
CHAPTER 14 DATAPLOT Reference Files

Overview

DATAPLOT comes with a large number of reference files. If the location of these files are defined properly, then you can access these files using the LIST, READ, and CALL commands directly without specifying the directory name. For these commands (LIST, READ, CALL), DATAPLOT first tries to locate the file in the user's directory. If unsuccessful, DATAPLOT then searches the directory where the reference files are stored.

The reference files are ASCII text files that can be copied to your own directory and modified using any standard text editor. On most Unix systems, the directory will be /usr/local/lib/dataplot. For IBM/PC's the default directory is C:\DATAPLOT. For systems that do not have a default, contact the DATAPLOT installer at your site for the specific location of these files.

Although the file names were chosen to be valid on a large number of systems (8 character file names with a 3 character extension separated by a period), the names may vary on some systems. Specifically:

- A few systems may not allow file name extensions (e.g., the CDC NOS/VE operating system). In this case, the extension is probably coded as an underscore. For example, the file BERGER1.DAT is coded as BERGER1_DAT. If your site uses a non-standard extension, then that extension must be used on the various DATAPLOT commands. For example, READ BERGER1_DAT. Y X.
- Unix systems are case sensitive. DATAPLOT will find the reference file regardless of the case when using the LIST, READ, and CALL commands. However, if you want to copy a reference files for your own use, you need to check which case is used on your system. The default on Unix is that support files (e.g. the on-line help files) are in lower case while the sample data and macro files are in upper case.

The following types of files are provided:

- The DATAPLOT support files. These include the on-line help files, the on-line news file, the on-line command dictionary, and various other files. On most systems, the support files have a file name extension of ".TEX" or ".tex."
- Sample data files are provided. On most systems these files have a ".DAT" or ".dat" file name extension.
- There are various macro, menu macro, and program files. On most systems, these files have an extension of ".DP" or ".dp." Macro files and program files demonstrate the capabilities of DATAPLOT. Program files analyze a specific data set while macro files are intended to be more general (i.e., easy to adapt to your own data sets). Menu macro files demonstrate how to create user defined menus.
- Reference files contain various types of reference information. On most systems, these files have a ".TEX" or ".tex" file name extension.
- Map files contain the coordinates for several sample maps. On most systems, these files have a ".DAT" or a ".dat" file name extension.
- Fractal art files contain the data to generate sample fractals. On most systems, these files have a ".DAT" or ".dat" file name extension.
- Experiment design files contain commonly used experimental designs. On most systems, these files have a ".DAT" or ".dat" file name extension.

Additional sample data and macro files are frequently added, so the list in this chapter is not complete.

Support files

DATAPLOT uses the following support files (these may have lower case names on some systems):

DPHE1F.TEX	Help file 1 (generic subjects).
DPHE2F.TEX	Help file 2 (commands starting with the letters A thru C).
DPHE3F.TEX	Help file 3 (commands starting with the letters D thru K).
DPHE4F.TEX	Help file 4 (commands starting with the letters L thru O).
DPHE5F.TEX	Help file 5 (commands starting with the letters P thru S).
DPHE6F.TEX	Help file 6 (commands starting with the letters T thru Z).
DPHE7F.TEX	Help file 7 (defines aliases for various commands).
DPNEWF.TEX	News file (contains a description of recent additions to DATAPLOT).
DPDIRF.TEX	Directory file (one line summary of all DATAPLOT commands grouped by command category).
DPDICF.TEX	Dictionary file (one line summary of all DATAPLOT commands grouped alphabetically).
DPSYSF.TEX	Global login macro file.
DPLOGF.TEX	User login macro file.
DPBUGF.TEX	File containing a list of known bugs.
DPMAIF.TEX	File used by the MAIL command.
DPQUEF.TEX	File used by the QUERY command.
DPMESF.TEX	File used by the DATAPLOT MESSAGE command.
COMMANDS	File containing one line descriptions of DATAPLOT commands (subset of DPDICF.TEX file).
DATASETS	File containing a list of on-line data files (subset of DPDIRF.TEX).
DESIGNS	File containing a list of on-line design of experiment files (subset of DPDIRF.TEX).
DISTRIBU	File containing descriptions of the distributions available in DATAPLOT.
FUNCTION	File containing one line descriptions of DATAPLOT functions (subset of DPDIRF.TEX).
MACROS	File containing a list of on-line macro files.
PROGRAMS	File containing a list of on-line program files.
SYNTAX	File containing sample syntax for DATAPLOT commands.
DPSNAPSH.PS	A Postscript format file that contains a "quick reference" for the most commonly used DATAPLOT commands.

We recommend printing copies of the DPSNAPSH.PS file, the news file (DPNEWF.TEX) and the directory file (DPDIRF.TEX) as part of the DATAPLOT documentation. The news file contains commands that are not yet available in the hard-copy documentation.

The help files are essentially on-line versions of this Reference Manual (Volumes I and II), so there is little reason to print them.

The system login file allows a site to define local defaults. This file is generally maintained by the local site installer. In addition, you can create a login file to define whatever defaults you prefer. Creating a local login file is optional.

The DATAPLOT MAIL and QUERY commands are obsolete since most operating systems provide far more sophisticated mail commands than DATAPLOT provides.

Files DPME1F.TEX through DPM20F.TEX are used by the MENU command which, as of this printing, is still under development. Most of these files are currently incomplete.

Data files

The following are sample data and reference files (many generated by NIST scientists or DATAPLOT users). This can be useful for experimenting with DATAPLOT. Most of these files require a SKIP command in order to pass over comment lines. You can do a LIST <file> FOR I = 1 1 25 command from within DATAPLOT to read the first 25 lines (they will typically say how many lines need to be skipped).

-----Core Data Sets -----

Univariate

LEW.DAT	Steel-concrete beam deflection.
MAVRO.DAT	Filter transmittance.
SUNSPOT2.DAT	Monthly sunspot.
SINSIN.DAT	Multiple sine curves.

Regression

BERGER1.DAT	Alaska pipeline radiographic calibration.
PONTIUS.DAT	Load cell calibration.
SPIEGEL.DAT	Nuclear tank calibration.

Multi-factor

BATTADD2.DAT	Battery additive.
DRAFT69B.DAT	1969 draft lottery data rankings.
SHEESLE2.DAT	Defective lightbulbs (mean data).
SPLETT2.DAT	Charpy V-NIST notch testing.

DEX: Design of Experiments

BOXSPRIN.DAT	2**3 defective springs.
SPLETT3.DAT	2**3 eddy current.
SPLETT4.DAT	2**4 eddy current.

Multivariate

AUTO83.DAT	EPA auto miles per gallon.
AUTO83B.DAT	EPA auto miles per gallon.
IRIS.DAT	Classic Fisher iris data.

Quality and Statistical Process Control (SPC)

CROARK3.DAT	NIST SEM line width SRM.
UGIANSKY.DAT	Interlaboratory stress correlation.

