

Software Bulletin



ADO™
Digital Effects System

Version 10.1

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AMPEX

Prepared by

MSS Publications
Ampex Corporation
401 Broadway
Redwood City, CA 94063

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SOFTWARE BULLETIN

ADO VERSION 10.1

1 INTRODUCTION

Version 10.1 of ADO system software implements new features and changes some existing operating characteristics. This bulletin describes system changes not reflected in version 8; it assumes familiarity with the use of ADO software version 8 or version 9. The new ADO keyboard provides improved user interface, making the system faster and simpler to use by eliminating several soft key levels. Information in this bulletin is presented in the following order:

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 - Hard Keys that Have Been Moved
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- Digital I/O Interface
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2 THE NEW KEYBOARD

3 Purpose

The new keyboard simplifies use by eliminating several soft key levels, giving the user fast, easy access to menus. Since the introduction of the ADO, many new features have been added, often requiring the addition of more soft key levels. With version 10.1 software, many functions that previously were accessed by soft key are now accessed directly by hard key. The user will find that there are no more than two levels of soft keys in any mode.

The new keyboard also includes hard keys that provide new features such as the joystick FINE ADJUST and parameter PICK. The following paragraphs explain the new keys, as well as other changes on the new keyboard.

4 New Hard Keys

- INSERT

When pressed, adds a keyframe to the currently selected channel. Formerly a soft key.

- FINE ADJUST

Implements the new joystick Fine Adjust feature. When key is dimly lit, moving the joystick causes parameters to change at a moderate speed. When key is pressed to select Fine Adjust mode, key lights brightly, and moving the joystick causes parameter changes at a much slower speed. This enables the user to more easily use joystick to make minor parameter modifications to an effect.

- DELETE

When pressed, this key deletes the current keyframe from the current channel.

- MOTION TYPE

When pressed, this key accesses the Motion Type submenu in Program mode. Formerly a soft key.

- KEY CONTROL

Calls up the Key Control menu. To exit this menu, press MORE, PROG, or one of the parameter keys.

- KF FLAGS

When pressed, accesses the Keyframe Flags menu. Exit this menu in the same way you would the Key Control menu.

- IV PARAMS

Brings up the Input Video Parameters menu. The input video flags screen can be reached by pressing the **iv flags** soft key.

- FS PARAMS

Calls up the Framestore Parameters menu. If the CPP is not currently in the concentrator channel, the system automatically switches to that channel when the FS PARAMS key is pressed. To access the Framestore Flags menu, press **Fs1 flags** or **Fs2 flags** soft keys in the FS Parameters menu. (FS PARAMS was formerly a soft key in the Concentrator Parameters menu.)

- DISK

Selects the new Disk mode. The primary function of this key is to provide a directory listing of the disk. See paragraph 6 for a description of Disk mode.

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5 Hard Keys that Have Been Moved

- +/-

Formerly a lighted hard key, this key is logically associated with numeric input, and has been added to the numeric keypad.

- STORE EFFECT, RECALL EFFECT, TIME

These are effects control keys, and were previously lighted hard keys. Since they always require numeric input, they are now part of the numeric keypad.

- BORDER WIDTH

In software versions later than version 7.3, the border width function shared the same key as the CROP LEFT TOP key. It now occupies a separate key.

- CONCEN

Selects Concentrator Program mode, allowing entry into concentrator parameters and menus. Key has been moved from the parameter key group to the mode select key group.

6 Disk Mode

Pressing the new DISK key puts the CPP into Disk mode and calls up the new Disk menu, where most functions having to do with the disk can be found. When the DISK key is pressed, the system performs the list disk operation. The MORE key function was previously performed by the more dir soft key, i.e., listing subsequent pages of the directory. The following soft key functions are found in this mode:

- copy disk

Press to access the Copy Disk submenu. Formerly in the Set-Up menu.

- erase eff

Erase effect, formerly in the Program menu.

- enter name

Press to name the disk. Formerly in Program menu.

- **format disk**

A common sequence when formatting a disk is first to enter a name for the disk and then format it. With a minimum of keystrokes the user can now access the Enter Name submenu and format the disk (see Disk menu). Formerly in Set-Up menu.

