

**GENERAL****PURPOSE**

Direct graphical output to a device independent format (a DATAPLOT specific metafile).

**DESCRIPTION**

The metafile contains an English-like description of the plot. Specifying **GENERAL CODED** generates abbreviated forms of the commands (in practice there is not much advantage to this form). Specifying **GENERAL CGM** produces a metafile in the ANSI standard CGM format (see the documentation for for CGM command in this chapter for more information).

The purpose of generating a metafile is typically to make it available to some sort of post processor that supports a graphics device that DATAPLOT does not. There is a DATAPLOT post processor program (which is independent of the DATAPLOT program) which can translate the metafile. See the NOTE below for more details.

You may have a local post processor that does not support either the DATAPLOT specific metafile or the CGM metafile. In this case, many post processors can also accept various types of device specific files as input. Of the devices supported by DATAPLOT, the HP-GL, Postscript, and Tektronix 4014 formats are the most likely to be supported by a post processor.

**SYNTAX 1**

**GENERAL**  
**GENERAL CODED**  
**GENERAL CGM**

This form designates device 1 (i.e., the terminal) as a **GENERAL** device. This form is rarely used since metafiles are typically sent to a file so they can be post processed.

**SYNTAX 2**

**DEVICE <1/2/3> GENERAL**  
**DEVICE <1/2/3> GENERAL CODED**  
**DEVICE <1/2/3> GENERAL CGM**

This form designates one of DATAPLOT's 3 devices (it will typically be device 2) to be a **GENERAL** device.

**EXAMPLES**

**GENERAL**  
**DEVICE 1 GENERAL**  
**DEVICE 2 GENERAL**  
**DEVICE 3 GENERAL**  
**DEVICE 2 GENERAL CODED**  
**DEVICE 2 GENERAL CGM**

**NOTE 1**

The DATAPLOT post processor is run independently of DATAPLOT. The following versions of the program are available:

1. A version using the **DISSPLA** graphical subroutine library.
2. A version using the **TEMPLATE** graphical subroutine library.
3. Versions for specific graphics devices (currently for Calcomp, Postscript, and X11 devices). However, these devices are now available directly in DATAPLOT, so there is no need for them.
4. A skeleton version, which can be modified to support a local graphics library or graphics device.

There is a manual for the DATAPLOT post processor that gives more information on how to do this. Post processors tend to be adequate solutions for off-line devices such as plotters and film recorders. They are not very useful for terminal devices (although these can be useful for previewing or for debugging a driver before trying to install it directly into DATAPLOT).

The DATAPLOT post processor can translate DATAPLOT **GENERAL** format files and Tektronix 4014 format files. However, it does not translate CGM metafiles. The CGM files should be usable by post processors that support CGM.

Contact Alan Heckert (301-975-2899, heckert@cam.nist.gov) to obtain a copy of the post processor.

## NOTE 2

In order to support post processors with varying degrees of capability, several SET commands are available and should be used to control the output produced by the metafiles.

1. SET GENERAL REGION FILL [ON/OFF] - if OFF, region fills are generated with move and draw commands. If ON, a pattern identifier is specified and the post processor generates the region fill.
2. SET GENERAL JUSTIFICATION [ON/OFF] - if OFF, text strings are justified before being plotted. If ON, a justification is specified and the post processor does the justification.
3. SET GENERAL FONT [OFF/ON] - if OFF, software fonts are generated as move and draw commands. If ON, the name of the font and the text string are specified and the post processor draws it.
4. SET GENERAL PEN WIDTH [OFF/ON] - if OFF, a line width parameter is specified and the line is drawn once (i.e., the post processor draws the wide lines). If ON, the line is drawn multiple times to handle wide lines.
5. SET GENERAL PEN THICKNESS [width] - sets the line width (in DATAPLOT 0 to 100 coordinates) to use when multiple lines are used to draw wide lines.

## DEFAULT

Off

## SYNONYMS

None

## DEVICE NOTES

The following notes apply to how attributes are stored in the metafile. Be aware that a post-processor can do things differently when drawing the metafile on a specific device (e.g., it may draw area fills in software even though the metafile specifies a hardware fill).

1. HARDWARE TEXT - GENERAL hardware characters can be scaled to any size. Vertical strings are specified as vertical strings (it is up to the post processor to rotate them however).
2. COLOR - The GENERAL driver supports 8 colors. Enter the SHOW COLORS GENERAL command to list the color mapping.
3. HARDWARE FILL - The GENERAL file specifies the boundary of the region and an index identifying the type of fill. See the SET GENERAL REGION FILL note above for instructions on how to generate software fills directly in the metafile.
4. DASH PATTERNS - The GENERAL file identifies the dash pattern with an index. There is a unique index for each dash pattern supported by DATAPLOT.
5. LINE WIDTH - The GENERAL device draws thick lines by drawing one line and specifying a width parameter. See the SET GENERAL PEN WIDTH note above for instructions on how to draw thick lines by drawing multiple lines instead.
6. GRAPHICS INPUT - The CROSS-HAIR command is ignored for this device.

## RELATED COMMANDS

CGM	=	Direct graphical output to a CGM metafile.
CALCOMP	=	Direct graphical output to a Calcomp device.
POSTSCRIPT	=	Direct graphical output to a Postscript device.
TEKTRONIX	=	Direct graphical output to a Tektronix device.
HPGL	=	Direct graphical output to an HP-GL device.
DEVICE	=	Specify certain actions for the graphics output.

## APPLICATIONS

Graphics metafile output

## IMPLEMENTATION DATE

89/2

## PROGRAM

```
DEVICE 2 GENERAL
PLOT SIN(X) FOR X = -6.28 0.01 6.28
QUIT
```

The GENERAL output will be saved in the file DPPLIF.DAT (the name may vary on some operating systems). The DPPLIF.DAT file is typically used as input to a local post processor.