

BINARY PUNCH PROGRAM

A. Introduction

The Binary Punch program provides the ability to punch data from 1080 memory onto paper tape using either the high speed or low speed punch. The data might consist of a data table from some experiment or it might consist of a program, either loaded or modified from the switch register. The format of the Binary Punch program is compatible with the Binary Loader (NIC 80/S-7001). Thus, the data (or program) stored on tape may be reloaded at some later date using the standard Binary Loader.

Two versions of the Binary Punch program are supplied. They are identical except for the block of memory they occupy. The low version occupies addresses \emptyset through 252_8 . The high version starts at 5000_8 and ends at 5252_8 . The version selected should be the one which does not overlay the data to be punched.

B. Loading the Binary Punch

The Binary Punch program is loaded using the Binary Loader.

C. Using the Binary Punch

1. To start the program running
 - a. Low version:
 - (1) Depress the START button on the 290 console.
 - (2) Depress the EXECUTE switch.
 - b. High version:
 - (1) Set the Switch Register (SR) to 5000_8 .
 - (2) Depress LOAD PC.

- (3) Depress EXECUTE.
- (4) Depress CONTINUE.
- (5) Depress EXECUTE.

2. Upon starting, the program types "P." The question inferred is "which Punch are you using?" The operator responds by typing "H" for high speed punch or "L" for low speed punch.

3. The program follows by printing "SA" for starting address. The operator responds by typing the octal number corresponding to the starting address of the block of data to be punched. The octal number must be followed by typing a RETURN (CR).

4. After the SA is entered (with following CR), the program asks for the terminating address of the block of data by printing "TA." Again the operator should enter an octal number. The TA must be larger than the SA.

5. After entering the terminating address, and before typing the CR, turn on the punch.

6. Upon typing CR, the program will start punching the binary tape, first punching leader, then punching the block of data. As the program runs, the "checksum" is continually updated and punched at the end of the block of data.

7. Once the block is punched, the operator has two choices:

- a. If more data blocks are desired,
 - (1) turn the punch off,
 - (2) type "M." The program will return to step 3.

Follow the steps as before. The only difference in operation will be the absence of leader before the data block.

b. If termination is desired, type "T." A few feet of trailer is punched and the program stops. If more tapes are desired, depress CONTINUE followed by pressing the EXECUTE switch. This will cause the program to jump back to step 2. If the trailer is examined, it might be noted that a few inches past the checksum a "rubout" occurs. This character is recognized by the Binary Loader as an instruction to halt operation. Consequently, as tapes generated by the Binary Punch are read by the Binary Loader, the loader will stop shortly after reading the last checksum.