



GENERATING HP BASIC

PREREQUISITE SOP MODULES:

Introduction (5951-1369)

Front Panel Procedures Module

Peripheral Equipment Manual Functions (5951-1373)

REFERENCE MANUALS:

HP BASIC (02116-9077)

Magnetic Tape System (02116-91752)



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INTRODUCTION

An HP BASIC system consists of the HP BASIC interpreter and the Prepare BASIC System (PBS) programs. Assembly language subroutines written by the user may be included.

The HP BASIC tape consists of the HP BASIC interpreter. The PBS tape contains drivers for the terminal, photoreader, high-speed punch, and the routines necessary to configure these drivers into an HP BASIC system.

An HP BASIC system is generated by:

- || Loading the configuration program (PBS) into memory.
- || Loading other tapes (HP BASIC, user subroutines) to be included on the system tape.
- || Using PBS to configure the HP BASIC System and to dump it onto a single tape.
- || Loading the configured HP BASIC System tape into memory along with any separate programs (HP BASIC, user subroutines) included in the system.



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PROCEDURE 1 CONFIGURING AN HP BASIC SYSTEM

1. Decide which elements the configured HP BASIC system tape will contain.
The three choices are:
 - a. I/O drivers, BASIC, User subroutines
 - b. I/O drivers, BASIC
 - c. I/O drivers.
2. Turn on all necessary peripheral devices (teleprinter, tape punch, etc).
3. Make sure the computer has halted.
4. Use the Basic Binary Loader (BBL) or the Basic Binary Disc Loader (BBDL) to load the PBS tape into memory.*
5. If option a or b was chosen in step 1, use the BBL or the BBDL to load the HP BASIC tape into memory. If option a or b was not chosen, skip to step 7.
6. If option a was chosen in step 1, then use the BBL or BBDL to load the user-subroutines tapes into memory. If option a was not chosen, skip to step 7.
7. Set a starting address of 2_8 .
8. Set the switch register to the octal select code of the terminal.
(Set bit 15 OFF.)

** If an operator error is made or if any tape does not load properly, return to step 3 to reload PBS.*

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9. Start PBS execution.

10. The PBS program types:

PHOTOREADER I/O ADDRESS?

Type the photoreader octal select code on the teleprinter keyboard, then press the return key. If there is no photoreader, then press return key only.

11. PBS then types:

PUNCH I/O ADDRESS?

Type the high-speed punch octal select code on the teleprinter keyboard, then press the return key. If there is no high-speed punch, press the return key only.

12. PBS then asks:

SYSTEM DUMP I/O ADDRESS?

Type the high-speed punch octal select code on the teleprinter keyboard, then press the return key. If no high-speed punch exists, press the return key only.

13. PBS then asks:

CORE SIZE?

Enter the computer core size (8, 16, 24 or 32), then press the return key. (Pressing return only indicates an 8K memory size.)

14. If a high-speed punch is available, a configured HP BASIC system tape is punched. If a high-speed punch is not available, the message:

TURN ON TTY PUNCH, PRESS RUN

is printed, and the computer halts.



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15. Turn the teleprinter punch on and start the computer, without modifying the contents of any computer register.

The configured HP BASIC system tape is punched on the teleprinter punch and the computer halts.

16. To punch another copy of the system tape, merely restart the computer without modifying any register contents.

NOTE: After the configured system tape is punched (Steps 14, 15 and 16), the configured system remains intact in memory. To run the system right away on the same computer that configured it, start at Step 4 when using PROCEDURE 2 (to avoid loading in the configured system tape). If the system is to run on a computer different from the one that configured it, or on the same computer at a later time, start at Step 1 when using PROCEDURE 2.

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PROCEDURE 2 LOADING THE CONFIGURED HP BASIC SYSTEM

1. Turn on all necessary peripheral equipment (teleprinter, tape input device, etc.).
2. Make sure that the computer has halted.
3. Load the configured HP BASIC system tape using the BBL or BBDL.
4. If the HP BASIC interpreter was not included as part of the configured HP BASIC system tape, load the HP BASIC interpreter tape into memory using the BBL or BBDL.
5. If any user subroutines are to be included in the system and if they are not part of the HP BASIC system tape previously loaded, load the user-subroutine tapes using the BBL or BBDL.
6. Set a starting address of 100_8 .
7. Start program execution. The message:

READY

is typed. HP BASIC is ready for use.