Since it is considered a new mode, Disk mode can only be exited by choosing one of the other mode keys: PROG, RUN, or SET-UP.

7 **NEW CAPABILITIES**

8 **AVC Mode**

Version 10.1 includes a new interface to the AVC series switcher. This was previously available with the ADO 1000/2000, and is now available with the ADO 3000. Pressing the AVC soft key in the Program menu passes CPP control to the switcher.

While in AVC mode, the user is able to select channels and freeze them by pressing the FREEZE key.

9 **Add Keyframe**

This new feature allows the user to insert a keyframe while in Run mode. This keyframe will have the parameter values of the current picture position. To use add keyframe, an effect must be programmed with at least two keyframes. For example:

1. Press the RUN key to enter Run menu.
2. Run the effect to a desired place along the timeline using the run keys, the joystick, or the jog toggle soft keys.
3. Press MORE to bring up the add keyframe soft key.

4. Press **add keyframe**. A keyframe has been inserted into the effect at the current time with the current parameters.

Having done this, the user can then go into Program mode and modify that keyframe as desired.

Note

When the add keyframe soft key is pressed, the signal system sends up to the CPP all the current values of the keyframe parameters. This is a lengthy process that may cause a flash in the picture. Add keyframe is designed as a helpful tool in constructing effects and is not intended for on-air use.

You should also be aware of an anomaly when using an effect built this way on a system that does not have the add keyframe feature (on all versions up through 9.0). Using the joystick in Run mode, it is now possible to position the picture between field boundaries and create a keyframe at this position. The added keyframe now has a fractional element in its timeline. This is fine when the effect is run on a system that incorporates this feature, but systems that do not (such as versions 8.0 and 9.0) will ignore the fractional time element and therefore the effect will run slightly differently than programmed. This can be avoided by using the jog soft keys to position the picture before pressing the add keyframe soft key.

10 Storing Effects in Control Panel Memory

This new feature uses the **eff→mem** and **eff←mem** soft keys in Program and Concentrator Parameters menus, and is similar to **save→mem** and **get←mem** functions except that it applies to the whole effect: the *local* and *global keyframes*, the *timeline*, and the *priority settings*. With this capability you can have two complete effects stored in CPP memory. The stored effect is called the *saved* effect, while the current effect is called the *working* effect, i.e., the effect you are working on. This provides you with a fast, convenient way of temporarily storing an effect. For example, if you are programming an effect and you get to a point where you are happy with it, you can press **eff→mem** to save it. You can then do further work on the effect without worrying about ruining it, because you can quickly undo your change by pressing **eff←mem** to restore your saved effect.

Note

The effect that has been saved will be lost if you do a format disk or copy disk operation.

11 Pick/Put Register

You can now store a keyframe parameter value in a pick register. Whenever you make a numeric entry by pressing ENT X, ENT Y, or ENT Z, the picked number will be the default entry for that parameter. For example:

1. While in Program mode, press LOCATE 3-D
2. Press ENT X, **3.5000**, ENTER.
3. Press PICK. This displays the message:
GET VALUE: SELECT X, Y, Z, OR 0 TO CLEAR VALUE.
4. Press ENT X. The value 3.5000 is now held in the pick register.
5. Press ENT Z. The number **3.5000** flashes.
6. Press ENTER. This puts the value 3.5000 into the parameter.

Any subsequent numeric entries default to the picked value. To override the default, simply enter the desired value before pressing ENTER. To clear out the register:

7. Press PICK, 0, ENTER

12 Quick Negation of Parameter Values

Negating a number can now be done quickly using just two keystrokes. For example:

1. Select a parameter and enter an X axis value of 3.5000.
2. To negate, press +/- . A message displays:
Press Ent X, Ent Y, or Ent Z. To cancel hit any other key.
3. Press ENT X. Value is now -3.5000.

13 Warp Factor Flag

A new flag has been added to the Input Video Flags submenu—the warp factor flag. It takes the place of the hproc and vproc flags formerly in Set-Up mode in version 8.0. This flag allows the user to disable the horizontal or vertical processing in the signal system. This capability can be used to warp an ADO image in ways that were previously only possible if certain extreme numbers were entered into certain parameters. The warp factor allows this same type of warping but with much more user control. Page turns, twists, flag waves, and other effects are now possible with this capability. Note that if both horizontal and vertical processing are disabled (i.e., the zero selection is chosen), picture transformations in 3D space cannot take place.