-----Univariate-----

NIST datasets

DZIUBA1.DAT	Standard resistor.
FUNEL5A.DAT	Funnel data.
LEW.DAT	Steel-concrete beam deflection.
KEYWEST.DAT	Maximum wind speeds for Key West, Florida.
MARSHAK.DAT	Nuclear thermometry cryothermometry experiment.
MAVRO.DAT	Filter transmittance.
MORALES.DAT	Mass spectrometry exa-fluor.
MORALES2.DAT	Mass spectrometry exa-fluor.
REHM.DAT	Biomedical air flow.
SIMIU.DAT	Thunderstorm wind velocity.
SOULEN0.DAT	Josephson junction cryothermometry.
SOULEN.DAT	Josephson junction cryothermometry.
VANGEL1.DAT	Tensile strength.
WASHDC.DAT	Maximum wind speeds for Washington, DC.
ZARR13.DAT	Heat flow meter apparatus calibration.
ZARR14.DAT	Heat flow meter apparatus calibration.
ZARR15.DAT	Heat flow meter apparatus calibration.

Mary Natrella Handbook datasets

NATR21.DAT	Washer (2-1).
NATR26.DAT	Rocket (2-6).

SEMATECH datasets

SPAGON1.DAT	SEMATECH semi-conductor thickness.
SPAGON2.DAT	SEMATECH semi-conductor thickness.

Miscellaneous datasets

CLEAR.DAT	Component clearance inspection data.
FLICKER.DAT	Flicker noise.
GEAR.DAT	Gear diameters (Ishikawa).
LIN.DAT	Polonium 209 SRN concentrations.
LOTTERY3.DAT	Maryland "Pick 3" lottery numbers.
LOTTERY4.DAT	Maryland "Pick 4" lottery numbers.
MICHELSON.DAT	Michekson's 1879 determination of the speed of light.
RANDN.DAT	Normal random numbers.
RANDU.DAT	Uniform random numbers.
RANDWALK.DAT	Random walk.

-----Time Series-----

NIST datasets

BAKER.DAT	Force calibration.
DUTTON.DAT	Dutton coherency plot data.
DZIUBA1.DAT	Standard resistor.
FUNEL5A.DAT	Funnel data.
HABER1.DAT	Density of 2-admissible numbers.
HAYES1.DAT	Fire research smoke obscuration.
KEYWEST.DAT	Maximum wind speeds for Key West, Florida.
LEW.DAT	Steel-concrete beam deflection.
LUTHER.DAT	Torsion pendulum experiment for G.
MARSHAK.DAT	Nuclear thermometry cryothermometry experiment.
MAVRO.DAT	Filter transmittance.
NBSPOW1.DAT	NIST metrology data (part 1).
NBSPOW2.DAT	NIST metrology data (part 2).
NBSPOW3.DAT	NIST metrology data (part 3).
NEGIZ3.DAT	Aerosol particle size dynamic modeling.
NEGIZ4.DAT	Aerosol particle size dynamic modeling.
REHM.DAT	Biomedical air flow.
SIMIU.DAT	Thunderstorm wind velocity.
SOULEN0.DAT	Josephson junction cryothermometry.
SOULEN.DAT	Josephson junction cryothermometry.
WASHDC.DAT	Maximum wind speeds for Washington, DC.

Miscellaneous datasets

CLEAR.DAT	Component clearance inspection data.
CONSUMPR.DAT	Consumer price index (by year relative to 1974).
FLICKER.DAT	Flicker noise.
GEAR.DAT	Gear diameters (Ishikawa).
GNP.DAT	Gross National Product.
GNP2.DAT	Gross National Product.
LIN.DAT	Polonium 209 SRN concentrations.
LOTTERY3.DAT	Maryland "Pick 3" lottery numbers.
LOTTERY4.DAT	Maryland "Pick 4" lottery numbers.
MICHELSON.DAT	Michelson's 1879 determination of the speed of light.
OIL.DAT	Oil depth analysis.
RANDN.DAT	Normal random numbers.
RANDU.DAT	Uniform random numbers.
RANDWALK.DAT	Random walk.
SIN1.DAT	Sinusoidal data (frequency = 0.1).
SIN2.DAT	Sinusoidal data (frequency = 0.2).
SIN3.DAT	Sinusoidal data (frequency = 0.3).
SIN4.DAT	Sinusoidal data (frequency = 0.4).
SUNSPOT.DAT	Monthly sunspot.
SUNSPOT.DAT	Yearly sunspot.

Box-Jenkins datasets

BOXJENK1.DAT	Box and Jenkins data.
BOXJENK2.DAT	Box and Jenkins data.
FUNEL5A.DAT	Funnel data.

NOAA datasets

ASCO2.DAT	American Samoa monthly CO2 (1973-86).
ASF11.DAT	American Samoa monthly refrigerant-11 (1977-86).
ASF12.DAT	American Samoa monthly refrigerant-12 (1977-86).
ASN2O.DAT	American Samoa monthly N2O (1977-86).
ELKINS11.DAT	Elkins North Atlantic refrigerant-11.
ELNINO.DAT	El Nino/Southern Oscillation.
MLCO2.DAT	Mauna Loa monthly CO2 (1958-87).
MLCO2MON.DAT	Mauna Loa monthly CO2 (1974-86).
MLF11.DAT	Mauna Loa mon refrigerant-11 (1977-86).
MLF12.DAT	Mauna Loa mon refrigerant-12 (1977-86).
MLN2O.DAT	Mauna Loa monthly N2O (1977-86).
NAF11.DAT	Elkins North Atlantic refrigerant-11.
NWF11.DAT	Niwot Ridge monthly refrigerant-11 (1977-86).
NWF12.DAT	Niwot Ridge monthly refrigerant-12 (1977-86).
NWN2O.DAT	Niwot Ridge monthly N2O (1977-86).
PBCO2.DAT	Point Barrow monthly CO2 (1973-86).
PBF11.DAT	Point Barrow monthly refrigerant-11 (1977-86).
PBF12.DAT	Point Barrow monthly refrigerant-12 (1977-86).
PBN2O.DAT	Point Barrow monthly N2O (1977-86).
QUASIBIE.DAT	Quasi-biennial index.
SPCO2.DAT	South Pole monthly CO2 (1973-86).
SPF11.DAT	South Pole monthly refrigerant-11 (1977-86).
SPF12.DAT	South Pole monthly refrigerant-12 (1977-86).
SPN2O.DAT	South Pole monthly N2O (1977-86).

Pandit DDS datasets

DDS1.DAT	Papermaking gate openings.
DDS2.DAT	Yearly sunspot numbers.
DDS3.DAT	IBM stock prices.
DDS4.DAT	Mechanical vibratory system displacement.
DDS5.DAT	Grinding wheel profile.
DDS6.DAT	Machine part diameter 1.
DDS7.DAT	Machine part diameter 2.
DDS8.DAT	US treasury securities.
DDS9.DAT	Money market rates.
DDS10.DAT	Hospital in-patient counts
DDS11.DAT	US consumer price index.
DDS12.DAT	US wholesale price index.
DDS13.DAT	Airline passenger counts.
DDS14.DAT	Nuclear plant crack lengths
DDS15.DAT	Wood surface height.
DDS16.DAT	Papermaking machine I/O.
DDS17.DAT	Chemical concentration.
DDS18.DAT	US gross national product.
DDS19.DAT	US durables expenditures.
DDS20.DAT	Papermaking machine I/O.
DDS21.DAT	Papermaking machine I/O.

