THICKNESS

PURPOSE
Specifies the thickness (i.e., line width) of various plot elements and diagrammatic graphics components.

DESCRIPTION
Some examples for what the thickness can be set for are:

1. letters, numerals, and mathematics symbols generated by the TEXT command;

2. arrow head length (from ARROW command);

3. capacitor bar thickness, resistor wrinkle thickness, and inductor loop thickness (from the CAPACITOR, RESISTOR, and INDUCTOR commands);

4. traces, frames, grid lines, and characters drawn on plots.

The thickness is in decimal units of 0 to 100. A thickness of 0 would be negligibly small while a thickness of 100 would be full screen vertical distance. The thickness is achieved one of two ways:

1. by the drawing of slightly displaced parallel lines (i.e., software line thickness);

2. by specifying a thickness to the device protocol (i.e., hardware line thickness).

DATAPLOT draws thick lines in hardware when it is available (Postscript, QMS, X11). For these devices, it maps the thickness to the closest available setting on that device. The thinnest line available can vary from device to device. This can result in different widths on various devices even when software line thickness is used. Although the thickness measure is continuous, the number of distinct parallel lines drawn is discrete (due to limited screen resolution). The net effect is that thickness settings close to one another may result in the same apparent output thickness.

A thickness setting above 1.0 is rare. On most devices, a thickness of between 0.15 and 0.2 works well for producing bold lines (e.g., for lines that reproduce well when generating view graphs and multiple copies).

SYNTAX
THICKNESS <val>

where <val> is a number or parameter in the range 0 to 100 that specifies the desired thickness (typical values are between 0.1 and 0.3).

EXAMPLES
THICKNESS .5
THICKNESS 0.2

NOTE 1
The THICKNESS command sets ALL line thicknesses to the specified value. This command is appropriate for setting the default thickness for the subsequent graphs. There are commands to set the thickness for individual elements of the graphs (see the RELATED COMMANDS section below).

NOTE 2
The THICKNESS command with no arguments reverts the thickness to the default.

NOTE 3
DATAPLOT occasionally generates "spikes" when drawing thicker lines in software. This is a bug. The only patch at this time is to decrease the thickness (or generate the plot on a device that uses hardware line thickness).

DEFAULT
The default thickness is 0.1.

SYNONYMS
None

RELATED COMMANDS
LINE THICKNESS	=	Sets the thickness for plot lines (and certain diagrammatic graphics).
CHARACTER THICKNESS	=	Sets the thickness for plot characters.
SPIKE THICKNESS	=	Sets the thickness for plot spikes.
BAR BORDER THICKNESS	=	Sets the thickness for plot bars (border).

FRAME THICKNESS	=	Sets the thickness for plot frame.
TIC THICKNESS	=	Sets the thickness for tic marks.
TIC LABEL THICKNESS	=	Sets the thickness for tic labels.
LABEL THICKNESS	=	Sets the thickness for plot labels.
TITLE THICKNESS	=	Sets the thickness for plot title.
LEGEND THICKNESS	=	Sets the thickness for plot legends.
GRID THICKNESS	=	Sets the thickness for grids.

APPLICATIONS

Presentation graphics

IMPLEMENTATION DATE

Pre-1987

PROGRAM

MULTIPLOT 2 2; MULTIPLOT CORNER COORDINATES 0 0 100 100
FONT SIMPLEX
X1LABEL X AXIS
Y1LABEL Y AXIS
TITLE DEFAULT THICKNESS (0.1)
PLOT X**2 FOR X = 1 1 9
THICKNESS 0.15
TITLE UC()THICKNESS 0.15
PLOT X**2 FOR X = 1 1 9
THICKNESS 0.2
TITLE UC()THICKNESS 0.20
PLOT X**2 FOR X = 1 1 9
THICKNESS 0.3
TITLE UC()THICKNESS 0.30
PLOT X**2 FOR X = 1 1 9
END OF MULTIPLOT