Accessing Complex Global Variables and Waves

You must specify if a global numeric variable or a wave is complex using the /C flag:

```
NVAR/C gc1 = gc1
WAVE/C gcw1 = gcw1
```

Accessing Text Waves

Text waves must be accessed using the /T flag:

```
WAVE/T tw= MyTextWave
```

Accessing Global Variables and Waves Using Liberal Names

There are two ways to initialize a reference an Igor object: using a literal name or path or using a string variable. For example:

```
Wave w = root:MyDataFolder:MyWave              // Using literal path
String path = "root:MyDataFolder:MyWave"
Wave w = $path                                 // Using string variable
```

Things get more complicated when you use a liberal name rather than a standard name. A standard name starts with a letter and includes letters, digits and the underscore character. A liberal name includes other characters such as spaces or punctuation.

In general, you must quote liberal names using single quotes so that Igor can determine where the name starts and where it ends. For example:

```
Wave w = root:'My Data Folder':'My Wave'        // Using literal path
String path = "root:'My Data Folder':'My Wave'"
Wave w = $path                                  // Using string variable
```

However, there is an exception to the quoting requirement. The rule is:

> You must quote a literal liberal name and you must quote a liberal path stored in a string variable but you must not quote a simple literal liberal name stored in a string variable.

The following functions illustrate this rule:

```
// Literal liberal name must be quoted
Function DemoLiteralLiberalNames()
   NewDataFolder/O root:'My Data Folder'

   Make/O root:'My Data Folder':'My Wave' // Literal name must be quoted

   SetDataFolder root:'My Data Folder'    // Literal name must be quoted

   Wave w = 'My Wave'                      // Literal name must be quoted
   w = 123

   SetDataFolder root:
End

// String liberal PATH must be quoted
Function DemoStringLiberalPaths()
   String path = "root:'My Data Folder'"
   NewDataFolder/O $path

   path = "root:'My Data Folder':'My Wave'"  // String path must be quoted
   Make/O $path

   Wave w = $path
```