Electronics International Inc.

(D-Sub)

UBG-16x

Operating Instructions

OI 0506991

Rev C: 10/14/26



You must read this manual before installing or operating the instrument. This manual contains warranty and other information that may affect your decision to install this product and/or the safety of your aircraft.

S/N:_____

Electronics International Inc.

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1. Important Notice: MUST READ!

If you think it is not important to read this manual, you are wrong! This manual contains important installation information that may affect the safety of your aircraft, delay your installation or affect the operation of your instrument. You MUST read this manual prior to installing your instrument. Any deviation from these installation instructions is the sole responsibility of the installer/pilot and may render the STC invalid.

The pilot must understand the operation and limitations of this product before flying the aircraft. Do not allow anyone to operate the aircraft that does not know how to properly interpret and operate this product. Keep the Operating Manual in the aircraft at all times. If you do not thoroughly understand the operation of this product, contact a certified flight instructor for training.

This Instrument only displays the parameters for the function(s) being monitored. The pilot is responsible for interpreting the data and determining if an engine or aircraft system anomaly exits. When using this instrument the pilot's diagnostic ability is limited to his/her interpretation of the displayed data and their observation skills.

If after reading this manual you do not have the knowledge to interpret the displayed data to operate the aircraft safely or to detect engine and/or aircraft system problems, contact a knowledgeable instructor for training.

The ability of this product to detect an engine or aircraft system anomaly depends directly on the anomaly affects the specific function(s) being monitored (i.e.: if an engine fire does not affect the engine RPM, the RPM reading will not change).

If you detect a problem using this instrument, it is your responsibility to take appropriate action to ensure flight safety. Practice simulating problems to build your skills and to understand the relationships between problems and their effects on the displayed data. To ensure you are taking appropriate action contact a certified flight instructor for training.

This manual does not make any recommendations as to specific exhaust gas temperature(s) at which to lean your engine. Check the airframe and/or engine manufacturer's recommendations to properly lean your engine. It is the pilot's responsibility to lean the engine properly.

It is posible for any instrument to fail thereby displaying inaccurate high, low or jumpy readings. Therefore, you must be able to recognize an instrument failure and you must be proficient in operating your aircraft safely in spite of an instrument failure. If you do not have this knowledge, contact the FAA or a certified flight instructor for training prior to flying the aircraft with this instrument. Electronics International Inc. warrants this instrument and system components to be free from defects in materials and workmanship for a period of one year from the user invoice date. Electronics International Inc. will repair or replace any item under the terms of this Warranty provided the item is returned to the factory prepaid.

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2. Warranty / Agreement

1. This Warranty/Agreement does not cover labor costs associated with installation, removal, assembly or repair. Electronics International Inc retains the sole right to determine the cause of any product failure and the products eligibility for warranty coverage.

2. This warranty does not apply to any product that has been:
    * Altered or repaired by anyone other than Electronics International Inc.
    * Subjected to misuse, accident, incorrect wiring or negligence.
    * Improperly assembled or installed.

3. This Warranty/Agreement does not extend to any machine, vehicle, boat, aircraft or any other device to which the Electronics International Inc. product may be connected, attached, interconnected or used in conjunction with in any way.

4. The obligation assumed by Electronics International Inc. under this warranty is limited to repair, replacement or refund of the product, at the sole discretion of Electronics International Inc.

5. Electronics International Inc. is not liable for expenses incurred by the customer or installer due to factory updates, modifications, improvements, upgrades, changes, or any other alterations to the product that may affect the form, fit, function or operation of the product.

6. Personal injury or property damage due to misinterpretation or lack of understanding of this product is solely the pilot's responsibility. The pilot must understand all aspects of the operation of this product before flying the aircraft. If he/she does not, they agree to seek training from a certified instructor. Do not allow anyone to operate the aircraft unless they fully understand how to use this instrument.

7. Electronics International Inc. is not responsible for shipping charges or damages incurred under this Warranty.

8. No representative is authorized to assume any other liability or obligation on behalf for Electronics International Inc. other than what is expressly stated in this warranty.

