



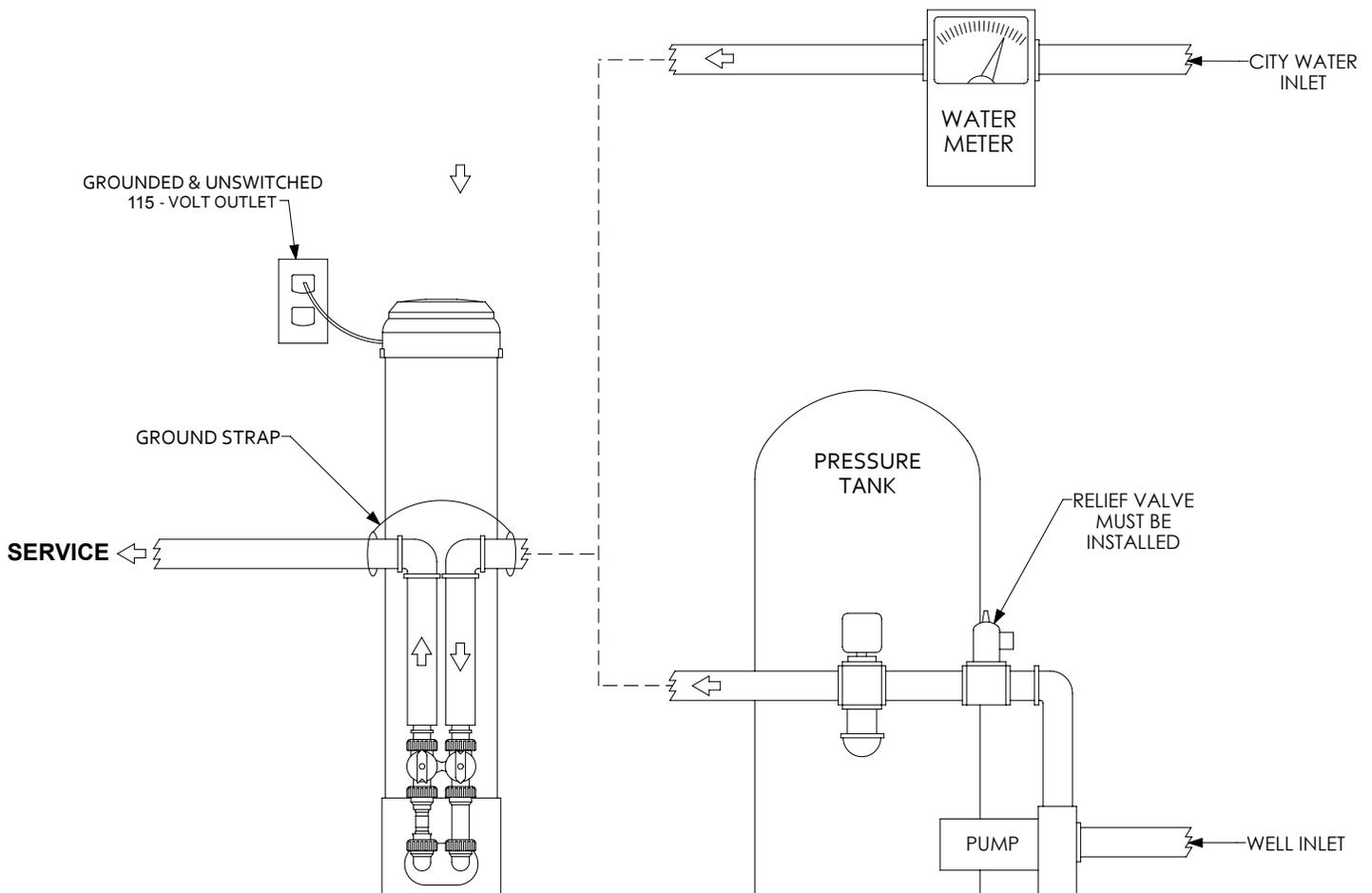
# INSTALLATION AND OPERATION MANUAL

## FOR METERED BYPASS SOLUTIONS

This manual should be kept for future reference. If you have any questions regarding your water filter, contact your local dealer, OEM, or the manufacturer at the following:

