



# MVP-50T

## Configuration Worksheet



*Download this file, fill it out and then save it. Include it with your order.*

**General Info:**

Aircraft Information:		Example:
Customer Name:		Peter Pilot
Customer Phone:		555-555-5555
Customer Email:		peterp@gmail.com
Aircraft Make & Model:		Pilatus, PC-6/B
Aircraft Tail Number:		N5555H
Engine Mfg and Model		Pratt, PT6A-6A
<input type="checkbox"/> Include a Certificate of Conformance (\$10.00)		
<input type="checkbox"/> Include an 8130-3 (\$195.00). Can add up to two weeks to lead time.		

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.

A configuration file for a TSO'd and/or STC'd MVP-50T 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 Information:** 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 you have listed in this document, your order will be delayed. Also, if the data supplied in this document is incomplete or missing, your order will be delayed.** Our mission is to get your order shipped as soon as possible.

**Functions Included in the Kit:**

The following functions are included in the kit: Np, Ng, TQ, ITT, Fuel Flow, Fuel Level, FP, OT, OP, Volts, Amps and OAT. Other functions and annunciators may be added. Some functions require sensors, probes or modules and must be purchased, others are free. Annunciators require a VI-221 interface (\$19.95 ea.).

The MVP-50T gets all its signals via an EDC-33T. Make sure you have the channels available on the EDC-33T to support your selections. An overview of the EDC-33T channels is provided in appendix A. The MVP-50T can accept data from two EDC-33T Engine Data Converters.

Add a second EDC-33T to the kit. (\$2,450)

## **Rules for Laying Out the Main and System Screens:**

The following rules will help you layout the Main and System screens that will meet our standardization requirements.

### **Main Screen, Annunciators:**

On the top of the Main Screen are annunciators called a Crew Alerting System (CAS). There are two configurations. If 14 or less annunciators will be displayed, the bottom row will display Main Screen caution and warnings. If more than 14 will be displayed, a single Master Caution and Warning will be provide at the far left.

### **Main Screen, 4-Arc Gauges:**

The 4-Arc Gauges are located on the left side of the Main Screen. They are setup as Ng, ITT, Np and TQ in that order (left to right, top to bottom). If Np is not displayed, Fuel Flow can be displayed in its place.

### **Main Screen 6-Horizontal Strip Gauges:**

The 3-Strip Gauges in the top right portion of the Main Screen should be setup as Fuel P (or F. Flow), Oil P and Oil T in that order. The 2-Strip Gauges in the middle right portion of the Main Screen should be setup as Fuel L, F. Flow (or Fuel P.) and Fuel R in that order.

### **Main Screen 6-Digital Gauges:**

Three Digital Gauges are located in the lower left portion of the Main Screen and three are located in the lower right portion of the Main Screen. Functions that require only a digital gauge can be placed here. The bottom right location is normally used for OAT. This location can display OAT in degrees C and in degrees F at the same time. Some functions that can be displayed in these locations are Amps, Volts, Boom P, Time to Empty, G-Meter, Hydraulic Pressure, Bleed Air, Oxgen P, Cabin P, Cabin Alt, Inverter and others. Also, these six locations can be setup as Annunciators. Annunciators require a VI-221 Voltage Interface Module (\$19.95 ea.).

### **System Screen, Rudder, Elevator, Aileron, Flap and Gear Indicators:**

The top of the System Screen provides Rudder, Elevator, Aileron, Flap and Gear Indicators. If Gear status and airspeed are monitored, the MVP-50T system will provide a gear-up warning. These indicators are only back-ups for the primary indicators in the aircraft.

### **System Screen, 7-Digital Gauges (or Annunciators):**

There are 7-Digital Gauges in the lower left portion of the System Screen. These gauges can also be setup to display annunciators.

