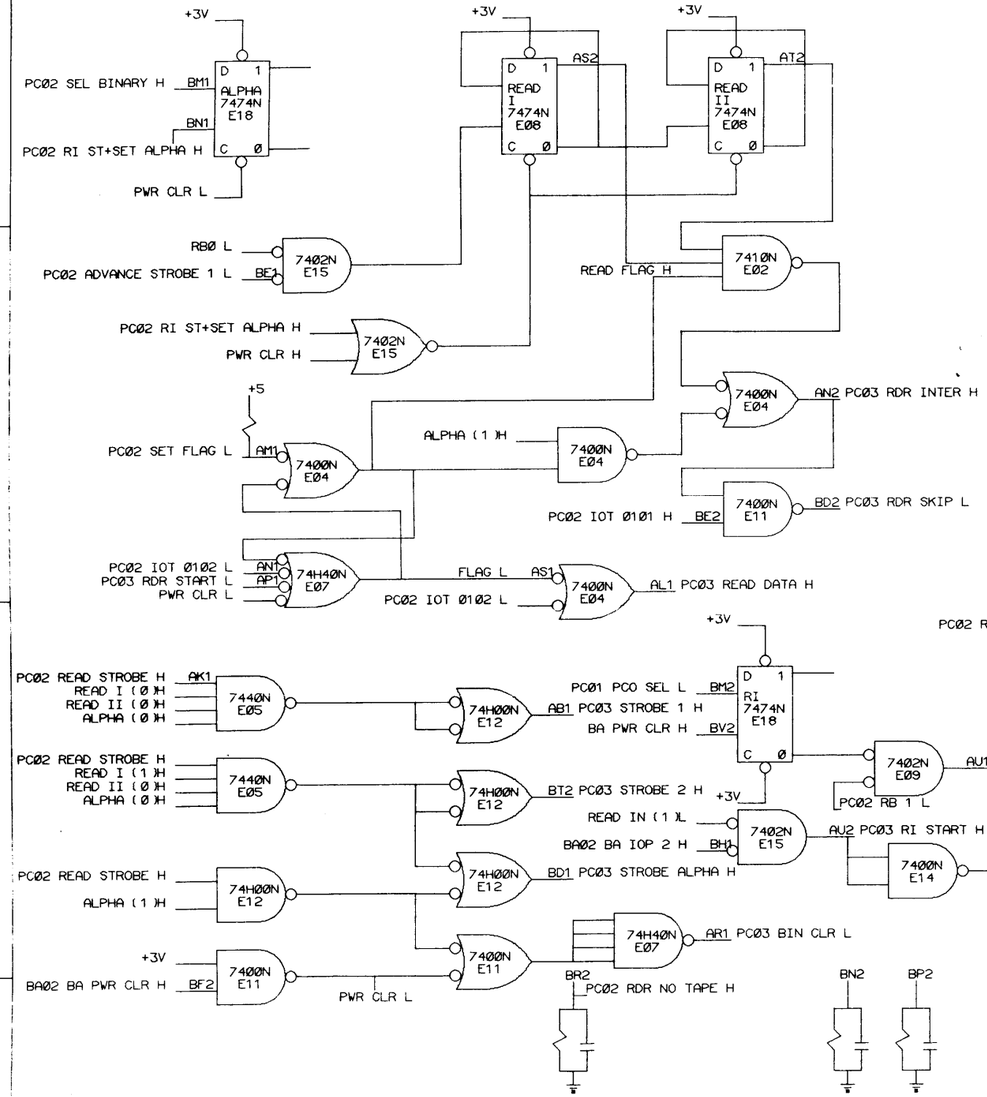


*DELETE B10H2 TO B10M2 WHEN INSTALLING PC15

+ PC05 SIGNAL NAMES INDICATED IN PARENTHESES IF DIFFERENT

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
NR	BA15-00001	A	GH	BA15-00008	E
	K COTE			K KRYSIAK 7/7/70	
	F AUMANN			F AUMANN 7/3/70	
PD	BA15-00002	B	GH	BA15-00011	F
	K COTE			F AUMANN 8/5/70	
	F AUMANN			F AUMANN 8/5/70	
PD	BA15-00004	C	GH	BA15-00013	G
	K COTE 4/9/70			K COTE 4/9/70	
	F AUMANN 4/13/70			F AUMANN 4/13/70	
	BA15-00007			BA15-00014	H
	R SOFKA			R SOFKA	
	F AUMANN			F AUMANN	

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N RHEAULT	DATE 11/12/69	TITLE HIGH SPEED READER CONTROL	
ENG. E NEWMYER	DATE 12/3/69		
PROJ. ENG. F AUMANN	DATE 12/3/69		
PROD. F LASKEY	DATE 12/6/69		
FIRST USED ON BA15		SIZE D / CODE BS / NUMBER PC15-0-02 / REV. J	
SCALE		DIST.	
SHEET 1 OF 1			



REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
NR	BA15-00001	A	GH	BA15-00014	E
	K COTE			K.WALSH 4/5/71	
	F AUMANN			F.AUMANN 4/5/71	
PD	BA15-00002	B		BA15-00021	F
	K COTE 3/25/70				
	F AUMANN 3/26/70				
GH	BA15-00009	C			
	K KRYSIAK 7/7/70				
	F AUMANN 7/13/70				
GH	BA15-00012	D			
	R SOFKA 2-17-71				
	F AUMANN 2-22-71				

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. N RHEAULT	DATE 11/12/69	
ENG. E NEWMYER	DATE 12/3/69	TITLE READER REGISTER
PROJ. ENG. F AUMANN	DATE 12/3/69	
PROD. F LASKEY	DATE 12/6/69	
FIRST USED ON 3A15		SIZE D / CODE 83 / NUMBER PC15-0-03 / REV. F
SCALE		
SHEET 1 OF 1		DIST.

LT02 TT00 L — A1 — M111 A15 — B1 — LT01 TT00 H

LT02 TT01 L — C1 — M111 A15 — D2 — LT01 TT01 H

LT02 TT02 L — D1 — M111 A15 — E1 — LT01 TT02 H

LT02 TT03 L — F1 — M111 A15 — H1 — LT01 TT03 H

LT02 TT04 L — E2 — M111 A15 — F2 — LT01 TT04 H

LT02 TT05 L — J1 — M111 A15 — K1 — LT01 TT05 H

LT02 TT06 L — H2 — M111 A15 — J2 — LT01 TT06 H

LT02 TT07 L — L1 — M111 A15 — M1 — LT01 TT07 H

BA02 BA I/O SYNC H — H1
BA02 BA PWR CLR H — N1
BA02 BA API 3 GR H — E2
LT01 IDT 4002 L — F2
LT01 XMTR EN IN H — H2
LT01 TELEPRINTER FLAG H — S2
M104 A23 *
E1 — LT01 XMTR ADDR L
F1 — LT01 TTY API 3 RQ L
P1 — LT01 API 3 EN OUT H
S1 — LT01 TTY API 3 RQ H

M002 A13 — S2

M002 A13 — LT01 TTY API 3 RQ L — A1
U2 — LT01 KBD API 3 RQ L — B1
M113 B30 — C1 — LT01 BA API 3 RQ H

H1
J1
M113 B30 — K1 — LT01 BA API 3 RQ L

BA02 BA I/O SYNC H — H1
BA02 BA PWR CLR H — N1
BA02 BA API 3 GR H — E2
LT01 IDT 4102 L — F2
BA01 API 3 EN H — H2
LT01 KBD FLAG H — S2
M104 B23 *
E1 — LT01 RECVR ADDR L
F1 — LT01 KBD API 3 RQ L
P1 — LT01 XMTR EN H
S1 — LT01 KBD API 3 RQ H

LT01 KBD API 3 RQ L — T2
U2
M113 B30 — V2 — LT01 IND KBD API 3 H

LT01 TTY API 3 RQ L — L2
M2
M113 B29 — N2 — LT01 IND KBD API 3 H

BA02 BA IOP 1 H — P2 — M103 A24 — B1 — LT01 IDT 4001 L
A1 — LT01 IDT 4001 H

BA02 BA IOP 2 H — R2 — M103 A24 — D1 — LT01 IDT 4002 L
C1 — LT01 IDT 4002 H

BA02 BA IOP 4 H — S2 — M103 A24 — F1 — LT01 IDT 4004 L
E1 — LT01 IDT 4004 H

BA02 BA DS 00 H — D2
-BA02 BA DS 01 H — F2
-BA02 BA DS 02 H — F2
-BA02 BA DS 03 H — H2
-BA02 BA DS 04 H — J2
-BA02 BA DS 05 H — K2
-BA02 BA SD 00 H — L2
-BA02 BA SD 01 H — N2
M103 A24
V2
U2

LT03 TELEPRINTER FLAG L — H1
J1
M113 B29 — K1 — LT01 TELEPRINTER FLAG H

BA02 BA IOP 1 H — P2 — M103 B24 — B1 — LT01 IDT 4101 L
A1 — LT01 IDT 4101 H

BA02 BA IOP 2 H — R2 — M103 B24 — D1 — LT01 IDT 4102 L
C1 — LT01 IDT 4102 H

BA02 BA IOP 4 H — S2 — M103 B24 — F1 — LT01 IDT 4104 L
E1 — LT01 IDT 4104 H

BA02 BA DS 00 H — D2
-BA02 BA DS 01 H — F2
-BA02 BA DS 02 H — F2
-BA02 BA DS 03 H — H2
-BA02 BA DS 04 H — J2
-BA02 BA DS 05 H — K2
BA02 BA SD 00 H — L2
-BA02 BA SD 01 H — N2
M103 B24
V2
U2

LT02 KBD FLAG L — P2
R2
M113 B29 — S2 — LT01 KBD FLAG H

*DELETE A23M2 TO B23H2
WHEN INSTALLING LT15

REVISIONS		
CHK	CHANGE NO.	REV.
NR	BA15-00001	A
	K COTE	
	F AUMANN	
PD	BA15-00002	B
	K COTE 3/25/70	
	F AUMANN	
GH	BA15-00008	C
	K KRYSIAK 7/7/70	
	F AUMANN 7/9/70	
	BA15-00012	D
	R Sibe 12/17/71	

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 11/12/69	
ENG. F NEWMYER	DATE 12/3/69	TITLE TELETYPE CONTROL
PROJ. ENG. F AUMANN	DATE 12/3/69	
PROD. F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D · CODE BS · NUMBER LT15-A-01 · REV. D
SCALE		DIST.
SHEET 1 OF 1		

