WINDSORIZED MEAN PLOT

PURPOSE
Generates a subsample Windsorized mean versus subsample index plot.

DESCRIPTION
The subsample Windsorized mean is the mean of the data with 100p1% of the bottom data replaced by the next larger value, and with 100p2% of the top data replaced by the next smaller value, in the ascending ordered data set. The Windsorized mean plot is used to answer the question: “Does the subsample location change over different subsamples?” It consists of:

- Vertical axis = subsample Windsorized mean;
- Horizontal axis = subsample index.

In addition, a horizontal line is drawn representing the full sample Windsorized mean. The appearance of the 2 traces is controlled by the first 2 settings of the LINES, CHARACTERS, SPIKES, BARS, and similar attributes.

SYNTAX
WINDSORIZED MEAN PLOT <y> <x> [<SUBSET/EXCEPT/FOR/qualification>]
where <y> is the response (= dependent) variable;
<x> is the subsample identifier variable (this variable appears on the horizontal axis);
and where the <SUBSET/EXCEPT/FOR qualification> is optional.

EXAMPLES
WINDSORIZED MEAN PLOT Y X
WINDSORIZED MEAN PLOT Y X1 SUBSET X1 > 2

NOTE
The analyst usually precedes the WINDSORIZED MEAN PLOT command with 2 LET commands of the following type:

LET P1 = .05
LET P2 = .10

where P1 and P2 are both between 0 and 1 and indicate the amount of data to be Windsorized from the left and right, respectively. In the example here, P1 = .05 and P2 = .10 indicates that 5% of the smallest data are replaced by the next larger value and 10% of the largest data are replaced by the next smaller value before forming the mean. Values greater than 1 are interpreted as percents. That is, P1 and P2 could be entered as 5 and 10 respectively.

DEFAULT
None

SYNONYMS
None

RELATED COMMANDS
- CHARACTERS = Sets the type for plot characters.
- LINES = Sets the type for plot lines.
- SD PLOT = Generates a standard deviation plot.
- VARIANCE PLOT = Generates a variance plot.
- RANGE PLOT = Generates a range plot.
- MEAN PLOT = Generates a mean plot.
- MEDIAN PLOT = Generates a median plot.
- MIDMEAN PLOT = Generates a midmean plot.
- MIDRANGE PLOT = Generates a midrange plot.
- TRIMMED MEAN PLOT = Generates a trimmed mean plot.
- BOX PLOT = Generates a box plot.
- XBAR CHART = Generates an xbar control chart.
- PLOT = Generates a data or function plot.

APPLICATIONS
- Quality Control
IMPLEMENTATION DATE
88/2

PROGRAM
SKIP 25
READ GEAR.DAT Y X
LET P1 = 10
LET P2 = 10
LINE BLANK DASH
CHARACTER X BLANK
XTIC OFFSET 0.2 0.2
Y1LABEL WINDSORIZED MEAN
X1LABEL SAMPLE ID
TITLE AUTOMATIC
WINDSORIZED MEAN PLOT Y X