Image analysis datasets

BENNETT.DAT
BRAIN.DAT
CUBE.DAT
EHRSTEIN.DAT
WOOLLEY.DAT

Fracture surface roughness.
Brain wave analysis.
Vertices of a cube.
Resistivity of semiconductor wafers.
Optical disk errors.

Bivariate datasets

CHOI.DAT
CHOI2.DAT
SINSIN.DAT

Fire residue emission trigger (N=4000).
Fire residue emission trigger (N=1000).
Multiple sine curves.

-----Regression-----

1-variable and polynomial

BERGER1.DAT	Alaska pipeline radiographic calibration.
BOXRATS.DAT	Rat growth rate versus supplement amount.
BOXSPRAY.DAT	Aerosol spray dispersion versus age.
BOXWELD.DAT	Intermetal weld breaking strength versus velocity.
FREQPRIM.DAT	Frequency of prime numbers.
GRAYI326.DAT	Blood pressure.
MICHELSO.DAT	Michelson's 1879 determination of the speed of light.
MORALES.DAT	SO ₂ isotope analysis.
MORALES2.DAT	SO ₂ isotope analysis.
NATR511.DAT	Young's modulus.
NATR522.DAT	Young's modulus (with replications).
NATR527.DAT	Colorimetry.
NATR533.DAT	Tire wear.
NATR540.DAT	Tire wear.
NATR65.DAT	3-variable.
NATR627.DAT	Cubic.
NORRIS6.DAT	Ozone photometry.
PONTIUS.DAT	Load cell calibration.
PRIMESM.DAT	Mersenne prime numbers.
SNAIL.DAT	Snail spiral data.
SPIEGEL.DAT	Nuclear tank calibration.
WAMPLER1.DAT	Polynomial fitting test data.

1-variable and non-linear

BENNETT5.DAT	Superconductivity magnetization.
BOXBOD.DAT	Oxygen demand versus incubation time.
CHWIRUT1.DAT	Ultrasonic reference block calibration.
CHWIRUT2.DAT	Ultrasonic reference block calibration.
ECKERLE4.DAT	Circular interference transmissions.
GRAYI617.DAT	Visual response proportion.
HABER1.DAT	Density of 2-admissible numbers.
HAHN1.DAT	Thermal expansion of copper.
KIRBY2.DAT	Electron microscope line width standard.
KIM.DAT	Electron mobility analysis.
LEW3.DAT	Concrete tensile strength.
MISRA1.DAT	Dental research monomolecular absorption study.
NELSON.DAT	Dielectric breakdown strength of insulation.
ROZMAN1.DAT	Quantum defects for sulfur 1 atom.
SWANSON1.DAT	Ozone spectroscopy.
THURBER.DAT	Semiconductor mobility modelling.

Multi-variable

BOXCHEM2.DAT	Chemical impurity, 2 independent variables.
BOXCLEAN.DAT	Acid effects on cleanser stability.
BOXYIELD.DAT	Chemical yield (function of time, temperature).
BOXYIELD2.DAT	Chemical yield (function of time, temperature).
HALD647.DAT	Cement hardening (Regression, 4 variables).
LONGLEY.DAT	Longley labor statistic regression data.
NELSON.DAT	Dielectric breakdown strength of insulation.
USADEBT.DAT	USA national debt (1947 to 1993).
WAMPLER2.DAT	Multilinear fitting test data.

-----Quality and Statistical Process Control (SPC)-----

Quality/SPC data files

QUAL7OLD.TEX	The "7 Old Tools" for quality control.
QUALCOCH.TEX	Control charts.
QUALEWMA.TEX	EWMA control charts
QUALPCI.TEX	Process capability index.
QUALTAG.TEX	The 2 primary Taguchi reference books for quality.

Control Charts

CCC.DAT	Surface defects per square yard (C Control Charts).
CCP.DAT	Defective motors (P Control Charts).
CCPN.DAT	Defective mirrors (P and PN Control Charts).
CCU.DAT	Cracks in plastic wire after refrigeration and flexing (U Control Chart).
CCXBAR.DAT	Silicon wafer thickness (Mean, Range, and S control charts).
CLEAR.DAT	Component clearance inspection data.
CROARKIN.DAT	Mass calibration.
CROARK2.DAT	NIST magnification standard.
CROARK3.DAT	NIST SEM line width SRM.
DRAFT69B.DAT	1969 draft lottery data rankings.
GEAR.DAT	Gear diameters (Ishikawa).

-----1-factor (including the “2-sample” problem)-----

NIST datasets

BATTADD2.DAT	Battery additive (2-level).
BATTADD3.DAT	Battery additive (3-level).
BATTERY1.DAT	Battery comparison.
CHOLEST1.DAT	NIST cholesterol SRM.
DORKO4.DAT	NIST GASIE SO4 concentration.
FUNNEL5B.DAT	2-sample funnel data.
FUNNEL5C.DAT	2-sample funnel data.
SPLETT2.DAT	Charpy testing (4-levels).
VANGEL2.DAT	Tensile strength.
WATTERS.DAT	NIST Si and Cr SRM.

Miscellaneous datasets

LOTTERY3.DAT	Maryland “Pick 3” lottery numbers.
LOTTERY4.DAT	Maryland “Pick 4” lottery numbers.
MICHELSO.DAT	Michekson’s 1879 determination of the speed of light.
PENTAGON.DAT	Pentagon expenditures by year.
USADEBT.DAT	US national debt (1947-1993).
USADEFIC.DAT	US national deficit (1989 to 1988).

Mary Natrella Handbook datasets

NATR323.DAT	Fusion (3-23).
NATR326.DAT	Concrete (3-26).
NATR332.DAT	Batteries (3-32).
NATR334.DAT	Steel (3-34).
NATR338.DAT	Dextrons (3-38).
NATR341.DAT	Cement (3-41).
NATR41.DAT	Batteries (4-1).
NATR45.DAT	Tubes (4-5).
NATR48.DAT	Dive bombs (4-8).

SEMATECH datasets

SPAGON3.DAT	SEMATECH semi-conductor thickness.
SPAGON4.DAT	SEMATECH semi-conductor thickness.

-----Multi-factor-----

2-factor

CLARK0.DAT	Electrical connectors.
FREY.DAT	Frey drug fatality analysis (ANOVA).
OLYMPICS.DAT	Scoring for women's figure skating in 1994 Olympics.
PERIODIC.DAT	Chemistry periodic table.
WRIGHT11.DAT	Wright brothers original flight data.

3-factor

CHALLENG.DAT	NASA Challenger disaster data.
CURVEBAL.DAT	Curveball data (partial data set) (ANOVA).
CURVEBA2.DAT	Curveball data (full data set) (ANOVA).
EDA1.DAT	Compare 2 detectors.
HAMAKER.DAT	Drill speed.
MANDEL.DAT	Specific volume of rubber.

4-factor

ELECT92.DAT	1992 presidential election (by state).
RIPKEN.DAT	Cal Ripken batting average.
SHEESLEY.DAT	Light bulb lead wire weld process (raw data).
SHEESLE2.DAT	Defective lightbulbs (mean data).

