

<code>/WAVE</code>	Wave holds wave references. See <b>Wave References</b> on page IV-71 for more discussion.
<code>/Y=type</code>	See <b>Wave Data Types</b> below.

### Wave Data Types

You can use `/Y=(numType)` to set the data type instead of the `/B`, `/C`, `/D`, `/I`, `/L`, `/R`, `/T`, `/U`, and `/W` data type flags. See **WaveType** function for *numType* values. The `/Y` flag overrides other type flags. You still need to use the explicit data type flags to control the automatic wave reference created by the compiler if you use the wave in an assignment statement in the same function; see **WAVE Reference Types** on page IV-73 for details.

### Details

The maximum allowed number of elements (rows\*columns\*layers\*chunks) in a wave depends on whether you are using the 64-bit version of Igor (max is 214,700,000,000) or the 32-bit version (max is 2,147,000,000).

Unless overridden by the flags, the created waves have the default length, type, precision, units and scaling. The factory defaults are:

**Note:** The preferred precision set by the Miscellaneous Settings dialog only presets the Make Waves dialog checkbox and determines the precision of imported waves. It does not affect the Make operation.

Property	Default
Number of points	128
Precision	Single precision floating point
Type	Real
dimensions	1
x, y, z, and t scaling	offset=0, delta=1 ("point scaling")
x, y, z, and t units	" " (blank)
Data Full Scale	0, 0
Data units	" " (blank)

The maximum allowed number of elements (rows\*columns\*layers\*chunks) in a wave is 214,700,000,000.

### See Also

The **SetScale**, **Duplicate**, and **Redimension** operations.

## MakeIndex

**MakeIndex** [`/A/C/R`] *sortKeyWaves*, *indexWave*

The **MakeIndex** operation sets the data values of *indexWave* such that they give the ordering of *sortKeyWaves*.

For simple sorting problems, **MakeIndex** is not needed. Just use the **Sort** operation.

### Parameters

*sortKeyWaves* is either the name of a single wave, to use a single sort key, or the name of multiple waves in braces, to use multiple sort keys.

*indexWave* must specify an existing numeric wave.

All waves must be of the same length and must not be complex.