### **System Screen, 4-Strip Gauges (or Annunciators):**

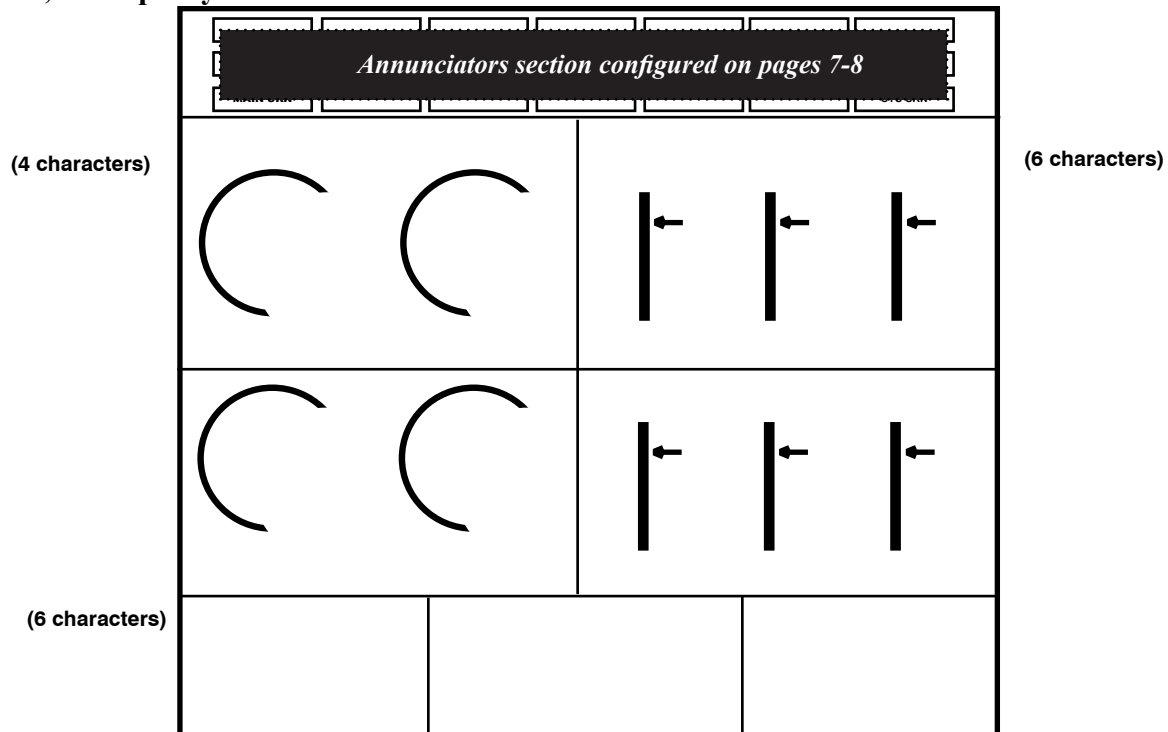
There are 4-Strip Gauges in the lower middle portion of the System Screen.

If any of the gauges on the System Screen displays a function in red or yellow, the "SYS SCR" Annunciator on the Main Screen will blink in the color of the alert.

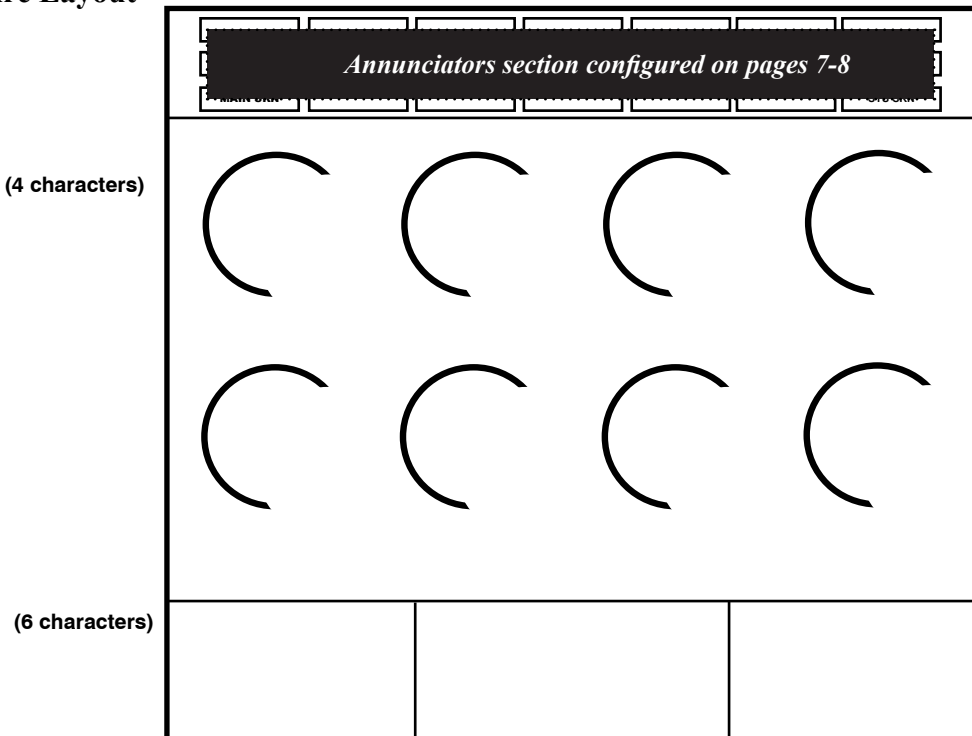
### Main Screen Layout:

This page allows you to choose and configure your Main Screen layout. Electronics International may have to change the layout to meet standardization requirements. Please choose your layout from the options below. The maximum number of characters allowed in each function name are indicated in the parenthesis below, these maximums include spaces.