5+-factor

AUTO83.DAT	EPA automobile miles per gallon.
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-----Reliability-----

NIST datasets

FULLER2.DAT	Airplane glass failure times.
VANGEL2.DAT	Strength at failure.

Miscellaneous datasets

ABERNE17.DAT	Compressor rivet failure.
ABERNE35.DAT	Fatigue failure time.
ABERNE43.DAT	Bearing cage failure time.
CASTILL6.DAT	Chain link strength.
CASTILL7.DAT	Electrical insulation lifetime.
CASTILL8.DAT	Wire cycles-to-failure.
CLEAR.DAT	Component clearance inspection data.
GEAR.DAT	Gear diameters (Ishikawa).
HAHN.DAT	Reliability of locomotive gears.
RANDN.DAT	Normal random numbers.
RANDU.DAT	Uniform random numbers.

-----Extreme value analysis-----

NIST datasets

KEYWEST.DAT	Maximum wind speeds for Key West, Florida.
SIMIU.DAT	Thunderstorm wind velocity.
WASHDC.DAT	Maximum wind speeds for Washington, DC.

Castillo datasets

CASTILL1.DAT	Maximum yearly wind speeds.
CASTILL2.DAT	Maximum yearly river discharge.
CASTILL3.DAT	Maximum yearly wave height.
CASTILL4.DAT	Between phone call wait times.
CASTILL5.DAT	Chain link strength.
CASTILL6.DAT	Chain link strength.
CASTILL7.DAT	Electrical insulation lifetime.
CASTILL8.DAT	Wire cycles-to-failure.
CASTILL9.DAT	Philadelphia yearly precipitation.
CASTILL10.DAT	Maximum wave height in Norway.
CASTILL11.DAT	Maximum yearly river discharge in Macon.
CASTILL12.DAT	Maximum yearly river discharge in Hawk.
CASTILL13.DAT	Oldest man's age in Sweden.
CASTILL14.DAT	Oldest woman's age in Sweden.

Miscellaneous datasets

CLEAR.DAT	Component clearance inspection data.
GEAR.DAT	Gear diameters (Ishikawa).
RANDN.DAT	Normal random numbers.
RANDU.DAT	Uniform random numbers.

-----Miscellaneous categories-----

3D-plotting and contouring

BENNETT.DAT	Fracture surface roughness.
BRAIN.DAT	Brain wave analysis.
CUBE.DAT	Vertices of a cube.
EHRSTEIN.DAT	Resistivity of semiconductor wafers.

Multivariate

AC.DAT	2**(6-3) air conditioner performance.
AUTO79.DAT	Automobile characteristics.
AUTO83.DAT	EPA automobile miles per gallon.
AUTO83B.DAT	EPA automobile miles per gallon.
BIOMED3.DAT	Biomedical (Multivariate).
CURRIE.DAT	Pollution source analysis.
CURRIE3.DAT	Atmospheric zinc concentrations.
CURRIE4.DAT	Atmospheric chemical concentrations.
FLURY5.DAT	Flury-Riedwyl Swiss bank note data.
GNP.DAT	Gross national product.
IRIS.DAT	Classic Fisher iris data.
KAUL.DAT	Refrigerant analysis.
KRASNY1.DAT	2**5 cigarette flamability study.
MORALES.DAT	Mass spectrometry exa-fluor.
MORALES2.DAT	Mass spectrometry exa-fluor.
NEGIZ3.DAT	Aerosol particle size dynamic modeling.
PALLETT.DAT	Voice recognition ATIS SLS test results.
PLANETS.DAT	Solar system planet statistics.
SMALL14.DAT	Atomic modelling.
UGIANSKY.DAT	Interlaboratory stress correlation.

Uncertainty

GARBOCZI.DAT	Percolation data (error bar plotting).
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Probability

RANDN.DAT	Normal random numbers.
RANDU.DAT	Uniform random numbers.

Mathematics

FREQPRIM.DAT	Frequency of prime numbers.
PRIMESM.DAT	Mersenne prime numbers.

Pareto analysis

GASTAX86.DAT	Gasoline tax (by state).
MURDER86.DAT	1986 murder rates (by state).
NBSSOFTW.DAT	Software used at NIST.
NBSACTIV.DAT	Statistical computing activities at NIST.
TRAFFIC.DAT	Automobile traffic fatalities by state.

-----Design of experiments (most from Box, Hunter, and Hunter book)-----

Comparative design datasets

BATTADD3.DAT	Battery additive (3 levels).
BOXAUTO.DAT	Latin square design for automobile emissions.
BOXBLOOD.DAT	Comparative randomized design for blood coagulation time.
BOXCLOTH.DAT	Greco-Latin square design for cloth data.
BOXPENIC.DAT	Randomized block design for penicillin yield.
BOXPOISO.DAT	Randomized block design for poison antidote.
BOXSHOES.DAT	Randomized block design for boys shoe sole wear.
BOXTOMAT.DAT	Comparative randomized design for tomato yield.
FUNNEL.DAT	Randomized block design for funnel experiment.

2k full factorial design datasets**

BOXCAKE.DAT	2**5 cake taste.
BOXCAKE2.DAT	2**3 cake taste.
BOXCHEM.DAT	2**4 chemical yield.
BOXPILOT.DAT	2**3 pilot plant yield.
BOXRADAR.DAT	2**3 radar acquisition time.
BOXREACT.DAT	2**5 reactor efficiency.
BOXSOLAR.DAT	2**4 solar collection efficiency.
BOXSPRIN.DAT	2**3 defective springs.
BOWEN.DAT	2**3 dental polysac adhesion.
KRASNY1.DAT	2**5 cigarette flamability.
NUT.DAT	2**3 nut strength.
SPLETT3.DAT	2**3 eddy current.
SPLETT4.DAT	2**4 eddy current.
STENBAKK.DAT	2**10 DAC converter.
SUPERCON.DAT	2**3 superconductivity temperature.
VECCHIA.DAT	2**4 superconducting chip optimization.
WEBER.DAT	2**5 hospital energy consumption.

2(k-p) fractional factorial design datasets**

AC.DAT	2**(6-3) air conditioner performance.
AMRF.DAT	2**(7-4) automobile manufacturing tooling station.
BOXBIKE2.DAT	2**(7-4) bike speed.
BOXBIKE3.DAT	2**(7-4) bike speed.
BOXCLEAN.DAT	2**(4-1) cleanser stability.
BOXFILT.DAT	2**(7-4) filtration time.
BOXFILT2.DAT	2**(7-3) filtration time.
BOXREAC2.DAT	2**(5-1) reactor efficiency.
BOXSPRI2.DAT	2**(3-1) defective springs.
BOXSPRI3.DAT	2**(3-1) defective springs.
ESSEX.DAT	2**(7-4) piston dome porosity.
QUINLAN.DAT	2**(15-11) speedometer casing.
VIBRATE.DAT	2**(9-5) vibration of a component.

Taguchi design datasets

BOXCAKE.DAT	2**5 cake taste.
BOXCAKE2.DAT	2**3 cake taste.
KENSEI.DAT	L18 aerosol spray.
QUINLAN.DAT	L16 speedometer casing.