LT02 TT00 L
LT02 TT01 L
LT02 TT02 L
LT02 TT03 L
LT02 TT04 L
LT02 TT05 L
LT02 TT06 L
LT02 TT07 L
LT01 IOT 4101 H
LT02 KBD SKIP L
LT02 ECHO
+3V AD1
EIGHT BIT
TTI 00 E10
TTI 01 E10
TTI 02 E08
TTI 03 E08
TTI 04 E06
TTI 05 E06
TTI 06 E05
TTI 07 E05
KBD FLG E02
IN LAST UNIT E14
LT02 IN STOP 02 (0)L
LT02 KBD FLAG L
LT01 CLK SCALE 02 (1)H
INACTIVE (1)H
E16
E20
LT02 TTI SHIFT L
LT02 TTI SHIFT H
LT02 PRESET L
E01
E03
+3V B29V1
KCC L
START ENABLE H
+3V B11U1 H
E21
TTI CLOCK H
+3V
LT01 IOT 4102 H
E11
E12
E09
BA02 BA I/O PWR CLR H
W076 B27
LT02 TT KBD IN H
LT03 PRINTER DRIVE H
ST
PRINTER SEL DRIVER MAGNET
LT02 READER RELAY H
AM2 LT02 ECHO H
TTI SHIFT
SPIKE DETECTOR (1)H
IN ACTIVE (0)
LT02 IN STOP 02 (1)L
INACTIVE (0)
IN LAST UNIT (0)
LT02 START ENABLE H
CLOCK SCALE 00 E02
CLOCK SCALE 01 E17
CLOCK SCALE 02 E17
IN STOP 01 E19
IN STOP 02 E19
IN ACTIVE E14
SPIKE DECTOR E13
READER RUN E13
KCC L
M452 A27
CLK E01 880HZ
LT02 TTI CLK H
LT02 PRESET L
TTO SHIFT L
IN LAST UNIT (1)H
LT02 WAIT L
TTI SHIFT L
LT02 READER RELAY H
M706 A25 B25
K2 LT02 TTO CLOCK H

FOR OTHER THAN 110 BAUD USE AN M453
JUMPER A27S1-A27U1
A27V1-A27A2

BAUD RATE	JUMPER	SET K2 TO
110	J1-T1	4.5 M.S
150	J1-R1	3.3
300	J1-P1	1.7
600	J1-P1	833 N.S
1200	J1-N1	417
2400	J1-N1	208

TO IMPLEMENT ONE STOP BIT
DELETE B25V2-B25P2
ADD B25U2-B25R2

REVISIONS			
CHK	CHANGE NO.	REV.	
NR	BA15-00001	A	
	K COTE 2/17/70		
	F AUMANN 2/20/70		
PD	BA15-00003	B	
	K COTE 4/10/70		
	F AUMANN 4/13/70		
GH	BA15-00008	C	
	K KRYSIAK 7/7/70		
	F AUMANN 7/9/70		
	BA15-00012	D	

BA15-00023 E
E.ALLain 7-30-73
F.DOLL

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. N RHEAULT	DATE 11/12/69	
ENG. E NEWMYER	DATE 12/3/69	TITLE TELETYPE RECEIVER
PROJ. ENG. F AUMANN	DATE 12/3/69	
PROD. F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D CODE BS NUMBER LT15-A-02 REV. E
SCALE		DIST.
SHEET 1 OF 1		

AE2
AE1
AF2
AF1
AJ2
AH2
E01
AN1
E04
TTO SELECT
AS1
E04
LT01 IOT 4004 H
E04
AB1
E03
AV2 PRINTER DRIVE H
+3V B11U1 H
BA02 BA I/O BUS 10 H
AP2
E05
AN2
E04
BA02 BA I/O BUS 11 H
BA02 BA I/O BUS 12 H
AL2
E05
AR2
E05
BA02 BA I/O BUS 13 H
BA02 BA I/O BUS 14 H
AU2
E07
AM2
E05
BA02 BA I/O BUS 15 H
BA02 BA I/O BUS 16 H
AT2
E07
AS2
E07
BA02 BA I/O BUS 17 H
AU1
E07
OUT ACTIVE (1)L
AK2
AJ1
AL1
D 1 TTO ENABLE E06 C 0
D 1 TTO 00 E06 C 0
D 1 TTO 01 E08 C 0
D 1 TTO 02 E08 C 0
D 1 TTO 03 E11 C 0
D 1 TTO 04 E11 C 0
D 1 TTO 05 E03 C 0
D 1 TTO 06 E15 C 0
D 1 TTO 07 E02 C 0
D 1 LINE E02 C 0
AD2
AH1
E09
TTO FIN L
OUT ACTIVE (1)H
E10
TTO SHIFT H
+3V
E12
E12
+3V
E18
TTO CLOCK H
BP2
D 1 FREQ DIVIDE E14 C 0
D 1 OUT STOP 1 E14 C 0
BR2
D 1 OUT STOP 1.5 E17 C 0
BP1
D 1 OUT STOP 2 E17 C 0
BN1
+3V BJ1
D 1 OUT ACTIVE E16 C 0
AD1
+3V
LT01 IOT 4001 H
BH2
-TTO FIN
TTO SELECT H
E13
BJ2 LT03 TTO SKIP L
TTO SHIFT
D 1 TELE-PRINT FLAG E16 C 0
BK2 LT03 TELEPRINTER FLAG L
OUT ACTIVE (0)L
+3V B11U1 H
BS2
E18
OUT STOP 02 (0)H
BN2
TTO ENABLE (1)H
AK1
E18
E12
OUT ACTIVE (1)H
TTO FIN H
E18
BA02 BA PWR CLR H
BE2
+3V BJ1
E10
BF2
E13
+3V B29V1 H
+3V
E12
TTO SELECT
LT01 IOT 4002 H
BD2
E13

M707
A26
B26

REVISIONS		
CHK	CHANGE NO.	REV.
NR	BA15-00001	A
	K COTE 2/17/70	
	F AJMANN 2/20/70	
GH	BA15-00008	B
	K KRYSIAK 7/7/70	
	F AJMANN 7/9/70	
JM	BA15-00021	C
	R SOFKA 2/17/71	
	F AJMANN 2/22/71	
	BA15-00021	D

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D N AHEAULT	DATE 11/12/69	TITLE TELETYPE TRANSMITTER
ENG. E NEWMYER	DATE 12/3/69	
PROJ. ENG. F AJMANN	DATE 12/3/69	
PROD. F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D CODE BS NUMBER LT15-A-03 REV. D
SCALE		DIST.
SHEET 1 OF 1		

REF SUP -2V

D/A

A607 A19 B19

YC00 YC01 YC02 YC03 YC04 YC05 YC06 YC07 YC08 YC09

AE2 AF2 AM2 AN2 AS2 AT2 BD2 BE2 BH2 BJ2

AD2

AL2

BS2 VP01 Y OUT H

VP01 IOT 06 X2 L

VP01 IOT 06 X4 H

REF SUP -2V

D/A

A607 A20 B20

XC00 XC01 XC02 XC03 XC04 XC05 XC06 XC07 XC08 XC09

AE2 AF2 AM2 AN2 AS2 AT2 BD2 BE2 BH2 BJ2

AD2

AL2

BS2 VP01 X OUT H

VP01 IOT 05 X2 H

VP01 IOT 05 X4 H

BA02 BA I/O BUS 08 H
BA02 BA I/O BUS 09 H
BA02 BA I/O BUS 10 H
BA02 BA I/O BUS 11 H
BA02 BA I/O BUS 12 H
BA02 BA I/O BUS 13 H
BA02 BA I/O BUS 14 H
BA02 BA I/O BUS 15 H
BA02 BA I/O BUS 16 H
BA02 BA I/O BUS 17 H

W028 B18

VP01 LP IN H
VP01 X OUT H
VP02 VIEW L
VP01 Y OUT H
VP01 ERASE FIN L
VP02 Z AXIS H
VP01 INT A H
VP02 ERASE L

BA02 BA IOP 1 H P2 — M103 A17 — B1 VP01 IOT 05 X1 L, A1 VP01 IOT 05 X1 H
BA02 BA IOP 2 H R2 — M103 A17 — D1 VP01 IOT 05 X2 L, C1 VP01 IOT 05 X2 H
BA02 BA IOP 4 H S2 — M103 A17 — F1 VP01 IOT 05 X4 L, E1 VP01 IOT 05 X4 H

BA02 -BA DS 00 H D2
BA02 -BA DS 01 H E2
BA02 -BA DS 02 H F2
BA02 BA DS 03 H H2
BA02 -BA DS 04 H J2
BA02 BA DS 05 H K2
+3V B11U1 H N2
L2
M103 A17 U2
V2 VP01 DEV SEL 05 H

VP02 DSPY INTER L P2
VP02 LP INTER L R2
M113 B11 S2 VP01 VP09 INT RQ H
L1
M1
M103 A17 N1 VP02 VP09 INT RQ L

BA02 BA IOP 1 H P2 — M103 B17 — B1 VP01 IOT 06 X1 L, A1 VP01 IOT 06 X1 H
BA02 BA IOP 2 H R2 — M103 B17 — D1 VP01 IOT 06 X2 L, C1 VP01 IOT 06 X2 H
BA02 BA IOP 4 H S2 — M103 B17 — F1 VP01 IOT 06 X4 L, E1 VP01 IOT 06 X4 H

BA02 -BA DS 00 H D2
BA02 -BA DS 01 H E2
BA02 -BA DS 02 H F2
BA02 BA DS 03 H H2
BA02 BA DS 04 H J2
BA02 BA DS 05 H K2
+3V B11U1 H N2
L2
M103 B17 U2
V2 VP01 DEV SEL 06 H

VP02 DSPY SKIP L H1
VP02 LP SKIP L J1
M103 B17 K1 VP01 VP09 SKIP RQ H
L1
M1
M103 B17 N1 VP01 VP09 SKIP L

BA02 BA IOP 1 H P2 — M103 A18 — B1 VP01 IOT 07 X1 L, A1 VP01 IOT 07 X1 H
BA02 BA IOP 2 H R2 — M103 A18 — D1 VP01 IOT 07 X2 L, C1 VP01 IOT 07 X2 H
BA02 BA IOP 4 H S2 — M103 A18 — F1 VP01 IOT 07 X4 L, E1 VP01 IOT 07 X4 H

BA02 -BA DS 00 H D2
BA02 -BA DS 01 H E2
BA02 -BA DS 02 H F2
BA02 BA DS 03 H H2
BA02 BA DS 04 H J2
BA02 BA DS 05 H K2
+3V B11U1 H N2
L2
M103 A18 U2
V2 VP01 DEV SEL 07 H

BA02 BA I/O SYNC H H1
BA02 BA PWR CLR H N1
BA02 BA API 2 GR H E2
VP01 IOT 05 X2 L F2
PC02 VP09 EN IN H H2
VP01 VP09 INT RQ H S2
M104 A16
E1 F1 P1 S1 VP01 VP09 ADDR L
J2 VP01 VP09 API 2 RQ L
M2 VP01 API 2 EN OUT H
U2 VP01 VP09 API 2 RQ H

*WHEN VP OPTION IS INSTALLED DELETE WIRE FROM A16H2 TO A16M2

REVISIONS		
CHK	CHANGE NO.	REV.
NR	BA15-00001	A
	K COTE	
	F AUMANN	
PD	BA15-00002	B
	K COTE 3/25/70	
	F AUMANN 3/26/70	
GH	BA15-00008	C
	K.KRYSIAK 7-7-70	
	F.AUMANN 7-22-70	
RC	BA15-00017	D

DRN. M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. N RHEAULT	DATE 11/12/69	
ENG. E NEWMYER	DATE 12/3/69	TITLE DISPLAY D/A & DEV SEL
PROJ. ENG. F AUMANN	DATE 12/3/69	
PROD. F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D CODE BS NUMBER VP15-0-01 REV. D
SCALE		
SHEET 1 OF 1		DIST.

