SPIKE DIRECTION

PURPOSE
Specifies if a spike will be drawn horizontally or vertically on subsequent plots.

DESCRIPTION
A spike is a vertical line from the plot point to the spike base. Vertical spikes are drawn from the x-axis to the plot point while horizontal spikes are drawn from the y-axis to the plot point.

SYNTAX
SPIKE DIRECTION <H/V> <H/V> <H/V> etc.

where H specifies the spike is drawn horizontally while V specifies that the spike is drawn vertically. Up to 100 spike directions can be specified.

EXAMPLES
SPIKE DIRECTION H H
SPIKE DIRECTION V V
SPIKE DIRECTION V ALL
SPIKE DIRECTION ALL V
SPIKE DIRECTION

NOTE 1
The HORIZONTAL SWITCH command can also be used to generate horizontal spikes. This command is more general in that all plot elements are drawn horizontally (SPIKE DIRECTION only does the spikes). It also exchanges the x and y data values before plotting (the BAR DIRECTION command does not do this).

NOTE 2
Horizontal spikes are typically combined with a portrait page orientation to generate publication quality bar dot graphs.

NOTE 3
The SPIKE DIRECTION command with no arguments sets the spike direction to default for all spikes. The SPIKE DIRECTION command with the word ALL before or after the specified direction assigns that spike direction to all traces; thus SPIKE DIRECTION H ALL or SPIKE DIRECTION ALL H plots all spikes horizontally.

DEFAULT
All spikes are drawn vertically. This is also true for the default setting of the HORIZONTAL SWITCH command.

SYNONYMS
None

RELATED COMMANDS
PLOT	=	Generates a data or function plot.
HORIZONTAL SWITCH	=	Specifies whether a plot is drawn horizontally or vertically.
SPIKE	=	Sets the on/off switches for plot spikes.
SPIKE BASE	=	Sets the base locations for plot spikes.
SPIKE COLOR	=	Sets the colors for plot spikes.
SPIKE LINE	=	Sets the line types for plot spikes.
SPIKE THICKNESS	=	Sets the line thicknesses for plot spikes.

REFERENCES
"Elements of Graphing Data," William S. Cleveland, Wadsworth Advanced Books and Software, 1985.

"Visualizing Data," William S. Cleveland, Hobart Press, 1993.

APPLICATIONS
Presentation graphics, time series plots, dot charts

IMPLEMENTATION DATE
Pre-1987

PROGRAM

```
LET CARTER = DATA 66 30 11 43 44 41 35 82 54 36
LET REAGAN = DATA 26 54 84 47 51 51 52 14 36 55
LET X = DATA 1 2 3 5 6 7 8 10 11 12
.
TIC MARK LABEL FORMAT ALPHA; YLIMITS 1 12; YTIC OFFSET 1 1
Y1TIC LABEL CONTENT DEMOCRATS INDEPENDENTS REPUBLICANS SP() ...
     EAST SOUTH MIDWEST WEST SP() BLACKS HISPANICS WHITES SP()
MINOR Y1TIC MARK NUMBER 0
X1LABEL PERCENT
XLIMITS -100 100
MAJOR XTIC MARK NUMBER 11; MINOR XTIC MARK NUMBER 1
XTIC MARK LABEL CONTENT 100 80 60 40 20 0 20 40 60 80 100
.
LINE BLANK BLANK SOLID; SPIKE ON ON OFF
SPIKE DIRECTION H ALL
CHARACTER CIRCLE CIRCLE
CHARACTER FILL ON ON; CHARACTER HW 1 0.75 ALL
TITLE DOT CHART WITH HORIZONTAL DIRECTION
TITLE SIZE 5
LEGEND 1 CARTER; LEGEND 1 COORDINATES 17 85
LEGEND 2 REAGAN; LEGEND 2 COORDINATES 83 85
LEGEND 2 JUST RIGHT
.
LET CART2 = -CARTER
LET XJUNK = DATA 0.5 12.5
LET YJUNK = DATA 0 0
PLOT X VS REAGAN AND
PLOT X VS CART2 AND
PLOT XJUNK YJUNK
```