

LabChart 7 comes with the Digital Output feature that allows the simple management and control of eight digital output lines present in most PowerLab data acquisition units. By creating digital output configuration states, LabChart 7 can control up to eight external TTL (Transistor-transistor logic) devices. An application of this feature could be turning on or off a heater.

## Step 1: Creating a Digital Output Configuration

- Select Setup and click on Digital Output to bring up the Digital Output Configuration dialog.

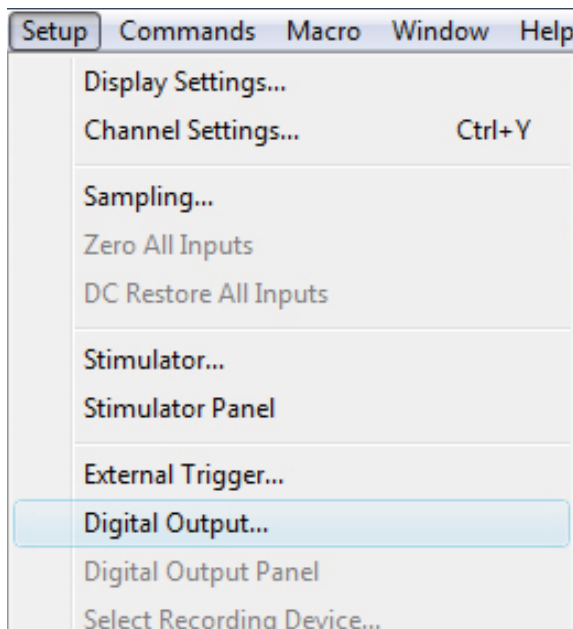


Figure 1: Digital Output Extension adds two new items to the Setup Menu in LabChart.

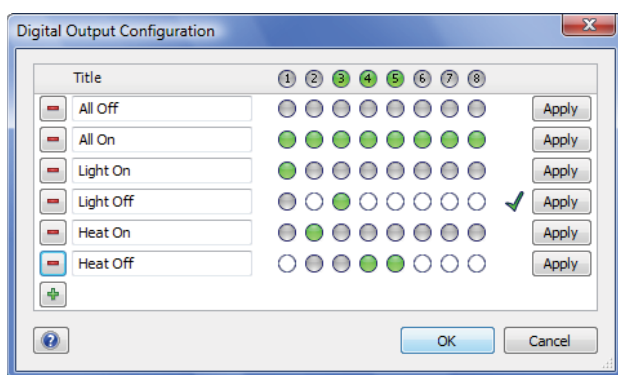


Figure 2: The Digital Output Configuration dialog

- Add and remove configurations by clicking the '+' and '-' buttons.
- Type a title for each of the configuration such as 'All Off' and 'All On'
- The state of each digital output line in the Digital Output Configuration dialog is shown by a radio button. These three states are:
  - On (Green)
  - Off (Grey)
  - No Change (No Color)

- Click the radio buttons to change the state to provide a unique combination to identify each configuration.
- Click the Apply button to test the validity of configuration. The indicator lights along the top show the current digital output configuration.
- Click OK when finished.

### Step 2: Activating configurations

- The Digital Output panel allows easy switching between the configurations. The panel can be accessed from **Setup** menu and selecting **Digital Output Panel**.
- Press the button to activate a configuration.

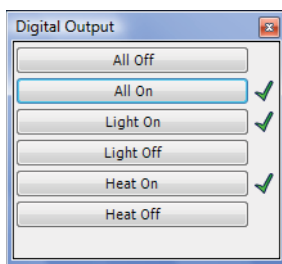


Figure 3: The Digital Output panel and tick marks show the active configurations.

Digital outputs are reset when exiting LabChart.

### Note:

- Digital Output feature is for the simple management of digital outputs. It does not change the digital output state in reaction to an event.
- Do not use the Digital Output feature with the Event Manager extension or with Fast Response Output Extension as conflicts may arise controlling the digital output bits.