



## **EMISSION Five Gas Analyzer Quick Start Guide**

For a complete description of all the features of the Emission Five Gas Analyzer, please refer to the operator's manual.

### **Power-up**

**Power Supply Options:** 110V - Use AC adapter to plug into 110 power supply.  
 12V - Use the cigarette lighter adapter or battery clips to connect to the vehicle's battery

**Internal Battery:** Allows the technician to move the Emission without having to wait for the instrument to restart. The battery does not supply enough power to run the sample pump in "Measure". The Emission must be connected to an external power supply to sample gas.

**Initial Power up:** When the Emission has been connected to an appropriate power supply press the on button to start the unit. The Emission will display random lights briefly then in the first 5 seconds all the display LEDs will light in order to test function. The front panel will then display: "Please Stand By" while the analyzer is starting up. The Emission will run the zero function during the startup process, the zero and pump lights will turn on. The display will come up when the startup protocol is finished, approximately 5 minutes. After an additional 5 minutes the Emission will zero once more automatically. Now the instrument will provide accurate test results.

### **Measuring Gases**

Once the Emission 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 Emission. Insert sampling probe to a gas source or an exhaust stream. Press the Measure button [6] to begin sampling of the gases. Allow a few seconds for the gases to reach the Emission. While in measure mode, you can hold or freeze the display values by pressing the Hold button [8].

Before testing tailpipe emission levels, maintain engine speed at about 2000 RPM for 30 seconds, followed by a 30-second normalization period at idle speed before reading gas values. Always zero the emission before each test.

### **Selecting Different Parameters to Display**

The bottom two display windows are configurable to display any two of four parameters (NOX and kRPM are options and may not appear as valid choices in your analyzer). Press Mode button [17] once to select what parameter is displayed on the bottom left window. Use the Up and Down arrow keys to select one of the identifiers [3]. Press Mode button [17] again to select what parameter is displayed on bottom right window. Press Print / Mode Exit button [15] to return to stand by operation.

### **Shut Down and Storage**

When the test is complete remove the probe from the tailpipe and continue to run the Emission on "Measure" for an additional 3 to 5 minutes. This will allow the Emission to purge the water vapor that will condense out once the Emission has cooled. After long tests, it may also be beneficial to disconnect the sample hose from the back of the Emission and use compressed air to purge vapor and water from the hose.

After vapor has been purged, press the measure button to stop the measure function.

If the Emission will be used to test another vehical press the zero button to zero the analyzer. The Emission is now ready for the next test.

If testing is complete press the on/off button and hold for 2 seconds to power down the Emission.

The Emission should be stored plugged into the power supply. This will provide for the best life of the lead-acid battery.

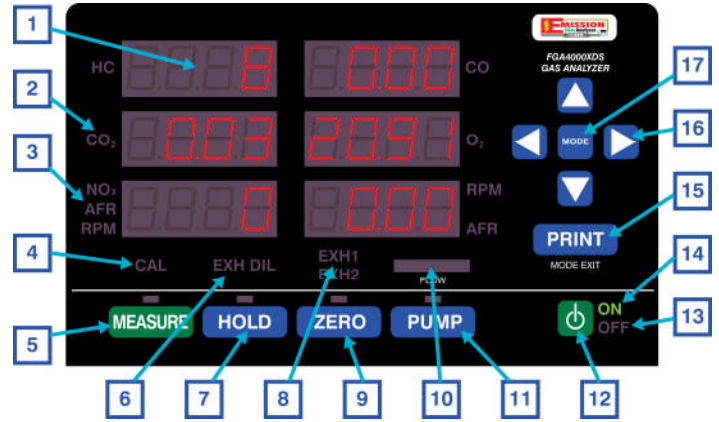
### **LED Character Reference**

The following table demonstrates how the English alphabet will be displayed on the Emission 5 Gas Analyzer screen.

A	b	c	d	E	F	G	h	I	J	K	L	M	n	o	P	q	r	S	t	U	v	W	X	Y	Z
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

## Identifying Parts

1. 4-Digit LED window x6.
2. Fixed Window Identifier x4.
3. User-Selectable Window Identifier x2. Calibration Indicator. On in Calibration Mode, Blink when performing Calibration Calculation with Cal gas present.
4. Button Identifiers x4. On or Blink when button is selected, off when deselected.
5. Measure Button. Press to begin measure mode. Pump is turned on automatically in measure mode.
6. Exhaust Dilution indicator. On when Dilution Mode is selected, Blink when Dilution has occurred.
7. Hold Button. Freezes all six-display parameters in Measure mode only. Blinks when in Hold.
8. Dual Exhaust Mode. Indicates which exhaust pipe the sampling probe should be in.
9. Zero Button. Zeros the Emission for approx. 1 minute. Pump is automatically controlled during zero.
10. Flow Indicator. During pump's operation, all bars will be on. In case of a flow restriction in the gas sampling system, the bars will turn off starting from right side indicating flow restriction. In case of total restriction, the first segment will blink indicating no flow.
11. Pump Button. Allows manual on/off operation of the pump. Can be used to purge gas from the Emission.
12. Power Button. Push momentarily to turn on the Emission. **Push & Hold for 2 seconds to turn off the Emission.**
13. OFF indicator. Indicates the Emission is plugged into a power source but it is off.
14. ON indicator. Indicates the Emission is on and operational.
15. 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.
16. Arrow buttons x4. Used to navigate when in Mode selection operation.
17. Mode Button. Enters the mode selection operation where different aspects of the Emission can be set up or changed. Refer to the Mode Selection section for more detail



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|-------------------------------|-------------------------------|
| 1. Paper Filter Element       | 8. NO <sub>x</sub> Cell       |
| 2. 12 Volt DC Power Connector | 9. Sample Gas Exhaust Port    |
| 3. Secondary Filter Drain     | 10. Calibration Port          |
| 4. Water Separator Screen     | 11. TACH Connector            |
| 5. Aspirator/Water Purge Port | 12. Serial Communication Port |
| 6. Sample Hose Connector      | 13. O <sub>2</sub> Cell       |
| 7. Zero Port                  |                               |