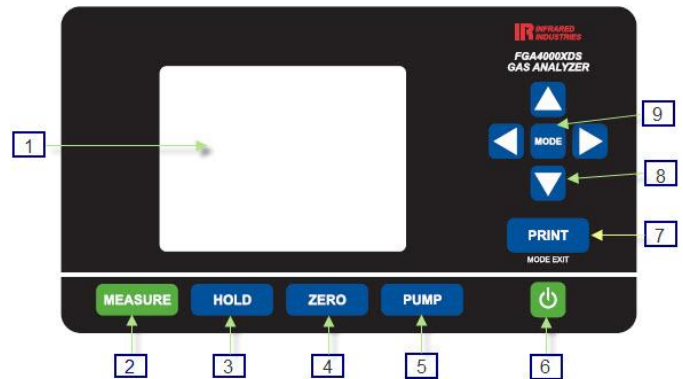


For a complete description of all the features of FGA4500 Gas Analyzer, please refer to the Operator's Manual.

Getting Familiar With Your FGA4500 Gas Analyzer

Identifying Parts

- [1] LCD Screen
- [2] **Measure Button.** Press to begin measure mode. Pump is turned on and Zero function is locked out automatically in measure mode.
- [3] **Hold Button.** Freezes all six display parameters in Measure mode only. Blinks when in Hold.
- [4] **Zero Button.** Zeros the analyzer for approximately 1 minute. Pump is automatically controlled during zero.
- [5] **Pump Button.** Allows manual on/off operation of the pump. Can be used to purge gas from the analyzer.
- [6] **Power Button.** Push momentarily to turn on the analyzer. Push and hold to turn off the analyzer.
- [7] **Print / Mode Exit button.** In Measure or standby mode, the button will start the optional built-in or external printer. When in mode selection process, initiated by Mode button [18], Print / Mode exit button will terminate the mode selection and go back to standby mode.
- [8] **Arrow buttons x4.** Used to navigate when in Mode selection operation.



- [9] **Mode Button.** Enters the mode selection operation where different aspects of the analyzer can be set up or changed. Refer to the Mode Selection section for more detail.

Initial Power-up

After plugging in the FGA4500 Gas Analyzer, press the **Power button [6]** to turn on the unit. The **LCD screen [1]** will display the logo and the analyzer will beep six times. After 10 seconds a green progress bar will display at the bottom of the LCD screen while the analyzer warms up. The warm-up times may vary depending on analyzer's internal temperature. Do not attempt to flow any gases into the analyzer through the **CAL** port. This will severely affect the accuracy of the analyzer. When the warm-up is done the analyzer will go into Standby Mode.