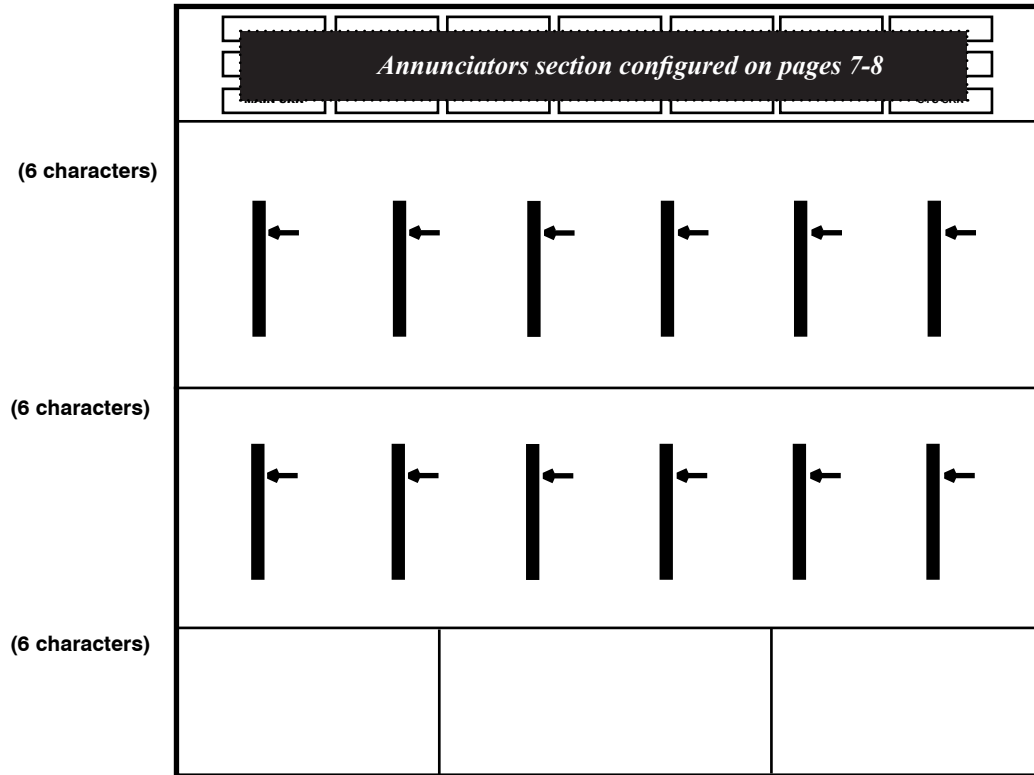
4-Arc, 6-Strip Layout



8-Arc Layout

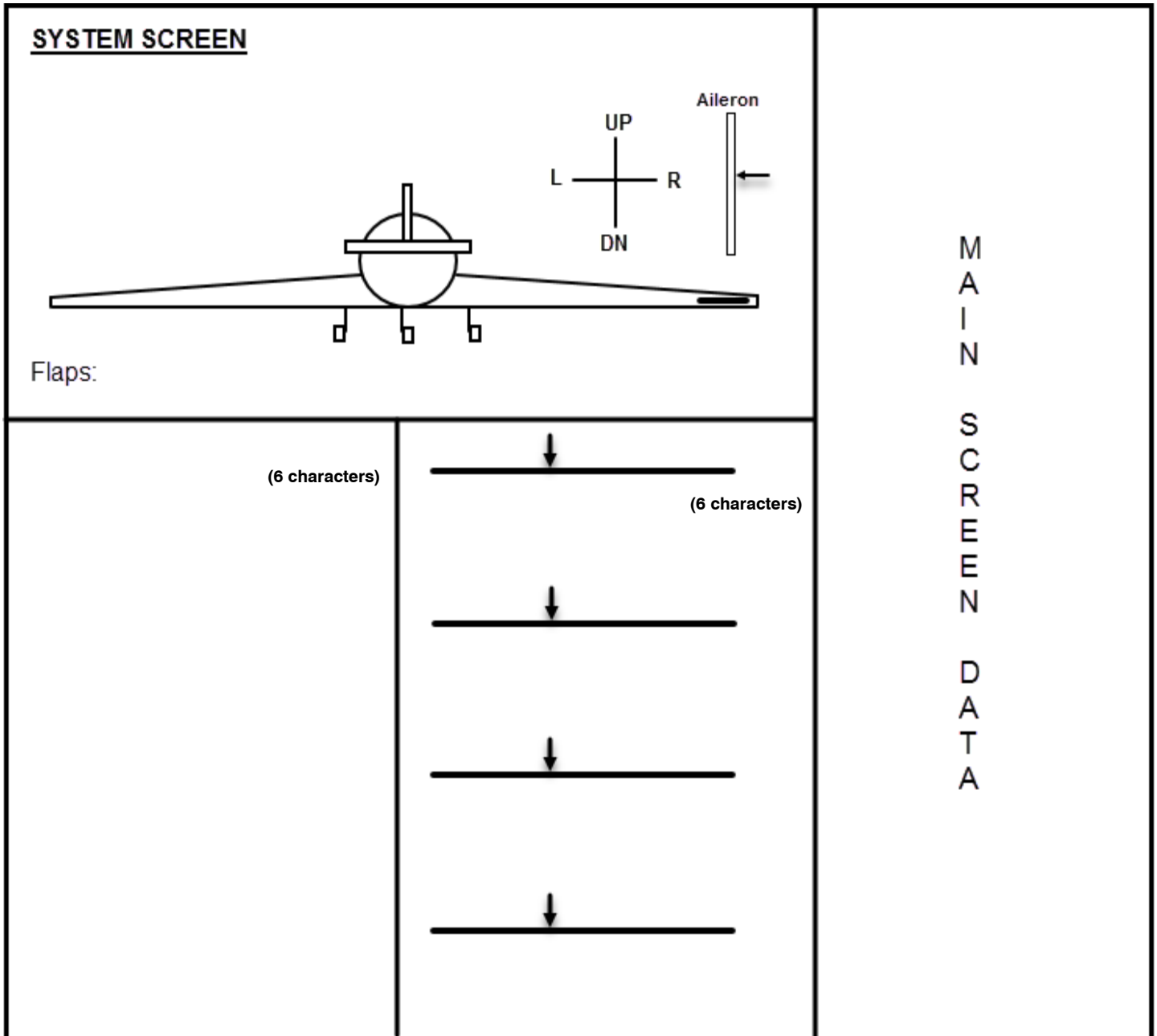


[ ] 12-Strip Layout



### System Screen Layout:

This page allows you to configure your System Screen layout. Electronics International may have to change the layout to meet standardization requirement. The maximum number of characters allowed in each function name are indicated in the parenthesis below, these maximums include spaces.

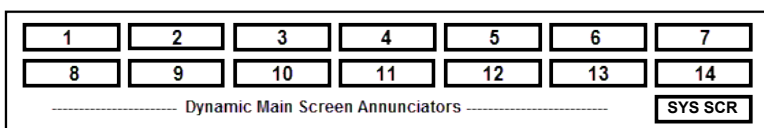


The MVP-50T gets all its signals via an EDC-33x. Make sure you have the channels available on the EDC-33x to support your selections. An overview of the EDC-33x channels are provided in appendix A. The MVP-50T can receive signals from two EDC-33x units.

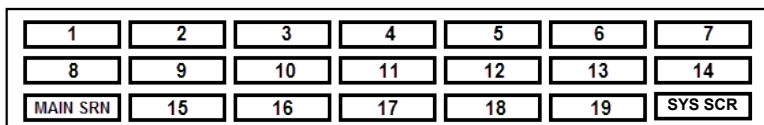
## Provide Limit, Range and Signal Information:

For each of the functions placed on the Main and System Screens, provide information to allow the EDC-33x to interface to the provided signals and the MVP-50T to display proper range and limits.

### 19-Annunciators:



On the MVP-50T Main Screen, the area above the gauges is reserved for annunciators and is called a Crew Alerting System (CAS). There are two configurations. If 14 or less annunciators will be displayed in the first two rows, the third row will annunciate the gauges on the Main Screen. This is done dynamically by first shown the functions in red (warnings) starting from the left, followed by function in yellow (cautions). The far right annunciator in the third row serves as a Master Caution & Warning for all functions displayed on the System Screen.



