

### **TV2 Clean Room Monitor**

#### Please print out the Users Guide. http://www.e2di.com/support

Although you should use the Users Guide to familiarize yourself with the TV2 installation and use, you can use the quick-start instructions below, if you are in a hurry.

Your TV2 Clean room monitor comes with free software to copy the logged data from your TV2 to your computer. To download the free TView software go to <u>www.e2di.com</u> and place your mouse cursor on <u>Support</u>. Then click on the Software, users and installation guides, Etc.. Next click on the link #2: <u>PC Interface Software</u>. Click on TView Clean Room Monitor User Guide and copy the software to your desktop, unzip it and click on 'Setup' to install. It installs like any other windows software.







**Temperature/RH Sensor** 

**Differential Pressure Sensor** 



#### QUICKSTART

Your TV2 can be installed and operating in just a few minutes by following these simple steps.

#### Set the time and temperature scale

*1*. Connect the TV2 to a power supply or a computer with the enclosed USB cable. The System Parameter display will appear.



- 2. Touch 'Up' or 'Down' to select  $C^{\circ}$  or  $F^{\circ}$  and touch 'Enter'.
- *3.* Touch 'Up' to select the date format (MM/DD/YY, DD/MM/YY or YY/MM/DD) and then 'Enter'. The date format defaults to the US style (MM/DD/YY).
- 4. Set the day, month, year, hour and minute in the appropriate field by scrolling through the possible values with 'Up' or 'Down' after moving to the appropriate field with 'Enter'.

(*Note:* It is possible to move to another field with the 'Right' button but your entries will <u>not</u> be recorded).

- 5. Touch 'Escape'. You will be asked to verify that you want to erase all data. Use 'Right' to highlight YES and touch 'Enter'.
- 6. Touch 'Escape' to return to the previous menu.

#### Setting up sensors

1. Plug the pressure sensor into the socket next to the small green relay on the end of the display and the temp/RH sensor into the socket next to it. Position the pressure sensor so that the ends of the positive and negative clear plastic tubes are in different rooms so the difference in pressure will be measured and displayed on the TV2.



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2. After a few seconds, the TV2 will recognize the first sensor and change the display to the Sensor Setup menu. Move the cursor to the Sample Data field by touching 'Right'.

- 3. This is how often you want the sensor to log the pressure. You may log the pressure between once a minute and once every 24 hours. Use the 'Up' and 'Down' buttons to scroll to the interval you prefer. Touch 'Enter' to move to the next field. The default value is ten minutes (00:10:00). For pressure sensors we recommend you set it for 15 seconds (00:00:15).
  - 4. Select the type of averaging by touching 'UP', or 'Down' and then 'Enter'. There are three possible selections. The sensor actually measures the pressure many times a seconds updating the number on the display every 5 seconds. The readings are averaged again for logging.
    - *a*. Fast no averaging occurs. The exact measurement at the time of sampling will be stored and displayed. (Not normally used except during calibration)
    - b. Medium- most often used to filter out minor fluctuations (*This is the default value*).
    - *c.* Slow additional averaging will occur. (Not normally used).
  - 5. Set the graph display (Y axis) with 'Up' and 'Down'. **These settings have no effect on the alarm, what data is collected, or what is stored.** They only set the upper and lower point of the Y-axis of the pressure graph shown on the TV2 clean room monitor. Any data point that cannot be displayed on the chart, because it falls outside these limits, will show as a point at the top or bottom of the display.

*Note: These limits can be adjusted at any time without affecting your data.* 



#### Setting the sensor alarms

6. Set alarms for pressure, temperature and humidity, by highlighting the 'Set Alarm' button on the 'Sensor # Setup' screen with 'Left' or 'Right' and touching 'Enter'.

Alarm: Disable Trigger alarm/relay for MM:SS If P > 0.60 "WG for 00:05:00 HHMMSS If D < 0.02 "WG for 00:05:00 HHMMSS If te	ensor 1 Thermistor arm: Disable igger alarm/relav for 15:00 MM:SS temp> 78 for 00:10:00 HH:MM:SS temp< 65 for 00:10:00 HH:MM:SS	Up Left Right
	RH> 65% for 00:10:00 HH:MM:SS RH< 43% for 00:10:00 HH:MM:SS	Down Enter

Alarm menu for pressure sensor

Alarm menu for temperature and RH sensor

- 7. Enable the alarm by touching 'Up' and then 'Enter'.
- 8. Set the trigger-alarm-time to any value between 0:00 and 99:00. This controls how long the alarm and the normally open (N/O) relay will be activated.

(*Note:* If you are using an auto dialer set it for at least 00:30 (30 seconds) but not longer than 06:00 (Six minutes)).

a. Scroll in the upper alarm data limit and delay time and then the lower alarm limit and delay with 'Up' and 'Down' touching 'Enter' to move to each field in turn.

(Note: The delay time is how long the pressure, must remain above (or below) the limit before the alarm occurs).

9. You do not need to enter the Calibration Menu at this time. (*For calibration procedures see the document Entitled 'Calibration Procedures' on the CD. It can also be downloaded from our website http://www.e2di.com/PDFs/Calibration Procedures.pdf*)

Touch 'Escape' until you return to the Status Screen.

Compounding room 1	Compounding room 1	
Max/Min 0.21" 0.12"WG	71.6°F 53%	Max/Min 73.1°F 68.4°F 56% 46%
Alarm Enabled	Alarm Disabled	
03/05/13 4:17:29		Main Men

## You are done!

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# The TV2 Clean Room monitor shows the safe/unsafe condition of room pressure, temperature and humidity at all times.

If all the numbers are green everything is OK and the room can be used, but if any numbers are **red** the clean room should not be used until the red condition is corrected.



If any number (pressure, temperature or humidity) is **red**, it is outside the safe conditions and the room should not be used.

Safe limits are set in the alarm menu of each sensor.

Alarm Menu	Escape
Sensor 1 Pressure Alarm: Disable Trigger alarm/relay for MM:SS If P > 0.60 "WG for 00:05:00 HHMMSS If P < 0.00 "WG for 00:05:00 HHMMSS	Up Left Right
	Down
	Enter

	1	
-0.01"WG <sup>Max/Min</sup> -0.01"	71.6°F 53%	Max/Min 73.1°F 68.4°F 56% 46%
Alarm Enabled	Alarm Enabled	
03/05/13 4:17:29	Last Review 09/15/16 08:15:00	Main Menu

Restore positive pressure to correct this alarm condition.



If the Minimum pressure is **red** the pressure dropped below the safe point sometime in the past. As long ompounding room 1 as the current pressure is green it is ok. Max/Min Max/Min 0.48" 73.1°F 68.4°F 71.6°F 03/05 01:00 0.16" WG 16,00 03/04 53% 56% 46% Alarm Enabled Main Menu 03/05/13 4:17:29 Ь . 0.12 71.8°F

Check the logged data to see what happened and reset the Max/Min pressure

If the Alarm is <u>disabled</u> the quick check will be unable to display red conditions.





Enable the sensor alarm