Lancaster Water Group | 1340 Manheim Pike, Lancaster, PA 17601 | [lancasterwatergroup.com](http://lancasterwatergroup.com) | 1-800-442-0786

## WHERE TO INSTALL



### NOTES

- Select a proper location for installation. The unit must be installed before the main water line connects to the water heater, near where it connects to your home.
- Please allow 3 feet of open space above the system for replacement cartridges.
- Before installing, turn off the main source of water. Turn on a faucet inside of your home to relieve water pressure by draining it from lines.
- Installing Ground: To maintain an electrical ground in metal plumbing of a home's cold water piping (such as a copper plumbing system), install a ground clamp or jumper wiring.
- Plumbing the filtration system assembly: the inlet and outlet of the filtration housing are 1" threaded MNPT connections.
- No use of extra lubricants, unapproved sealants, and use of tools. Use of tools other than hand tighten only parts voids warranty.
- System to be supplied only with cold water.
- 3-AAA batteries not included.
- Meter assembly preset to 100,000 gallons.

*The system and installation must comply with state and local laws and regulations.*

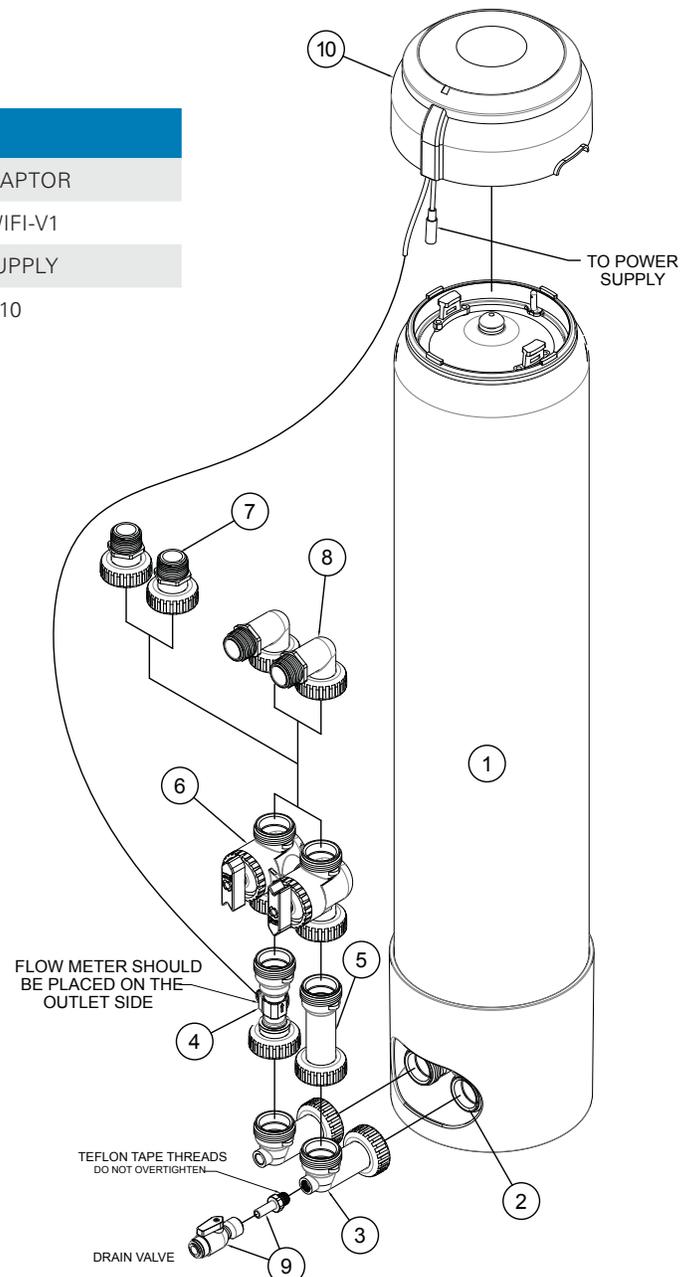
# PARTS DIAGRAM

## SHOWN IN DIAGRAM

PART IDENTIFICATION	PART NUMBER
1. ONE-E3-M Filtration System / Housing	CTA0840BBBKP5-06L00
2. In/Out Head for 1.050" Riser Pipe	CT-IOHMBK-INOUT1050
3. 90 Degree Vertical Elbow With/without Machined Drain Port	CT-ELBOW-90DRAIN
4. Flow Meter Assembly With Cord	CT-METERASSY
5. Meter Spacer Assembly	CT-METERSPACER
6. Bypass Manifold	CT-IOHMBK-BYPASSMANIFOLD-GR
