

# Ultimate Bar Graph Analyzer (UBG-16) Quick Reference Guide

0506991

The Following Blinks  
when a Limit is Violated:

"H" = High Limit

"L" = Low Limit

"D" = EGT Differential Limit

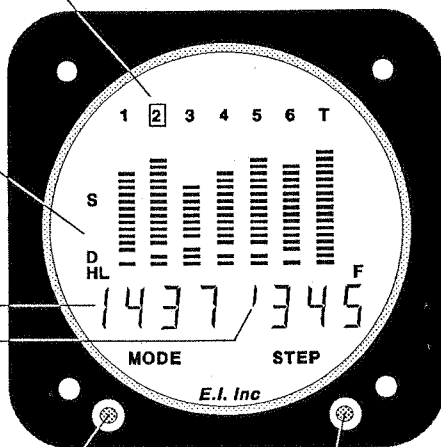
"S" = Shock Cooling Limit

Box indicates which cylinder is being  
displayed digitally (i.e., cylinder #2).

Left Digital Display = EGT

Right Digital Display = CHT

A blinking High Bar indicates this  
temperature has violated the High  
Limit. A blinking Low Bar would  
indicate the Low Limit has been  
violated.



Mode Switch:

Step Switch:

Push Right - Change Operating Modes  
(Normal, Normalized and Lean).

Push Right or Left - Selects  
the temperature or function  
to be displayed digitally.

Push Left - See Programming Limits.

## Normal Operating Mode:

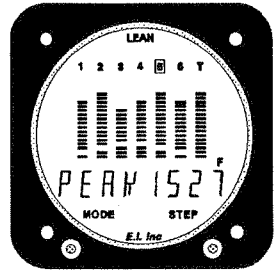
**Columns of Bars:** EGTs are represented by the height of the lit bars. CHTs are represented by the blanked bars. The 7th column ("T") may be used to display EGT and CHT, TIT or Oil Temperature, or it may be turned OFF.

**Digital Display:** Use the Step Switch to display a specific temperature or function.

For OAT, toggle between degrees F and C by pushing the Mode Switch to the left.

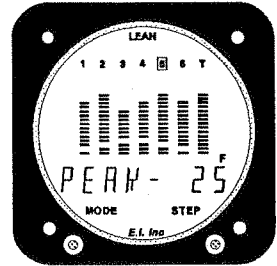
## Lean Operating Mode:

Lean slowly. The slower you lean, the more accurate the results. When any cylinder reaches its peak (hottest) EGT, the digital display will blink the word "PEAK" and the hottest (Peak) EGT reached will be displayed. Push the Step Switch to stop the blinking. As each cylinder begins to run on the lean side of peak, the cylinder number above the appropriate column of bars will blink.



To display the Temperature Below Peak EGT (example: "PEAK -25), push the Mode Switch to the left.

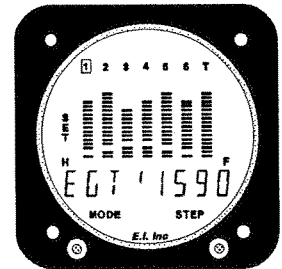
If you continue to lean gradually past peak and a False Peak was found, the UBG will switch back to the leaning mode ("LEAN" will show in the display).



## Programming High and Low Limits:

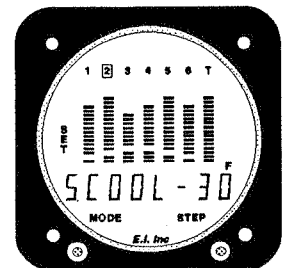
Select the temperature or function to be programmed. When operating in the Normal Mode only, push and hold the Mode Switch to the left until "PROGRAM" appears in the digital display. If "SET H" appears on the left side of the UBG display, you are setting the High Limit and if "SET L" appears, you are setting the Low Limit.

Use the Mode Switch to select the blinking digit and change functions. Use the Step Switch to increase/decrease the blinking digit. To exit this programming mode, push and hold the Mode Switch to the left until the word "END" appears. **Note:** Setting a limit to "000" will disable the limit and any alarms.



## Programming the Shock Cooling Limit and Cylinder:

When operating in the Normal Mode only, press and hold the mode switch to the left until the word "PROGRAM" appears in the digital display. If "S.COOL" appears, you are setting the Shock Cooling Limit and if "CH" appears, you are setting the cylinder to be monitored.



Shock Cooling Rate (S.COOL) is displayed in degrees F per minute for the indicated channel inside the lit box.

The Peak EGT (PEAK) achieved during the last leaning session may be displayed. The channel inside the lit box indicates the cylinder that peaked first.

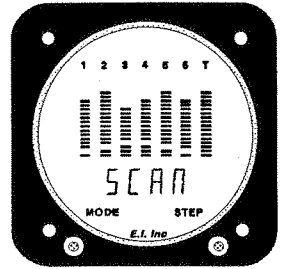
The temperature difference (DIFF) between the hottest and coldest EGT may be displayed.

### Scanning Through the Channels Automatically:

To scan the digital display through various temperatures and/or functions, push and hold the step switch to the right until the word "SCAN" appears. The Scan Mode can only be activated in the **Normal** or **Normalized Operating Mode**. To cancel the Scan operation, push the step switch to the right or left.

Entering the Scan Mode activates all alarms and the scan will stop on any temperature or function with an alarm.

When operating in the Scan Mode only, program the Scan Rate by pushing and holding the Mode Switch to the left until the word "PROGRAM" appears. Use the Step Switch to change the Scan Rate. To exit this programming mode, push and hold the Mode Switch to the left until the word "END" appears.



### Canceling all Active Alarms for 10 Minutes:

Push and hold the Step Switch to the left until the word "CANCEL" appears in the digital display.

### Normalized Operating Mode:

When operating in the Normalized Mode only, the EGT bars may be normalized on the UBG display by pushing and holding the Mode Switch to the left until "PROGRAM" appears in the digital display. Use the Step Switch to change the "N" to a "Y". To exit this programming mode, push and hold the Mode Switch to the left until the word "END" appears.

**Note:** The TIT column will not be affected.

Use the Mode Switch to select the blinking digit and change functions. Use the Step Switch to increase/decrease the blinking digit. To exit this programming mode, push and hold the Mode Switch to the left until the word "END" appears.

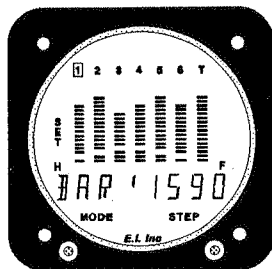
**Note:** Setting a limit to "000" will disable the limit and any alarms.

### Programming the Range of the EGT Columns of Bars:

Program the temperature at which the Upper and Lower Bars come on (Trip Points) to get the height of the EGT bars low in their columns during a climb, and high in their columns at peak EGT in cruise.

When operating in the Normal Mode only and viewing cylinder #1, push and hold the Mode Switch to the left until "PROGRAM" appears in the digital display. Push the Mode Switch to the right several times until you see "BAR" in the left portion of digital display. If "SET H" appears on the left side of the UBG display, you are setting the Upper Bar Trip Point and if "SET L" appears, you are setting the Lower Bar Trip Point.

Use the Mode Switch to select the blinking digit and change functions. Use the Step Switch to increase/decrease the blinking digit. To exit this programming mode, push and hold the Mode Switch to the left until the word "END" appears.



### Programming the Range of the 7th Column of Bars:

Do the same as above only when viewing the temperature on the 7th column ("T") of bars.