If 15 to 19 annunciators will be displayed in the CAS, the far left annunciator serves as a Master Caution & Warning for all functions on the Main Screen and again the far right annunciator serves as a Master Caution & Warning for all functions on the System Screen. Between the far left and right annunciators on the third row are 5 additional annunciators for a total of 19.

In all configurations there are External Master Caution and Master Warning Lights for alerting the pilot during heads-up operation. Also Annunciators may be used as Status Indicators.

The MVP-50T gets all its signals via an EDC-33x. Make sure you have the channels available on the EDC-33x to support your selections. An overview of the EDC-33T channels is provided in appendix A. The MVP-50T can receive signals from two EDC-33T units.

### Provide the following data for the 19-Annunciators at the top of the Main Screen:

1. For each Annunciator, write in the Displayed Name. Only 9 characters (includes spaces) are allowed. Annunciators require a VI-221 interface module (\$19.95 ea).
2. In the space for "ON Color" enter the color when the Annunciator is ON. Available colors are Red, Yellow, Green.
3. In the space for "ON State Voltage." enter the voltage level for an ON STATE. Some entries may be: Ground, 0V, Open, 14V, 28V or Bus.
4. In the space for "OFF State V." enter the voltage level for an OFF STATE. Some entries may be: Ground, 0V, Open, 14V, 28V or Bus.

Choose your desired annunciator configuration below.