*SET DELAY AT PIN AT2 FOR
VR14 6US
RM503 6US
611 STORAGE TUBE .8US

.002 MFD 10K +5V
2700 PF 10K +5V
+3V
AC1 TP1
VP01 ERASE FIN L
+3V A13V2
+5V AP1 D664
AA1 VP02 INT A H
BA02 BA SD 01 H
BA02 BA SD 00 H AJ2
+5V WRITE THROUGH L 3K AB1
+5V D664 AN1 VP02 ERASE L
BA02 BA SD 01 H
VP01 IOT 07 X4 H AE2
DSPY CLR L
ERASE FIN L
VP01 IOT 07 X2 H BH2
BA02 BA SD 01 H
BA02 BA PWR CLR L BJ1
+3V D 1 DISP FLAG C 0
VP01 IOT 05 X1 H
BA02 BA SD 01 H
BE1 VP02 DSPY SKIP L
VP02 DSPY INTER L
BA10 BUSS 16 H
DSPY CLR L
D 1 DSPY INTER ENAB E14 C 0
PWR CLR L
+5V
P01 IOT 05 X4 L AS1
P01 IOT 06 X4 L AR1
AF1 4700PF 10K +5V
AN2 .022MFD
AS2 510PF
5.6K +5V
180PF 100K
AT2 VIEW H
-BA SD 01 H
VP01 IOT 05 X1 H
BA1
BD1 VP02 LP SKIP L
VP02 LP INTER L
D 1 LP FLAG C 0
+3V
BA02 -BA SD 01 L AD2
-BA SD 01 H
AV2 TP2
+3V
+5V
D664
D670
VP01 IOT 07 X2 H
-BA SD 01 H
BA10 BUSS 17 H
D 1 LP INTER ENAB E14 C 0
PWR CLR L
330 OHMS
+3V
.01 MFD
750 OHMS
VIEW IN H BL1
BA02 BA I/O BUS 17 H
BR1 VP02 TP05
BS2 VP02 TP06
BK1 VP02 TP07
DEC 6534C
3K
1.5K
750 OHMS
BU2 VP02 Z AXIS H
-15V
BT2
-SD 00 H
SD 01 H
IOT 7X1 H BN1
BM1
.005 MFD 51K +5V
BD2 TP4
+3V
M717
A21
B21

NECESSARY CONNECTIONS
TO OSCILLOSCOPE (VP15B)
AT2 TO BL1
AF1 TO A13 V2
VR14 (VP15C)

AT2 TO BL1
AF1 TO AS2
AU2 TO AB1
AP1 TO A13 V2
611 STORAGE TUBE (VP15A)
AU2 TO AB1
AN2 TO AS2
BL1 TO GND
BE2 TO GND

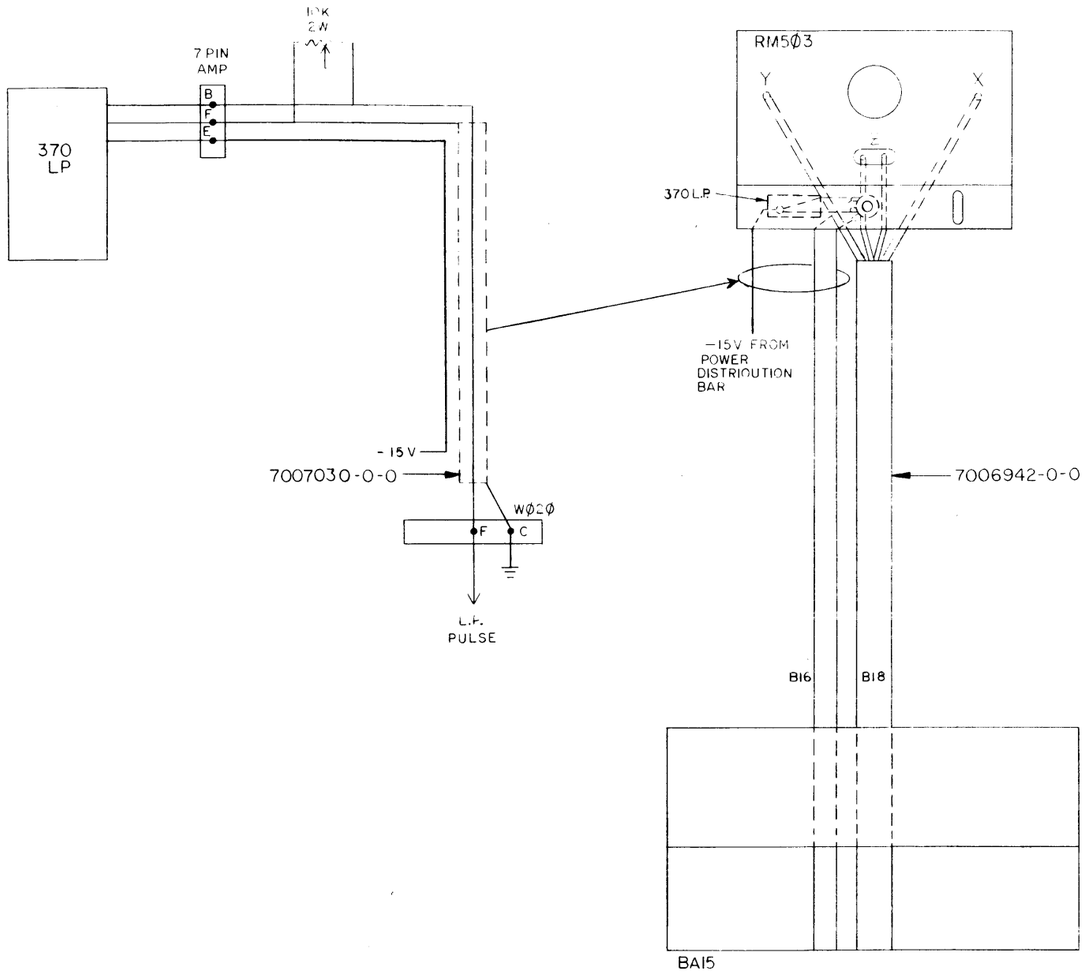
+3V
BA02 BA I/O BUS 16 H BJ2
D 1 BR00 C 0
BK2
D 1 BR01 C 0
BH1
BL2
BA02 BA PWR CLR L
VP02 -BA SD 01 H
VP01 IOT 07 X4 H

+10V
BM2
47K 10K 330 OHMS
+5V
D664
750 OHMS
BN2
D664 4.7K
DEC 3009B
D664

M412
B16
C2
F2 LP IN H
CONNECT F2 TO
C2 WHEN LIGHT PEN
NOT USED.
FOR 370 LIGHT PEN, CONNECT
B16F2 TO B21N2
FOR 374 LIGHT PEN, CONNECT
B18D2 TO B16N2
B16F2 TO B21E2
B21B2 TO B21N2
BE2 VP02 TP03
LP IN

REVISIONS			REVISIONS		
CHK	CHANGE NO.	REV.	CHK	CHANGE NO.	REV.
H	BA15-00011	A		BA15-00022	E
	K.KRYSIAK 7-9-70			E.NEUMYER	
	F.AUMANN 7-22-70				
M	BA15-00017	B			
	R.SOFKA 6/7/71				
	F.AUMANN 6/8/71				
M	BA15-00019	C			
	R.SOFKA 6/18/71				
	F. AUMANN 6/28/71				
M	BA15-0021	D			

DRN M SCHURMAN	DATE 11/12/69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHKD N RHEAULT	DATE 11/12/69	TITLE DISPLAY CONTROL BA15
ENG E NEWMYER	DATE 12/3/69	
PROJ ENG F AUMANN	DATE 12/3/69	
PROD F LASKEY	DATE 12/6/69	
FIRST USED ON BA15		SIZE D CODE BS NUMBER VP15-0-02 REV. E
SCALE		DIST.
SHEET 1 OF 1		



REVISIONS		
CHK	CHANGE NO.	REV.
—	BA15-00011	—
	ORIGINATED	
	BA15-00013	A

R. DIETER 3-15-77

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION / MODEL: VR15-BL

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN	DATE
CHK'D.	DATE
ENG.	DATE
PROJ. ENG.	DATE
PROD.	DATE

NEXT HIGHER ASSY: A-ML-VP15-BL-1

SCALE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: INTERCONNECTION DIAGRAM

SIZE	CODE	NUMBER	REV.
D	IC	VP15-BL-1	A

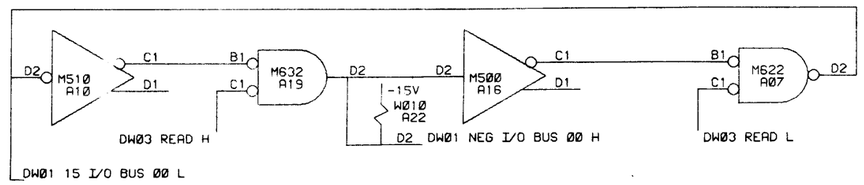
DIST.

