Getting Started

Default Logger Settings

Recording Time: 7 day
Range: 0 to 100
Input Range Channel 1 (Red pen)
Input Range Channel 2 (Blue pen)

Quick Start

To change the range and recording time, please reference *Dip Switch Setup* in this manual.

1. Insert a 9V battery and plug in AC adapter. The unit will power on. (see Figure 3)
2. Plug in transducers using uncompensated jacks. (See figure 3)

   Note Be sure to observe proper polarity when connecting wires from transmitter. (See figure 3)
3. Remove the protective pen caps.
4. Press the **ON/OFF** key (See figure 2) to turn the instrument on.
5. The instrument will move pens to the appropriate readings.
6. Install the chart that matches the "Dip Switch settings" you have selected.
7. Press the **Pen Home** key to move the pens to the outside of the chart. The pens are automatically raised off the chart.
8. Remove the old chart. Place the new chart on the "Chart Hub" making certain that the edge of the chart slides under the "chart guide clips" located at the outside of the chart.
9. **Set the appropriate time.** There are two ways to adjust the chart and set the appropriate time:

   a. Set the chart time manually by inserting a coin into the groove in the chart hub and turning clockwise until the correct hour (and day if applicable) on the chart is referenced to the timing arrow (just to the right of the pen tip on the dial).

   This feature should be used for fine adjustments only

   b. To adjust the chart time, press and hold **Adjust-Up** and **Adjust-Down** buttons located on the back of the unit next to the dip switch (see Figure 3).

   The green LED will blink rapidly for about five seconds, then the LED will remain solid green. While in this state the **Adjust-Up** button will move the chart backward (counter clockwise) and the **Adjust-Down** button will move the chart forward (clockwise).

   Rotate the chart until the correct hour (and day if applicable) on the chart is referenced to the timing arrow. Once you have set your chart, press the **Pen Home** button to exit "Chart Adjust Mode". The unit will take one minute to exit the "Chart Adjust Mode" once **Pen Home** is pressed.

   Press **Pen Home** to move the pens back onto the chart.
10. Place the **ET8** recorder on a flat vibration-free surface. Be sure it is in a vertical position and level. For best performance and longevity, the location should be a clean environment, free from dust and corrosive fumes. Do not exceed temperature specifications.

Wall Mount Keyhole slots are provided on the **ET8** recorder for wall mounting.

Display Symbols (Optional)

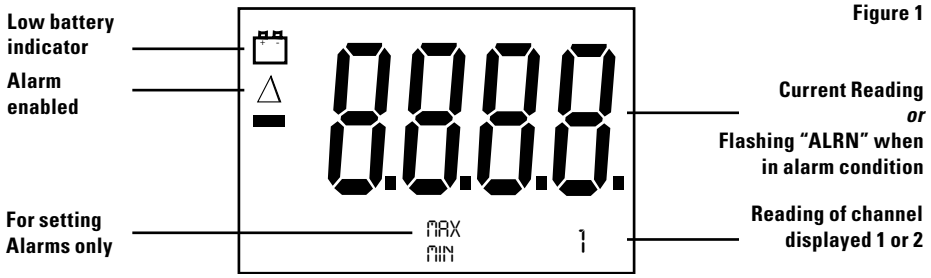


Figure 1

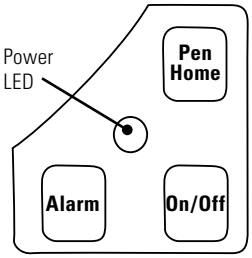
Button Operations

On/Off

The On/Off key turns the unit on and off.

Figure 2

ET855



Pen Home

If the pens are located on the outside edge of the chart, press the **Pen Home** to move pen(s) to recording position. If the pens are located on the chart, press the **Pen Home** key to move the pen(s) to the outside edge of the chart.

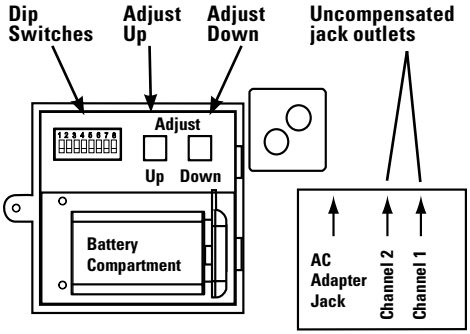
Alarm

Pen 1: = Red Pen

Pen 2: = Blue Pen

1. To set the alarm, make sure unit is on and press and hold the **Alarm** button. The LED will blink red rapidly for about five seconds, then the LED will turn solid green. Release the **Alarm** button and the LED will turn solid red. At this point the display will show "On" or "Off".