14-Annunciator Configuration with Dynamic Main Screen Annunciators

1	2	3	4	5	6	7
8	9	10	11	12	13	14
----- Dynamic Main Screen Annunciators -----						SYS SCR

19-Annunciator Configuration

1	2	3	4	5	6	7
8	9	10	11	12	13	14
MAIN SRN	15	16	17	18	19	SYS SCR

Location	Displayed Name (9)	ON Color	ON State Voltage	OFF State Voltage	Pilot or Aircraft Activated
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

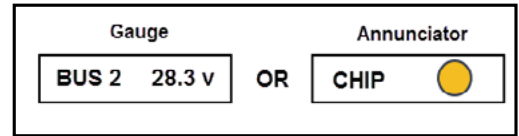
Complete if 19-Annunciator Configuration is chosen above.

Location	Displayed Name (9)	ON Color	ON State Voltage	OFF State Voltage	Pilot or Aircraft Activated
15					
16					
17					
18					
19					



**Other Annunciators:**

On the Main and System Screens there are digital-only gauges that may be setup to display as an annunciator. For each of these annunciators provide the following information: Annunciators require a VI-221 interface module (\$19.95 ea).



Displayed Name (9)	ON Color	ON State Voltage	OFF State Voltage	Pilot or Aircraft Activated

**Ng (N1, Nh, ....)** (Select one):  Ng  N1  Nh  Other \_\_\_\_\_

On most engines the Ng signal comes from a Tach Generator and on other engines it comes from a Transmitter (usually counting gear teeth). If the signal is from a Tach Generator, we need to know the RPM of the Tach Gen for a 100% Ng reading. If the signal is from a Transmitter, we need to know the frequency of the signal for a 100% Ng reading. Select your application and provide the data below:

Pratt PT6, Garrett/Honeywell TPE331, Walter/GE 601, Allison/Rolls-Royce 250, GE J85, Engine for the L39, others with similar tach generators.

Tach Generator (RPM): \_\_\_\_\_ for 100% reading (Example: 4187 RPM)

GE H80, Lycoming/Honeywell LTS101, Williams FJ33 and others with similar signals.

Transmitter Output (Hz): \_\_\_\_\_ for 100% reading (Example: 4200 Hz)

Note: The EDC-33W will handle frequencies up to 11.0 KHz. The FM-RPM-xx module will handle frequencies up to 30 KHz (\$395.00).

<b>Markings:</b> Units: %			
<input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color

**Np (N2, NL, NE, ....)** (Select one):  Np  N2  NL  NF  Other \_\_\_\_\_

On most engines the Np signal comes from a Tach Generator and on other engines it comes for a Transmitter (usually counting gear teeth). If the signal is from a Tach Generator, we need to know the RPM of the Tach Gen for a given prop RPM (or for a 100% Np reading). If the signal is from a Transmitter, we need to know the frequency of the signal for a given prop RPM (or for a 100% Np reading). Select your application and provide the data below:

Garrett/Honeywell TPE331 (Np is geared off of Ng, therefore Np is not measured)

Pratt PT6, Walter/GE 601, GE H80, Allison/Rolls-Royce 250, GE J85, Engine for the L39 and others with similar tach generators.

Tach Generator (RPM): \_\_\_\_\_ for a \_\_\_\_\_  Prop RPM **or**  100% reading (select one)

Example: 4200 Tach Gen RPM for 2080 Prop RPM reading.

Lycoming/Honeywell LTS101, Williams FJ33 and others with similar signals.

Transmitter Output (Hz): \_\_\_\_\_ for a \_\_\_\_\_  Prop RPM **or**  100% reading (select one)

Example: 4200 Hz for a 2200 RPM Prop Reading.

<b>Markings:</b> Units: _____			
<input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			Example
			0   2200   Green
			2200   9999   Red

**Torque:**

Select your application and provide the data below:

The Torque signal will be monitored from the existing torque transmitter.

\_\_\_\_\_ Volts equals \_\_\_\_\_ PSI % FTLBS

Electronics International’s torque transducer will be used. This transducer is provided in the kit and should be mounted in the engine compartment on the firewall away from heat and vibration. You will need to route a flexible hose from the engine torque pressure port to the transducer.

Low Torque will be monitored. This transducer will also be provided in the kit.

This is a Garrett engine and it uses a strain gauge torque measurement system incorporating a Signal Conditioner and a Torque Temperature Limiter (TTL). 5V = 0% and 0V = 100% Torque.

**Note:** For this application an FM-RIU-15a EGT/Torque Interface module will be required which uses an EDC-33T pressure channel for Torque and a temperature channel for EGT (\$295.00).

This is a Garrett engine and it uses a strain gauge torque measurement system but does not incorporate a Signal Conditioner. This application requires a FM-GSI-1 Garrett Strain Gauge Interface (\$495.00)

This is a PT6A and torque is measured differentially (high torque and low torque). Requires both high and low torque for differential measurement.

**Torque Units**

Torque is measured in PSI and displayed in PSI.

Torque is measured in PSI and displayed in %.

PSI for 100% Torque: \_\_\_\_\_.

Torque is measured in PSI and displayed in FTLBS.

