SGPLOT Statements

Proc statement
PROC SGPLOT <DATA= input-data-set>
<CYCLEATTRS | NOCYCLEATTRS>
<DESCRIPTION= "string">
<NOAUTOLEGEND>
<TMPLOUT= "filename”>
<UNIFORM= GROUP | SCALE | ALL>
;

Basic plots
BAND X=variable | Y=variable
LOWER=number | numeric-variable
UPPER=number | numeric-variable
< options >
BUBBLE X=variable | Y=variable
SIZE=numerical-variable</ options >
HIGHLOW X=variable | Y=variable
HIGH=numerical-variable
LOW=numerical-variable</ options >
NEEDLE X=variable | numeric-variable
< options >
SCATTER X=variable | Y=variable
< options >
SERIES X=variable | Y=variable
< options >
STEP X=variable | Y=variable
< options >
VECTOR X=numeric-variable
NEEDLE X=numeric-variable
LOW=numeric-variable
< options >
VLINE category-variable</ options >

Distribution plots
DENSITY numeric-variable</ options >
HBOX numeric-variable</ options >
HISTOGRAM numeric-variable
< options >
VBOX numeric-variable</ options >

Fit and confidence plots
LOESS X=numeric-variable
Y=numeric-variable</ smoothing-options >
PLOTSPLINE X=numeric-variable
Y=numeric-variable
< smoothing-options >
< options >
REG X=numeric-variable
Y=numeric-variable</ smoothing-options >
< options >
ELLIPSE X=numeric-variable
Y=numeric-variable</ smoothing-options >
< options >

Some common smoothing-options:
ALPHA= numeric-value
CLM= "string"
SMOOTH= numeric-value
WEIGHT= numeric-value

Categorization plots
DOT category-variable</ options >
HBAR category-variable</ options >
VBAR category-variable</ options >
VLINE category-variable</ options >

Common plot options
LEGENDLABEL="string"
NAME= "string"
TRANSPARENCY= number
XAXIS 1, XAXIS 2

Axes and Reference lines
REFLINE value-list | variable
< options >
XAXIS < options >
YAXIS < options >
ZAXIS < options >

Some common axis options
DISPLAY = ALL | NONE | display-items
display-items = NOLABEL | NOLINE | NOVALUES
GRID
LABEL = "string"
MAX = number, MIN = number
OFFSETMAX = number
OFFSETMIN = number

Insets and Legends
INSET "string-1" ... "string-n"
| label-1" = "value-1"
... "label-n" = "value-n"
< options >
KEYLEGEND "plot-name-1".."plot-name-n"
< options >

Some KEYLEGEND options:
ACROSS = integer
BORDER | NOBORDER
DOWN = integer
LOCATION = OUTSIDE | INSIDE
POSITION = BOTTOM | TOP | RIGHT | LEFT
| TOPRIGHT | TOPLEFT
| BOTTOMRIGHT | BOTTOMLEFT
TITLE= "string"

Also see SAS 9.3 doc on:
• HBARPARM, VBARPARM
• LINEPARM
• WATERFALLPLOT (SGPLOT only)
• Discrete Attribute Maps
• Annotation

For more information, see:
Papers:
http://support.sas.com/resources/papers/tnote/graph.html
SAS® 9.3 documentation:
http://support.sas.com/documentation/online/cdoc/graph/index.html

SAS® 9 SGPLOT Procedure Tip Sheet

We’ve put all the information here to get you started with the SGPLOT procedure. The examples on the reverse side can be typed into the program editor and run.

This procedure lets you quickly create single-celled graphs with scatter plots, series plots, vector plots, confidence bands, prediction or confidence ellipses, fit lines, histograms, density plots, dot plots, bar charts, box plots and many more.

The SG procedure family emphasizes good default behavior that lends itself well to effective graphics. These procedures are based on the Graph Template Language (GTL) and fit into the ODS Graphics.
SGPLOT Procedures Tip Sheet

SGPlot: Basic Series with Band

```sas
proc sgplot data=sashelp.stocks
    where=(stock='IBM');
    lineattrs=(pattern=dot);
    series x=date y=close /
        band x=date upper=high lower=low /
        (where=(stock='IBM'));
run;
```

SGPlot: Horizontal Box with title

```sas
proc sgplot data=sashelp.class;
    hbox weight / category=sex ;
    title "Student Weight distribution";
run;
```

SGPlot: Vertical Box with footnote

```sas
proc sgplot data=sashelp.cars
    where=(origin='USA'));
    vbox mpg_city / category=type;
    footnote height=1 justify=right "Created at: &systime";
run;
```

SGPlot: Loess fit

```sas
proc sgplot data=sashelp.class;
    loess x=age y=height / group=sex clm;
    run;
```

SGPlot: Modify axis

```sas
proc sgplot data=sashelp.class;
    location=inside;
    keyLegend "sp1"/ title="Gender:" group=sex name="sp1";
    scatter x=weight y=height /
        alpha=0.2;
run;
```

SGPlot: Modify legend

```sas
proc sgplot data=sashelp.class;
    ellipse x=weight y=height / fill
        xorigin=100 yorigin=62.3 group=sex;
    xaxis label="Student Weight" grid;
    run;
```

SGPlot: BY groups

```sas
proc sgplot data=sashelp.cars
    (where=(origin='Europe'));
    vbar type / response=mpg_city
        by make;
    group=drivetrain stat=mean;
    run;
```

SGPlot: Dot plot

```sas
proc sgplot data=sashelp.cars
    (where=(origin='Europe'));
    dot make / response=mpg_city
        stat=mean limitstat=clm;
run;
```

SGPlot: Modify legend

```sas
proc sgplot data=sashelp.class;
    ellipse x=weight y=height / fill
        (make in ('Acura','Volvo'));
run;
```

SGPlot: Basic Series with Band

```sas
proc sgplot data=sashelp.stocks
    where=(stock='IBM'));
    lineattrs=(pattern=dot);
    series x=date y=close /
        legendLabel="High-Low";
run;
```

SGPlot: Modify axis

```sas
proc sgplot data=sashelp.class;
    xaxis label="Student Weight" grid;
    run;
```