7. 1" MNPT Straight Connector	CT-1MNPTSTRAIGHT
8. 1" MNPT 90 Degree Elbow Connector	CT-1MNPTELBOW
9. 3/8" PEX Drain Valve Kit Assembly With Shut-off	CT-38DRAINVALVEKIT-P
10. PCB Umbrella With Electronics Non-WIFI, Version 1	CT-PCBUMBRELLA-NONWIFI-V1

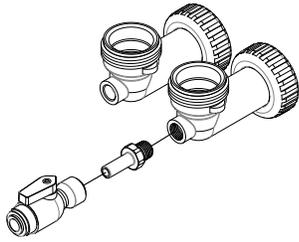
## NOT SHOWN IN DIAGRAM

PART IDENTIFICATION	PART NUMBER
Head and Filter Adapter	CT-IOHMBK-FILTERADAPTOR
PCB Electronics Board Only Non-WIFI, Version 1	CT-PCBBOARD-NONWIFI-V1
ONE-E3-M Power Supply	CT-PIONEERPOWERSUPPLY
ONE-E3-M 10' Power Extender	CT-POWEREXTENDER10



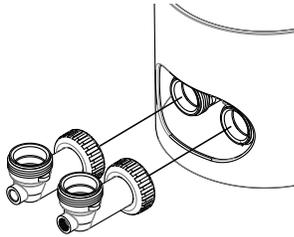
# ASSEMBLY INSTRUCTIONS

## STEP 1: TANK ASSEMBLY (SEE DIAGRAM ON PREVIOUS PAGE)



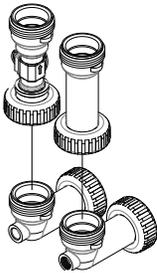
### STEP 1A

Wrap #9 (Drain Valve Assembly) with three clockwise wraps of Teflon® tape. Install/thread #9 (Drain Valve Assembly) into #3. **HAND TIGHTEN ONLY.**



### STEP 1B

Connect #3 to #2 on the bottom of Filter Housing #1. The threaded Drain Valve Assembly should be on the inlet side (right side) at the bottom of the tank. **HAND TIGHTEN ONLY.**



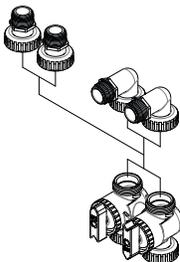
### STEP 1C

Connect #4 to #3; Flow Meter Assembly should be placed on the Outlet Side (left side) at the bottom of the tank. Connect #5 Bypass to #3. **HAND TIGHTEN ONLY.**



### STEP 1D

Connect #6 to #4 and #5. **HAND TIGHTEN ONLY.**



### STEP 1E

Use either part #7 or #8 for connecting your plumbing to the system. **HAND TIGHTEN ONLY.**

### STEP 1F

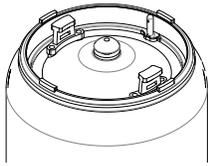
Connect 3/8" PEX plumbing to Drain Valve Assembly #9 (**NOT PROVIDED**).

### STEP 1G

Install 3-AAA batteries in umbrella cap; connect to power supply.

