

Most PowerLab data acquisition units (eg. 26T, /30 series, 4/SP, 8/SP, 16/SP and 4/ST) provide digital input sockets in the form of 15-pin connectors on the rear panel of the PowerLab. There are eight digital output lines that can be used to trigger or control up to eight external TTL (Transistor-transistor logic) devices such as stimulators or heating baths.

The new ADInstruments Digital Output Extension allows simple management and control of these digital output lines by creating digital output configuration states. An application of this feature could be turning on or off a heater.

Step 1: Accessing the Digital Output Configuration

- Download and install the Digital Output Extension. Further information is available under Digital Output in the Extension folder in LabChart Help.
- Select Setup and click on Digital Output to bring up the Digital Output Configuration dialog.

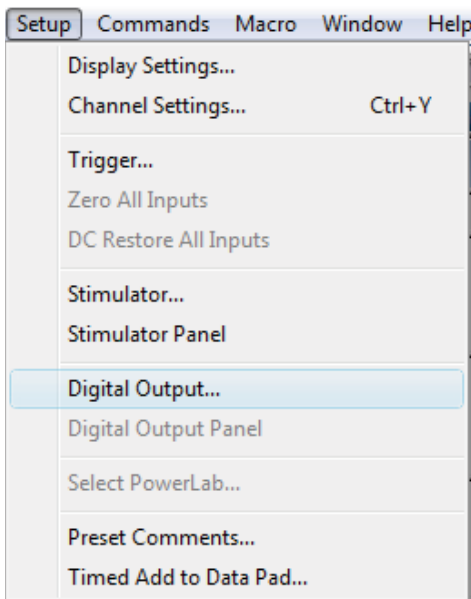


Figure 1: Digital Output Extension adds two new items to the Setup Menu in LabChart.

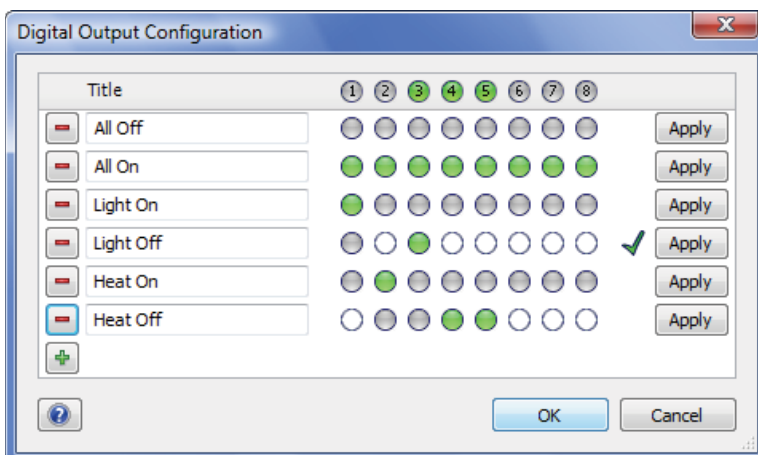


Figure 2: The Digital Output Configuration dialog

Step 2: Creating a configuration

- 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. This 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 3: Activating configurations

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

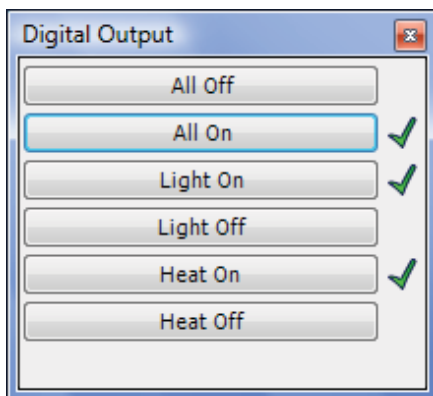


Figure 3: The Digital Output panel and tick marks show the active configurations.

Digital outputs are reset when exiting LabChart.

Note that the Digital Output Extension is for simple management of the digital outputs.

It does not change the digital output state in reaction to an event. In addition, do not use the Digital Output extension with the Event Manager extension or with Fast Response Output as conflicts may arise controlling the digital output bits.