

SIO TELEPRINTER DRIVER ***(LP Compatible)***

HP Product Numbers

24123 (4K version)

24125 (8K version)

24127 (16K version)



**DATA SYSTEMS DEVELOPMENT DIVISION
11000 WOLFE ROAD
CUPERTINO, CA. 95014**

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SIO TELEPRINTER DRIVER

(LP Compatible)

This driver provides noninterrupt input, output, and spacing functions on the HP 2600A, the HP 2752A (ASR-33) or HP 2754B (ASR-35) for absolute Assembly Language programs. Once an operation is initiated, the execution control remains in the driver until the operation is completed. Upon completion, the driver transfers execution control back to the calling program.

The driver keeps a count of the number of lines per page. On the sixty-first list request, the driver automatically emits six linefeeds (goes to "top-of-page"), prints the line and returns to the calling program.

When using the driver with an interactive program such as Prepare Tape System, the keyboard input section resets the line counter to "top-of-page" each time the keyboard section is entered. This keeps the line counter from ever becoming large enough to cause page ejections at seemingly random intervals.

USER CALLING SEQUENCES

For keyboard input:

Address	Instruction
(P)	<i>LDA length of input buffer</i>
(P+1)	<i>LDB address of input buffer</i>
(P+2)	<i>JSB 104B,I (keyboard entry point)</i>

For paper tape input:

Address	Instruction
(P)	<i>LDA length of input buffer</i>
(P+1)	<i>LDB address of input buffer</i>
(P+2)	<i>101B,I (tape input entry point)</i>

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For tape punch output:

Address	Instruction
(P)	<i>LDA length of output buffer</i>
(P+1)	<i>LDB address of output buffer</i>
(P+2)	<i>JSB 103B,I (punch output entry point)</i>

For the previous three functions, the buffer length must not equal zero. If the A register is greater than zero, it indicates the number of characters in the ASCII record to be read or punched. (On punching, the driver appends a carriage return and linefeed to the record; on reading, these characters terminate the input record and are not transmitted.) If the A register is less than zero, its absolute value is the number of words to be read or punched in binary mode (no carriage return or linefeed).

For list output:

Address	Instruction
(P)	<i>LDA length of output buffer</i>
(P+1)	<i>LDB address of output buffer</i>
(P+2)	<i>JSB 102B,I (list output entry point)</i>

For the list output function, if the A register contains a zero value, the driver emits a blank line. If the A register contains any negative value, the driver automatically ejects to “top-of-page”. The number of linefeeds issued is determined by adding the number of unused lines on the current page to 6 (the inter-page spatial gap). No data is printed during this spacing operation. If the A register contains a positive value, this indicates the number of ASCII characters to be listed.

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DRIVER CONFIGURATION

In any SIO environment, the teleprinter driver must be loaded and configured before any other drivers. If an SIO Line Printer Driver is added, then the list and punch portions of the teleprinter driver are replaced by that driver and the SIO Tape Punch Driver must be added in order to properly operate and dump the SIO Drivers.

To configure the driver:

1. Load the SIO Teleprinter Driver using BBL.
2. LOAD ADDRESS 28.
3. Set parameters in the switch register:
 - a. Teleprinter select code in bits 5-0.
 - b. Bit 15 down (off) for HP 2752A (ASR-33) or bit 15 up (on) for HP 2754B (ASR-35).
4. Press RUN.

After the teleprinter driver is configured, additional drivers can be loaded and configured in this order.

1. SIO Line Printer Driver
2. SIO Punched Tape Reader or Card Reader Driver
3. SIO Tape Punch Driver
4. SIO Magnetic Tape Unit or Disc/Drum Driver
5. Then, if a dump is desired, load and execute the SIO System Dump.