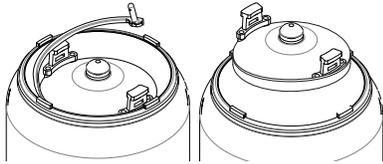
# INSTALLING THE CARTRIDGE

## STEP 2: REMOVING THE TOP CAP



### STEP 2A

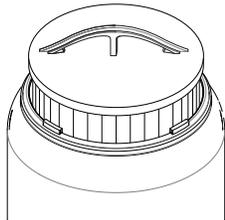
Unseat the snap ring by pushing down on the top cap with both hands. Remove the ring by taking the handle and pulling inward, then upward; the ring should slide completely out.



### STEP 2B

Remove the snap ring on the top of the tank, then remove the top cap from the housing assembly. Lift up on the handles to pull the cap out of the top of the tank.

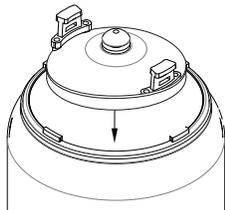
## STEP 3: FILTER PREPARATION



### STEP 3A

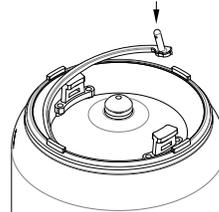
Remove the filter cartridge from the packaging, then place it into the tank with the O-ring down. Align the cartridge to the bottom center opening. *(Note: There's a small opening in the bottom center of the tank to help you align the cartridge.)* Press down on the filter cartridge so the O-ring moves down into place.

## STEP 4: REATTACH THE TOP CAP



### STEP 4A

Place the top cap back into its original location.



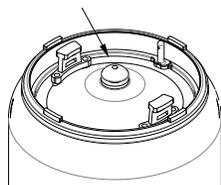
### STEP 4B

Reattach the snap ring, then pull up on the cap to lock in the O-rings.

## STEP 5: FINAL CHECK

### STEP 5A

Allow enough time for glue to dry, if PVC glue fittings are used on initial system install, according to instructions provided by the manufacturer.



### STEP 5B

Slowly turn the water back on. Press down on the red button located in the middle of the cap. This depressurizes the system and relieves it of air. Keep the button pressed down as the water comes back on. **DO NOT** stop pushing the button until all air pressure is released and water comes out of the depressurization button.

### STEP 5C

Release the button, then check the system for leaks. Run water for 10 minutes through the system to make sure it's fully flushed out.

# REPLACING THE CARTRIDGE

1. Turn off the water supply to the system by shutting off the inlet and outlet valves on the bypass.
2. *(Optional)* Install a 3/8" PEX tubing hose to the provided fitting and shut-off that connects to the inlet side of the filtration system. Run the hose to a floor drain or bucket, and use to drain sediment or to aid in filter removal during change-out.
3. Remove umbrella cap on the top of the vessel. Replace the 3-AAA batteries with new batteries. Push and hold the reset button on the metered board for 3 seconds to reset the totalizer. When the totalizer is reset, the LED lights will flash green 3 times to confirm that it is reset.
4. Depressurize the system by pushing down on the red depressurization button on the top cap of the system. Keep the button pushed down until all the air or water pressure is completely released.
5. Push down the top cap with both hands to unseat the retaining ring.
6. Remove the retaining ring by carefully grasping the handle and pulling inward, then upward. The retaining ring should slide completely out of the groove.
7. Remove the top cap of the system by lifting up on the top handles and remove the old filter. *(NOTE that filter adapter (yellow/white in color) may come loose from bottom connection when removing filter, and should be reinstalled into the bottom connection for proper installation of filter.)*
8. Open the fitting and shut-off, and then flush out the bottom of the system.
9. Look down into the tank assembly and locate the small opening centered in the bottom of the tank.
10. Remove packaging from the new filter and place the new cartridge into the tank with the double O-ring facing down.
11. Position the cartridge so that it is aligned with the bottom center opening.
12. Press down on the cartridge so that the double O-ring seal moves into place within the bottom center opening.
13. Reposition the top cap into its original location.
14. Reattach the top tank snap ring, then pull up on the top cap to seat O-rings.
15. *(If Step 2 was completed, do this step; if not, skip to 16.)* Close the fitting and shut-off.
16. Turn the water supply on and open the inlet and outlet valves on the bypass.
17. Relieve the system of air in the tank as the system fills with water by pushing down on the red depressurization button on the top cap of the system. Keep the button pushed down until all the air pressure is completely released, and water comes out of the red depressurization button.
18. Release the red depressurization button.
19. Return the umbrella cap to the top of the system.
20. Check for leaks.
21. Flush the new cartridge per its installation instructions.
22. During flush, confirm green LED lights are flashing with flowing water. If lights are not flashing green, go back to step 3.