Optimization (response surface) design datasets

BOXCLEAN.DAT	2**(4-1) cleanser stability.
BOXYIELD.DAT	2**3 chemical yield.
BOXYIEL2.DAT	2**3 chemical yield.

Regression design datasets

BOXBOD.DAT	Oxygen demand versus incubation time.
BOXCHEM2.DAT	Chemical impurity, 2 independent variables.
BOXRATS.DAT	Rat growth rate versus supplement amount.
BOXSPRAY.DAT	Aerosol spray dispersion versus age.
BOXWELD.DAT	Intertial weld breaking strength versus velocity.

Reference files

These files contain various types of reference information.

AREACODE.TEX	United States phone area codes (ordered alphabetic by state).
AREACOD2.TEX	United States phone area codes (ordered numerically).
AREAS.TEX	Area formulae for geometric figures.
ASCII.TEX	ASCII numeric equivalents.
ATOMS.TEX	Relative number of atoms of elements in universe.
BARKEREX.TEX	Index of selected examples from "Quality by Experimental Design" by Barker.
BINTAILP.TEX	Binary tail probabilities.
BOXHHEX.TEX	Index of selected examples from "Statistics for Experimenters" by Box, Hunter, and Hunter.
CALENDAR.TEX	Calendars for the years 1988 and 1989.
CONSTANT.TEX	Mathematical, physical, and engineering constants.
CONVFACT.TEX	Conversion factors between metrics/units.
DEFAULTS.TEX	DATAPLOT default settings.
DEMING14.TEX	Demings's 14 "deadly diseases" (industrial quality).
DEMING7.TEX	Demings's 7 "dreadful diseases" (industrial quality).
DEXSTAT2.TEX	Typical command sequence in using DEXSTAT2.DP.
ER.TEX	File containing control sequence to get out of Tektronix mode for the IBM-PC 386 version of DATAPLOT.
FEDPAY88.TEX	U. S. Federal salary scale for 1988.
HOT.TEX	10 hottest locations in the United States.
ISHIKAW4.TEX	The 4 usual "M" components in Ishikawa cause and effect diagram.
JAPANU.TEX	Japan's 3 U's to be eliminated in the work area.
JAPANW.TEX	Japan's 5 W's (and 1 H) for component analysis.
JAPAN6.TEX	Japan's 6-point program for quality manufacturing.
JAPAN3.TEX	The 3 modern concepts in Japanese industry.
JOBS.TEX	Fastest growing jobs requiring a college degree.
KACKER.TEX	Kacker's 7 summary points of Taguchi's philosophy.
LATITUDE.TEX	Latitude and longitude of United States cities.
MORTGAGE.TEX	Washington DC 30 year mortgage rates (December/87).
NEWTTOOLS.TEX	The "7 New Tools" for quality control.
NORPPCC.TEX	Percent points of the normal probability plot.
PERIM.TEX	Perimeter formulae for geometric figures.
POSTCODE.TEX	United States postal state codes (alphabetically).
POSTRATE.TEX	April 1988 postal rates for various weights.
POSTRAT2.TEX	U. S. postal rates for various years.
PDF.TEX	Probability density functions for distributions.
PPF.TEX	Percent point functions for distributions.
PRESIDENT.TEX	U. S. Presidents (ordered by year).
QUALCOST.TEX	Japan's definition and 4 components of "quality cost."
SPECTRUM.TEX	Electromagnetic Spectrum (by frequency).
SNOWY.TEX	10 snowiest places in the United States.
TAX1979.TEX	1979 federal income tax rates.
TAX1987.TEX	1987 federal income tax rates.
TIMEMANA.TEX	6 techniques for time management.
VOLUMES.TEX	Volume formulae for geometric figures.
WINDCHIL.TEX	Windchill factor curves.
WORKSTAT.TEX	Top 10 workstations in 1986.

Map files

These data files contain X and Y coordinates for some sample maps.

DATAPLOT does not have a specific mapping capability. It can draw the borders by simply doing:

```
PRE-SORT OFF
PLOT Y X
```

More complicated maps (e.g., counties within a state) can be handled by defining a tag variable (e.g., all values for a given county within a state map will have the same value for the tag variable). The REGION BASE POLYGON command (see the REGION BASE command in the Plot Control chapter) can be used to draw solid filled or hatch pattern maps.

CHINA.DAT	Map coordinates for China.
NBSPART1.DAT	Map of middle of NIST campus.
TEXAS.DAT	Map coordinates for Texas.
USA.DAT	Map coordinates for USA (crude resolution).
USA3.DAT	Map coordinates for USA.

Fractal art files

These files contain data that can be used to generate fractal plots (via the FRACTAL PLOT command).

FRACBRAN.DAT	Fractal data to generate a branch.
FRACCHRI.DAT	Fractal data to generate a Christmas tree.
FRACCLOU.DAT	Fractal data to generate a cloud.
FRACFERN.DAT	Fractal data to generate a fern.
FRACFRON.DAT	Fractal data to generate a frond.
FRACGALA.DAT	Fractal data to generate a galaxy.
FRACPENT.DAT	Fractal data to generate a pentagon.
FRACSPIR.DAT	Fractal data to generate a spiral.
FRACSQUA.DAT	Fractal data to generate a square.
FRACTRIA.DAT	Fractal data to generate a triangle.