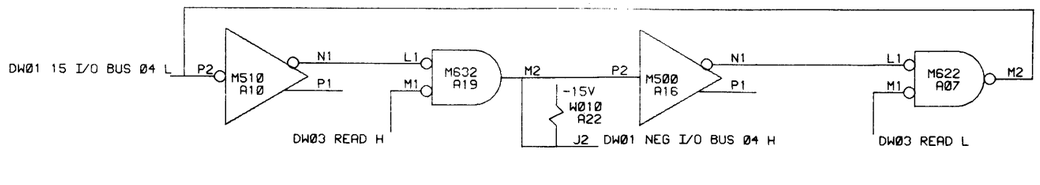
REV A

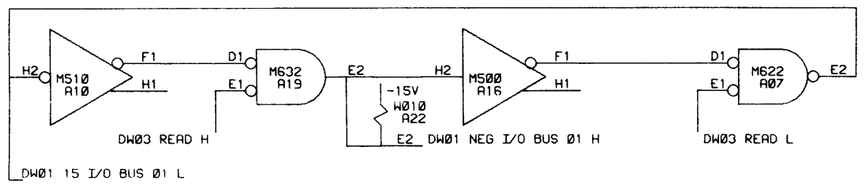
NUMBER VP15-BL-1

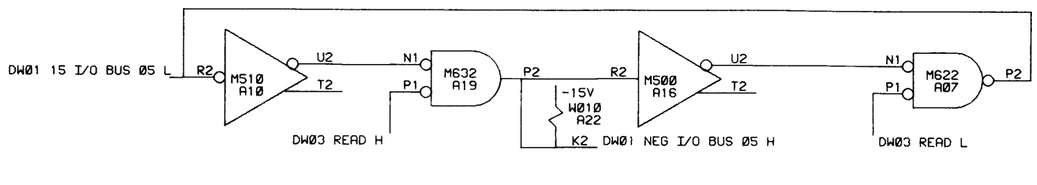
SIZE D CODE IC

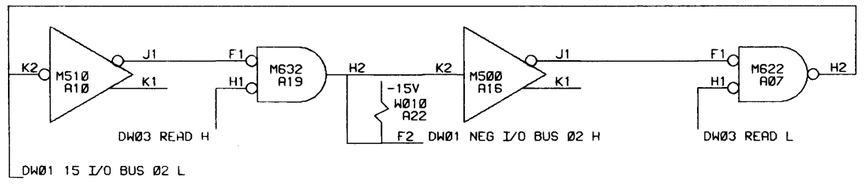
DEC FORM NO. DRD 100

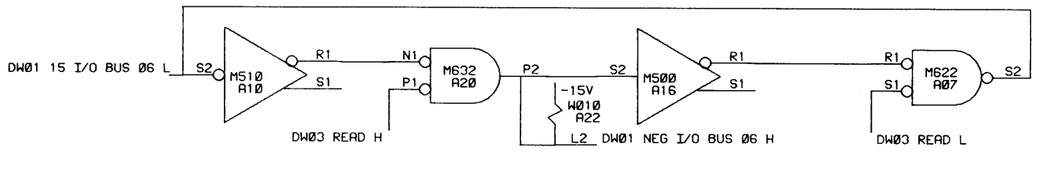


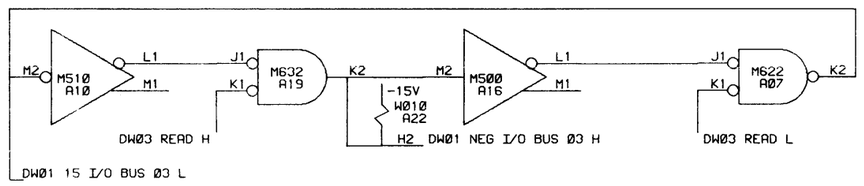


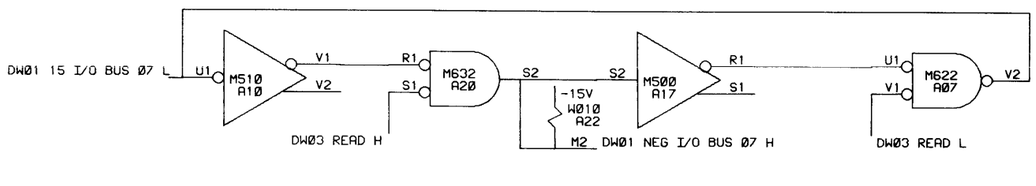


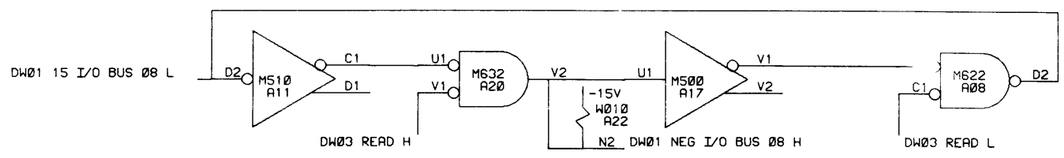






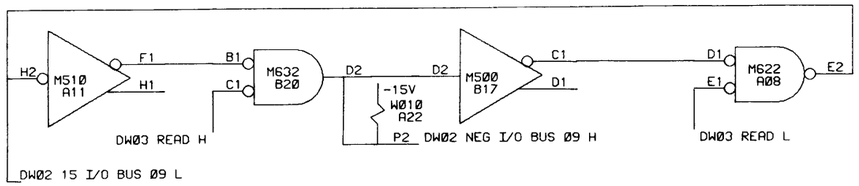


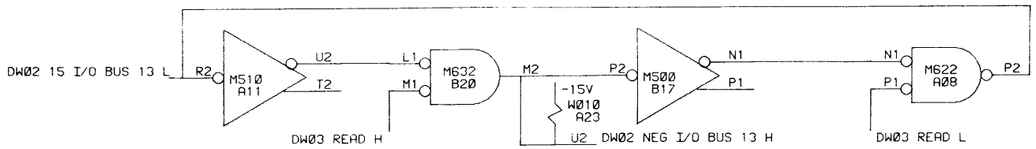


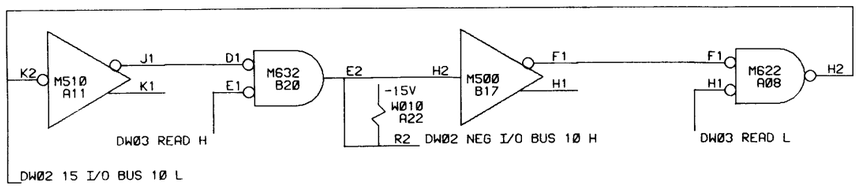


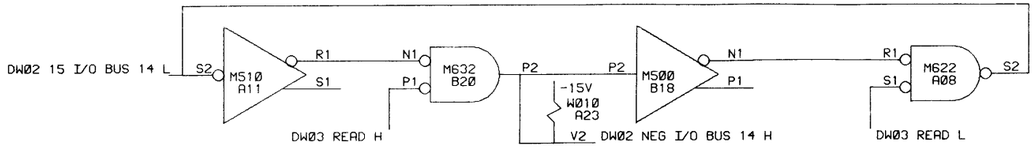
REVISIONS		
CHK	CHANGE NO.	REV.

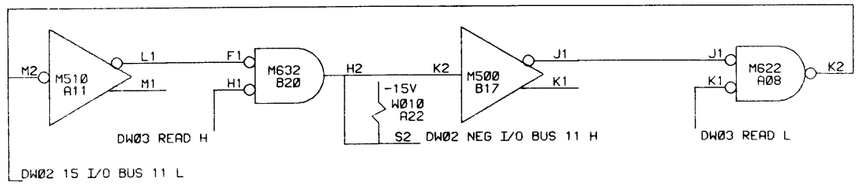
DRN. K BOGGS	DATE 9-2-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 9-2-69	TITLE BI DIRECT I/O BUS 0-8
ENG. J PRATT	DATE 9-2-69	
PROJ. ENG. J PRATT	DATE 9-3-69	
PROD. F LASKEY	DATE 9-7-69	
FIRST USED ON DW15		SIZE D · CODE BS · NUMBER DW15-A-01 · REV. 00
SCALE		DIST.
SHEET 1 OF 1		

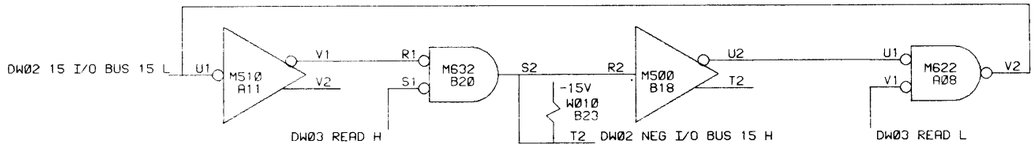


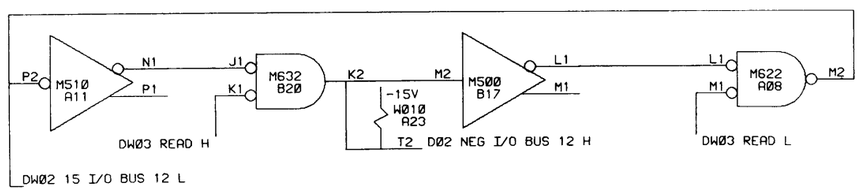


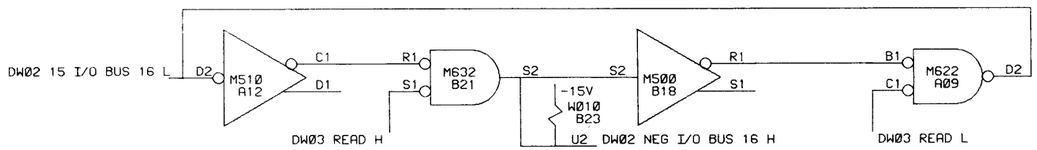


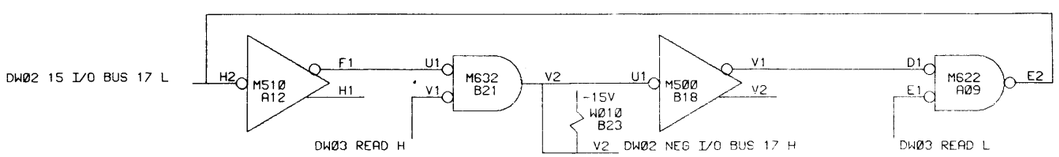






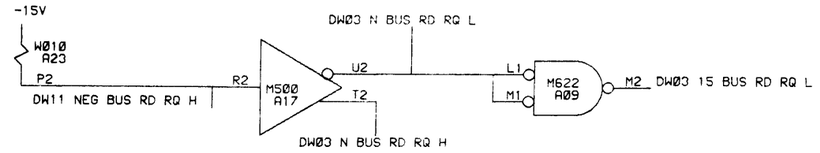


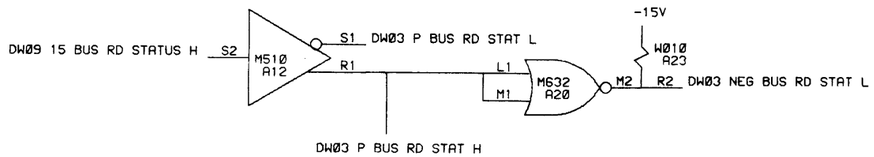


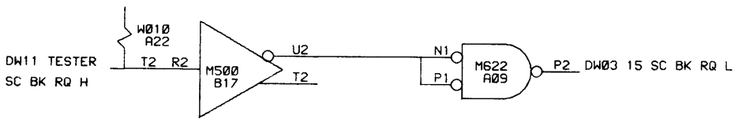


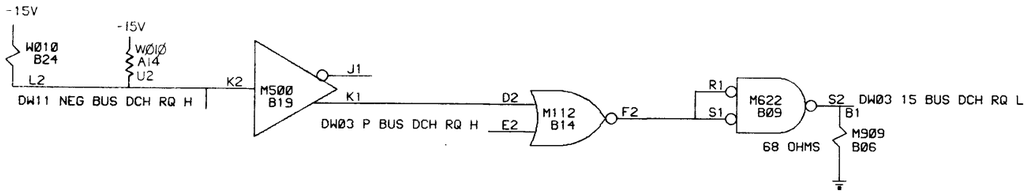
REVISIONS		
CHK	CHANGE NO.	REV.

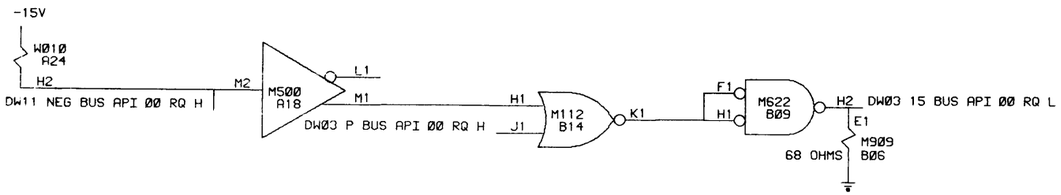
DRN. K ROGGS	DATE 9-3-69	digital EQUIPMENT CORPORATION
CHK'D. M RHEAULT	DATE 9-3-69	
ENG. J PRATT	DATE 9-3-69	TITLE: R1 INPUT I/O BUS 9-17
PROJ. ENG. J PRATT	DATE 9-3-69	
PROD. F LASKY	DATE 9-9-69	
FIRST USED ON: DW15		SIZE: D CODE: 85 NUMBER: DW15-H-02 REV: 00
SCALE		
SHEET 1 OF 1		DIST.