9. You must read the entire installation and operating instructions. If you do not agree to and accept the terms of this warranty/agreement and the responsibilities set forth in this manual, DO NOT install this product. Contact E.I. for a refund.

This Warranty is made only to the original user. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OR OBLIGATIONS: EXPRESS OR IMPLIED. MANUFACTURER EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PURCHASER AGREES THAT IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS OR LOSS OF USE OR OTHER ECONOMIC LOSS. EXCEPT AS EXPRESSLY PROVIDED HEREIN, MANUFACTURER DISCLAIMS ALL OTHER LIABILITY TO PURCHASER OR ANY OTHER PERSON IN CONNECTION WITH THE USE OR PERFORMANCE OF MANUFACTURER'S PRODUCTS, INCLUDING SPECIFICALLY LIABILITY IN TORT.

3. Operating Instructions

Congratulations on purchasing the Ultimate Bar Graph Engine Analyzer (UBG), one of the most sophisticated diagnostic tools available in general aviation. You can master the UBG's basic functions within a few minutes of hands-on operation. Although the UBG is simple to operate, its capabilities are numerous.

The UBG is shipped from the factory with all of the programmed limits turned off. This allows you to learn the basic operation of the UBG without having to deal with alarms or programming limits. As you become comfortable operating the UBG, you can begin using more of its features.

3.1 Power-up Blue Screen:

If the UBG is set up to display Fuel Flow, you may get a blue screen on power-up. This screen is provided to remind you to update the Est Fuel in the UBG. This screen can be turned off in one of the Power-up Programming screens. If the UBG is not monitoring Fuel Flow, this screen will not appear. When this screen is displayed, you can turn the knob to Add Fuel or press the knob to display the Main Screen.

3.2 Main Screen:

On the Main Screen is an cyan colored arrow. This arrow can be moved by rotating the knob to point to one of the following selections: A. **Bar Graph Display Mode**, B. **Bottom Digital Display Mode** or C. **Top Digital Display Mode**. Each of these selections is described below.

A. Bar Graph Display Modes:

The current Bar Graph Display Mode is shown in brown at the top left portion of the screen. With the cyan arrow pointing at this position, push the knob to select and highlight the current Bar Graph Display Mode. Rotate the knob to change the screen to one of the following modes: a. EGT/CHT, b. Lean LOP, c. Lean ROP, d. Normalized, e. EGT, f. CHT, g. Aux Data, h. Fuel Data or i. Fuel Setup. Each of these operating modes are described below.



a. EGT/CHT - This screen shows the EGTs in cyan and the CHTs in green (if they are in limit). For each CHT operating in a yellow limit, the CHT bar will be in yellow and for each CHT operating in a red limit, the CHT bar will be in red.

The CHT Lower Range, Upper Range, Yellow Limit, Red Limit and Diff Limit can be set during Power-up Programing. The "USR" red line on the screen represents the user-set Red Limit and the "CHT" white line on the screen represents the top of the CHT range. If there is a CHT yellow limit, a yellow line will be displayed.

When a cylinder's CHT exceeds a yellow or red limit, the appropriate bar will blink in the appropriate color. The blinking is intended to catch your attention. You can stop the blinking by pushing the knob.

The EGT Lower Range, Upper Range, Low Limit, Upper Limit and Diff Limit can be set during Power-up Programing. When a cylinder's EGT exceeds a limit, the appropriate bar will blink in white. You can stop the blinking by pushing the knob.

If the UBG has been set-up to display TIT, it will be shown on the last bar. A Red Limit can be set during Power-up Programing. When TIT exceeds this Red Limit, the TIT bar will blink in red. You can stop the blinking by pushing the knob.

b. Lean LOP - This screen is provided to help the pilot lean the engine Lean-of-Peak (LOP) EGT. As you lean the engine, the UBG will detect and display the first cylinder to reach peak. As you continue to lean, the degrees at which this cylinder is operating below its peak will also be displayed.



As each cylinder reaches its peak EGT, a white marker will appear above its bar. If you can lean to a point where **all** of the cylinders reach their peak EGTs, the fuel flow spread (FS) value will appear in the top right portion of the UBG display. This spread is a measurement of the fuel/air ratio balance for the engine. It can be used to detect incorrect fuel nozzles sizing, and dirty or clogged injectors.

c. Lean ROP - This screen is provided to help the pilot lean the engine Rich-of-Peak (ROP) EGT. As you lean the engine, the UBG will detect and display the first cylinder to reach peak and provide a white line on that cylinder's bar. At this point you should enrich the mixture. The UBG will then display the degrees below peak at which this cylinder is operating.

d. Normalized - During cruise the EGTs and CHTs for each cylinder will all be different. This is also true for climb and descent but this mode is most often used during cruise. With all the bars at different levels it is difficult to determine what normal operation for the engine is. This is where the Normalized mode can help.



Once you have established cruise operation, you can normalize (or set) all of the EGT bars to the same level and all of the CHT bars to the same level. This is done by pushing and holding the knob while operating in the Normalized mode. A blue screen will pop up allowing you to normalized the bars.

Once the bars are all at the same level (normalized), all the offsets are stored in long-term memory. When selecting the Normalized mode, it is easy, from flight to flight, to spot a cylinder that is not operating at its normal level.

e. EGT - In this screen a graphic representation of the engine is shown. The EGT values are displayed on the outside of each cylinder. The hottest cylinder is marked with an "H."

f. CHT - In this screen, a graphic representation of the engine is shown. The CHTs are displayed on the outside of each cylinder. The hottest cylinder is marked with an "H."



g. Aux Data - If your UBG is setup to display one or more Aux temperature channels, all the Aux channels and the TIT will be displayed on this screen.

h. Fuel Data - If your UBG is set up to display fuel flow, the following data is provided:

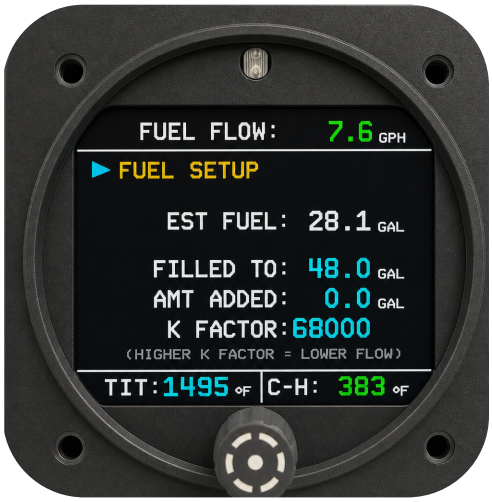


Est Fuel: This field is the estimated fuel on board. It is a calculated value based on the fuel flow from the time you added fuel to the UBG to the present. The Est Fuel can be calibrated by changing the K Factor. See the Fuel Setup section below.

Fuel Used: This field is a calculated value based on the fuel flow from the time you added fuel to the UBG the present.

Time to Empty: This field is calculated from the Est Fuel and the current Fuel Flow rate. Changing the throttle or the mixture will produce an immediate change in the Time to Empty, which can be very helpful.

i. Fuel Setup - If the UBG is set up to display fuel flow, the following data is provided:



Est Fuel: This field is the estimated fuel on board the aircraft. It is a calculated value based on the fuel flow from the time you added fuel to the UBG to the present. The Est Fuel can be calibrated by changing the K Factor. The K Factor is the number of pulses the flow transducer outputs per gal of fuel. Each flow transducer has a slightly different K Factor. Increasing the K Factor will decrease the Fuel Flow reading. When the Est Fuel is accurate, the Fuel Flow will also be accurate.

Filled To: The value in this field is preset to the value set during Power-up Programming. The value in this field can be changed and the Est Fuel can be set to that value as follows:

Use the knob to move the arrow and select this field. Push the knob to enter a field. Rotate the knob to select a digit. Push and then rotate the knob to change the digit. Push and hold the knob to exit a digit and then again to exit a field. This will set the Est Fuel to the value entered.

Amt Added: Use this field to add a given amount of fuel to the current Est Fuel value. To do this, use the same method described above.

B. Bottom Digital Display Modes:

The current Bottom Digital Display Mode is shown in brown at the top right portion of the screen. With the cyan arrow pointing to this position, push the knob to select and highlight the current Bottom Digital Display Mode. Rotate the knob to display one of the following modes: a. Hottest, b. Select, c. Diff, d. Scan or e. Actual.

These modes are displayed at the bottom of the screen and in some cases the values are displayed on the Main Screen when showing the graphic display of the engine. Each of these functions are described below.

a. Hottest - This mode displays the Hottest EGT (shown as E-H) and the Hottest CHT (shown as C-H) in a digital format at the bottom of the screen.



b. Select - In this mode the EGT and CHT values will be displayed in a digital format at the bottom of the screen for the cylinder selected. Use the knob to select the cylinder to be displayed.

c. Diff - This mode displays the difference between the hottest and coldest EGT and CHT in a digital format at the bottom of the screen. This provides a quick way to determine the spread between cylinders.

When displaying the engine in graphical form (EGT and CHT Bar Graph Display Modes), the Diff function displays the coldest cylinder as "0" and the other cylinders at their temperature above the coldest.

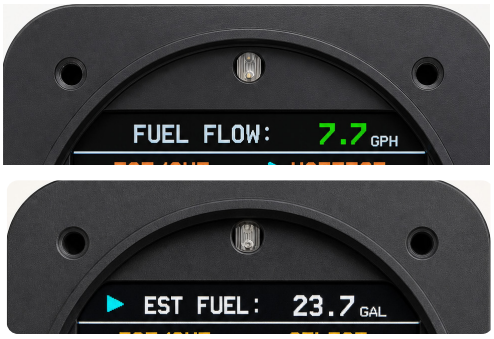
d. Scan - This mode scans through the cylinders and displays the EGTs and CHTs values at the bottom of the screen.

e. Actual - This mode is only available when viewing the EGTs or CHTs with the graphic display of the engine. In the "Actual" mode, the digital values are the real temperatures for each cylinder. In the "Diff" mode, the digital values are the difference between the coldest and the current cylinder.

C. Top Digital Display Modes:

The Top Digital Display Mode is shown in white at the top of the screen. With the cyan arrow pointing to this position, push the knob to select and highlight the current Top Digital Display Mode. Rotate the knob to change the display to one of the following: a. Fuel Flow, b. Est Fuel, c. Fuel Used, d. Time to Empty, e. Shock Cooling or f. Aux Temps (OAT, Carb T, Oil T, etc.). If the UBG has not been set up to display Fuel Flow, then Fuel Flow, Est Fuel, Fuel Used, and Time to Empty data fields will not be available.

a. Fuel Flow - This mode displays the current fuel flow for the engine. During Power-up Programming it can be set to display in Gal, Lbs, Ltr, BGL (British Gallons) or Kil.



b. Est Fuel - This field displays the estimated fuel on board the aircraft, based on the fuel flow and the starting fuel value.

c. Fuel Used - This field is the calculated fuel used based on fuel flow from the time you added fuel to the UBG.

d: Time to Empty - This field is calculated from the Est Fuel and the current Fuel Flow rate. Changing the throttle or the mixture will produce an immediate change in the Time to Empty, which can be very helpful.

e. Shock Cooling - This function calculates the rate the CHTs are dropping for each cylinder and then displays the cylinder dropping the fastest. The value is displayed in degrees per minute. Shock cooling can be an issue when performing a fast descent at low power. A Shock Cooling limit can be set during Power-up Programming. If the limit is exceeded, the value will display in yellow and blink.

f. Aux Temps - The UBG can display up to three aux temperature functions depending on the available spare channels. During Power-up Programming these Aux Temp fields can be set up to display a number of options (OAT, Carb T, Oil T, etc.). You can program the UBG to display 1 to 3 aux temp functions or none at all.



3.3 Power-up Programming:

Power-up Programming allows you to set up the UBG for your aircraft, engine and methods of operating the UBG. To enter the Power-up Programming Mode, push and hold the knob while applying power to the unit. Continue pushing until you see the screen shows "Release Knob to Enter Programming Mode." The next screen allows you to continue or go into the normal operating mode.

If you continue, you can scroll through the following setup screens: A. **General Setup** B. **TIT & Aux Temp**, C. **Fuel Flow**, D. **EGT Limits**, E. **CHT Limits**, F. **Set Time and Date**, **Dimming**, G. **Dimming**, H. **Exit**. With the setup screen highlighted, push and hold to exit a field, rotate the knob move the arrow, push the knob to select a field, rotate the knob to change the selection. The settings provided in each of these screens will be discussed below.

A. General Setup:

This screen provides the following fields: a. Number of Cylinders, b. Cyl 1 Loc, c. Bar Format, d. CHT Probe, e. Shock Cool Lmt, f. USB Flt DNLD #, G. Save and Exit. Each of these fields are described below.



a. Number of Cylinders - Set this value to the number of cylinders for your engine.

b. Cyl 1 Loc - Select the #1 cylinder location for your engine.

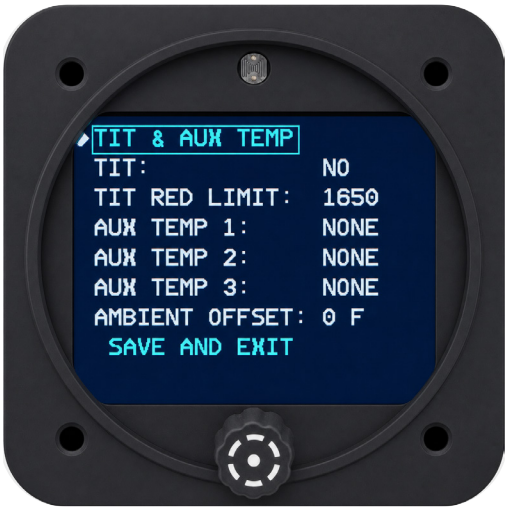
c. Bar Format - Select the bar format to match the number of EGTs and CHTs you will be monitoring. EGT&CHT is the most common.

d. CHT Probe - Select the CHT probe type. All Electronics International temperature probes are type K.

e. Shock Cool Lmt - Set the Shock Cooling Limit for the value recommended for your engine. Many engines have a limit around 50 degrees per minute.

f. USB Flt DNLD # - This field sets the number of flights the UBG will download to the USB data stick when it is inserted into the USB connector.

g. Save and Exit - To save your settings and exit to the main operating screen, select this field. If you do not want to save your settings, turn off the power to the unit.



B. TIT & Aux Temp:

This screen provides following fields: a. TIT, b. TIT Red Limit, c. Aux Temp 1-3, and d. Ambient Offset. Each of these fields are described below.

a. TIT - If you will be monitoring TIT, set this field to "Yes."

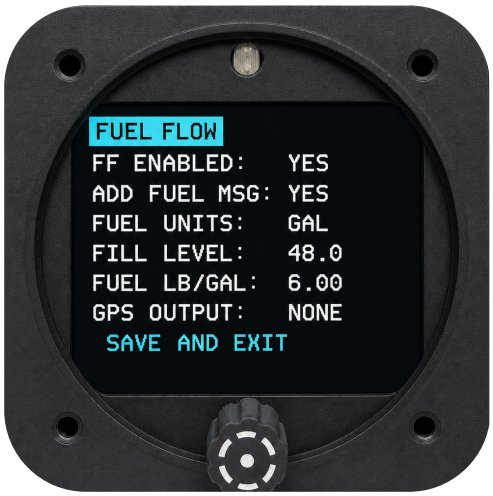
b. TIT Red Limit - Set this field to the max limit for the TIT.

c. Aux Temp 1-3 - The UBG can display up to three aux temperature functions depending on the available spare channels. The wiring diagram shows the inputs for each of these channels. Select the name for each function to be displayed. If a channel is not used, select "None."

d. Ambient Offset - The Ambient Offset adjustment allows you to calibrate the system, once it has been installed, for OAT or Carb Temp where you want extreme accuracy. Place the probe in an ice bath and set the Ambient Offset for a 32'F reading.

C. Fuel Flow:

This screen provides following fields: a. FF Enabled, b. Add Fuel Msg, c. Fuel Units, d. Fill Level, e. Fuel Lb/Gal, f. GPS Output, and g. Save and Exit. Each of these fields are described below.



a. FF Enable - If you will be monitoring Fuel Flow, set this field to "Yes."

b. Add Fuel Msg - If you are monitoring Fuel Flow and you do not want the blue screen (displayed at power-up) to remind you to add fuel to the UBG, set this field to "No."

c. Fuel Units - You can set the Fuel Units to be displayed in Gal, Lbs, Ltr, BGal or Kil.

d. Fill Level - Set this field to the fuel level at which you normally fly. When viewing the "Fuel Setup" screen, the "Filled To" field will default to this value.

e. Lb/Gal - Fuel Flow is internally calculated in gal/hr. If you wish to display Fuel Flow in lbs/hr, you can set the lbs/gal conversion factor for your fuel.

f. GPS Output - This field can be set to output fuel data in the various GPS formats. If the UBG is not connected to a GPS, set this field to "None."

g. Save and Exit - To save your settings and exit to the main operating screen, select this field. If you do not want to save your settings, turn off the power to the unit.

D. EGT Limit:

This screen provides the following fields: a. Degree Units, b. EGT Low Range, c. EGT High Range, d. EGT Lower Limit, e. EGT Upper Limit, f. EGT Diff Limit, and g. Save and Exit. Each of these fields is described below.



a. Degree Units - Set this field to display temperatures in 'F or 'C.

b. EGT Low Range - This field sets the temperature at which the EGT bars start to move up from their lowest position. The higher this value, the more resolution there will be in the EGT bar graph. You want this value to be at or below the operating temperature at full rich and low throttle cruise.

c. EGT High Range - This field sets the temperature at which the EGT bars are at the top of their scale. The lower this value, the more resolution there will be in the EGT bar graph. You want this value to be above peak EGT for the hottest cylinder.

d. EGT Lower Limit - This field sets the low limit for all EGTs. If a cylinder's EGT drops below this value, the bar and digital readout for that cylinder turns white. You may want to set this field just below the EGT value where the engine is running at idle.

e. EGT Upper Limit - This field sets the upper limit for all EGTs. If a cylinder's EGT exceeds this value, the bar and digital readout for that cylinder will turn white. You may want to set this field above the peak EGT value for the hottest cylinder.

f. EGT Diff Limit - The EGT spread between cylinders can tell you when one or more cylinders is not operating properly. When the spread between EGTs exceeds the limit set in this field and the EGT Diff (E-D) digital value is being displayed, the value will be shown white. Set this value above the maximum EGT spread between cylinders.

g. Save and Exit - To save your settings and exit to the main operating screen, select this field. If you do not want to save your settings, turn off the power to the unit.

E. CHT Limit:

This screen provides following fields: a. CHT Low Range, b. CHT High Range, c. CHT Red Limit, d. CHT Yellow Limit, e. CHT Low Limit, f. CHT Diff Limit, and g. Save and Exit. Each of these fields is described below.



a. CHT Low Range - This field sets the temperature where the CHT bars are at their lowest position. The higher this value, the more resolution there will be in the CHT bar graph. This value should be at or below the operating temperature at full rich and low throttle cruise.

b. CHT High Range - This field sets the temperature at which the CHT bars are at the top of their scale. The lower this value, the more resolution there will be in the CHT bar graph. This value to be just above the Max Limit for the CHTs.

c. CHT Red Limit - This field sets the max limit for all the CHTs. A red line at this value will be drawn in the bar graph. If a cylinder's CHT exceeds this value, the bar and digital readout for that cylinder turns red.

d. CHT Yellow Limit - This field sets the yellow or caution limit for all CHTs. A yellow line at this value will be drawn in the bar graph. If a cylinder's CHT exceeds this value, the bar and digital readout for that cylinder turns yellow.

e. CHT Low Limit - This field sets the low limit for all CHTs. If a cylinder's CHT drops below this value, the bar and digital readout for that cylinder turns yellow. You may want to set this field just below the CHT value at which the engine is running at idle.

f. CHT Diff Limit - The CHT spread between cylinders can tell you when one or more cylinders is not operating properly. When the spread between CHTs exceeds the limit set in this field and the CHT Diff (C-D) digital value is being displayed, the value will be shown yellow. Set this value above the maximum CHT spread between cylinders.

g. Save and Exit - To save your settings and exit to the main operating screen, select this field. If you do not want to save your settings, turn off the power to the unit.

F. Set Time / Date:
The fields in this screen allow you to set the time and date. The time and date is used to time stamp the recorded data and for the Fuel Data Screen.

G. Dimming:
This screen is used to set the source and level of dimming used for day and night operation. The following calibration procedures are provided for each dimming source.



Dimming Source: Photocell
This method of dimming uses the photocell on the front of the instrument to set the level of dimming. The Control Value (shown in brown) provides the output (in counts) of the photocell. Calibrate the photocell to your requirements as follows:

1. Set the "Source" to Photocell.
2. Place a piece of black electrical tape over the photocell. You should see the "Control Value" decreasing.
3. Set the "Min Bright" to 7%.
4. Select "Test Now." Adjust the "Min Bright" value and retest to achieve your desired minimum brightness level for night operation.

5. Remove the black electrical tape from the photocell. You should see the "Control Value" increasing.
6. Set the "Max Bright" to 100%.
7. Select "Test Now." Adjust the "Max Bright" value and retest to achieve the desired max brightness level for daytime operation.

Dimming Source: External or Ext Postlamp
There are two methods of dimming using the existing Dimming Control Pot in the aircraft. The "External" method provides a linear control of the brightness over its full range. When the pot is full counterclockwise, the UBG display will be at its dimmest. When the pot is full clockwise, the UGB display will be at its brightest. The Dimming screen allows you to set the dim and bright levels.

The "Ext Postlamp" method also provides a linear control of the brightness, but at the full counterclockwise position, the post-lights are off (day time operation) and the UBG will be at its brightest. As the pot is rotated slightly clockwise, off its stop, the post-lights and the UBG display will be at their dimmest for night operation. As you rotate the pot clockwise, the post-lights and the UBG display will operate linearly up to their brightest level. You can calibrate the UBG backlight for both of these methods as follows:

1. Set the "Source" to External or Ex Postlamp.
2. Set the "Min Bright" to 7%.
3. Set the "Max Bright" to 100%
4. Select "Test Now." Adjust the aircraft's Dimming Control Pot over its full range.
5. Adjust the "Min Bright" and "Max Bright" to your desired brightness levels and retest.

H. Exit:
This screen allows you to "Save and Exit," saving the changes you have made, or "Exit without Saving" the changes.

3.4 Data Recording:

The UBG only excepts data sticks that have been formated as FAT32. The UBG records all measured functions every 3 seconds. The files are organized, one for each power cycle. If you cycle power between flights, each file represents a flight.

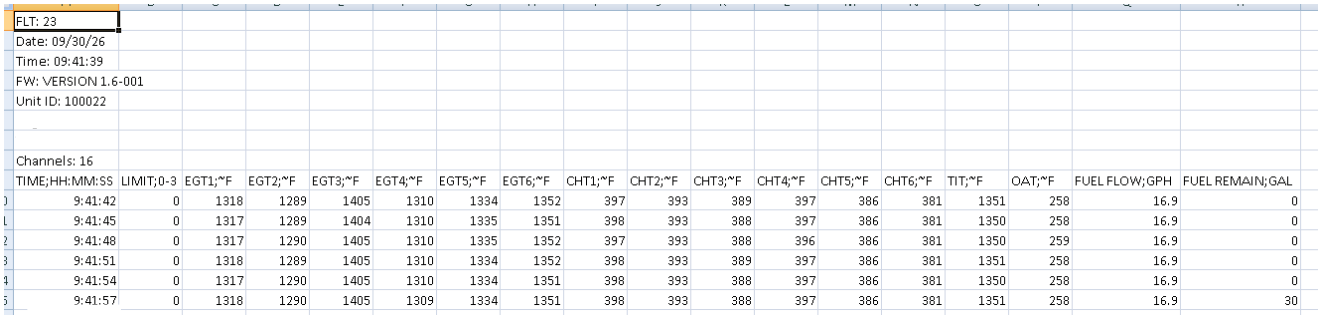
The UBG can record approximately 500 hours of data. To download the data, simply install the USB data stick into the USB connector. The UBG screen will display the number of file to be downloaded. The USB connector may have be installed in the instrument panel or it may be accessible from under the panel. The number of flights to be downloaded to the USB data stick is set in the Power-up Programing section of this manual.

If you are at the end of a flight and have not turned off the power to the UBG, it will continue to record and the current flight will not be downloaded. Cycle the aircraft power to end the flight and then install the data stick to record the current flight. Also, when you are in the Power-up Programming mode, the UBG will not record data.

On the USB data stick is a "UBG-16T" folder. In this folder is a single folder with the Unit ID for its name. The Unit ID allows you to identify one UBG instrument from another. In the Unit ID folder are two folders, Config and DataRecords. The Config folder contains programmed configuration files for the UBG. This data is transfered to the data stick each time you insert the data stick into the USB connector. The Config file name contains the date the file was created. The Electronics International support team can set a flag to allow a Config file to be uploaded into the UBG. These Config files and features can be very helpful when working with the support team.

Also, in the Unit ID folder is a DataRecords folder. This folder contains the stored records for each flight. If a flight exceeds 12 hours, it will be broken into two or more files. The files are formatted to be displayed in Microsoft Excel. These files can be invaluable when performing engine diagnostics.

The "Limit; 0-3" field in the Excel file provides a number based on the max warning level for each record (line). 0 = No Warnings, 1 = White (Egt) Warning, 2 = Yellow Warning and 3 = Red Warning. The highest number for the record will be displayed.



FLT: 23
Date: 09/30/26
Time: 09:41:39
FW: VERSION 1.6-001
Unit ID: 100022
Channels: 16

TIME;HH:MM:SS	LIMIT;0-3	EGT1;°F	EGT2;°F	EGT3;°F	EGT4;°F	EGT5;°F	EGT6;°F	CHT1;°F	CHT2;°F	CHT3;°F	CHT4;°F	CHT5;°F	CHT6;°F	TIT;°F	OAT;°F	FUEL FLOW;GPH	FUEL REMAIN;GAL
9:41:42	0	1318	1289	1405	1310	1334	1352	397	393	389	397	386	381	1351	258	16.9	0
9:41:45	0	1317	1289	1404	1310	1335	1351	398	393	388	397	386	381	1350	258	16.9	0
9:41:48	0	1317	1290	1405	1310	1335	1352	397	393	388	396	386	381	1350	259	16.9	0
9:41:51	0	1318	1289	1405	1310	1334	1352	398	393	389	397	386	381	1351	258	16.9	0
9:41:54	0	1317	1290	1405	1310	1334	1351	398	393	388	397	386	381	1350	258	16.9	0
9:41:57	0	1318	1290	1405	1309	1334	1351	398	393	388	397	386	381	1351	258	16.9	30

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