



For all CGR Models

1. Enter to the **User Setup Screen**, from the **Main Screen**, hold down the <SELECT knob> for 3 seconds. Note, if you are in a Normalized Mode, you must first exit from that mode to enter the **User Setup Screen**.

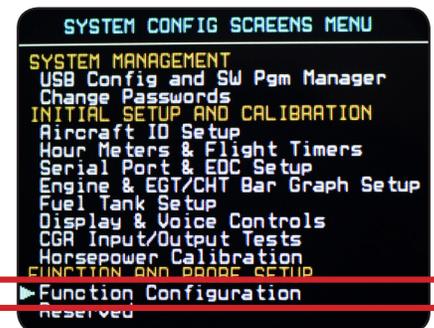


2. Navigate to **System Config Screens Menu** option, push the <SELECT knob>.

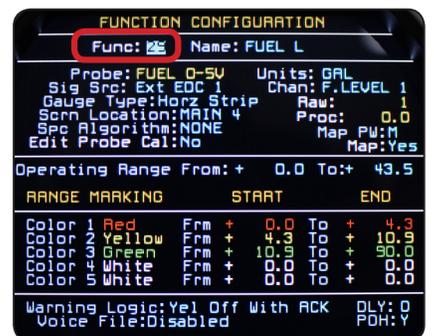


3. Enter your Maintenance Password (Default password: 00200), press the <S Button> on the CGR to continue.

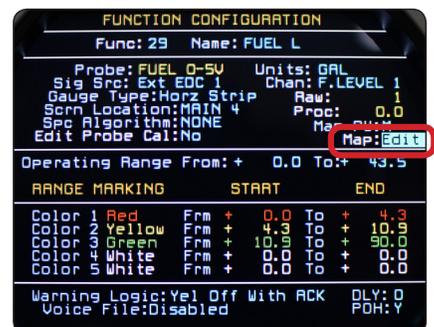
4. Under **FUNCTION AND PROBE SETUP**, navigate to 'Function Configuration', push the <SELECT knob>.



5. Navigate to 'Func:', push the <SELECT knob>, change the function number to be the function of the desired fuel tank level to calibrate, push the <SELECT knob>. Be sure to choose the function that represents your fuel tank and NOT the fuel tank annunciator (ANN).



6. Navigate to 'Map', push the <SELECT knob>, change Map setting to 'Edit' then push the <SELECT knob>



7. Continue calibration by following the instructions on the second page of this document.

CGR Fuel Level Calibration

For all CGR Models

The instructions below are the high level steps for calibrating your fuel tank(s). For more detail please reference the **Fuel Tank Calibration** section in your **Operating Instructions**. Read the “**Important Notice**” in the CGR-30 **Operating Instructions**.

An aircraft’s Fuel Tank can be calibrated using a fuel truck. Fuel will be added to the tank in set amounts. Normally it only takes about 20 seconds to allow the “Current Cnts” to stabilize and set a map point. You should practice setting mapped points before calling for the fuel truck.

The steps below are for calibrating the fuel level for a Fuel Tank, but any function can be mapped.

The calibration map is built as follows:

1. Empty the fuel tank.
2. Put the aircraft in level flight attitude and add just the unusable fuel quantity as indicated in your POH. Note whether the Current Cnts increases or decreases as fuel is added.
3. Wait for the ‘Current Cnts’ field to stabilize and use this as your first calibration point. The ‘Cal Filter’ can be adjusted to stabilize jumpy readings.
4. If the Current Cnts increase as you add fuel, start with row #1 and work down the screen. If the Current Cnts decrease as you add fuel, start with row #5 and work up the screen.
5. In row #1 (or 5 as necessary), set Value to 0. Use the ‘Use Current Cnts’ field to assign the Current Cnts to the row #1 Counts field. Your empty point is now calibrated to the probe.
6. Fill the tank to 1/4 full. Set row #2 (or 4) Value to the fuel quantity used (in gallons or other volume units). Again allow the Current Cnts to stabilize after fueling and use the ‘Use Current Cnts’ field to assign the Current Cnts to the row #2 Counts field. Your 1/4 point is now calibrated to the probe.
7. Repeat step 6 for a 1/2 tank calibration point, a 3/4 tank calibration point, and finally a Full tank calibration point, using rows in their ordered sequence as you fill.
8. For a stable Full fuel level reading, manually adjust the Full tank Counts by 20% of the difference between 3/4 tank and Full. If your Counts increase with fuel, subtract this 20% calculation from your detected Full Counts and use this new value as your Full Counts. If Counts decrease with added fuel, add this 20% calculation back to your detected Full Counts and use this new value as your Full Counts.
9. This will fill row 5 (or 1) and complete your calibration for this fuel tank. Take a photograph of this screen or record these values outside of the instrument in case this process needs to be revisited later on.
10. When exiting the Function Configuration page, be sure to follow the prompt to save all changes you made.

Important Information (Must Read)

- Do not leave any gaps in the rows between the calibration points and do not leave row 1 blank.
- The “Counts” column should increase 10 counts or more for each gallon of fuel added to the fuel tank.
- Some fuel sensor floats reach the top of the tank before the tank is Full. If this is the case, the CGR-30 will display a Full fuel level. The Fuel Tank reading on the CGR-30 will hang at Full until fuel in the tank drops into the measurable range. This is a common issue with many aircraft fuel systems.
- The CGR-30 can provide accurate fuel level readings for straight and level flight when the fuel level is in the measurable range. By calibrating the CGR-30 to the fuel tank, nonlinearity in the tank’s shape and nonlinearity in the Fuel Level Sensor will be compensated for. The CGR-30 can not correct for inconsistent or non-repeatable readings from a Resistive Float Sender or the non-measurable range of the tank. Unfortunately, many Resistive Float Senders (and in some cases even new units) exhibit non-repeatable problems. If you find inconsistent or inaccurate fuel level readings (due to a defective Resistive Float Sender), you must have the sensor replaced or repaired. E.I. manufactures a P-300M Magnetic Float Sensor that can replace a resistive float sender. See the E.I. price sheet for further information.
- E.I. Magnetic Float Senders – These senders are accurate and repeatable. They have one moving part (a magnet) and are not affected by oxidization or corrosion. This sender can replace a resistive float sender only when used with the CGR-30 system. This sender can not fix a non-measurable range issue.