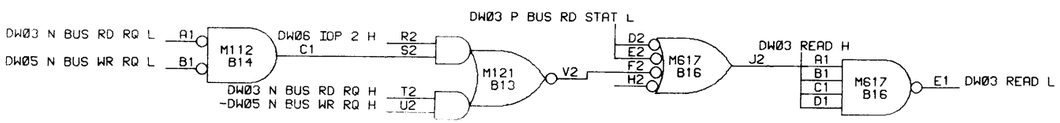


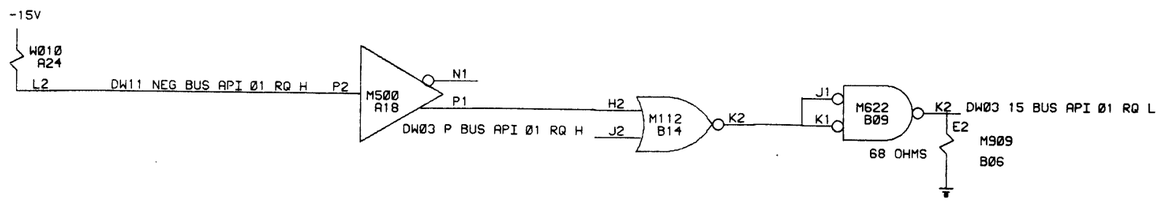


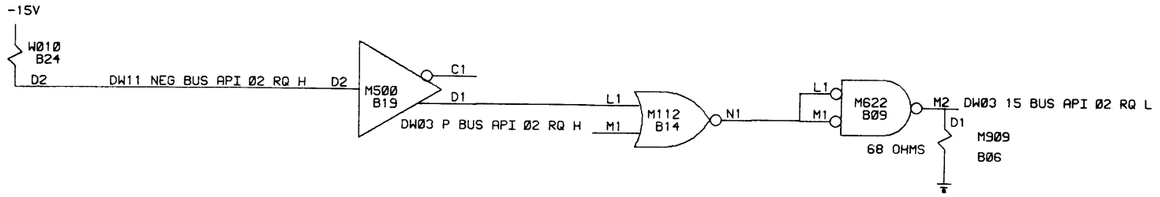


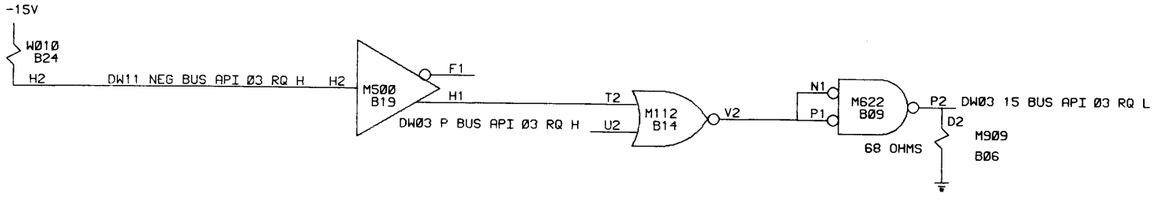


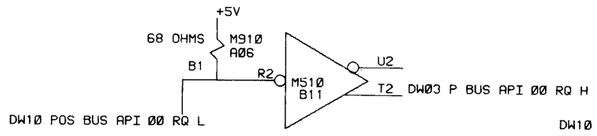


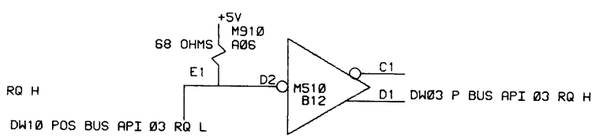


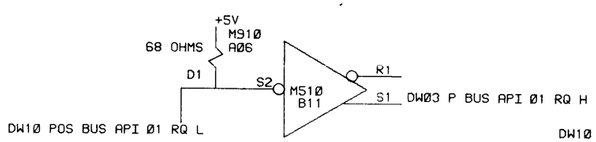


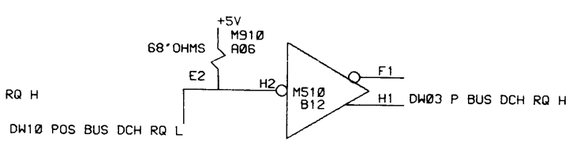


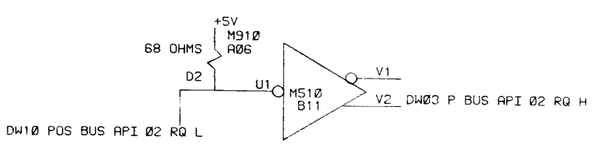








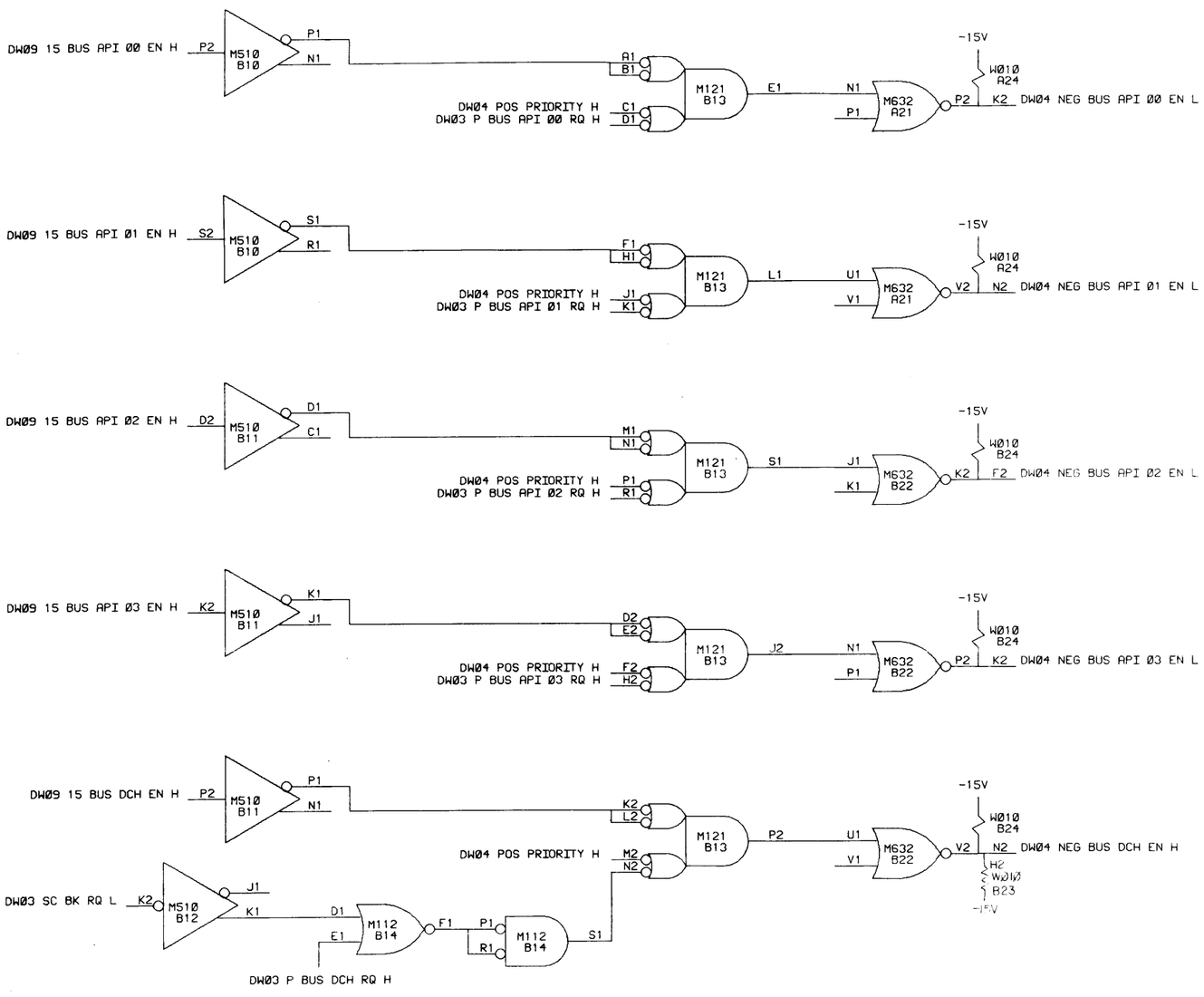




REVISIONS		
CHK	CHANGE NO.	REV.
AN	DW15A-00001	A
	K KRYSIAK	
	J PRATT	
AN	DW15A-00003	B
	K KRYSIAK	
	J PRATT	
	DW15A-00004	C
	[illegible]	
	[illegible]	

DRN. K BOGGS	DATE 9-3-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 9-3-69	
ENG. J PRATT	DATE 9-3-69	TITLE: AP DCH RQ+BI DI BS CON
PROJ. ENG. J PRATT	DATE 9-3-69	
PROD. F LASKEY	DATE 9-5-69	
FIRST USED ON DW15		SIZE D / CODE BS / NUMBER DW15-A-03 / REV. D
SCALE		DIST.
SHEET 1 OF 1		

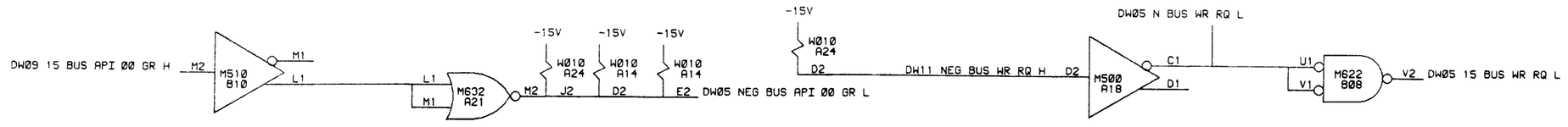
1113

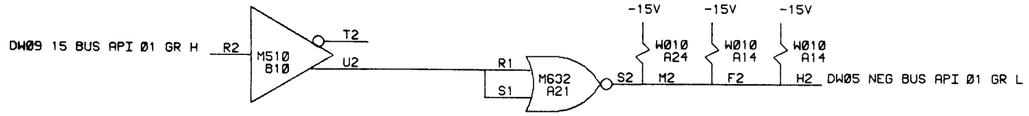


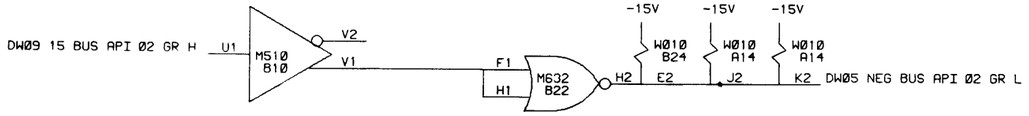
M121 B13 M121 B13
V1 U1 DW04 POS PRIORITY H

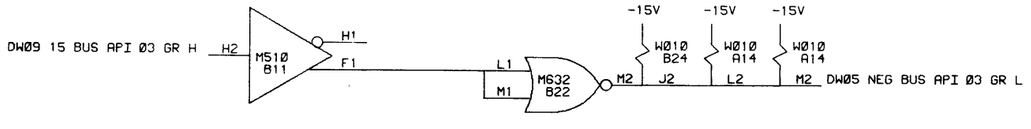
REVISIONS		
CHK	CHANGE NO.	REV.
	DW15A-00004	A

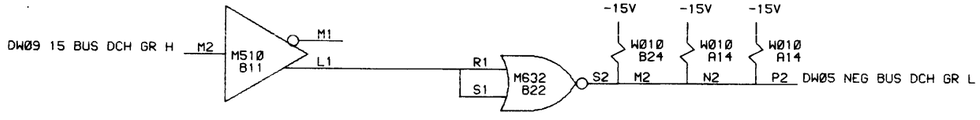
DRN. K BOGGS	DATE 9/3/69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. N RHEAULT	DATE 9/3/69	
ENG. J PRATT	DATE 9/3/69	TITLE: API + DCH ENABLES
PROJ. ENG. J PRATT	DATE 9/3/69	
PROD. F LASKEY	DATE 9/9/69	
FIRST USED ON: DW15		SIZE D | CODE BS | NUMBER DW15-A-04 | REV. B
SCALE		
SHEET 1 OF 1		DIST.