\_\_\_\_\_ PSI equals \_\_\_\_\_ FTLBS.

**Markings:**  Markings are not specified in the POH/AFM.

(Low)	Range	(High)	Color	Example
				0   1315   Green
				1315   9990   Red

**ITT (EGT, TOT, ...)** (Select one):  ITT  EGT  TOT  Other \_\_\_\_\_

When the engine is NOT running the MVP-50T can display engine start limits and automatically switches to display normal operating limits, after the engine is running. If your current ITT gauge is marked with start limits that cannot be integrated into the MVP-50T display with the normal operating limits, this information is required. The following marking information is only for engine start.

Engine Start Limits will be displayed:

Max ITT (EGT) allowed to initiate a start \_\_\_\_\_ °C. (Example: 200 °C). A start should not be attempted above this temperature.

Max ITT (EGT) during Normal Operation \_\_\_\_\_ °C (Example: 680°C). This is the red limit during normal operation. During start you are only allowed to be over this limit for few seconds (see below).

Max ITT (EGT) Start Limit \_\_\_\_\_ °C (Example: 1090°C). During start, this limit should never be exceeded.

Max time allowed (during start only) to be over the Max Normal Operating Limit but less than the Max Start Limit \_\_\_\_\_ seconds (Example: 1 second) Most engines have a time limit of 1, 2 or 5 seconds. This time limit is not a climb limit or any other limit associated with Normal Operation.

**Note:** For Garrett/Honeywell TPE331 engines, a replacement 8-probe EGT harness (P-908) is available. Call for information.

**Markings for Normal Operation:**

Markings are not specified in the POH/AFM.

(Low)	Range	(High)	Color	Example
				400   700   Green
				700   9999   Red

**Fuel Flow:**

An FT-180 fuel flow transducer will be provided in the kit. If you elect to use your existing fuel flow transducer, (which is already plumbed into the aircraft) we need to know its K-factor and if the output signal is a 5, 24 volt pulse or an inductive pickup. Inductive pickup is the most common type and will require a Foxboro Interface unit IU-1, which will be supplied in place of the FT-180 Flow Transducer.

I will be using my existing Fuel Flow Transducer:

The K-Factor is \_\_\_\_\_.

It is an Inductive pickup unit (most common).

It is a 5-volt pulse unit.

It is a 24-volt pulse unit.

I will be using the FT-180 provided in the kit.

To display “Estimated Fuel Remaining” we need the following information:

\_\_\_\_\_ Total Fuel Available (usable fuel, see POH/AFM)

\_\_\_\_\_ Tab or Partial Fuel Level (level if you do not wish to carry a full load of fuel)

<b>Markings: Units _____</b>			
<input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			Example
			0   60   Green

**Fuel Pressure:**

Measured out of the fuel pump (do not measure the fuel pressure out of the fuel controller).

<b>Markings: Units _____</b>			
<input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			Example
			0   5.0   Red
			5.0   10.0   Yellow
			10.0   25.0   Green
			25.0   999.9   Red

**Fuel Level:** Units:

The MVP-50T can provide accurate fuel level readings for straight and level flight. By calibrating the MVP-50T to the fuel tank, nonlinearity in the tank’s shape and nonlinearity in the Fuel Level Sensor can be compensated. The MVP-50T cannot correct for inconsistent or non-repeatable readings from a defective Resistive Fuel Level Sensor. Unfortunately, many Resistive Fuel Level Sensors (and in some cases even new units) exhibit these problems. If you find inconsistent or inaccurate fuel level readings (due to a defective Resistive Fuel Level Sensor), you must have the sensor replaced or repaired. Read the “Important Notice” in the MVP-50T Operating Instructions. **Fuel Level Sensors are not provided in the kit.** The following are some E.I. probes and modules available:

P-300C: This is 3/4” OD capacitive probe (\$395.00). Not included in the kit.

P-300M: Magnetic Float Sensor, replacement for Resistive Sensor (\$395.00). Not included in the kit.

RFLM-4: Provides the current for up to 4 resistive fuel level sensors. Provided in the kit.

FLAM -4: Monitors up to 4 capacitive fuel level probes in one tank and outputs the signal to the EDC-33x as a single tank (\$475.00). Not included in the kit.

**Important Notice:** Only use the RFLM-4 for Resistive Probes, otherwise damage will occur.

For each Fuel Level Probe we require the following information:

Displayed Name	Main (Left) Probe Type	Tank Configuration
_____ 6 characters including spaces.	Select only one: <input type="checkbox"/> Resistive Probe (an RFLM-4 will be provided) <input type="checkbox"/> E.I. P-300M magnetic probe. <input type="checkbox"/> E.I. P-300C capacitive probe. <input type="checkbox"/> Penny Cap Capacitive Probe (select only one below): <input type="checkbox"/> The Signal Conditioner box provides the signal. <input type="checkbox"/> The signal will come from the probes. <input type="checkbox"/> Other Probe _____  <input type="checkbox"/> Variable Frequency <input type="checkbox"/> Variable Voltage Empty Freq: _____      Empty Voltage: _____ Full Freq: _____      Full Voltage: _____ Powered by: <input type="checkbox"/> Bus Power <input type="checkbox"/> EDC Power	Full Usable Fuel Level: _____. Select only one: <input type="checkbox"/> This tank can be selected to feed the engine. <input type="checkbox"/> Fuel is only transferred from this tank to another.  Note: All displayed Fuel Levels must be in the same units-of-measure.