Measuring Gases

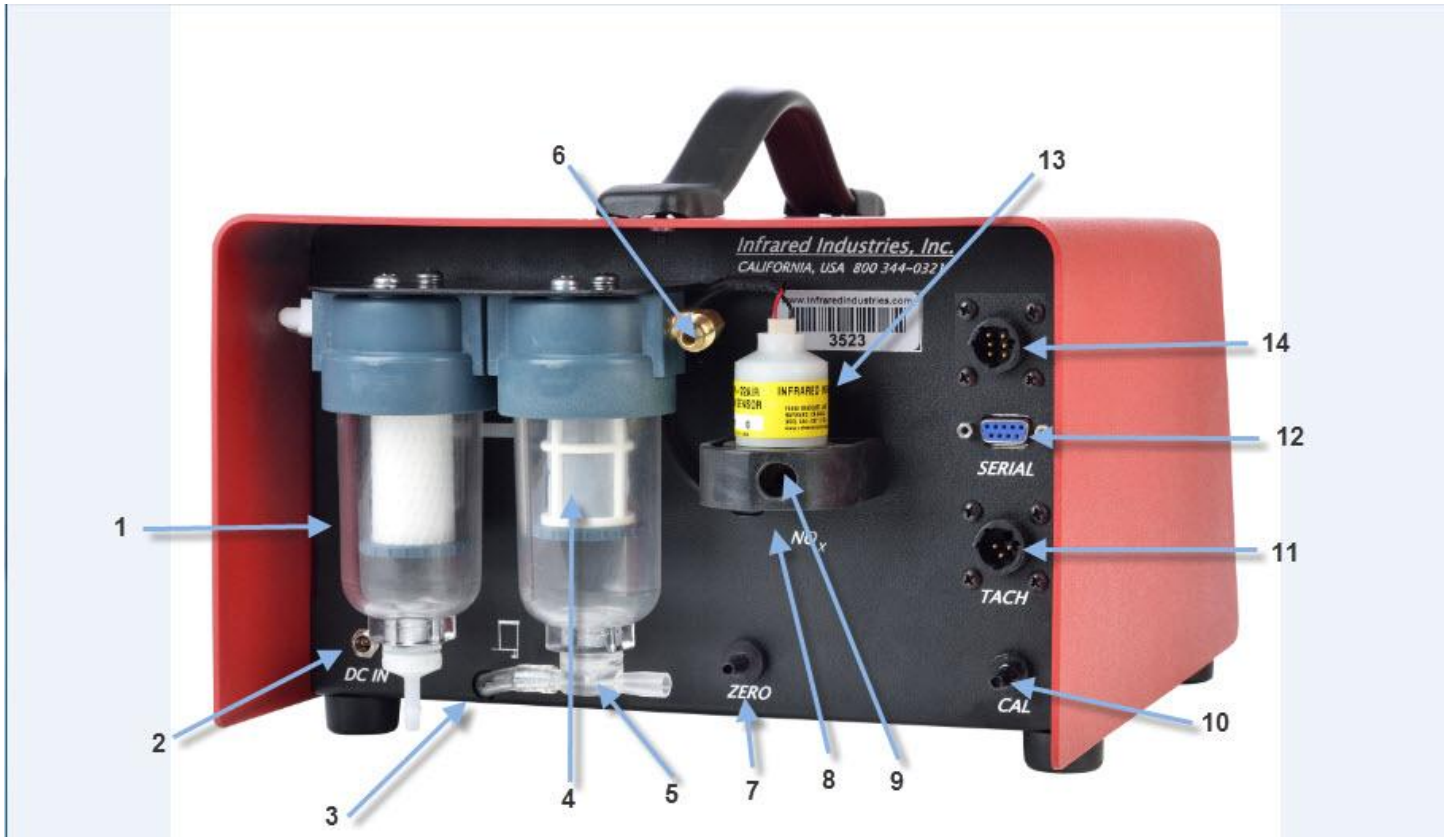
Once the analyzer is warmed up, you can begin measuring gas concentrations by connecting the sampling hose/probe assembly to the inlet port located on the filter in the back of the analyzer. Insert sampling probe to exhaust pipe. Press the **Measure button [2]** to begin sampling of the gases. Allow a few seconds for the gases to reach the analyzer. While in measure mode, you can hold or freeze the display values by pressing the **Hold button [3]**. During Measurement Mode you can select to run a Grams Per Mile (GPM) or Grams Per Kilometer (GPKM) test. You may also select to measure a Dual Exhaust and/or record the measurement data. All these features displayed along the bottom of the LCD screen and are selectable using the left and right arrow buttons followed by the MODE button. To exit Measurement Mode push the **Measure button [2]**.

Selecting Configuration Menu Items

While in Standby Mode you can enter the Configuration Menu by pressing the **Mode button [9]**. A list of configuration items will appear. Use the up and down arrow buttons to move between the different items. Not all items fit on the LCD screen. By pushing the up or down arrow key when at the first or last item listed on the screen respectively the LCD screen will refresh with additional items. To select an item press the Mode button after you have used the arrow keys to highlight the item. An item is highlighted when a blue square appears around the item.

Field Calibration

It is occasionally necessary to field calibrate the analyzer using BAR certified gas mixtures. To begin calibrating the analyzer start by pressing the **Mode button [9]** while in the Standby Mode and then select **Calibration**. The analyzer will enter into an automated purge and zero sequence. Wait until you see **Enter Tag Values. For HC; enter the actual propane tag value**. The Analyzer will automatically use the correct PEF ratio. Use the Up or Down arrow keys to increment or decrement each digit and Left or Right arrows to move to individual digits. Press the **Mode button [9]** to advance to the next tag value. Enter all zeros if do not wish to calibrate a particular gas. We recommend always entering all zeros in the O2 window which will allow it to self-calibrate. By pressing the Mode button after entering the last tag value, you will see the message **Turn Cal Gas On**. Make sure the Calibration Gas is connected to the **CAL** port in the back of the unit. The CAL port is located on the bottom right side of the back panel. Turn on the Calibration gas and press the Mode button. You will see the gas concentrations climbing upwards while the O2 value drops on the display. Wait until all the values have stabilized. This may take a few seconds. When the values are stable; press the **Mode button [9]**. Do not disturb the analyzer or the gas flow to the analyzer at this point. When the CAL indicator turns off, you will see the message **Turn Calibration Gas Off**. You can now turn off the calibration gas and disconnect the hose from the CAL port and press the Mode key to continue. Within a few minutes the analyzer will purge the calibration gas out of the analyzer and zero itself. The field calibration will at this time be complete.



[1] High Efficiency Filter Element

[2] 12 Volt DC Power Connector

[3] Secondary Filter Drain

[4] Water Separator Screen

[5] Aspirator/Water Purge Port

[6] Sample Hose Connector

[7] Zero Port

[8] NOx Cell (5 gas only)

[9] Sample Gas Exhaust Port

[10] Calibration Port

[11] TACH Connector

[12] Serial Communication Port

[13] O2 Cell

[14] DAC Connector