Figure 3

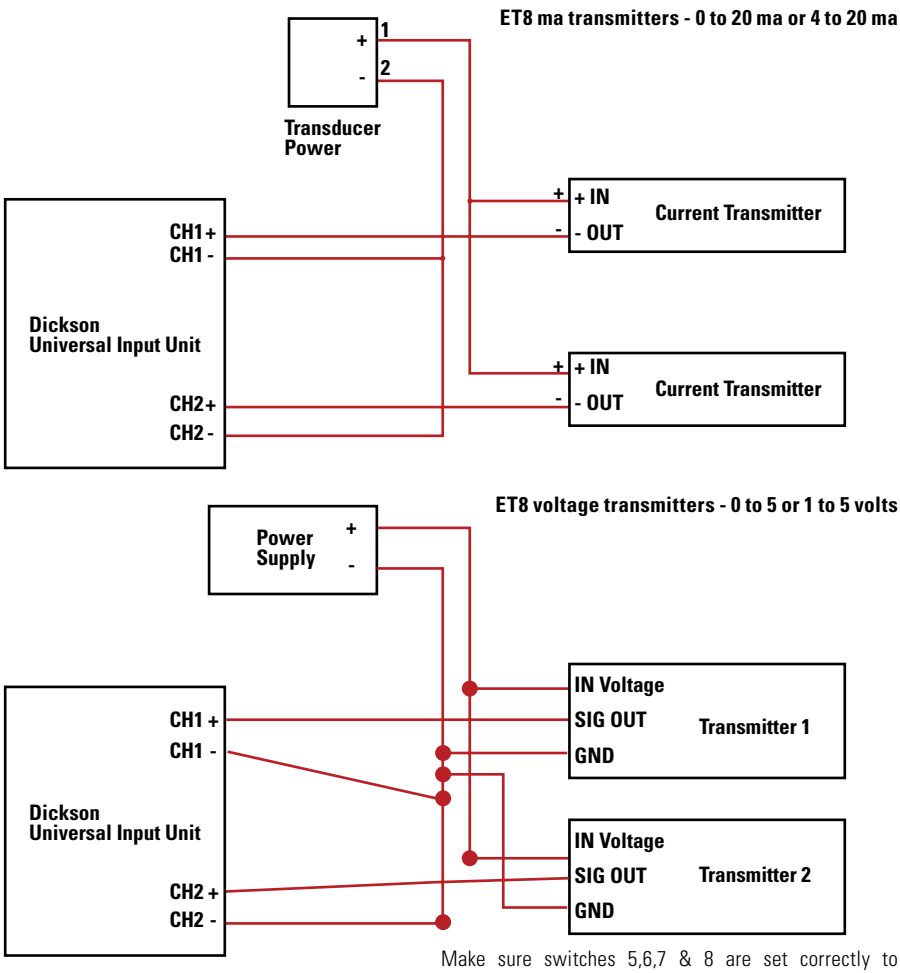


2. Pressing either the **Adjust-Up** or **Adjust-Down** buttons, located on the back of the unit next to the dip switch, will toggle the alarm on or off.
3. Pressing **PEN HOME** will scroll to the next alarm options.
   - **a.** Alarm "on" or "off"
   - **b.** Pen 1 alarm minimum
   - **c.** Pen 1 alarm maximum
   - **d.** Pen 2 alarm minimum
   - **e.** Pen 2 alarm maximum
4. In order to set pen alarm minimums and maximums, pressing **Adjust-Up** will increase the alarm value, and pressing **Adjust-Dowm** will decrease the alarm value. There is acceleration if the **Adjust-Up** button is held down.

   Repetitively pressing the **Pen Home** button will scroll through the five options until the alarm button is pressed to exit from alarm adjust. Each press of the **Pen Home** or **Alarm** button will store the new settings. The unit will take one minute to exit "Alarm Set Mode" once the **Alarm** button is pressed.
5. If the alarm is triggered, the LED will show as solid red and the alarm will sound. Press the **Alarm** button to silence the audible alarm.

(Continued on next page)

Wiring Diagram



Make sure switches 5,6,7 & 8 are set correctly to match the type of transducer you are using and that the transducer is plugged into the correct jack.

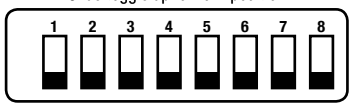
Dip Switch Setup

To set-up the **ET8** recorder for your specific application, you might need to change some of the "Dip Switches". The Dip Switches are located on the back of the unit.

Use a pen or small screw driver to flip the switches. *Remember to install the correct chart to match the corresponding Dip Switch setting.*

Slide toggle up for "on" position

Dip Switch 1 5–8 are not active on this recorder.



Slide toggle down for "off" position

ET8 Dip Switch Setting					Up=On	Down=Off
Switches 1–8	1	2	3	4	5(ch2) 6(ch1)	7(ch2)/8(ch1
7-Day	D					
24-Hour	U					
0.0 to 100.0		D	D	D		
0 to 1000		D	D	U		
0.0 to 14.0		D	U	D		
0.0 to 150.0		D	U	U		
0.0 to 200.0		U	D	D		
0.0 to 300.0		U	D	U		
-10.0 to 10.0		U	U	D		
-150.0 to 250.0		U	U	U		
0.0 to 5.0 volts					D	D
0.0 to 20.0 ma					D	U
1.0 to 5.0 volts					U	D
4.0 to 20.0 ma					U	U
Remember to install the correct chart to match corresponding switch setting						
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Make sure switches 5,6,7 & 8 are set correctly to match the type of transducer you are using and that the transducer is plugged into the correct jack.