Displayed Name	Main (Right) Probe Type	Tank Configuration
<p>_____</p> <p>6 characters including spaces.</p>	<p>Select only one:</p> <p><input type="checkbox"/> Resistive Probe (an RFLM-4 will be provided)</p> <p><input type="checkbox"/> E.I. P-300M magnetic probe.</p> <p><input type="checkbox"/> E.I. P-300C capacitive probe.</p> <p><input type="checkbox"/> Penny Cap Capacitive Probe (select only one below):</p> <p style="padding-left: 20px;"><input type="checkbox"/> The Signal Conditioner box provides the signal.</p> <p style="padding-left: 20px;"><input type="checkbox"/> The signal will come from the probes.</p> <p><input type="checkbox"/> Other Probe _____</p> <p><input type="checkbox"/> Variable Frequency      <input type="checkbox"/> Variable Voltage</p> <p>Empty Freq: _____      Empty Voltage: _____</p> <p>Full Freq: _____      Full Voltage: _____</p> <p>Powered by: <input type="checkbox"/> Bus Power      <input type="checkbox"/> EDC Power</p>	<p>Full Usable Fuel Level: _____.</p> <p>Select only one:</p> <p><input type="checkbox"/> This tank can be selected to feed the engine.</p> <p><input type="checkbox"/> Fuel is only transferred from this tank to another.</p> <p>Note: All displayed Fuel Levels must be in the same units-of-measure.</p>

Displayed Name	Outboard (Left) Probe Type	Tank Configuration
<p>_____</p> <p>6 characters including spaces.</p>	<p>Select only one:</p> <p><input type="checkbox"/> Resistive Probe (an RFLM-4 will be provided)</p> <p><input type="checkbox"/> E.I. P-300M magnetic probe.</p> <p><input type="checkbox"/> E.I. P-300C capacitive probe.</p> <p><input type="checkbox"/> Penny Cap Capacitive Probe (select only one below):</p> <p style="padding-left: 20px;"><input type="checkbox"/> The Signal Conditioner box provides the signal.</p> <p style="padding-left: 20px;"><input type="checkbox"/> The signal will come from the probes.</p> <p><input type="checkbox"/> Other Probe _____</p> <p><input type="checkbox"/> Variable Frequency      <input type="checkbox"/> Variable Voltage</p> <p>Empty Freq: _____      Empty Voltage: _____</p> <p>Full Freq: _____      Full Voltage: _____</p> <p>Powered by: <input type="checkbox"/> Bus Power      <input type="checkbox"/> EDC Power</p>	<p>Full Usable Fuel Level: _____.</p> <p>Select only one:</p> <p><input type="checkbox"/> This tank can be selected to feed the engine.</p> <p><input type="checkbox"/> Fuel is only transferred from this tank to another.</p> <p>Note: All displayed Fuel Levels must be in the same units-of-measure.</p>

Displayed Name	Outboard (Right) Probe Type	Tank Configuration
<p>_____</p> <p>6 characters including spaces.</p>	<p>Select only one:</p> <p><input type="checkbox"/> Resistive Probe (an RFLM-4 will be provided)</p> <p><input type="checkbox"/> E.I. P-300M magnetic probe.</p> <p><input type="checkbox"/> E.I. P-300C capacitive probe.</p> <p><input type="checkbox"/> Penny Cap Capacitive Probe (select only one below):</p> <p style="padding-left: 20px;"><input type="checkbox"/> The Signal Conditioner box provides the signal.</p> <p style="padding-left: 20px;"><input type="checkbox"/> The signal will come from the probes.</p> <p><input type="checkbox"/> Other Probe _____</p> <p><input type="checkbox"/> Variable Frequency      <input type="checkbox"/> Variable Voltage</p> <p>Empty Freq: _____      Empty Voltage: _____</p> <p>Full Freq: _____      Full Voltage: _____</p> <p>Powered by: <input type="checkbox"/> Bus Power      <input type="checkbox"/> EDC Power</p>	<p>Full Usable Fuel Level: _____.</p> <p>Select only one:</p> <p><input type="checkbox"/> This tank can be selected to feed the engine.</p> <p><input type="checkbox"/> Fuel is only transferred from this tank to another.</p> <p>Note: All displayed Fuel Levels must be in the same units-of-measure.</p>