14 Scoping for Keyframe Duration

The scoping keys, TO BEG, ALL KF, and TO END, can now be used to affect keyframe duration. For example:

1. While in program mode, press ALL KF once. This displays the message:
SET ALL KF, THIS CHANNEL: SELECT X, Y, Z or TIME.
2. Press TIME.
3. Enter a value in seconds and frames from the keypad.
4. Press ENTER. All keyframes will now have the same duration.

15 Joystick Fine Adjust

See description in paragraph 4.

16 GPI Control

The GPI Control submenu allows the user to specify the functions of the three GPI switches. This utility expands the GPI interface beyond the standard *run forward*, *run backward*, and *freeze* functions it now performs. Press the **gpi control** soft key in Set-Up menu to bring up the GPI Control menu. The display consists of a matrix much like that in Communications mode. The available functions are listed down the left side of the screen, the three switches labeled A, B, and C are along the top. An x is displayed to show which function the corresponding switch will execute when closed. Use the ← and → soft keys to select the desired function, then use the soft keys **switch A**, **switch B**, or **switch C** to toggle the x on or off. To get the default settings, press MASTER CLEAR. Press CLEAR X, CLEAR Y, or CLEAR Z to clear all the settings for switches A, B, or C, respectively. It is possible to assign more than one function to a switch, although illogical assignments will yield illogical results. For example, setting switch B to do *run forward* and *run backward* is an illogical setting, whereas setting switch B to *run forward* and *freeze channel 1* is a logical setting. These settings cannot be stored on disk or EEROM.

17 Chroma Kill

This feature allows the user to program a chroma kill to make the output black and white, and is done by entering special values into the input video parameter C-SOL. The values for this parameter that will remove chrominance are 7, 15, 23, and 31.

18 Enable/Disable Combine

The ADO Concentrator has two combine processes running. A combine is assigned to a CPP on a first come/first served basis determined by channel acquisition. The toggled **com enabled/disabled** soft key provides an improved way of allocating concentrator resources, and is found in the second soft key level in Communications mode. If no combine is enabled, concentrator resources are not displayed. Once the combine is enabled, the concentrator resources appear. It is important to note that this soft key does

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not guarantee that a combine will be acquired, it merely requests a combine. It should be used primarily to release the combine when it is no longer needed so that a user in another edit suite can acquire it.

19 Digital I/O Interface

Software version 10.1 includes access to the ADO Digital Interface. The user can select video and key inputs to be digital or analog, and control the selection on a keyframe basis via the keyframe flags and key control flags. For example:

1. Press KF FLAGS. The Keyframe Flags menu is displayed.
2. Press the → soft key until the *digital input* flag is highlighted.
3. The possible selections are:
 - *off*—use analog inputs
 - *A*—use digital input for input A and use analog input for input B
 - *B*—use analog input for input A and use digital input for input B
 - *A&B*—use digital inputs for both inputs A and B

The flag in the Key Control menu is called digital key input and is used in the same manner as the keyframe flag.

20 OTHER IMPROVEMENTS

1. Keyframe Duration

Previously, whenever a keyframe was inserted, it was given a duration of one second. The new software uses the duration of the previous keyframe for the inserted keyframe. If the previous keyframe has no duration, the system assigns a duration of one second.

2. Jog to Field/Frame Boundary

In Run mode, it is now possible to position the picture in between two fields using the joystick. If this is not desired, you can align the picture to a field boundary using the jog keys ← and → on the numeric keypad. If the toggled **jog** soft key in Run mode is set to **jog by frame**, the picture jogs to the nearest frame boundary. If the **jog** soft key is set to **jog by field**, the picture jogs to the nearest field boundary.