UMBRELLA CAP  
AND LED LIGHTS

# LED REPLACEMENT NOTIFICATIONS

## EASY TO UNDERSTAND LED REPLACEMENT NOTIFICATIONS

The Real-time Dynamic LED System monitors water and flow rate and provides a visual color-coded notification to the homeowner, letting them know when to replace their filter.

**GREEN:  
FILTER  
GOOD**



**YELLOW:  
CHANGE  
SOON**

*(10% OF  
FILTER LIFE  
REMAINING)*



**RED:  
CHANGE  
NOW**



## EASY FILTER REPLACEMENTS WITH NO TOOLS REQUIRED

E3-M uses state-of-the-art snap-ring technology to eliminate the need for cumbersome tools. Homeowners can easily replace the filter in their E3-M system by following a few simple steps.

### 1. PRESS THE RED PRESSURE RELIEF VALVE TO UNSEAT THE RING



### 2. REMOVE SNAP RING



### 3. LIFT TOP CAP



### NOTES

- Meter preset at 100,000 gallons; see page 6 for adjusting presets.
- Three AAA batteries not included for battery back-up. Change annually with filter change-out.



To see a video demonstration, scan the QR code above or visit [enpress.com/replacements](http://enpress.com/replacements).

# CONTENTS OF BOX

**Straight Connector**



**90 Degree Elbow Connectors (2)**



**Umbrella Cap**



**Bypass Manifold**



**Flow Meter Assembly**



**Filter Cap**



**Filter Housing**



**Vertical Elbows (2)**



**In/Out Head w/ Filter Adapter**



**Drain Valve Assembly**



**2.5" Inlet Cap**



Contents of the box you receive will vary depending on your order. If you have questions or concerns, please contact Lancaster Water Group at 1.800.442.0786.

# SPECIFICATIONS

ONE E3-M Name and Part Number	Size and Micron Rating	Rated Capacity and Flow Rate	Peak Flow and % Reduction of Lead and PFOA/PFOS	Chlorine/chloramine Taste and Odor Reduction Capacity*	Pressure Drop Spec
<b>ONE E3-M System and PIONEER Pb Filter</b>					
<b>ONE E3-M System</b> 7-CTFS-NSF	8" x 40" / 0.5 Microns	Lead Reduction and PFOA/PFOS 100,000 gallons @ 4.51 GPM (378,541 Liters @ 17.1 lpm)  @ 99.62% lead reduction @ 97.9% PFOA/PFOS reduction	8 GPM (30.2 lpm) @ 99.62% lead reduction @ 97.9% PFOA/PFOS reduction  >88,000 gallons at 8 GPM* (333,116 Liters @ 30.2 lpm)	>300,000 gallons @ 15 GPM (1,135,533 Liters @ 56.8 lpm) with greater than 90% reduction, estimated capacity using 2 ppm of free chlorine  >150,000 gallons @ 8 GPM (567,812 Liters @ 30.3 lpm) with greater than 85% reduction, estimated using 3 ppm of chloramine	9 psid @ 4.51 GPM

Replacement Cartridge Filters Are Listed as PIONEER Pb—0.5 Micron High Capacity Carbon Block // PART NUMBER: CT-NSF-CB

## OTHER SPECIFICATIONS

**Minimum Operating Temperature:** 34 °F / 1 °C

**Maximum Operating Temperature:** 120 °F / 50 °C

**Minimum Operating Pressure:** 20 psig / 1.38 bar

**Maximum Operating Pressure:** 125 psig / 8.6 bar

**Electrical Requirements:** Grounded and unswitched 115 V outlet and 3-AAA Batteries

**Filter Replacement Operating Instructions:** New cartridges must be flushed for a minimum of 10 minutes prior to use. System and installation to comply with state and local laws and regulations. **Do not** use with water that is microbiologically unsafe or unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts. Manufactured from NSF/ANSI standard 61 and California Prop 65 Compliant certified coconut shell carbon and raw materials.