On-line experiment design files

CC2.DAT	2-factor central composite design.
CC3.DAT	3-factor central composite design.
GRLATSQ3.DAT	3 by 3 Graeco-Latin square design.
GRLATSQ4.DAT	4 by 4 Graeco-Latin square design.
LATSQ3.DAT	3 by 3 Latin square design.
LATSQ4.DAT	4 by 4 Latin square design.
PLACBURM.DAT	Plackett-Burman orthogonal experimental designs 11 factors, 2 levels.
PERM9.DAT	Random permutations of 1-9.
PERM16.DAT	Random permutations of 1-16.
PERM20.DAT	Random permutations of 1-20.
PERM30.DAT	Random permutations of 1-30.
PERM50.DAT	Random permutations of 1-50.
PERM100.DAT	Random permutations of 1-100.
PERM200.DAT	Random permutations of 1-200.
PERM500.DAT	Random permutations of 1-500.
PERM1000.DAT	Random permutation of 1-1000.
L4.DAT	Taguchi L4 orthogonal experimental designs 3 factors, 2 levels.
L8.DAT	Taguchi L8 orthogonal experimental designs 7 factors, 2 levels.
L9.DAT	Taguchi L9 orthogonal experimental designs 4 factors, 3 levels.
L12.DAT	Taguchi L12 orthogonal experimental designs 11 factors, 2 levels.
L16.DAT	Taguchi L16 orthogonal experimental designs 15 factors, 2 levels.
L16B.DAT	Taguchi L16B orthogonal experimental designs 5 factors, 4 levels.
L18.DAT	Taguchi L18 orthogonal experimental designs 7 factors, 6/3 levels.
L25.DAT	Taguchi L25 orthogonal experimental designs 6 factors, 5 levels.
L27.DAT	Taguchi L27 orthogonal experimental designs 13 factors, 2/3 levels.
L32.DAT	Taguchi L32 orthogonal experimental designs 31 factors, 2 levels.
L32B.DAT	Taguchi L32B orthogonal experimental designs 10 factors, 2/4 levels.
L36.DAT	Taguchi L36 orthogonal experimental designs 22 factors, 3 levels.
L50.DAT	Taguchi L50 orthogonal experimental designs 12 factors, 2/5 levels.
L54.DAT	Taguchi L54 orthogonal experimental designs 26 factors, 2/3 levels.
L64.DAT	Taguchi L64 orthogonal experimental designs 31 factors, 2 levels.
L64B.DAT	Taguchi L64B orthogonal experimental designs 21 factors, 4 levels.
L81.DAT	Taguchi L81 orthogonal experimental designs 40 factors, 3 levels.
STAR2WC.DAT	2-factor star design.
STAR3WC.DAT	3-factor star design.
TAGINDEX.DAT	Taguchi orthogonal experimental designs--ordered by factors/runs/levels.
2TO2.DAT	Full factorial experimental designs 2 levels, 2 factors, 4 runs.
2TO3M1.DAT	Fractional factorial experimental designs 2 levels, 3 factors, 4 runs.
2TO3.DAT	Full factorial experimental designs 2 levels, 3 factors, 8 runs.
2TO4M1.DAT	Fractional factorial experimental designs 2 levels, 4 factors, 8 runs.
2TO4.DAT	Full factorial experimental designs 2 levels, 4 factors, 16 runs.
2TO5M2.DAT	Fractional factorial experimental designs 2 levels, 5 factors, 8 runs.
2TO5M1.DAT	Fractional factorial experimental designs 2 levels, 5 factors, 16 runs.
2TO5.DAT	Full factorial experimental designs 2 levels, 5 factors, 32 runs.
2TO6M3.DAT	Fractional factorial experimental designs 2 levels, 6 factors, 8 runs.

2TO6M2.DAT	Fractional factorial experimental designs 2 levels, 6 factors, 16 runs.
2TO6M1.DAT	Fractional factorial experimental designs 2 levels, 6 factors, 32 runs.
2TO6.DAT	Full factorial experimental designs 2 levels, 6 factors, 64 runs.
2TO7M4.DAT	Fractional factorial experimental designs 2 levels, 7 factors, 8 runs.
2TO7M3.DAT	Fractional factorial experimental designs 2 levels, 7 factors, 16 runs.
2TO7M2.DAT	Fractional factorial experimental designs 2 levels, 7 factors, 32 runs.
2TO7M1.DAT	Fractional factorial experimental designs 2 levels, 7 factors, 64 runs.
2TO7.DAT	Full factorial experimental designs 2 levels, 7 factors, 128 runs.
2TO8M4.DAT	Fractional factorial experimental designs 2 levels, 8 factors, 16 runs.
2TO8M3.DAT	Fractional factorial experimental designs 2 levels, 8 factors, 32 runs.
2TO8M2.DAT	Fractional factorial experimental designs 2 levels, 8 factors, 64 runs.
2TO8M1.DAT	Fractional factorial experimental designs 2 levels, 8 factors, 128 runs.
2TO9M5.DAT	Fractional factorial experimental designs 2 levels, 9 factors, 16 runs.
2TO9M4.DAT	Fractional factorial experimental designs 2 levels, 9 factors, 32 runs.
2TO9M3.DAT	Fractional factorial experimental designs 2 levels, 9 factors, 64 runs.
2TO9M2.DAT	Fractional factorial experimental designs 2 levels, 9 factors, 128 runs.
2TO10M6.DAT	Fractional factorial experimental designs 2 levels, 10 factors, 16 runs.
2TO10M5.DAT	Fractional factorial experimental designs 2 levels, 10 factors, 32 runs.
2TO10M4.DAT	Fractional factorial experimental designs 2 levels, 10 factors, 64 runs.
2TO10M3.DAT	Fractional factorial experimental designs 2 levels, 10 factors, 128 runs.
2TO11M7.DAT	Fractional factorial experimental designs 2 levels, 11 factors, 16 runs.
2TO11M6.DAT	Fractional factorial experimental designs 2 levels, 11 factors, 32 runs.
2TO11M5.DAT	Fractional factorial experimental designs 2 levels, 11 factors, 64 runs.
2TO11M4.DAT	Fractional factorial experimental designs 2 levels, 11 factors, 128 runs.
2TO15M11.DAT	Fractional factorial experimental designs 2 levels, 11 factors, 16 runs.
2TO31M26.DAT	Fractional factor experimental designs 2 levels, 31 factors, 32 runs.
2KINDEX.DAT	$2^{**}(k-p)$ experimental designs--ordered by factors and runs.

Macro files

The following are macro files. These macros serve two purposes. First, they provide examples of how to write your own macros. Second, they provide useful capabilities that you can apply to your own data sets.

CASCADEP.DP	Generate a cascade plot (for time series).
DEXCONT.DP	Generate a DEX contour plot.
DEXCONT2.DP	Generate a DEX contour plot (subsets).
DEXCONTP.DP	Generate a DEX contour plot.
DEXCONTQ.DP	Generate a DEX contour plot.
DEXFACT2.DP	Create all 2-term interaction factors.
DEXFACT3.DP	Create all 2 and 3 term interaction factors.
DEXPARET.DP	Generate a Pareto plot of absolute effects.
DEXSCAT1.DP	Generate a multiplot of main effects scatter plots.
DEXSCAT2.DP	Generate a plot of main effects and 2-term interactions.
DEXSTAT1.DP	Generate a multiplot of statistics plots (main effects).
DEXSTAT2.DP	Generate a multiplot of statistics plots (main, 2-term).
DEXSTAT3.DP	Generate a statistics plots (main, 2-term, 3-term).
HOTELL.DP	Compute Hotelling (simultaneous) confidence limits.
IRLS.DP	Perform an iteratively reweighted least squares analysis (10 weight functions supplied).
KW.DP	Performs a Kruskal-Wallis 1-way analysis of variance.
LAD.DP	Perform a least absolute deviations or a L_p fit (for $1 \leq p \leq 2$) using iteratively reweighted least squares.
LOGO.DP	Generate DATAPLOT logo in lower right corner.
LOGO2.DP	Generate DATAPLOT logo (larger size).
LOGO3.DP	Generate DATAPLOT logo (for landscape mode).
LOGO3B.DP	Generate DATAPLOT logo (for portrait mode).
LOGO4.DP	Generate JJF and DATAPLOT logo.
MARK.DP	Generate user defined logo.
MARK2.DP	Generate user defined logo with DATAPLOT logo.
MDPLOT.DP	Generate a Tukey mean difference plot.
PLOTTEXT.DP	Superimpose text strings on pre-existing plot.
REFPLOT.DP	Generate the DATAPLOT tutorial reference plot.
SDPRED.DP	Compute the linear fit confidence limits for observations.
SETCOLOR.DP	Set-up Postscript colors and page size.
SHADEBOX.DP	Draw a legend box (with shadow effect).
SUBPLOT.DP	Generate subseries plot of raw data.
SUBPLOT.R.DP	Generate subseries plot of residuals.
WILCOXRS.DP	Wilcoxon rank sum test (also known as the Mann-Whitney U test).
WILCOXSR.DP	Wilcoxon signed rank test.

