

```

// This requires Igor 9.00
WAVE/B/U wl = StringToUnsignedByteWave(theStr)
Print wl

// This works in older versions of Igor
Variable len = strlen(theStr)
Make/B/U/FREE/N=(len) wl
wl = char2num(theStr[p])
Print wl
End

```

**See Also**

**WaveDataToString, MoveWave, Free Waves** on page IV-91, **Working With Binary String Data** on page IV-175

**strlen****strlen(str)**

The `strlen` function returns the number of bytes in the string expression *str*.

`strlen` returns `Nan` if the *str* is `NULL`. A local string variable or a string field in a structure that has never been set is `NULL`. `NULL` is not the same as zero length. Use `numtype` to test if the result from `strlen` is `Nan`.

**Examples**

```

String zeroLength = ""
String neverSet
Print strlen(zeroLength), strlen(neverSet)

// Test if a string is null
Variable len = strlen(neverSet) // Nan if neverSet is null
if (numtype(len) == 2) // strlen returned Nan?
    Print "neverSet is null"
endif

```

**See Also**

**Characters Versus Bytes** on page III-483, **Character-by-Character Operations** on page IV-173

**strsearch****strsearch(str, findThisStr, start[, options])**

The `strsearch` function returns the byte position of the string expression *findThisStr* in the string expression *str*.

**Details**

`strsearch` performs a case-sensitive search.

`strsearch` returns `-1` if *findThisStr* does not occur in *str*.

The search starts from the byte position in *str* specified by *start*; `0` references the start of *str*.

`strsearch` clips *start* to one less than the length of *str* in bytes, so it is useful to use `Inf` for *start* when searching backwards to ensure that the search is from the end of *str*.

*options* is an optional bitwise parameter specifying the search options:

- 1: Search backwards from *start*.
- 2: Ignore case.
- 3: Search backwards and ignore case.

**Examples**

```

String str="This is a test isn't it?"
Print strsearch(str,"test",0) // prints 10
Print strsearch(str,"TEST",0) // prints -1
Print strsearch(UpperStr(str),"TEST",0) // prints 10
Print strsearch(str,"TEST",0,2) // prints 10
Print strsearch(str,"is",0) // prints 2

```