

READ STRING

PURPOSE

Reads a string into DATAPLOT:

1. from a mass storage file; or
2. from within a CALLED DATAPLOT sub-program; or
3. from the terminal.

DESCRIPTION

The rules regarding READ STRING are as follows:

1. Only one line is read. Unlike a READ of variables, no END OF DATA is searched for.
2. Typically, only one string is read at a time. Reading more than one STRING is allowed (but not recommended). If more than STRING is read from the same line, separate the strings with at least one space and leave no spaces within a given string. For example,


```
READ STRING S1 S2
String1 String2
```
3. In scanning for the string, the full line image is scanned (for reading from a mass storage file, the full line image is 132 columns; for reading from within a sub-program and for reading from the terminal, the full line image is 80 columns). For variations on this, see the COLUMN LIMITS command.
4. If one string is read, embedded blanks are included in the string. However, if more than one string is read, blanks are used to separate the strings.
5. By default, all reads start from the beginning of the file (to override this this, see the SKIP and ROW LIMITS commands).

SYNTAX 1

```
READ STRING <s1> <s2> ... <sk>
```

where <s1>, <s2>, ..., <sk> are the desired strings (typically only one is given).

This syntax is used to read strings from the terminal or from a DATAPLOT sub-program. For example, READ STRING F1 F2.

SYNTAX 2

```
READ STRING <file> <s1> <s2> ... <sk>
```

where <file> is the name of the mass storage file where the strings reside;
and <s1>, <s2>, ..., <sk> are the desired strings (typically only one is given).

This syntax is used to read strings from a file. For example, READ STRING CALIB.DAT F1 F2.

EXAMPLES

```
READ STRING CALIB. S
```

```
READ STRING S
```

```
    This is a sample string
```

NOTE 1

The LET command can also be used to define a string (e.g., LET S = STRING THIS IS A STRING). However, there is one important distinction. The LET command automatically converts the string to upper case while the READ STRING command preserves the case that is read.

NOTE 2

In order to determine whether the first argument is a file name or a variable name, it looks for a period in the name. If it finds one, it assumes a file name. If it does not, it assumes a variable name. If your file name does not contain a period, attach a trailing period (no spaces) to the file name on the READ command.

NOTE 3

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 "." 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 tries to open the file with the trailing period. If this fails, it then tries to open the file with the trailing period stripped off.

Some users prefer to give all data files a “.DAT” or “.dat” extension. Although this is a useful method for keeping track of data files, it is strictly a user convention and is not enforced by DATAPLOT in any way.

NOTE 4

File names are case sensitive on Unix file systems. For Unix, DATAPLOT attempts to open the file as given. If this fails, it attempts to open the file as all upper case characters. If this fails, it attempts to open the file as all lower case characters. 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

1. If no file name in the READ STRING command is specified and a CALL is being executed, then the string should be listed directly in the DATAPLOT sub-program immediately after the READ STRING command.
2. If no file name in the READ STRING command is specified and commands are being manually entered/executed one at a time from the terminal, then the string should be entered directly from the terminal immediately after the READ STRING command.

SYNONYMS

READ STRING is equivalent to READ FUNCTION (strings and functions are treated equivalently internally in DATAPLOT, although they differ in the context in which they are used).

RELATED COMMANDS

SERIAL READ	=	Perform a serial read.
READ	=	Read variables.
READ FUNCTION	=	Read a function.
READ PARAMETER	=	Read a parameter.
READ MATRIX	=	Read a matrix.
LET	=	Define a string.

APPLICATIONS

Defining strings

IMPLEMENTATION DATE

87/4

PROGRAM

. Suppose the file STATES.DAT has the literal name of each of the 50 states in its first 50 lines. The following program reads the 50 names into DATAPLOT and forms 50 internal DATAPLOT strings S1, S2, ..., S50 to be used in further analyses.

```
SET READ REWIND OFF
LOOP FOR K = 1 1 50
    READ STRING STATES.DAT S^K
END OF LOOP
SET READ REWIND ON
```