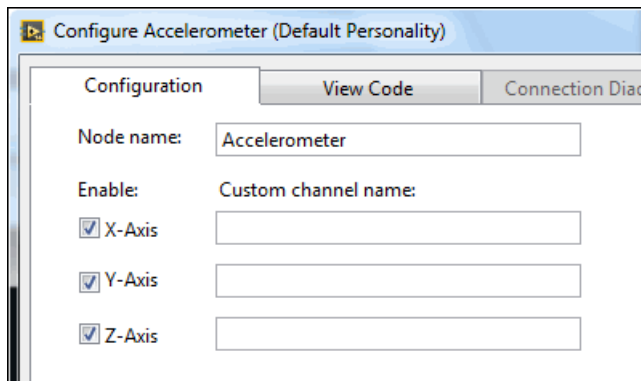
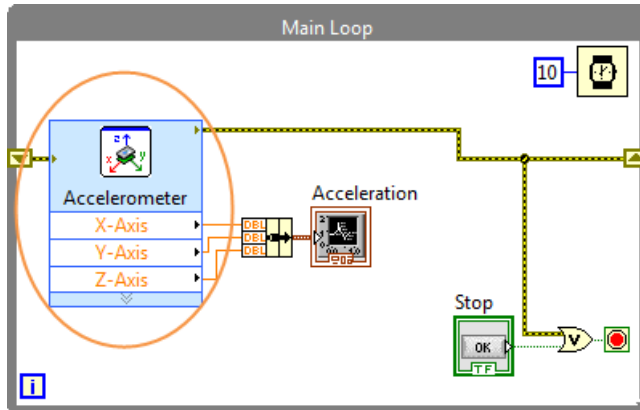




Part 2: Controlling the Accelerometer

The myRIO contains an onboard accelerometer that measures the magnitude and direction of acceleration. This part of the tutorial teaches you how to create an application to read acceleration values from the onboard accelerometer and to display the acceleration values on a waveform chart. Before starting this part, make sure you have completed the previous part of the tutorial.



1. In the **Project Explorer** window of your myRIO project, open the Main VI. By default, LabVIEW opens the front panel of the Main VI. The front panel is the user interface of a VI.
2. Press <Ctrl-E> to switch to the block diagram of the Main VI. The block diagram contains the graphical code of a VI. This VI uses the Accelerometer Express VI to read acceleration values from the onboard accelerometer and uses the waveform chart indicator to display the acceleration values.
3. Double-click the Accelerometer Express VI to display the configuration dialog box.

4. Press <Ctrl-H> to display the **Context Help** window. You can move the cursor over options in the configuration dialog box and learn basic information about the options from the **Context Help** window. Most objects in LabVIEW display context help information.
5. Click **OK** to close the configuration dialog box.
6. Press <Ctrl-E> to switch to the front panel of the Main VI.

7. Click **Run** .
8. Rotate or shake the myRIO and observe the changes of the X, Y, and Z acceleration values on the waveform chart.
9. Click **Stop** .
10. Select **File>Save** to save the VI.

Congratulations! You have successfully programmed to control the onboard accelerometer.

Before you proceed to the next part of the tutorial, spend some time understanding the block diagram of the Main VI. The block diagram uses a Flat Sequence structure that executes the following frames from left to right:

- **Initialize**—Initializes the **error in** cluster to specific values.
- **Acquire and process data**—Acquires acceleration values from the onboard accelerometer by using the Accelerometer Express VI and displays the acceleration values by using a waveform chart. The Main Loop repeats the code until you click **Stop** or an error occurs.

- **Close**—Resets the onboard accelerometer before the application exits.

Now, proceed to program the onboard LEDs.