Menu macro files

The following files are menu macro files (i.e., they prompt the user for input). They serve two purposes. First, they provide examples of how to write your own menu macros. Second, they provide useful capabilities to use with your own data sets.

CONNDOTS.DP	Connect dots via the cross-hair.
DEXCUBE.DP	Generate the cube for a 2**3 factorial design.
DEXSQUAR.DP	Generate the square for a 2**2 factorial design.
INVMAT.DP	Invert a matrix.
ISHIKAWA.DP	Generate an Ishikawa diagram.
ISHIKAW2.DP	Generate an Ishikawa diagram.
MULTITEXT.DP	Position text via the cross-hair.
NORMHIST.DP	Generate a histogram and a normal density trace.
PARETO.DP	Generate a Pareto plot.
PIECHART.DP	Generate labelled pie chart.
PLOT1VAR.DP	Read and plot 1 variable (elementary).
PLOT2VAR.DP	Read and plot 2 variables (elementary).
PLOTFUNC.DP	Plot a function.
PLOTSIN.DP	Plot a sine function (elementary).
RANDSAMP.DP	Generate a stratified random sample.
SIMPMETH.DP	Compute a simplex solution to a linear programming problem.
SORT.DP	Sort an alphabetic list via priorities.
SUM.DP	Compute the sum of a list of numbers.
TTEST.DP	Perform a t-test on 2 variables.
WORDCHAV.DP	Generate a centered vertical wordchart.
WORDCHAH.DP	Generate a centered horizontal wordchart.
3DPLOT.DP	Generate a 3d-plot with cube frame.

Program files

The following files provide a variety of sample data analyses performed by DATAPLOT. They can provide useful guides to performing similar analyses on your own data sets.

----Basic statistics and graphics-----

4PLOT.DP	Generate a 4-PLOT analysis (GEAR.DAT).
BALLSTIC.DP	Generate a ball and stick Pareto plot.
BARPLOT6.DP	Generate a Pareto bar plot.
BENNETT.DP	Fit with indicator variables (BENNETT.DAT).
BERGER1.DP	Fitting for the Alaska pipeline data (BERGER1.DAT).
BIHIST.DP	Generate a bihistogram (AUTO83B.DAT).
BIQUAD.DP	Carry out a bi-quadratic data transformation.
BOXPLOT.DP	Generate a box plot (AUTO83.DAT).
BOXPLOT2.DP	Generate a box plot (PBF11.DAT).
CHWIRUT1.DP	Non-linear fitting of the NIST ultrasonic calibration data (CHWIRUT1.DAT).
COLORMAP.DP	Show the available colors on a given output device.
CONTOUR.DP	Generate a contour plot (BRAIN.DAT).
CPKPLOT	Generate a Cpk plot (GEAR.DAT).
GANOVA3.DP	Generate a 3-factor GANOVA plot (HAMAKER.DAT).
HABER1.DAT	Non-linear fitting of 2-admissible numbers data (HABER1.DAT).
HAMAKER.DP	A graphical analysis of variance (HAMAKER.DAT).
HIST.DP	Generate a histogram (SUNSPOT2.DAT).
HIST2.DP	Generate a presentation graphics histogram (WORKSTAT.TEX).
HUMPHREY.DP	Generate random card selection and random run sequence using the RANDOM SAMPLE and RANDOM PERMUTATION commands for dosimetry data.
LEW11.DP	Non-linear fitting of beam deflection data (LEW11.DAT).
LISSAJOU.DP	Generate plots of Lissajous trigonometric functions.
LP.DP	Demonstrate the use of the LAD.DP macro for performing L_p fits (CHWIRUT1.DAT).
MATHOPER.DP	Generate a word chart with math options.
MAXITEST.DP	A large test macro.
MEANPLOT.DP	Generate a mean plot (PBF11.DAT).
MINITEST.DP	DATAPLOT test macro.
MORTGAGE.DP	Generate mortgage table.
MULTITRA.DP	Generate a multi-trace plot (HAYES1.DAT).
NORMDENS.DP	Draw a labelled normal density function.
PDFPLOT.DP	Generate pdf traces for the chi-square distribution.
PLOT25.DP	Generate a multiplot of 25 representative plots.
PONTIUS.DP	Analyze NIST load calibration data (PONTIUS.DAT).
PREDPLOT.DP	Generate plot of predicted values (CHWIRUT1.DAT).
QUANPLOT	Generate a quantile-quantile plot (AUTO83.DAT).
RESPLOT.DP	Generate a residual plot (SPIEGEL.DAT).
RFSREAD.DP	Generate a r-f spread plot.
RIDGE.DP	Perform a ridge regression.
ROOTPLOT.DP	Generate a plot before extracting roots.
SDPLOT.DP	Generate a standard deviation plot (PBF11.DAT).
SIGN.DP	Perform a sign test for paired samples.
SLPLOT.DP	Generate a spread-location plot.
SPIRAL.DP	Generate a spiral plot.
TAGTRACE.DP	Show how to annotate traces semi-automatically.

TEXASMAP.DP	Generate a map of Texas.
THURBER.DP	Non-linear fitting of semi-conductor electron mobility data (THURBER.DAT).
UGIANSKY.DP	Generate a Youden plot (UGIANSKY.DAT).
WEIBPLOT.DP	Generate a Weibull plot (ABERNE17.DP).
WEIGHTS.DP	Demonstrate the use of the IRLS.DP macro for performing iteratively reweighted least squares.
WRIGHT11.DP	Analyze Wright brothers lift data (WRIGHT11.DAT).
YOUDPLOT.DP	Generate a Youden plot (UGIANSKY.DAT).
----Bootstrap Analysis-----	
BOOTBERG.DP	Perform a bootstrap linear slope analysis (BERGER1.DAT).
BOOTBER2.DP	Perform a bootstrap inverse calibration analysis (BERGER1.DAT).
BOOTLEW.DP	Perform a bootstrap location analysis (LEW1.DAT).
BOOTMARS.DP	Perform a bootstrap location analysis (MARSHAK.DAT).
BOOTSIMI.DP	Perform a bootstrap analysis for an unsupported statistic (SIMIU3.DAT).
EFRON1.DP	Generate statistics for a bootstrap simulation.
----Time Series Analysis-----	
DATAPLOT.DP	Generate a run sequence plot (BAKER.DAT).
NEGIZ4.DP	ARIMA analysis of particle size data (NEGIZ4.DAT).
LAGPLOT.DP	Generate a lag plot (LEW.DAT).
SPECPLOT.DP	Generate a spectral plot (LEW.DAT).
SPIKEPLO.DP	Generate a spike plot (GNP.DAT).
----Multivariate Analysis-----	
BIPLOT.DP	Generate a biplot.
CANNCORR.DP	Perform a canonical correlation analysis.
FISH2DIS.DP	Perform Fisher's discriminant analysis on 2 populations.
FISHIRIS.DP	Perform Fisher's discriminant analysis on Fisher's iris data.
MULTPLOT.DP	Generate multiple scatter plots (AUTO83.DAT).
PARCOORD.DP	Generate a parallel coordinates plot (AUTO79.DAT).
PLANETS.DP	Generate a scatter plot matrix for the planets data (PLANETS.DAT).
PERIODIC.DP	Generate a scatter plot matrix for the periodic table data (PERIODIC.DAT).
PERIODI2.DP	Generate plots for the periodic table data (PERIODIC.DAT).
PROFPLOT.DP	Generate a profile plot (AUTO79.DAT).
STARPLOT.DP	Generate a star plot (AUTO79.DAT).
----Control Charts-----	
CCC.DP	Generate a C control chart (CCC.DAT).
PCC.DP	Generate a P control chart (PCC.DAT).
PCC.DP	Generate a P control chart (PCC.DAT).
UCC.DP	Generate a U control chart (UCC.DAT).
XBARCHAR.DP	Generate a mean control chart (CCXBAR.DAT).
----Experiment Design-----	
Most of the following analyze data sets from the book "Statistics for Experimenters" by Box, Hunter, and Hunter.	
2TO30M21.DP	Generate a 2**(30-21) fractional factorial design.
A.DP	Generate a block plot (BOXSHOES.DAT).
B.DP	Generate a block plot (SHEESLE2.DAT).