3. Version Numbers in Disk Mode

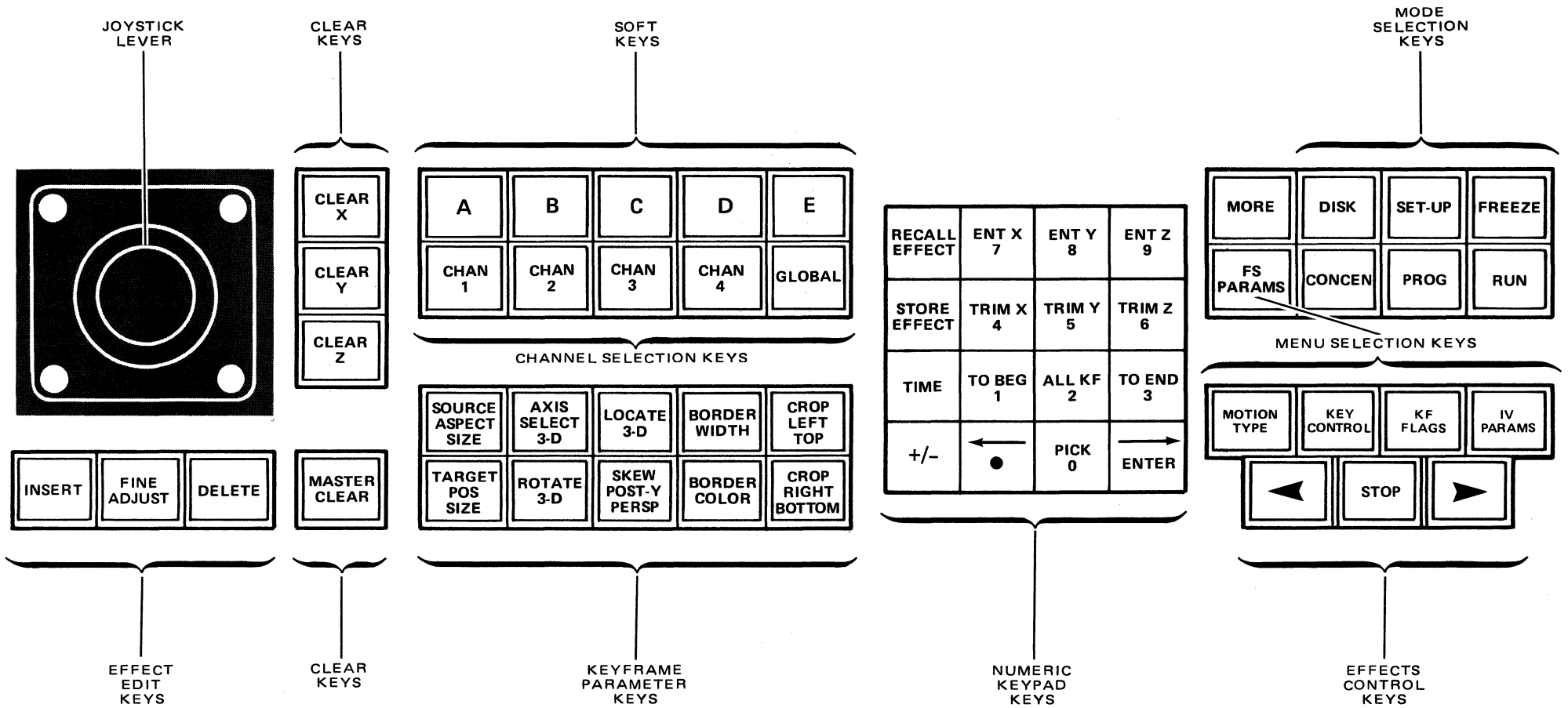
The version number displayed in disk mode no longer reflects the version number of the current software. Rather, the displayed number reflects the disk format version used in writing the effect. Thus, effects made on software version 9.0 will have a disk version number of 8.0. This system implies that any software that writes a v8.0 formatted effect onto disk can read any effect (regardless of the software version) with the same or lower disk version.

