

WRITE

PURPOSE

This is a very important I/O command that writes variables (vectors), parameters (scalars), functions (including strings), and matrices to the screen or to a file.

DESCRIPTION

Numbers are written in exponential format by default. The analyst can specify a specific Fortran-like format with the SET WRITE FORMAT statement. The simpler SET WRITE DECIMALS command can also be used to control the format of numbers. The output file is rewound by default (that is, if the file already exists it is overwritten). Use the SET WRITE REWIND OFF command to allow multiple appended writes to the same file.

DATAPLOT writes to an ASCII text file. No method of writing binary files is currently supported.

SYNTAX 1

```
WRITE <variable list>
```

where <variable list> is a list of parameters, variables, strings, or matrices (separated by spaces).

An example of this syntax is WRITE X Y.

SYNTAX 2

```
WRITE <file name> <variable list>
```

where <file name> specifies the name of the output file;

and <variable list> is a list of parameters, variables, strings, or matrices (separated by spaces).

An example of this syntax is WRITE X Y. DATAPLOT requires file names to have a period somewhere in the name. If the file name does not contain a period, place a period (no spaces) at the end of the file name. For example, WRITE OUT X Y should become WRITE OUT. X Y.

EXAMPLES

```
WRITE OUT. Y1 Y2 Y3 X
```

```
WRITE DATA.SAVE X Y PRED RES
```

```
WRITE X Y PRED RES
```

NOTE 1

Literal text for headers and separators and such can be written by enclosing it in double quotes. For example,

```
PRINT "Enter the value for X"
```

```
PRINT " "; . To enter a blank line
```

```
PRINT "The value of temperature is ^TEMP"
```

NOTE 2

DATAPLOT has no restrictions on the file name other than it be a valid file name on the local operating system and that it contain a period "." somewhere in the file name itself or as a trailing character. DATAPLOT strips off trailing periods on those systems where it is appropriate to do so. On systems where trailing periods can be a valid file name (e.g., Unix), DATAPLOT opens the file with the trailing period.

NOTE 3

File names are case sensitive on Unix file systems. For Unix, DATAPLOT opens the file as given. All other currently supported systems are not case sensitive regarding file names.

As a further caution for Unix hosts, certain expansion characters (specifically ~ to refer to your home directory) are interpreted by the shell and are not recognized by the Fortran compiler. These expansion characters are interpreted as literal characters and do not yield the intended file name.

DEFAULT

None

SYNONYMS

PRINT is a synonym for WRITE.

RELATED COMMANDS

SET WRITE FORMAT	=	Define a Fortran like format for writing data.
SET WRITE DECIMALS	=	Specify the number of digits to the right of the decimal point when printing numbers.
SET WRITE REWIND	=	Specify if the output file is rewound before writing.
READ	=	Read variables, parameters, strings, and matrices from a file.

APPLICATIONS

Writing data

IMPLEMENTATION DATE

Pre-1987

PROGRAM 1

```
LET Y1 = NORMAL RANDOM NUMBERS FOR I = 1 1 100
LET Y2 = EXPONENTIAL RANDOM NUMBERS FOR I = 1 1 100
LET Y3 = UNIFORM RANDOM NUMBERS FOR I = 1 1 100
WRITE RANDOM.DAT Y1 Y2 Y3
```

PROGRAM 2

```
LET Y1 = DATA 1 3 5 7 9
LET LAB = 1
SET WRITE DECIMALS 0
SET WRITE REWIND OFF
WRITE OUT. "The lab ID = ^LAB"
WRITE Y1
LET Y2 = DATA 2 4 6 8 10
LET LAB = 2
WRITE OUT. " "
WRITE OUT. "The lab ID = ^LAB"
WRITE Y2
```