BATTADD.DP	Analyze the battery acid data (BATTADD.DAT).
BATTADD2.DP	Analyze the battery acid data (BATTADD.DAT).
BLOCPLOT.DP	Block plot analysis (SHEESLE2.DAT).
BOXAUTO.DP	Analyze the Box automobile emissions experiment (BOXAUTO.DAT).
BOXAUTO2.DP	Analyze the Box automobile emissions experiment (BOXAUTO.DAT).
BOXAUTO3.DP	Analyze the Box automobile emissions experiment (BOXAUTO.DAT).
BOXBIKE2.DP	Analyze the bicycle data (BOXBIKE2.DAT).
BOXBIKE3.DP	Analyze the bicycle data (BOXBIKE3.DAT).
BOXBLOOD.DP	Analyze the blood coagulation time (BOXBLOOD.DAT).
BOXBOD.DP	Analyze the oxygen demand data (BOXBOD.DAT).
BOXCAKE.DP	Analyze the cake taste data (BOXCAKE.DAT).
BOXCAKE2.DP	Analyze the cake taste data (BOXCAKE2.DAT).
BOXCAKE3.DP	Analyze the cake taste data (BOXCAKE2.DAT).
BOXCAKE4.DP	Analyze the cake taste data (BOXCAKE2.DAT).
BOXCHEM.DP	Analyze the chemical yield data (BOXCHEM.DAT).
BOXCHEM2.DP	Analyze the chemical yield data (BOXCHEM2.DAT).
BOXCLEAN.DP	Analyze the cleanser stability data (BOXCLEAN.DAT).
BOXCLOTH.DP	Analyze cloth wear data (BOXCLOTH.DAT).
BOXFILT.DP	Analyze the filtration time at new plant data (BOXFILT.DP).
BOXFILT2.DP	Analyze the filtration time at new plant data (BOXFILT.DP).
BOXPENIC.DP	Analyze penicillin yield data (BOXPENIC.DAT).
BOXPILOT.DP	Analyze pilot plant chemical yield data (BOXPILOT.DAT).
BOXRADAR.DP	Analyze the radar acquisition speed data (BOXRADAR.DAT).
BOXRATS.DP	Analyze the rat growth data (BOXRATS.DAT).
BOXREACT.DP	Analyze the chemical reactor efficiency data (BOXREACT.DAT).
BOXREAC2.DP	Analyze the chemical reactor efficiency data (BOXREAC2.DAT).
BOXSHOE2.DP	Analyze the Box shoes data (BOXSHOES.DAT).
BOXSHOE3.DP	Analyze the Box shoes data (BOXSHOES.DAT).
BOXSHOES.DP	Analyze the Box shoes data (BOXSHOES.DAT).
BOXSOLAR.DP	Analyze the solar collection efficiency data (BOXSOLAR.DAT).
BOXSPRAY.DP	Analyze the aerosol spray dispersion data (BOXSPRAY.DAT).
BOXSPRIN.DP	Analyze defective springs data (BOXSPRIN.DAT).
BOXWELD.DP	Analyze the weld strength data (BOXWELD.DAT).
BOXYIELD.DP	Analyze the chemical yield data (BOXYIELD.DAT).
BOXYIEL2.DP	Analyze the chemical yield data (BOXYIEL2.DAT).
C.DP	Generate a block plot (RIPKEN.DAT).
DEXCUB70.DP	Generate 70 $2^{*(3-1)}$ cubes (BOX.DAT).
DEXINTMP.DP	Generate a matrix of interaction plots (BOXREAC2.DAT).
DEXMEANP.DP	Generate DEX mean plots (BOXREAC2.DAT).
DEXOPT.DP	Perform a graphical analysis of optimizing designs (BOXYIEL2.DAT).
DEXREG.DP	Perform a graphical analysis of regression designs (BOXSPRAY.DAT).
DEXSCREE.DP	Perform a graphical analysis of screening designs (BOXREAC2.DAT).
DEXSIM.DP	Generate an experimental simulation.
DEXSURF.DP	Generate various experiment design surfaces.
DEXTITCU.DP	Generate a $2^{*(3-1)}$ title page cube (DEXTITCU.DAT).

ELECT92.DP	Block plot analysis of 1992 presidential election (ELECT92.DAT).
FUNNEL.DP	Analyze a funnel experiment (FUNNEL.DAT).
FUNNEL2.DP	Analyze a funnel experiment (FUNNEL.DAT).
KRASNY2.DP	Block plot analysis of cigarette ignition data (KRASNY1.DAT).
PALLET.DP	Generate block plots (PALLET.DAT).
SHEESLE2.DP	Generate a block plot (SHEESLE2.DAT).
----Mathematics-----	
BEAM.DP	Solve an elastic beam differential equation.
CHEMMIX.DP	Solve a system of linear equations to determine a chemical mixture.
CIRCLE.DP	Solve the equation of a circle (Matrix Cofactor).
CIRCUIT.DP	Solve a system of linear equations for an electrical circuit problem.
DERIVPLO.DP	Plot a function with its first two derivatives.
DIOPHANT.DP	Solve the Diophantine equation using set intersection.
FFT1.DP	Perform a frequency-domain smoothing (FFT).
FFT2.DP	Convolve/deconvolve a signal (FFT).
FFT3.DP	Perform a frequency-domain smoothing (FFT).
FFTPLOT.DP	Generate an FFT plot of normal random numbers.
FILTER.DP	Assess filter stability by solving for complex roots.
OIL.DP	Maximize oil production via the simplex method.
PLOTMAT.DP	Plot a matrix (Matrix).
PLOTROOT.DP	Plot the complex roots of a family.
POLYROO1.DP	Solve for the complex roots of a polynomial.
POLYROO2.DP	Solve for the roots of the sum of 20 quintics using polynomial arithmetic.
RAIN.DP	Solve a raindrop differential equation.
SPRINGS.DP	Solve for the frequency of a spring (Eigenvalues)