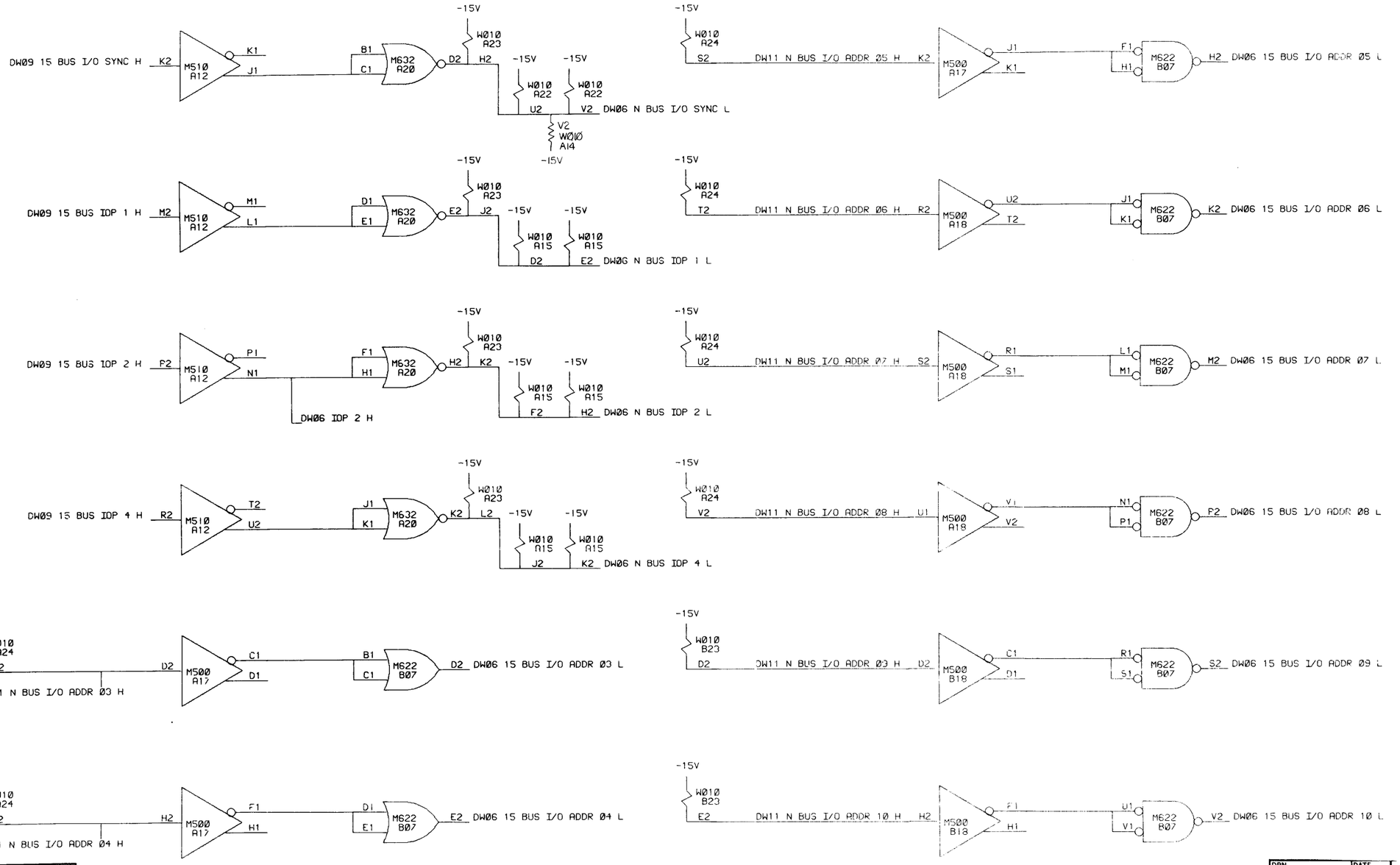






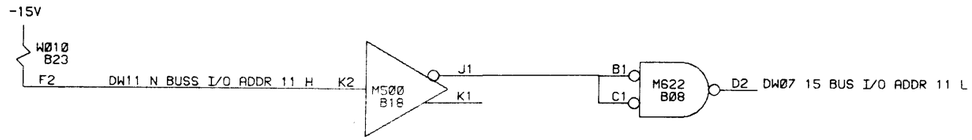
REVISIONS		
CHK	CHANGE NO.	REV.

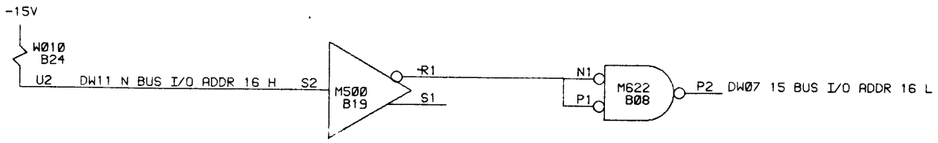
DRN. K BOGGS	DATE 9-3-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N RHEAULT	DATE 9-3-69	TITLE API + DCH GRANTS	
ENG. J PRATT	DATE 9-3-69		
PROJ. ENG. J PRATT	DATE 9-3-69		
PROD. FLASKEY	DATE 9-9-69		
FIRST USED ON DW15		SIZE D / CODE BS / NUMBER DW15-A-05 / REV. 00	
SCALE		DIST.	
SHEET 1 OF 1			

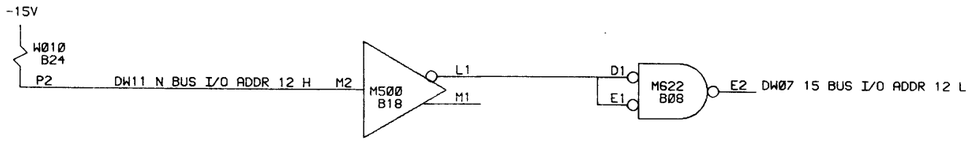


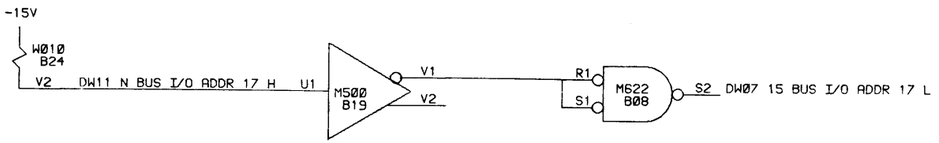
REVISIONS		
CHK	CHANGE NO.	REV.
	DWISA 00006	A

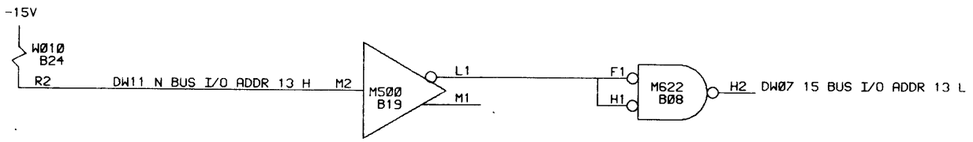
DRN. K BUGGS	DATE 9-2-69	digital EQUIPMENT CORPORATION
CHK'D N HERBERT	DATE 9-3-69	
ENG. J PRATT	DATE 9-3-69	TITLE I/O ADDRESS 3-10
PROJ. ENG. J PRATT	DATE 9-3-69	
PROD. E LASKEY	DATE 9-9-69	
FIRST USED ON DW15		SIZE D | CODE BS | NUMBER DW15-A-06 | REV. A
SCALE		DIST.
SHEET 1 OF 1		