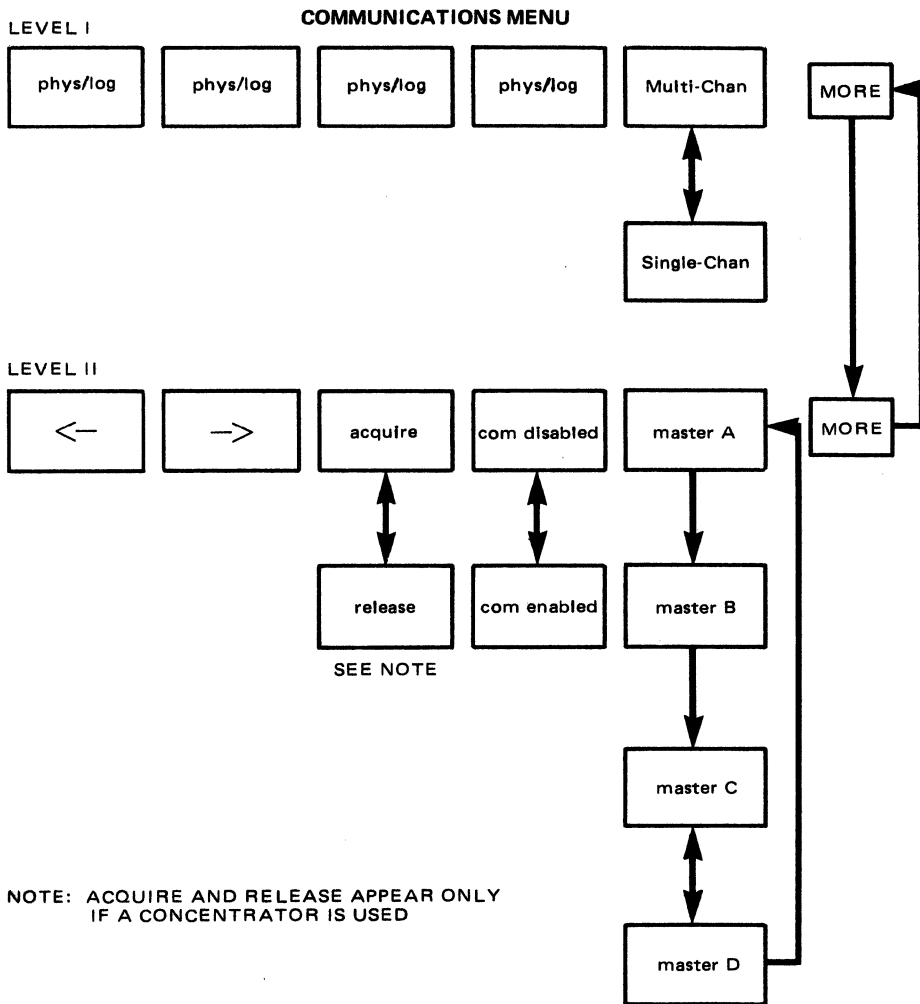
21 ANOMALIES

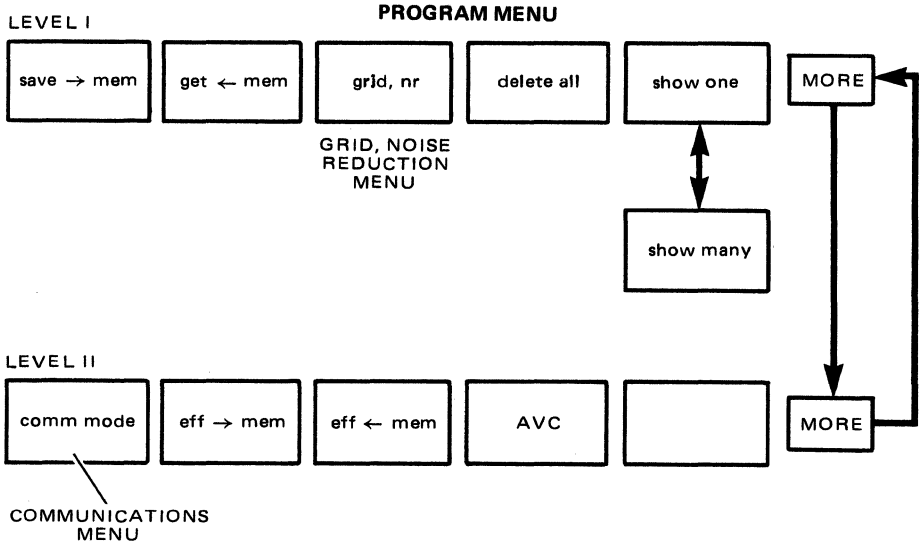
1. Storing a disk version 8.0 effect onto an older style disk (such as a 7.0 disk) is not guaranteed to work. It is advised that old style effects be recalled then restored onto a version 8.0 or greater formatted disk.
2. In the ADO/AVC switcher interface, the tallies are not guaranteed to be correct. If a channel is in a combine (showing the output of the ADO Concentrator), the channel will tally regardless of whether the channel is on screen or off screen. This can be avoided by not including a channel in a combine if it (the channel) is not used.
3. When the CPP is connected to an ACE editor, the CPP is mainly under control of the ACE. If an operator is programming the ADO while the ACE is sending commands, the ADO will be interrupted, possibly causing confusion on the part of the operator. This can be avoided by disabling the ADO from ACE, or by disconnecting the serial communications line on the back of the CPP.



