

G3. GERBER 6000 SYNTAX**G3.1 General**

The GERBER 6000 Syntax photoplotter instructions as specified by the EIA standard RS-274-C are divided into four groups:

- a) Coordinate instructions: Xn, Yn (n = 6 digits)
- b) Aperture select instruction: Dn (n = 2 digits)
- c) Exposure instructions: D01, D02, D03
- d) Set instructions: Mn (n = 2 digits)

Each sequence of instructions has to be terminated by "*".
The coordinate instructions X and Y can be sent in pairs or as individuals. Leading Zeros are allowed but not mandatory.
Parameters, being once defined, are valid until a new parameter is defined.

G3.2 Standard Plot Instructions

The following table lists the instructions which are accepted by the DP-3545 G photoplotter.

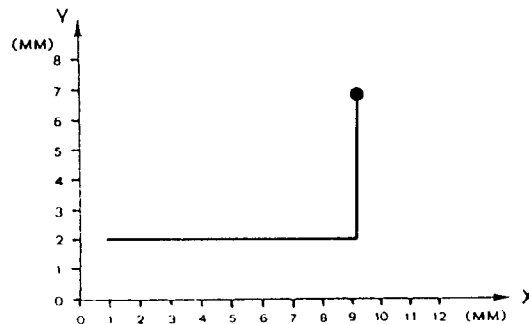
Instruction	Explanation
Xn	Relative or absolute movement of photohead in X direction. n is an integer number between -999999 and +999999. One digit is equal to a relative movement of .001 mm, .0001 in, .01 mm or .001 in. Power-up default .001 mm.
Yn	Relative or absolute movement in Y direction, equivalent to Xn. Power-up default absolute.
D01	Opens shutter
D02	Closes shutter
D03	Exposes the aperture previously defined by Dn (flash)
Dn	Integer numbers from 10 to 29 and 70 to 73 for n define one of the 24 available apertures of the photoplotter DP-3545 G. The shutter is not opened by this instruction.
	All available apertures can be exposed (flashed) as symbols by adding the instruction D03 to the X,Y coordinates.
	All round shaped apertures can be used to expose lines by adding the instruction D01 to the X, Y coordinates.

M00 Moves photohead to the table position 0,0 (origin)
M02 End of Program
M64 Set origin to current plotter position and continue.
M65 Move photohead + 8" beyond largest X and Y to 0.
Establish this as the new origin and continue.

Other instructions are ignored. No error indication is given.

Example:

D14* Selects aperture D14
X1000Y2000D02* Moves photohead 1 mm in X direction and 2 mm in Y direction
with shutter closed.
X8000D01* Moves the photohead 8 mm in X direction with shutter open.
A line with aperture D14 is exposed.
Y5000D01* Moves the photohead 5 mm in Y direction with shutter open.
D21* Selects aperture D21.
D03* Exposes the previously selected aperture (round pad).
M00* Closes the shutter and moves photohead to position 0,0
(origin).



Note: This exemple uses the conditions:

- a) Relative coordinates
- b) Metric high resolution (one digit equals .001 mm)

Standard aperture disk EF 345.71.001 is installed.

H3 - SET Functions

H3.1 The "SET" button

The button "SET" allows setting of specific plot parameters. The plotter has to be in the LOCAL mode.

After pressing the "SET" button the display shows "SET".
Enter the number of the desired parameter and parameter values, if required.

If one or more parameters are set, the LED "SET" is on.
"RESET" turns all parameters back to default.

H3.2 The "SET" Parameters

Param. No.	Display	Enter	Function
1	ZERO	-	<u>New zero.</u> The current position of the selected pen is the new origin.
2	WDLL	-	<u>Window.</u> The current position of the selected pen is the lower left corner of the window.
3	WDUR	-	<u>Window.</u> The current position of the selected pen is the upper right corner of the window.
4	SCAL	1 to 10	<u>Scale Factor</u> 1 = 1 6 = 0.707 2 = 1.41 7 = 0.5 3 = 2 8 = 0.25 4 = 4 9 = 0.125 5 = 8 10 = 1/16
6	VELO	1 to 6	<u>Pen velocity.</u> Velocity of pen movement in cm/sec (applies to all pens and to tangentially controlled tools, photohead excepted). 0 = 0,5cm/sec 1 = 1 cm/sec 4 = 8 cm/sec 2 = 2 cm/sec 5 = 16 cm/sec 3 = 4 cm/sec 6 = 32 cm/sec (or maximum)
7	NEWO	-	<u>New origin.</u> The new origin is shifted by 100 mm to + X and 100 mm to +Y.
8	VIEW	-	<u>View.</u> The carriage moves to +X limit of the plotter for free access to the plotting surface.