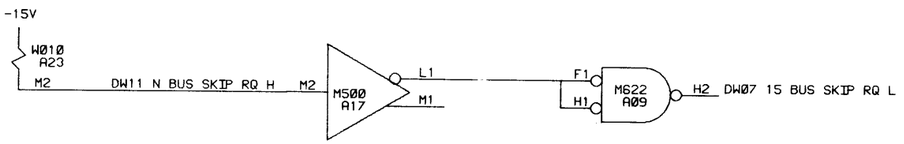


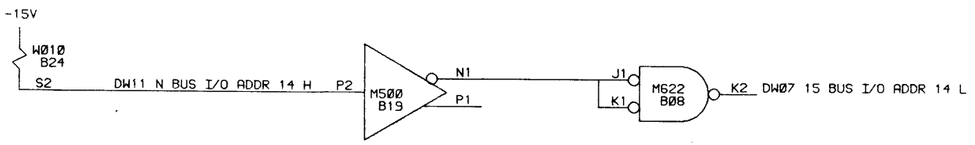


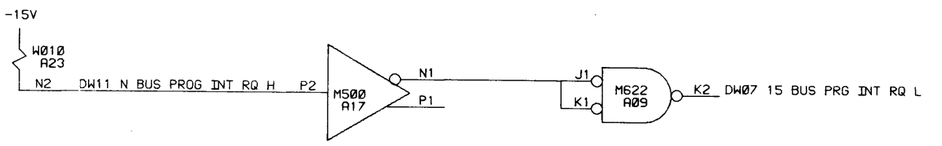


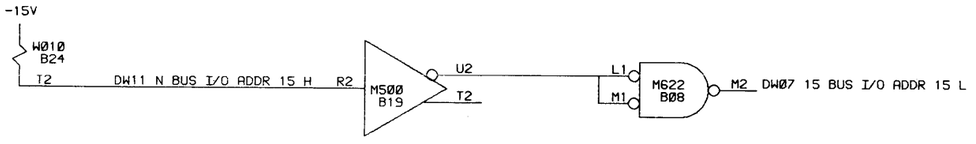


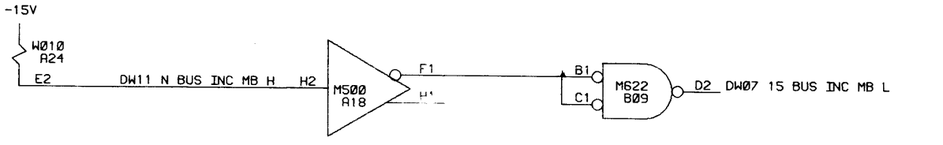


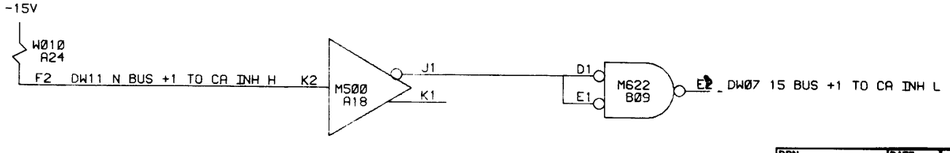






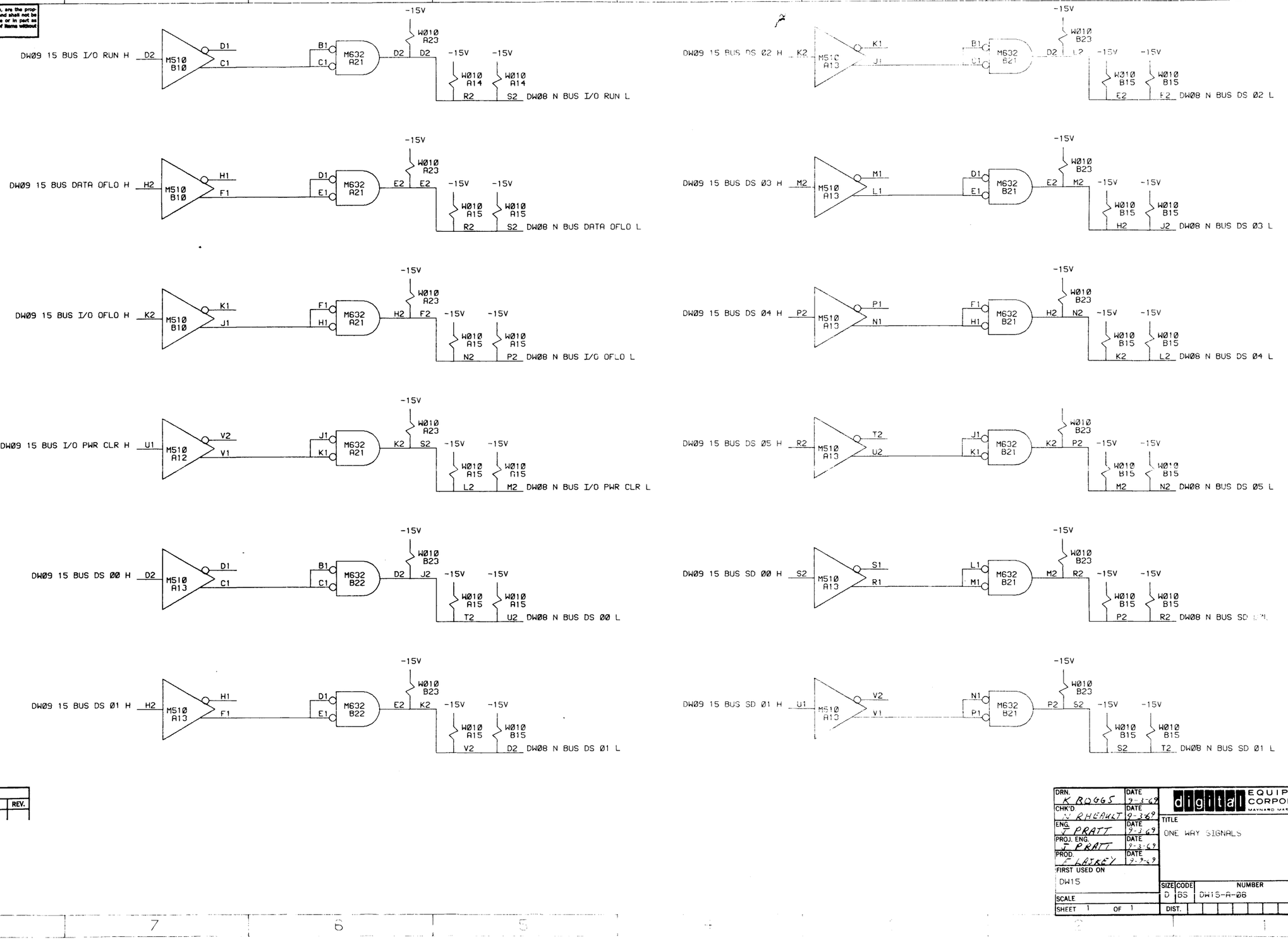






REVISIONS		
CHK	CHANGE NO.	REV.

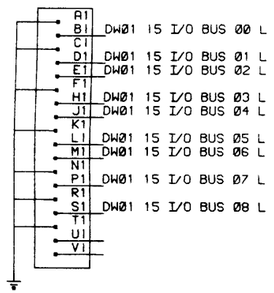
DRN. K ROGGS	DATE 9-3-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D. N RHEAULT	DATE 9-3-69	TITLE I/O ADDRESS 11-17	
ENG. T PRATT	DATE 9-3-69		
PROJ. ENG. T PRATT	DATE 9-3-69		
PROD. E LASKEY	DATE 9-3-69		
FIRST USED ON DW15			
SCALE		SIZE D / CODE BS / NUMBER DW15-A-07 / REV. 00	
SHEET 1 OF 1		DIST.	



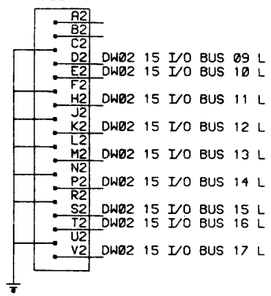
REVISIONS		
CHK	CHANGE NO.	REV.

DRN. K ROGGS	DATE 9-3-69	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. V RHEAULT	DATE 9-3-69	TITLE: ONE WAY SIGNALS
ENG. J PRATT	DATE 9-3-69	
PROJ. ENG. J PRATT	DATE 9-3-69	
PROD. E LAIKEY	DATE 9-3-69	
FIRST USED ON: DW15		SIZE: D; CODE: 65; NUMBER: DW15-A-06; REV.: 00
SCALE		DIST.
SHEET 1 OF 1		

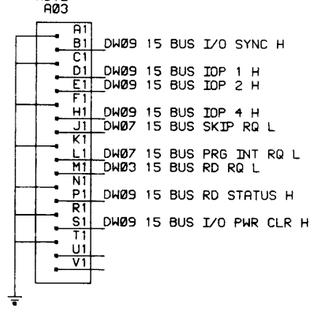
M912 A02



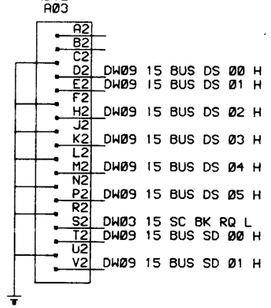
M912 A02



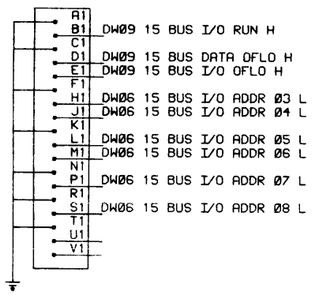
M912 A03



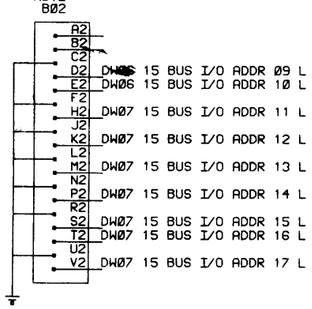
M912 A03



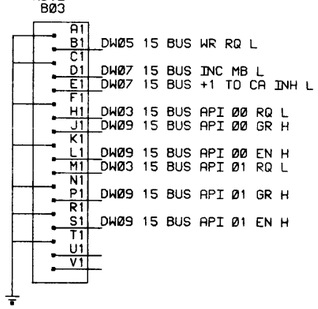
M912 B02



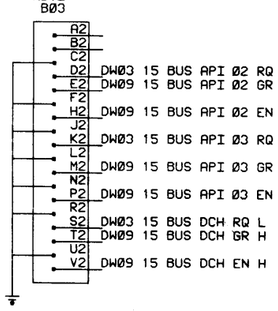
M912 B02



M912 B03



M912 B03



REVISIONS		
CHK	CHANGE NO.	REV.

DRN. K BOGGS	DATE 9-3-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 9-3-69	
ENG. J PRATT	DATE 9-3-69	TITLE POSITIVE INPUT CABLES
PROJ. ENG. J PRATT	DATE 9-3-69	
PROD. E LASKEY	DATE 9-9-69	
FIRST USED ON DW15		SIZE D / CODE 85 / NUMBER DW15-A-09 / REV. 00
SCALE		
SHEET OF		DIST.

M912 A04

A1	
B1	DW01 15 I/O BUS 00 L
C1	
D1	DW01 15 I/O BUS 01 L
E1	DW01 15 I/O BUS 02 L
F1	
H1	DW01 15 I/O BUS 03 L
J1	DW01 15 I/O BUS 04 L
K1	
L1	DW01 15 I/O BUS 05 L
M1	DW01 15 I/O BUS 06 L
N1	
P1	DW01 15 I/O BUS 07 L
R1	
S1	DW01 15 I/O BUS 08 L
T1	
U1	
V1	

M912 A04

A2	
B2	
C2	
D2	DW02 15 I/O BUS 09 L
E2	DW02 15 I/O BUS 10 L
F2	
H2	DW02 15 I/O BUS 11 L
J2	
K2	DW02 15 I/O BUS 12 L
L2	
M2	DW02 15 I/O BUS 13 L
N2	
P2	DW02 15 I/O BUS 14 L
R2	
S2	DW02 15 I/O BUS 15 L
T2	DW02 15 I/O BUS 16 L
U2	
V2	DW02 15 I/O BUS 17 L

M912 A05

A1	
B1	DW09 15 BUS I/O SYNC H
C1	
D1	DW09 15 BUS IOP 1 H
E1	DW09 15 BUS IOP 2 H
F1	
H1	DW09 15 BUS IOP 4 H
J1	DW07 15 BUS SKIP RQ L
K1	
L1	DW07 15 BUS PRG INT RQ L
M1	DW03 15 BUS RD RQ L
N1	
P1	DW09 15 BUS RD STATUS H
R1	
S1	DW09 15 BUS I/O PWR CLR H
T1	
U1	
V1	

M912 A05

A2	
B2	
C2	
D2	DW05 15 BUS DS Ø0 H
E2	DW09 15 BUS DS Ø1 H
F2	
H2	DW09 15 BUS DS Ø2 H
J2	
K2	DW09 15 BUS DS Ø3 H
L2	
M2	DW09 15 BUS DS Ø4 H
N2	
P2	DW09 15 BUS DS Ø5 H
R2	
S2	DW03 15 SC BK RQ L
T2	DW09 15 BUS SD Ø0 H
U2	
V2	DW09 15 BUS SD Ø1 H

M912 B04

A1	
B1	DW09 15 BUS I/O RUN H
C1	
D1	DW09 15 BUS DATA OFLO H
E1	DW09 15 BUS I/O OFLO H
F1	
H1	DW06 15 BUS I/O ADDR Ø3 L
J1	DW06 15 BUS I/O ADDR Ø4 L
K1	
L1	DW06 15 BUS I/O ADDR Ø5 L
M1	DW06 15 BUS I/O ADDR Ø6 L
N1	
P1	DW06 15 BUS I/O ADDR Ø7 L
R1	
S1	DW06 15 BUS I/O ADDR Ø8 L
T1	
U1	
V1	

M912 B04

A2	
B2	
C2	
D2	DW06 15 BUS I/O ADDR Ø9 L
E2	DW06 15 BUS I/O ADDR 10 L
F2	
H2	DW07 15 BUS I/O ADDR 11 L
J2	
K2	DW07 15 BUS I/O ADDR 12 L
L2	
M2	DW07 15 BUS I/O ADDR 13 L
N2	
P2	DW07 15 BUS I/O ADDR 14 L
R2	
S2	DW07 15 BUS I/O ADDR 15 L
T2	DW07 15 BUS I/O ADDR 16 L
U2	
V2	DW07 15 BUS I/O ADDR 17 L

M912 B05

A1	
B1	DW05 15 BUS WR RQ L
C1	
D1	DW07 15 BUS INC MR L
E1	DW07 15 BUS +1 TO CA INH L
F1	
H1	DW10 POS BUS API Ø0 RQ L
J1	DW09 15 BUS API Ø0 GR H
K1	
L1	DW09 15 BUS API Ø0 EN H
M1	DW10 POS BUS API Ø1 RQ L
N1	
P1	DW09 15 BUS API Ø1 GR H
R1	
S1	DW09 15 BUS API Ø1 EN H
T1	
U1	
V1	

M912 B05

A2	
B2	
C2	
D2	DW10 POS BUS API Ø2 RQ L
E2	DW09 15 BUS API Ø2 GR H
F2	
H2	DW09 15 BUS API Ø2 EN H
J2	
K2	DW10 POS BUS API Ø3 RQ L
L2	
M2	DW09 15 BUS API Ø3 GR H
N2	
P2	DW09 15 BUS API Ø3 EN H
R2	
S2	DW10 POS BUS DCH RQ L
T2	DW09 15 BUS DCH GR H
U2	
V2	DW09 15 BUS DCH EN H

REVISIONS		
CHK	CHANGE NO.	REV.

DRN. K BOGGS	DATE 9-1-69	digital EQUIPMENT CORPORATION	
CHK'D N RAGAN	DATE 9-1-69	TITLE POSITIVE BUS TABLES	
ENG. T PRATT	DATE 9-1-69		
PROJ. ENG. T PRATT	DATE 9-1-69		
PROD. E LASKEY	DATE 9-1-69		
FIRST USED ON DW15		SIZE D	CODE BS
SCALE		NUMBER DW15-A-10	REV. Ø0
SHEET 1 OF 1		NEXT	

W850 A25

C2	
D2	DW01 NEG I/O BUS 00 H
E2	DW01 NEG I/O BUS 01 H
F2	
H2	DW01 NEG I/O BUS 02 H
J2	
K2	DW01 NEG I/O BUS 03 H
L2	
M2	DW01 NEG I/O BUS 04 H
N2	
P2	DW01 NEG I/O BUS 05 H
R2	
S2	DW01 NEG I/O BUS 06 H
T2	DW01 NEG I/O BUS 07 H
U2	
V2	DW01 NEG I/O BUS 08 H

W850 A26

C2	
D2	DW06 N BUS I/O SYNC L
E2	DW06 N BUS IDP 1 L
F2	
H2	DW06 N BUS IDP 2 L
J2	
K2	DW06 N BUS IDP 4 L
L2	
M2	DW11 N BUS SKIP RQ H
N2	
P2	DW11 N BUS PROG INT RQ H
R2	
S2	DW11 NEG BUS RD RQ H
T2	DW03 NEG BUS RD STRT L
U2	
V2	DW08 N BUS I/O PWR CLR L

W850 A27

C2	
D2	DW08 N BUS I/O RUN L
E2	DW08 N BUS DATA OFLO L
F2	
H2	DW08 N BUS I/O OFLO L
J2	
K2	DW11 N BUS I/O ADDR 03 H
L2	
M2	DW11 N BUS I/O ADDR 04 H
N2	
P2	DW11 N BUS I/O ADDR 05 H
R2	
S2	DW11 N BUS I/O ADDR 06 H
T2	DW11 N BUS I/O ADDR 07 H
U2	
V2	DW11 N BUS I/O ADDR 08 H

W850 A28

C2	
D2	DW11 NEG BUS WR RQ H
E2	DW11 N BUS INC MB H
F2	
H2	DW11 N BUS +1 TO CA INH H
J2	
K2	DW11 NEG BUS API 00 RQ H
L2	
M2	DW05 NEG BUS API 00 GR L
N2	
P2	DW04 NEG BUS API 00 EN L
R2	
S2	DW11 NEG BUS API 01 RQ H
T2	DW05 NEG BUS API 01 GR L
U2	
V2	DW04 NEG BUS API 01 EN L

W850 B25

C2	
D2	DW02 NEG I/O BUS 09 H
E2	DW02 NEG I/O BUS 10 H
F2	
H2	DW02 NEG I/O BUS 11 H
J2	
K2	DW02 NEG I/O BUS 12 H
L2	
M2	DW02 NEG I/O BUS 13 H
N2	
P2	DW02 NEG I/O BUS 14 H
R2	
S2	DW02 NEG I/O BUS 15 H
T2	DW02 NEG I/O BUS 16 H
U2	
V2	DW02 NEG I/O BUS 17 H

W850 B26

C2	
D2	DW08 N BUS DS 00 L
E2	DW08 N BUS DS 01 L
F2	
H2	DW08 N BUS DS 02 L
J2	
K2	DW08 N BUS DS 03 L
L2	
M2	DW08 N BUS DS 04 L
N2	
P2	DW08 N BUS DS 05 L
R2	
S2	DW11 TESTER SC BK RQ H
T2	DW08 N BUS SD 00 L
U2	
V2	DW08 N BUS SD 01 L

W850 B27

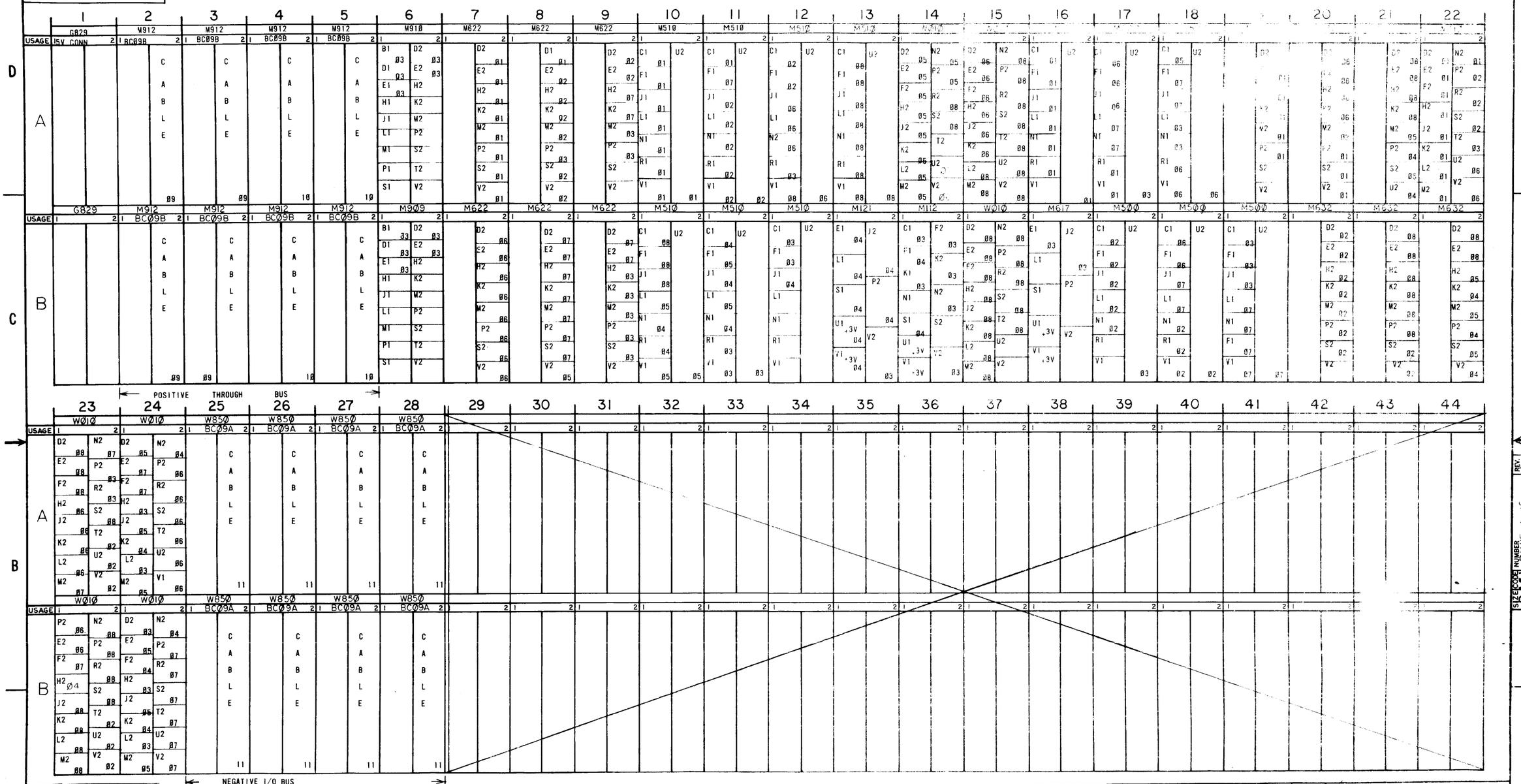
C2	
D2	DW11 N BUS I/O ADDR 09 H
E2	DW11 N BUS I/O ADDR 10 H
F2	
H2	DW11 N BUS I/O ADDR 11 H
J2	
K2	DW11 N BUS I/O ADDR 12 H
L2	
M2	DW11 N BUS I/O ADDR 13 H
N2	
P2	DW11 N BUS I/O ADDR 14 H
R2	
S2	DW11 N BUS I/O ADDR 15 H
T2	DW11 N BUS I/O ADDR 16 H
U2	
V2	DW11 N BUS I/O ADDR 17 H

W850 B28

C2	
D2	DW11 NEG BUS API 02 RQ H
E2	DW05 NEG BUS API 02 GR L
F2	
H2	DW04 NEG BUS API 02 EN L
J2	
K2	DW11 NEG BUS API 03 RQ H
L2	
M2	DW05 NEG BUS API 03 GR L
N2	
P2	DW04 NEG BUS API 03 EN L
R2	
S2	DW11 NEG BUS DCH RQ H
T2	DW05 NEG BUS DCH GR L
U2	
V2	DW04 NEG BUS DCH EN L

REVISIONS		
CHK	CHANGE NO.	REV.

DRN. K BUGGS	DATE 9-3-69	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. N RHEAULT	DATE 9-3-69	
ENG. J PRATT	DATE 9-3-69	TITLE NEGATIVE BUS CABLES
PROJ. ENG. J PRATT	DATE 9-3-69	
PROD. F LATKEY	DATE 9-9-69	
FIRST USED ON DW15		SIZE D | CODE BS | NUMBER DW15-A-11 | REV. 00
SCALE		
SHEET 1 OF 1		DIST.



REVISIONS			
CHK	CHANGE NO.	REV.	
JMD	DW15A-00005	C	
	TRANS 12-20		
	REDRAWN & REVISED		
	PRATT		

DEC FORM NO. DRD 112

FIRST USED ON OPTION/MODEL: DDP 15

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY 63
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

		DATE
DRN.		
CHK D.		DATE
ENG.		DATE
PROJ. ENG.		DATE
PROD.		DATE

NEXT HIGHER ASSY: A-MB-DW15-A

SCALE —

SHEET OF

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

MODULE UTILIZATION

SIZE	CODE	NUMBER	REV
D	MU	DW15-A-12	C

DIST