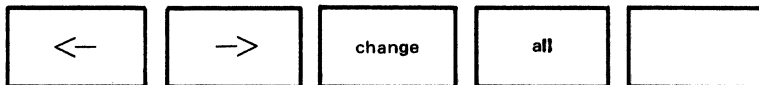
VERSION 10.1 KEYBOARD LAYOUT







KEY CONTROL MENU

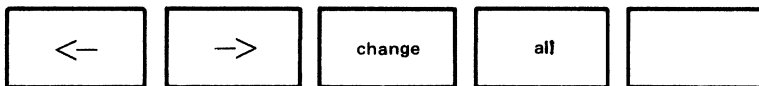


PRESS

MORE

TO RETURN
TO MAIN
MENU

KEYFRAME FLAGS MENU

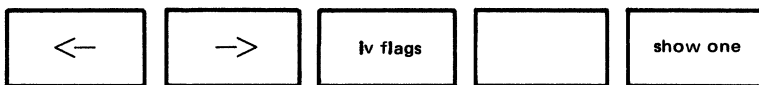


PRESS

MORE

TO RETURN
TO MAIN
MENU

INPUT VIDEO PARAMETERS MENU

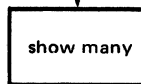


PRESS

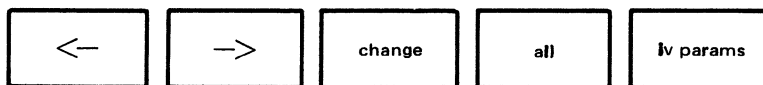
MORE

TO RETURN
TO MAIN
MENU

INPUT VIDEO
FLAGS MENU



INPUT VIDEO FLAGS MENU

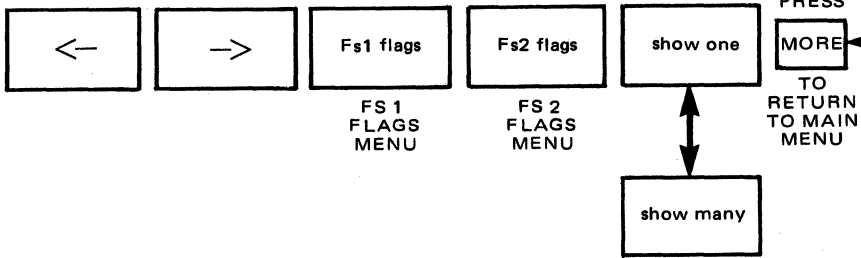


PRESS

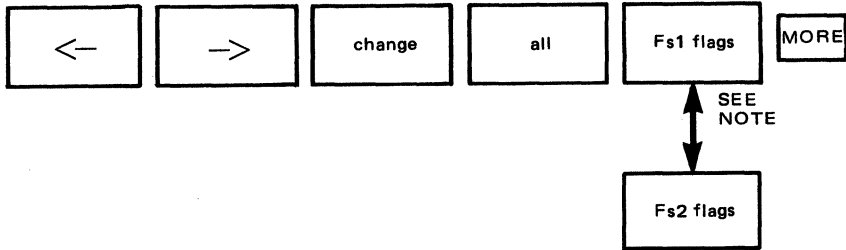
MORE

TO RETURN
TO MAIN
MENU

FRAMESTORE 1/2 PARAMETERS MENU



FRAMESTORE 1/2 FLAGS MENU



NOTE: PRESS TO TOGGLE TO OTHER FRAMESTORE FLAGS MENU.

CONCENTRATOR PARAMETERS MENU

