Supplement
for
Eighty-Column Display
Circuit Analysis Pac

Note: The actual error messages, prompt messages, and report formats may be different than those listed in the manual due to the larger display on your computer.

The eighty-column display Circuit Analysis Pac consists of the following programs: CAP, CAPTWO, CAPTHREE, CAPCOM, and CONVERT. Although the sequence of instructions used to run the Circuit Analysis Pac and the program flow are the same as those for the HP-85 Circuit Analysis Pac, the programs are not the same and cannot be interchanged. However, circuits created and stored on disc using the HP-85 can be retrieved and utilized by the eighty-column Circuit Analysis Pac by using the CONVERT program to convert the circuit data file to the proper format.

Problem Dimensions

Maximum problem size is dependent on available read-write memory (random-access memory or RAM). The programs in the Circuit Analysis Pac automatically calculate the maximum problem size based on the amount of RAM available according to the table below.

	32K	64K	96K	160K
Nodes (N)	14	31	42	59
Branches (B)	28	64	88	119

Circuits previously stored can be accessed if the amount of RAM presently available is greater than or equal to the amount of RAM available when the circuit was stored. For example, a problem created with 64K bytes may be accessed with 64K of RAM or larger. If there is not enough read-write memory available for the circuit, an error message will be displayed.

It is possible to determine the size of RAM the circuit was created with by doing a CAT and looking at the number of bytes per record for that data file. The tables below list the various record sizes corresponding with the amount of RAM the circuit was created with.

For circuits created using the HP-85 Circuit Analysis Pac:

Available RAM	16K	32K
bytes/record	416	1440

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For circuits created using the eighty-column CA Pac:

Available RAM	32K	64K	96K	160K
bytes/record	936	2088	2856	3848

Note: Due to code expansion in the eighty-column Circuit Analysis Pac, a circuit created with 32K RAM on the HP-85 can only be converted to eighty-column Circuit Analysis Pac format when there is at least 64K accessible RAM.

Using HP-85 Circuit Analysis Files

Circuits that were stored on disc using the HP-85 can be used by the eighty-column Circuit Analysis Pac, if they are converted to the proper format with the CONVERT program. To convert a file, follow the steps below.

1. Insert the eighty-column Circuit Analysis Pac disc into the disc drive.
   a. Type: LOAD "CONVERT"
   Note: Key #6 may be used here.
   b. Press (END LINE).
2. Insert the Circuit Analysis disc containing the HP-85 files into the disc drive.
3. Type: CAT and note what the file names are that you want to convert and what their respective sizes are.
4. To start the program:
   a. Press: (RUN).
5. When Enter the name of the data file? is displayed:
   a. Type in the name of the HP-85 Circuit Analysis problem that is to be converted for use with the eighty-column display Circuit Analysis.
   b. Press (END LINE).
   OR:
   a. Press (END LINE) to terminate the CONVERT program.
6. After Enter the :MSUS or .VOLUME LABEL appears
   a. Enter the .VOLUME LABEL of the disc containing the data file.
   b. Press (END LINE).

OR:
   a. Enter the :MSUS of the disc drive that the disc containing the Circuit Analysis data file is in.
   b. Press (END LINE).
7. When File format is 16K (bytes/rec=416) or 32K (bytes/rec=1440) is displayed:
   a. Enter 16 for a 16K data file.
   b. Press (END LINE).
   OR:
   a. Enter 32 for a 32K data file.
   b. Press (END LINE).
8. When Insert new disc is displayed:
   a. Insert a new disc into the disc drive that is to hold the Circuit Analysis problem in proper format for the eighty column Circuit Analysis Pac.
   b. Press (CONT).

OR:
   a. Leave the same disc in the drive.
   b. Press (CONT).
   c. When the error message telling you that the file already exists is displayed:
      1. Type O (for overwrite).
      2. Press (END LINE).

Using a Pen Plotter

One program in the Circuit Analysis Pac, CAPTHREE, uses CRT graphics. With the addition of a 00087-15002 Plotter ROM and an external plotter, these programs will automatically request if the plots are to be drawn on the CRT or the external plotter. No modifications to the programs are necessary.

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