Recording Time

The ET8 recorder has two different recording time options

24-hour 1 up
7-day 1 down

Recording Range

Range	2	3	4
0.0 to 100.0	D	D	D
0.0 to 1000.0	D	D	U
0.0 to 14.0	D	U	D
0.0 to 150.0	D	U	U
0.0 to 200.0	U	D	D
0.0 to 300.0	U	D	U
-10.0 to 10.0	U	U	D
-150.0 to 250.0	U	U	U

Channel Input

(Channel 1= Red Pen; Channel 2=Blue Pen)

Channel	Input	5	6	7	8
2	0.0 to 5.0V	D		D	
2	0.0 to 20.0 ma	D		U	
2	1.0 to 5.0V	U		D	
2	4.0 to 20.0 ma	U		U	
1	0.0 to 5.0V		D		D
1	0.0 to 20.0 ma		D		U
1	1.0 to 5.0V		U		D
1	4.0 to 20.0 ma		U		U

Power

The **ET8** operates on AC power with an optional 9V battery backup. Battery backup will last approximately 3 days.

Alarm and relays will not operate under battery only power.

LED Indicators

- AC power with battery backup–Solid green
- AC power with low battery or no battery–Blinks red
- Battery only–Blinks green
- Battery only (low battery)–Solid red

Need to know

Pen Adjust
Pen adjust may be needed if the pen(s) and display do not match.

1. While the unit is on, press and hold both the **Pen Home** button and the **On/Off** button (making sure to press the **Pen Home** button first so the unit will not turn off). The led will blink rapidly between amber and green for about five seconds, the LED will then turn green, release the **Pen Home** and **On/Off** buttons. The led will flash amber and green for one second and the led will turn off.
2. Both pens will move to the outer edge of the chart, and then the shorter red pen will move to the current position.

   Use the **Adjust-Up** and **Adjust-Down** buttons to move the pen to the maximum chart line. Once the shorter red pen is set, the **Pen Home** button will move the shorter red pen to the outer edge of the chart and the longer blue pen will move to its current position.

   The **Adjust-Up** and **Adjust-Down** buttons will adjust the longer blue pen position. Once the pen is set, the **Pen Home** button will move the longer blue pen to the outer edge of the chart and the shorter red pen will move to its new position.

   Each time **Pen Home** is pressed, the two pens will switch positions (moving the most recently adjusted position) until the **On/Off** button is pressed to exit pen adjust mode.

Note: Pressing the **On/Off** button will exit the adjustment and return the unit to normal operation. Each time the **Pen Home** or **On/Off** button is pressed, the adjustment currently in progress will be stored. The unit will take one minute to exit "Pen Adjust Mode" once the **On/Off** button is pressed.

Troubleshooting

Why isn't the chart keeping time or running slow?

- The chart may be hung up or restricted, possibly caused by a rip on the outer edge of the chart or the chart may be caught between the arm and pen arm platform.
- The incorrect chart is installed for the selected chart speed.

Why did the chart stop turning?

- Chart hung up or restricted, (ripped chart)
- The unit may be "locked up".

  This can be confirmed by pressing any of the buttons on the keypad. If the unit is "locked up", there will be no response to button presses and the chart recorder may appear to be working, but the readings won't change. Also, the chart will not rotate.

  Remove the power and battery, and then re-power.

Why don't the display and chart match?

- Dip switches are set for a specific range, but using chart for another range, or vice versa.
- Pen(s) not inserted on pen arm(s), all the way. To adjust the pen to match chart, see "Pen Adjust" in the *Need to Know* section of this manual.

Why won't the battery back-up work?

- Is there a good battery in the chart recorder?
- Keep in mind that battery back up lasts approximately 3 days. Temperature, pen movement and chart rotation speed will significantly affect battery life.
- If there was a momentary power outage "brown out", the unit may not have had enough time to recognize this and switch to battery mode. (The chart recorder may lock up or shut off in this situation) This situation may also occur if the unit is plugged into an outlet that shares the circuit with other machinery that has phase motors or compressors that cycle periodically. As these other machines cycle, they momentarily have a high current draw, therefore drawing from the unit.

Why won't the chart recorder respond to changes?

- Is the unit 'locked up'? this can be confirmed by pressing any of the buttons on the keypad, if the unit is 'locked up' there will be no response to button presses and the unit may appear to be working, but the readings won't change, also the chart will not rotate. Remove power and battery, and then re-power.

Why won't the unit power up?

- Remove the battery and power adapter for a minute or two. This will reset the unit. The unit should respond when the adapter is plugged in.

Warranty

Dickson warrants that this line of instruments will be free from defects in material and workmanship under normal use and service for a period of twelve months after delivery.

This warranty does not cover routine calibration and battery replacement.

For *Specifications* and *Technical Support* go to www.DicksonData.com

Factory Service & Returns

Contact Customer Service (630).543.3747 for a *Return Authorization Number* (RA) before returning any instrument. Please have the model and serial numbers, and a PO ready before calling.

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Rev. 08/09