Front Panel[*]

National Instruments

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Abstract

In this section, you will learn about the LabVIEW front panel.

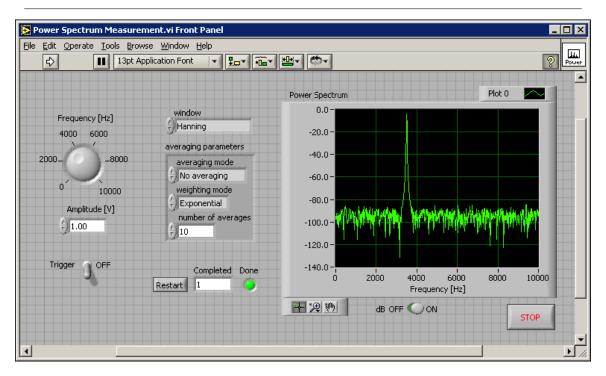The front panel is the user interface of the VI. Figure 1 shows an example of a front panel.

Figure 1: Example of a Front Panel

1 Controls and Indicators

You build the front panel with controls and indicators, which are the interactive input and output terminals of the VI, respectively. Controls are knobs, push buttons, dials, and other input devices. Indicators are graphs, LEDs, and other displays. Controls simulate instrument input devices and supply data to the block diagram of the VI. Indicators simulate instrument output devices and display data the block diagram acquires or generates.

1.1 Controls Palette

The `Controls` palette is available only on the front panel. The `Controls` palette contains the controls and indicators you use to create the front panel. Select `Window`≫`Show Controls Palette` or right-click the front panel workspace to display the `Controls` palette. Tack down the `Controls` palette by clicking the thumbtack on the top left corner of the palette. By default, the `Controls` palette starts in the Express view.

The Express palette view includes subpalettes on the top level of the `Controls` and `Functions` palettes that contain Express VIs and other objects you need to build common measurement applications. The `All Controls` and `All Functions` subpalettes contain the complete set of built-in controls, indicators, VIs, and functions.

The `Advanced` palette view includes subpalettes on the top level of the `Controls` and `Functions` palettes that contain the complete set of built-in controls, indicators, VIs, and functions. The `Express` subpalettes contain Express VIs and other objects you need to build common measurement applications.

> NOTE: In the `Express` palette view, toolsets and modules do not install subpalettes on the top level of the `Controls` and `Functions` palettes. Instead, toolsets and modules install on the `All Controls` and `All Functions` subpalettes. In the `Advanced` palette view, toolsets and modules install subpalettes on the top level.

Click the `Options` button on the `Controls` or `Functions` palette to change to another palette view or format.

1.1.1 Numeric Controls and Indicators

The two most commonly used numeric objects are the numeric control and the numeric indicator, as shown in Figure 2.
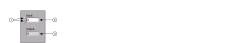

Figure 2: 1. Increment and Decrement Buttons, 2. Numeric Control, 3. Numeric Indicator

To enter or change values in a numeric control, click the `increment` and `decrement` buttons with the `Operating` tool or double-click the number with either the `Labeling` tool or the `Operating` tool, type a new number, and press the `Enter` key.

1.1.2 Boolean Controls and Indicators

Use Boolean controls and indicators to enter and display Boolean (`True` or `False`) values. Boolean objects simulate switches, push buttons, and LEDs. The most common Boolean objects are the vertical toggle switch and the round LED, as shown in Figure 3.

Figure 3