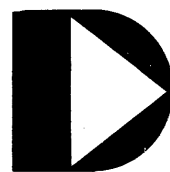# SERVO PRINTER DRIVER ROUTINES
SERVO 1.1
User's Guide

April 25, 1973

Model Code No. 50122

DATAPOINT CORPORATION

**The Leader in
Dispersed Data Processing**

CONFIDENTIAL PROPRIETARY INFORMATION

DATAPOINT 2200

SERVO

USER'S GUIDE

APRIL 1973

1. General Description

SERVO is a set of driver routines for the Servo Printer (2200-250 Series). Since SERVO is made up of a user called background routine and an interrupt driven foreground driver, a Version 2 Datapoint 2200 is needed. The background routine accepts characters like the Local Printer, and enables the foreground when a line is to be printed. The size of the 2200 required is determined by the user's calling program.

2. Operating Instructions

To use SERVO, the user need only call the background routine SPRINT with a character to be printed in the B-register. Every ASCII character found on the Datapoint 2200 keyboard is a legal printing character on the Servo Printer. The following control characters have the specified functions.

Character	Function
012	Line Feed
014	Form Feed
015	Carriage Return

The Servo Printer driver foreground is enabled by the printer driver background when a line is ready to be printed, and terminated at the end of the line. The user does not need to enable the foreground. However, the user program must be interruptable. SERVO cannot e used with CTOS 3.2 cassette tape, keyin, or display routines unless the routines have been made interruptable.

The SERVO source file includes parts of the DOS interrupt scheduler. However, the parts included only provide for one foreground process. If DOS is being used by the user program, the DOS interrupt scheduler may be used instead of the scheduler included in SERVO. The user need only include the following EQU definitions in place of the interrupt handler.

```
TP$      EQU    01036
CS$      EQU    01033
SETI$    EQU    01041
```

One other change needed in SERVO is the EQU definition for the interrupt number, which is located in the data section.

```
INTNUM    EQU    0
```

Currently interrupt 0 is used, but with the DOS interrupt scheduler, any high or low priority interrupt number can be used.

SERVO is assembled starting at 01000 octal. When using SERVO with DOS routines, it should be assembled with a different starting location.

The following is a sample print routine using SERVO.

```
.
. PRINTS LINES INPUT FROM THE KEYBOARD
.
SPRINT    EQU     01320               SERVO BACKGROUND ROUTINE
KEYIN$    EQU     01157               DOS INTERRUPTABLE KEYIN ROUTINE
LINE      SK      70                  LINE BUFFER
LINPTR    DC      LINE                LINE BUFFER POINTER
.
START     LB      014                 FORM FEED
          CALL    SPRINT
LOOP      HL      LINE
          LC      70
          CALL    KEYIN$              KEYIN A LINE
          LA      LINE
          MSA     *LINPTR             INITIALIZE LINE BUFFER POINTER
          CALL    PRINT$              PRINT A LINE
          JMP     LOOP
.
PRINT$    MLA     *LINPTR
          LBA
          AD      1                   INCREMENT LINE BUFFER POINTER
          LMA
          LAB                         INDEX INTO LINE BUFFER
          AD      LINE
          LLA
          LA      0
          AC      LINE)8
          LHA
          LBM                         GET THE CHARACTER
          LAB
          CP      015                 QUIT AT CARRIAGE RETURN
          JTZ     PRTEND
          CALL    SPRINT              PRINT THE CHARACTER
          JMP     PRINT$
.
PRTEND    CALL    SPRINT              PRINT THE CARRIAGE RETURN
          LB      012                 AND A LINE FEED
          CALL    SPRINT
          RET
```

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