

## ticks

### Parameters

*tgID* is thread group ID returned by **ThreadGroupCreate**, *index* is the desired thread of the group to set up to execute the specified ThreadSafe *WorkerFunc*.

### Details

The worker function starts running immediately.

The worker function must be defined as ThreadSafe and must return a real or complex numeric result.

The worker function's return value can be obtained after the function finishes by calling **ThreadReturnValue**. Igor records the fact that a thread has terminated when you call **ThreadGroupWait** so you must call **ThreadGroupWait** before calling **ThreadReturnValue**.

The worker function can take variable and wave parameters. It can not take pass-by-reference parameters or data folder reference parameters.

Any waves you pass to the worker are accessible to both the main thread and to your preemptive thread. Such waves are marked as being in use by a thread and Igor will refuse to perform any manipulations that could change the size of the wave.

### See Also

The **ThreadGroupCreate** and **ThreadReturnValue** functions; **ThreadSafe Functions** on page IV-106, and **ThreadSafe Functions and Multitasking** on page IV-329.

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The ticks function returns the number of ticks (approximately 1/60 second) elapsed since the operating system was initialized.

### See Also

The **StopMSTimer** function.

## TickWavesFromAxis

```
TickWavesFromAxis [ /W=graphName /DEST= {textWaveName, numericWaveName} /O  
/AUTO=mode ] axisName
```

The **TickWavesFromAxis** operation generates a pair of waves suitable for use as user tick waves (see **User Ticks from Waves** on page II-313). This allows you to programmatically determine the tick marks and tick labels that Igor would create for a given graph axis in auto mode.

**TickWavesFromAxis** was added in Igor Pro 8.00.

**TickWavesFromAxis** generates two waves: a two-column text wave containing tick labels and the names of tick types, and a numeric wave giving the positions of the ticks along the axis. By default, the information stored in the output waves reflects the automatically generated ticks based on the current axis settings but you can change this using the **/AUTO** flag.

By default the waves are given names derived from the graph window and axis name: *<graphname>\_<axisname>\_labels* and *<graphname>\_<axisname>\_values*. Use **/DEST** to give the waves custom names.

### Parameters

*axisName* is the name of the axis for which the tick waves are generated. This will usually be left, bottom, right or top, but may be the name of a free axis.