Substance	Influent Challenge Concentration (MG/L)	Maximum Permissible Product Water Concentration (MG/L)	NSF/ANSI Standard
Lead	0.15 +/- 10%	0.005	53
Cyst	Minimum 50,000/L	99.95%	53
PFOA/PFOS	1.5 +/- 10%	0.07	53

# WARNINGS

If this or any other system is installed in a metal (conductive) plumbing system, i.e. copper or galvanized metal, the plastic components of the system will interrupt the continuity of the plumbing system. As a result any errant electricity from improperly grounded appliances downstream or potential galvanic activity in the plumbing system can no longer ground through contiguous metal plumbing. Some homes may have been built in accordance with building codes, which actually encouraged the grounding of electrical appliances through the plumbing system. Consequently, the installation of a bypass consisting of the same material as the existing plumbing, or a grounded "jumper wire" bridging the equipment and reestablishing the contiguous conductive nature of the plumbing system must be installed prior to your systems use.

**DO NOT USE** extra lubricants, unapproved sealants and tools to tighten hand tightened only parts. Use of tools other than hand tighten only parts voids warranty. Testing was performed under standard laboratory conditions; actual performance may vary. Flush the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

# PERFORMANCE

This system conforms to NSF/ANSI 53 for the specific performance claims verified and substantiated by test data. Performance claims are based on independent lab results and manufacturer's internal test data\*. Actual performance is dependent on influent water quality, flow rates, system design and applications. Your results may vary. Performance claims are based on a complete system, including a filter, housing, and connection to a pressurized water source. This filter must be operated according to the system's specifications in order to deliver the claimed performance. It is essential to follow operational, maintenance, and filter replacement requirements, as directed for each application, for this filter and system to perform correctly. Read the Manufacturer's Performance Data Sheet accompanying the system and change the filter as suggested. The contaminants or other substances removed or reduced by this water filter are not necessarily in all users' water.

\*Claims are not performance tested by IAPMO or NSF. Performance claims are based on independent laboratory and manufacturer's internal test data. Actual performance is dependent on influent water quality, flow rates, system design and application. Results may vary.

# WATER TOTALIZER NOTIFIER

The overall purpose of this device is to receive a water meter input and totalize the amount of water that passes through the meter. When there is flow through the water meter, the lights flash at a rate that increases with the water flow rate. When the total amount of water flowed reaches within 10% of a pre-selected amount the totalizer turns yellow. When the total amount reaches the pre-selected amount the totalizer turns red.

## POWER

This unit is to be powered using +12VDC. The power input is a wire tail with a 2.5 mm center positive barrel jack.

The totalizer has a battery backup. The battery backup uses 3 AAA size batteries. The battery holder is a part of the PCB assembly and can be accessed by removing the lid to the cartridge filter. Battery life will vary based on water flow when running on battery mode and type of batteries used. With high continuous flow, the batteries are expected to last approximately less than 7 days. With no flow the batteries are expected to last approximately 6 months.

## OPERATION

### Water Meter

The totalizer keeps track of the gallons using a water meter. The water meter is a turbine style meter with a magnetic pickup that sends a pulse to the electronics for every revolution of the meter turbine. The meter turbine is removable for inspection and cleaning. Make sure water is bypassed or turned off when removing the meter for maintenance. The meter has a three pin plug that connects to the electronic board.

### LEDs

Normal colors for the LEDs are green, yellow and red, which are dependent on the totalizer value.

