

## Chart Recorder Control Demos

Igor Pro Folder:Examples:Feature Demos:FIFO Chart Demo FM.pxp  
 Igor Pro Folder:Examples:Feature Demos:FIFO Chart Overhead.pxp  
 Igor Pro Folder:Examples:Feature Demos:Wave Review Chart Demo.pxp  
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## Background Tasks

Background tasks allow procedures to run periodically "in the background" while you continue to interact normally with Igor. This is useful for data acquisition, simulations and other processes that run indefinitely, over long periods of time, or need to run at regular intervals. Using a background task allows you to continue to interact with Igor while your data acquisition or simulation runs.

Originally Igor supported just one unnamed background task controlled using the **CtrlBackground** operation (page V-118). New code should use the **CtrlNamedBackground** operation (page V-119) to create named background tasks instead, as shown in the following sections. You can run any number of named backgrounds tasks.

In addition to the documentation provided here, the Background Task Demo experiment provides sample code that is designed to be redeployed for other projects. We recommend reading this documentation first and then opening the demo by choosing File→Example Experiments→Programming→Background Task Demo.

### Background Task Example #1

You create and control background tasks using the **CtrlNamedBackground** operation. The main parameters of CtrlNamedBackground are the background task name, the name of a procedure to be called periodically, and the period. Here is a simple example:

```
Function TestTask(s)      // This is the function that will be called periodically
  STRUCT WMBackgroundStruct &s

  Printf "Task %s called, ticks=%d\r", s.name, s.curRunTicks
  return 0                  // Continue background task
End

Function StartTestTask()
  Variable numTicks = 2 * 60    // Run every two seconds (120 ticks)
  CtrlNamedBackground Test, period=numTicks, proc=TestTask
  CtrlNamedBackground Test, start
End

Function StopTestTask()
  CtrlNamedBackground Test, stop
End
```

You start this background task by calling `StartTestTask()` from the command line or from another procedure. `StartTestTask` creates a background task named `Test`, sets the period which is specified in units of ticks (1 tick = 1/60th of a second), and specifies the user-defined function to be called periodically (`TestTask` in this example).

You stop the `Test` background task by calling `StopTestTask()`.

As shown above, the background procedure takes a **WMBackgroundStruct** parameter. In most cases you won't need to access it.

### Background Task Exit Code

The background procedure (`TestTask` in the example above) returns an exit code to Igor. The code is one of the following values: