ELECTRONICS INTERNATIONAL INC.

CGR-30P PREMIUM PACKAGE

Marking and Configuration Requirements

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CGR-30P - Premium Package
Marking and Configuration Requirements

The following data covers the CGR-30P Premium Package. Any additional functions can be purchased from Electronics International directly.

Main Screen Layout - The RPM and EGT/CHT Bar Graph comes with every instrument. The following are the Primary Functions allowed for the Arc and Horizontal Gauges on the Main Screen. These functions **replace** the aircraft's existing gauges.

Circle five of the following primary functions (RPM, EGTs & CHTs are always provided):
M.P., Fuel Flow, Fuel Pressure (engine must have a fuel pump), TIT, Oil Press, Oil Temp, Left & Right Fuel Level (counts as two functions), Main Fuel Level, Aux Fuel Level, Vac, Volts or Amps.

Circle five of the following non-primary functions:

OAT in °F	N/C
OAT in °C	N/C
Horsepower	N/C (Requires M.P.)
Flight Timer	N/C
Engine Time	N/C
Tach Time	N/C
Local Time	N/C
Zulu Time	N/C
Volts (No Limits)	N/C
Carb Temp	$98

Amps (If not selected as a primary)	$39
Fuel Flow (If not selected as a primary)	$295
Hydraulic Pressure	$250
G-Meter	$295
Cabin Altitude	$150
Cabin Differential Pressure	$150
IAT	$98
CDT	$98
C.O. Detector (no discounts)	$475

NOTE:

- The arrangement of functions on the Main and Secondary screens is determined by FAA requirements.
- Measuring Fuel Flow on a pressure carburetor requires an FFDM-1 - $395.00
- Measuring Fuel Pressure on a turbocharged engine requires an upper deck pressure transducer - $195.00
- Fuel Level(s) option does not include the fuel level sensors. The CGR-30P package will interface to your existing fuel probes.

Electronics International Inc. will configure the CGR-30P to the range limits, markings and hardware outlined for the specified aircraft listed on this form. All data is to be provided by the pilot/owner or a FAA certified mechanic. All data must be verified for accuracy and must match the POH/AFM and any changes required by any AD's, Supplements or STC's. Also, limit and marking information must be cross-checked against the instruments mounted in the aircraft panel.

This document must be completed and signed by the aircraft owner or by a FAA certificated mechanic. This form should then be delivered to Electronics International Inc., at which time a configuration file for a specific CGR-30P will be generated. A configuration file for a CGR-30P can ***only*** be generated or changed by Electronics International Inc. If any of the information provided on this form is wrong, there may be a reprogramming fee to change the configuration.

IMPORTANT: The information in this document must be verified for accuracy and match the aircraft's hardware and POH/AFM marking requirements. **If you have not ordered the probes and transducers to support the functions, Electronics International will contact you for payment. If the data supplied in this document is incomplete or missing, your order will be delayed.**

Aircraft Information		**Example**
Customer Name		*Peter Pilot*
**** Customer Phone # & E-mail***		*555-555-5555 peterpilot@gmail.com*
FAA Certified Mechanic's Name		*Marty Mechanic*
**** Mechanic's Phone # & E-mail***		*555-555-0000 mm@acmeavionics.com*
Aircraft Make & Model		*Cessna, 182R*
Engine Mfg and Model		*Continental O-470U*
Aircraft Tail Number		*N5555H*
# of Cylinders & Max Engine HP		*6, 230HP*
Distance from furthest cylinder to EDC		*6 Feet*

**** Required to expedite resolution of any issues. Without this contact information your order may be delayed. Please help us by providing e-mail addresses.***

The CGR-30P can be configured with various functions and options.
Please provide information for only those functions to be displayed.

CHT Markings: Whether the CHTs are primary or not the FAA does not allow the CHT limits to be set by the pilot. Specify the CHT limits.

Color	Range	Example
		Red, 460°F and Above
		Yellow, 400 to 460°F
		Green, 200 to 400°F

Manifold Pressure Markings: **If markings are not specified in the POH/AFM, write "No Limits."** High Manifold Pressure (up to 70" Hg) option available. See EI Price List.

Color	Range	Example
		Green, 15 to 25"Hg

Tachometer Markings:

Color	Range	Example
		Red, 2700 RPM and above
		Green, 2000 to 2500 RPM

Fuel Flow Markings: **If markings are not specified in the POH/AFM, write "No Limits."** If your have a pressure carburetor, you will need the FFDM-1 Differential Module to accommodate the fuel return.

This is a Gravity Feed System with No Fuel Pump (requires a FT-90 Flow Transducer)

or

This system has a fuel pump (requires a FT-60 Flow Transducer)

Color	Range	Example
		Green, 0 GPH and above

Total Fuel Available:

If Fuel Flow is to be displayed, the following information is **required** for the Estimated Fuel Remaining, Fuel Reserve and Auto Fill features:

Total Fuel Available: _____

Tab or Partial Fuel Level: _____

(This is the level you fill the tanks to if you do not wish to carry a full load of fuel.)

Fuel Pressure Configuration and Markings

Aircraft Fuel Pressure Configuration:

Fuel pressure monitored at the Fuel Pump.

Turbocharged system. The Fuel Pressure is referenced to the Upper Deck Pressure (you must purchase an additional pressure transducer).

Metered Fuel pressure monitored at the Flow Divider.

Gravity Feed system with no Fuel Pump (Fuel Pressure CAN NOT be monitored).

Color	Range	Example
		Red, 14 PSI and above
		Green, 9 to 14 PSI
		Red, 9 PSI and below

Oil Temp Markings:

Color	Range	Example
		Red, 240°F and above
		Yellow, 200 to 240°F
		Green, 65 to 200°F
		Yellow, 65°F and below

Oil Pressure Markings:

Color	Range	Example
		Red, 100 PSI and above
		Green, 40 to 90 PSI
		Red, 25 PSI and below

Volts

Specify 12-Volt or 24-Volt system: _____ (Example 24 V)

Amps Configuration and Markings:

If markings are not specified in the POH/AFM, write "No Limits."
If you will be using the aircraft's existing shunt to monitor amps, we will need to know the value of your shunt. Otherwise, an E.I. 100A (S-50) shunt must be purchased (unless Amps is selected as Primary).

Color	Range	Example
		Green

TIT Markings: If markings are not specified in the POH/AFM, write "No Limits."

Color	Range	Example
		Red, 1650°F and above
		Green, 1650°F and below

Carb Temp Markings: If markings are not specified in the POH/AFM, use Recommended Limits.

Color	Range	Example
		Blue, 10 to 39°F (Ice Zone)
		Green, all except above

Vacuum Pressure Markings:

Color	Range	Example
		Green, 4.5 to 5.5"Hg

Hydraulic Pressure Markings: If markings are not specified in the POH/AFM, write "No Limits.

Color	Range	Example
		Green, 1000 to 2000 PSI

Carbon Monoxide Detector Markings: This Function requires RS232 Port 3 or 4 Input and the CO Guardian Option, see EI Price Sheet. If markings are not specified in the POH/AFM, use Recommended Limits.

Color	Range	Recommended Limits
		Red, 75 ppm and above
		Yellow, 25 to 75 ppm
		Green, 0 to 25 ppm

G-Meter Markings:

The G-Meter function provides a real time g-force display on the CGR-30P. The CGR-30P does not provide a peak-hold function, but the g-force readings are recorded for the entire flight. To capture the g-forces for all phases of the flight with no gaps, set the "Data Sample Rate" to 0.3 seconds. The G-Meter option can be used to capture g-forces in slow flight when turning to final, hard landings, turbulence, hard pull-ups, steep turns, aerobatic maneuvers, stalls, spins or when performing any maneuver that may stress the aircraft or lead to a stall/spin situation.

Color	Range	Recommended Limits
		Red above +3.8 g
		Green, -1.5 to 3.8 g
		Red, below -1.5 g

Fuel Level:

Resistive Float Senders – If your system uses resistive float senders and the CGR-30P system will be connecting directly to these senders, you will need a RFLM-4 module. WARNING: DO NOT connect an RFLM-4 module into any other system except directly to a resistive float sender. Damage to the fuel system will occur. Note: Your existing fuel gauges will need to be removed from the system.

Note: The CGR-30P can provide accurate fuel level readings for straight and level flight. By calibrating the CGR-30P to the fuel tank, nonlinearity in the tank's shape and nonlinearity in the Fuel Level Sensor will be compensated for. The CGR-30P can not correct for inconsistent or non-repeatable readings from a fuel sensor. Unfortunately, many Resistive Float Senders (and in some cases even new units) exhibit these problems. If you find inconsistent or inaccurate fuel level readings (due to a defective sensor), you must have the sensor replaced or repaired. Read the "Important Notice" in the CGR-30P Operating Instructions. 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

(Continued next page)

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. The sender can replace a resistive float sender only when used with the CGR-30P system. **WARNING:** An RFLM-4 module must NOT be used with these senders, damage to the system will occur.

E.I. Capacitive Probes – The CGR system will accept E.I. capacitive fuel level probes (P-300C). Generally these probes are difficult to adapt to a fuel tank incorporating a resistive float sender. **WARNING:** An RFLM-4 module must NOT be used with these probes, damage to the system will occur.

Other Fuel Systems – Other fuel system (whether capacitive or otherwise) will generally have a voltage output from a control unit that drives an analog gauge. This output voltage can be routed to the EDC-33P and used to measure fuel level. If this type of system is used, we need to know the output voltage for empty and full. **WARNING:** An RFLM-4 module must NOT be used with these systems. Damage to the system will occur.

Fuel Tank Name (6 Characters)	**Probe Type (Resistive, Capacitive, Magnetic, Other)**	**Configuration**		**Full Fuel Level (Usable Fuel) and Tab Level**	**Example**
		Does the resistance (or voltage) out of the sensor Increase or Decrease when adding fuel? (This can be checked using an Ohm Meter)	Does fuel from this tank feed the engine or is it transferred to another tank?		
					L MAIN, Res, Inc, Feed, 80/65 Gal
					R MAIN, Res, Inc, feed, 80/65 Gal
					Aux, Dec, trans, 20/15 Gal

*** Check to be sure that all range and configuration information is complete and accurate.**

I (the undersigned) have verified all the limits, markings and aircraft configuration data listed in this worksheet to be correct, accurate and taken from the information in the aircraft's POH/AFM, which includes any changes mandated by any AD's, Supplements and STCs. Even if the information on this form has been provided by Electronics International, I have checked and verified all the information for its accuracy. I understand there is important safety information in the Installation and Operating Instructions that must be read before installing the CGR-30P and flying the aircraft.

_____	_____	_____
Owner/Pilot or Mechanic (Print Name)	Signature	Date

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and Unparalleled Customer Service Since 1979

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