- **Green:** 0–90% of the programmed totalizer maximum
- **Yellow:** 90–100% of the programmed totalizer maximum
- **Red:** Greater than 100% of the programmed totalizer maximum

If there is flow the LEDs should alternately turn off in the following pattern: 1-2-3-2 (repeat). The frequency that they turn off is linearly correspondent to the flow rate being received from the water meter. For every 1 revolution from the meter, the LED pattern should be incremented to turn off the next LED. If there are no pulse edges for 2 seconds, all the LEDs will turn on solid.

If the battery is determined to be low, the middle LED (#2) will turn blue. The battery is checked only once an hour to minimize the battery drain from checking the voltage.

### Pushbutton

The pushbutton allows for the totalizer to be reset as well as the maximum value to be programmed.

To reset the totalizer, the user should flip the umbrella cover over to see the logo/sticker. While looking at the top, the user should press and hold the button on the electronics board for three seconds. When the totalizer is reset, the LEDs should flash green three times to confirm that it is reset. "GREEN" colored LEDs (LED1) represent 100,000s and "BLUE" colored LEDs (LED2) represent 10,000s.

The push button allows the unit to be programmed for the total gallons limit. It can be programmed between the range of 10,000 gals.–990,000 gals.

To program the maximum value using the push button: press and hold the button while powering up the board (either battery power or 12VDC power). Once the board is powered LED 1 (right LED) will represent 100,000's place and should be green. LED 2 (middle LED) will represent 10,000's place and should be blue. Both LEDs will be flashing at 1 Hz, the number of flashes that corresponds to the current setting for that digit placeholder. To indicate the start of the flash sequence both LEDs should flash white for 1 second, then flash the appropriate number of times. Once both are done wait 2 seconds and repeat. Refer to the figures below for an example.

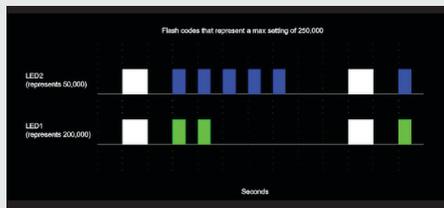


FIGURE 1

To change the maximum gallons setting, press and hold the button for 1 second. LED 1 should turn solid green, LED 2 should turn off and LED 3 should flash green the number of times that corresponds to the current setting. Pressing the button for less than 1 second would increment the value, rolling over from 9 to 0. Figure 2 is an example of the LEDs in this mode.

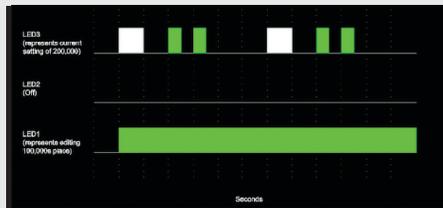


FIGURE 2

To save the setting for the 100,000s place and begin editing the 10,000s place press and hold the button for greater than 1 second. LED 1 should turn off, LED 2 should turn solid blue, and LED 3 should flash blue the number of times that corresponds to the current setting. Again, pressing the button for less than 1 second would increment the value, rolling over from 9 to 0. Figure 3 is an example of the LEDs in this mode.

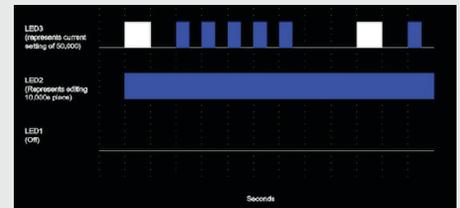


FIGURE 3

To save the setting for the 10,000s place, exit editing mode and return to the mode in Figure 1 press and hold the button for greater than 1 second. This will also save the current setting into internal EEPROM memory.

### Power Monitoring and Battery Mode

The board monitors the 12Vdc power and the battery power. If there is a power failure and no batteries are installed, the current totalizer value will be saved to non-volatile memory. When power is resumed, the totalizer count will resume from when it had previously lost power.

The LEDs should shut off during battery mode. If the totalizer is to the yellow or red state or if the battery voltage gets low, the right LED will flash on in the appropriate colors for 0.125 seconds every 30 seconds.



