

Using PowerLab as a Scheduler/Triggering Device

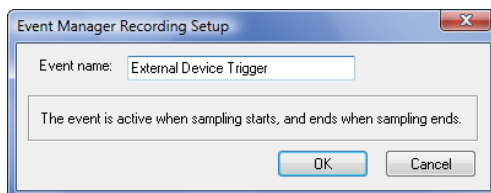
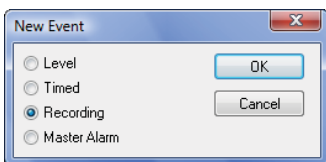
PowerLab data acquisition systems, together with LabChart software, provide scheduling and triggering options.

You can successfully combine the functionality of these two LabChart features to produce a reliable solution for triggering external devices while simultaneously scheduling recordings.

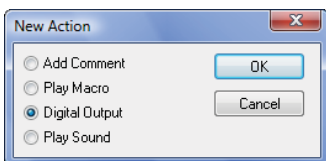
This requires the installation of the Event Manager LabChart Extension software, which is used to control Digital I/O ports on the back of the PowerLab. Triggering options are performed via the Trigger feature in LabChart.

Step 1: Event Manager needs to be configured to deliver a Digital Output pulse when LabChart starts recording and to deliver another Digital Output pulse when LabChart stops recording.

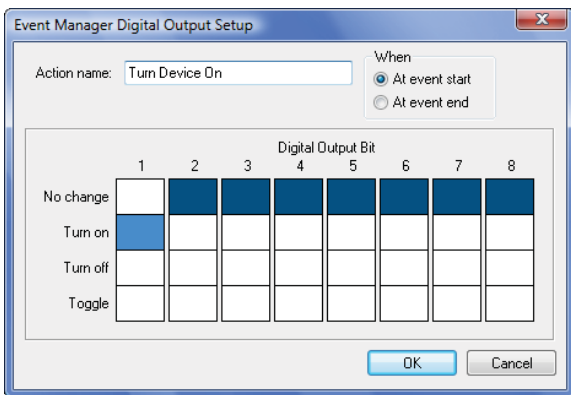
- Select “Event Manager” from the “Setup” menu to bring up the Event Manager dialog
- Select “New Event”
- Select “Recording” and click “OK”.
- Label the Event and click “OK”.



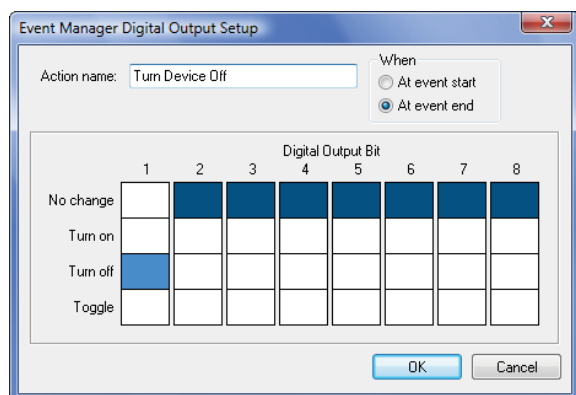
- Select “On Start” in the Event Manager Dialog and select “New Action”
- Select “Digital Output” and click “OK”



- Select “At event start”.
- Select the Digital Output Bit you wish to turn on (all 8 can be activated if required).
- Label the action and click “OK”.



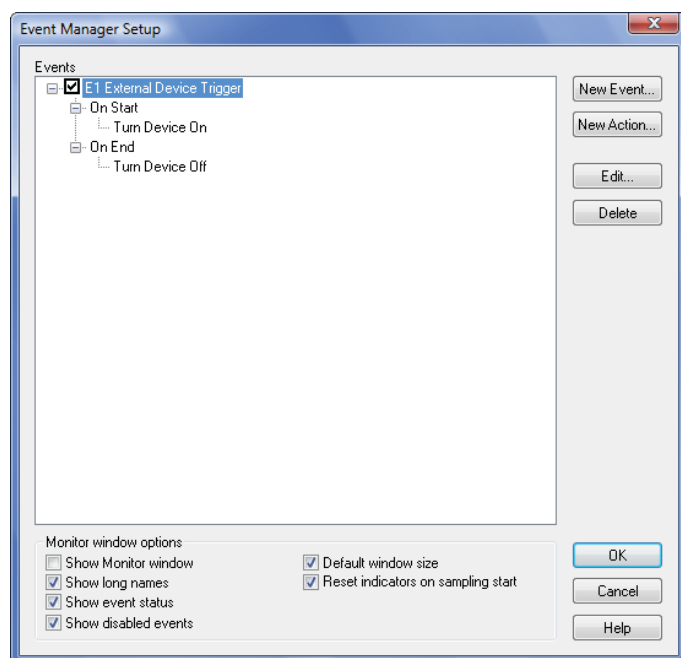
- Select “On End” in the Event Manager Dialog and select “New Action”.
- Select “Digital Output” and click “OK”
- Select “At event end”.
- Select the Digital Output Bit you wish to turn off (it should be that same digital bit that was previously turned on).
- Label the action and click “OK”.



- Click “OK” again to exit Event Manager.

Event Manager is now set up to send a Digital Output pulse both when recording starts and stops.

Note: The digital outputs will turn ON when some PowerLab models are switched on. Then the digital outputs will turn OFF when LabChart software is started. Therefore it is a good idea to connect the Digital I/O ports to your external devices after the PowerLab and LabChart have been turned on. Please refer to your PowerLab User’s Guide for specific details on the functionality of your unit’s Digital I/O ports.



Step 2: Setting up the Trigger feature. In this example, it is set to record for 5 minutes every hour, repeatedly for 12 hours.

- Select “Trigger” from the “Setup” menu to bring up the Trigger dialog

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- Select “Internal Timer” from the Trigger pull-down menu
- Enter “1 Hour”
- Enter “5 minutes” in Stop section
- Select “Stop cycling after” and enter “12” blocks
- Click “Close”

Your data acquisition system is now set to record for 5 minutes every hour for 12 hours after you press the Start recording button. Each time LabChart Starts/Stops, it will send out a Digital Output pulse to turn on/off the connected external device.

