

GPL/250

Description

HP 250 Graphics Plotting Library (GPL/250) is a collection of BASIC/250 subprograms which allows an HP 250 programmer to generate graphs, charts and other graphical output (including overhead slides) on a variety of HP Graphics Plotters. All charts can be annotated with symbols and text.

GPL/250 provides user application programs with total flexibility to create, modify, and produce charts. It can enhance a program which periodically generates reports to include customized charts that clarify data or emphasize key points. All capabilities (including chart design and execution) are called from a user-written program in HP 250 BUSINESS BASIC. Over 30 mnemonic intrinsics provide the programmer with an effective means of producing graphics output without having to learn a complex protocol or special language.

Features

- Ease-of-Use:
 - Device Independent Graphics
 - Mnemonic Subprogram Names
 - Simple Parameters
 - User-Defined Coordinates
- Graphical output can be directed to a disc file for later plotting:
 - Provides "spooling" of graphics output.
 - Operating messages (e.g., "change PENS") can be embedded in file.
- Plot Rotation—graphs can be rotated to fit aspect ratio of the plotter.

- System Confidence Test (i.e., plotter and HP 250)
- Nine line styles
- 96-character standard ASCII set for text:
 - plus European characters
 - variable sizes
 - 90-degree rotation
 - formatting (e.g., centering)

Powerful Features Make Graphics Programming Easy

Most people recognize that graphic output can be a valuable tool in decision making, but they're concerned about programming complexity and costs. This is where GPL/250 is particularly helpful. Subroutine calls with easy-to-remember names like PEN, MOVE, and DRAW facilitate the production of charts. The WINDOW subprogram establishes the device plotting area to be used and allows that user to work in his own coordinate system. Finally, special error-reporting facilities help with the debugging of application programs.

Typical Library Mnemonics

- | | |
|---------------|---|
| Gpl_draw | draws a straight line from current pen position to a specified (x, y) coordinate. |
| Gpl_text | draws text specified by a string variable or literal at the current pen location. |
| Gpl_linestyle | selects line style which can be a solid, dotted, dashed, or combination line. |
| Gpl_plotteris | specifies which HP plotter will be used. Parameters include the plotter model number, device address, and the address of the device which will receive operator messages (typically a workstation). |

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Documentation

For more technical information refer to:

Graphics Plotting Library
Programming Manual 45260-90064
Operating the HP 250 45260-90002

The *Graphics Plotting Library Programming Manual* is designed for first-day productivity by a BASIC language programmer with no graphics experience. It includes information on computer graphics concepts, running simple programs, and advanced graphics programming techniques.

Operating the HP 250 is a general operator's manual. The chapter "Graphics Devices" includes the device details for all supported plotters—such as how to change pens and papers.

This allows a software designer to use GPL/250 to develop plotting software without having to document the user instructions for each specific device.

Hardware Environment

GPL/250 requires the following HP 250 hardware:

- Any HP 250 Office Computer with 64K user memory partition (GPL/250 uses approximately 32K of user memory—an additional 28K is available for user program and remaining 4K for system overhead.)
- Asynchronous Serial Interface port.
- HP supported plotting device (RS232C interface).
Plotters supported by GPL/250:
 - HP 7220A/C/S/T*—4 & 8 Pen Graphics Plotter
 - HP 7221A/B/C/S/T*—4 & 8 Pen Graphics Plotter
 - HP 7225A/B—Single Pen Graphics Plotter
 - HP 7470A—Two Pen Graphics Plotter

*HP 7220/7221 S/T have automatic chart advance.

Software Environment

GPL/250 is included as part of the HP 250 OS 4 System Software shipped with each HP 250. Customers with an earlier version of the system software can purchase an upgrade. See your HP sales representative.

GPL/250 requires the PACK and TIO DROMs to be configured.