Displayed Name	Aux/Tip (Left) Probe Type	Tank Configuration
<p>_____</p> <p>6 characters including spaces.</p>	<p>Select only one:</p> <p><input type="checkbox"/> Resistive Probe (an RFLM-4 will be provided)</p> <p><input type="checkbox"/> E.I. P-300M magnetic probe.</p> <p><input type="checkbox"/> E.I. P-300C capacitive probe.</p> <p><input type="checkbox"/> Penny Cap Capacitive Probe (select only one below):</p> <p style="padding-left: 20px;"><input type="checkbox"/> The Signal Conditioner box provides the signal.</p> <p style="padding-left: 20px;"><input type="checkbox"/> The signal will come from the probes.</p> <p><input type="checkbox"/> Other Probe _____</p> <p><input type="checkbox"/> Variable Frequency      <input type="checkbox"/> Variable Voltage</p> <p>Empty Freq: _____      Empty Voltage: _____</p> <p>Full Freq: _____      Full Voltage: _____</p> <p>Powered by: <input type="checkbox"/> Bus Power      <input type="checkbox"/> EDC Power</p>	<p>Full Usable Fuel Level: _____.</p> <p>Select only one:</p> <p><input type="checkbox"/> This tank can be selected to feed the engine.</p> <p><input type="checkbox"/> Fuel is only transferred from this tank to another.</p> <p>Note: All displayed Fuel Levels must be in the same units-of-measure.</p>



Displayed Name	Aux/Tip (Right) Probe Type	Tank Configuration
6 characters including spaces.	Select only one: <input type="checkbox"/> Resistive Probe (an RFLM-4 will be provided) <input type="checkbox"/> E.I. P-300M magnetic probe. <input type="checkbox"/> E.I. P-300C capacitive probe. <input type="checkbox"/> Penny Cap Capacitive Probe (select only one below): <input type="checkbox"/> The Signal Conditioner box provides the signal. <input type="checkbox"/> The signal will come from the probes. <input type="checkbox"/> Other Probe _____  <input type="checkbox"/> Variable Frequency <input type="checkbox"/> Variable Voltage Empty Freq: _____      Empty Voltage: _____ Full Freq: _____      Full Voltage: _____ Powered by: <input type="checkbox"/> Bus Power <input type="checkbox"/> EDC Power	Full Usable Fuel Level: _____. Select only one: <input type="checkbox"/> This tank can be selected to feed the engine. <input type="checkbox"/> Fuel is only transferred from this tank to another.  Note: All displayed Fuel Levels must be in the same units-of-measure.

**Oil Pressure:**

You can choose to use your existing Oil Pressure Transducer or Electronics International’s PT-100GA or PT-300GA Oil Pressure Transducer which will then be provided in the kit (the most often choice). This transducer can be mounted in the engine compartment on the fire wall away from heat and vibration. A flexible hose will be routed from the engine port to the transducer.

- I will be using EI’s PT-100GA.
- I will be using EI’s PT-300GA.
- I will be using my existing Oil Pressure Transducer:

Provide the signal levels for a given pressure and the excitation voltage:

<b>Markings: Units _____</b> <input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			Example
			0   40   Red
			40   80   Yellow
			80   100   Green
			100   9999   Red

**Oil Temperature:**

You can choose to use your existing Oil Temperature Probe or our P-120 5/8-18 Oil Temp probe will be provided in the kit. In most cases it's best to use the existing resistive oil temp probe. Most aircraft use a MS28034 probe. Select your application and provide the data below:

- The EDC-33T will interface with my MS28034 Oil Temp Probe (most common).
- The EDC-33T will interface with my \_\_\_\_\_ Oil Temp Probe. The Resistance vs Temp chart is attached.
- Electronic International's P-111 Oil Temp Probe will be used.
- Electronic International's P-112 Oil Temp Probe will be used.
- Electronic International's P-114 Oil Temp Probe will be used.
- Electronic International's P-120 Oil Temp Probe will be used.

<b>Markings: Units _____</b>			
<input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			Example
			-9999   -40   Red
			-40   10   Yellow
			10   99   Green
			99   9999   Red

**Volts:** The EDC-33T has only one channel to measure voltage (n/c), but with the use of a VI-221 any of the temp channels can be used to measure voltage (\$19.95 ea.). Provide the name for each voltage measurement:

Name	Loc	EDC

Limits are preset by E.I. to provide over voltage, discharging and low voltage warnings.

**Amps:** Normally Amps do not have limits specified. A 300 Amp shunt is provided in the kit or the MVP-50P can be connected to the aircraft's existing shunt. To do this the value of the existing shunt must be provided. See [www.buy-ei.com](http://www.buy-ei.com) and look under VA-1A Downloads for help on determining the value of your existing shunt.

Measurement of:  Battery Current       Alternator Current       Other \_\_\_\_\_

Select one of the following:

- Use the 100 Amp Shunt that comes with the system.
- Use the 300 Amp Shunt that comes with the system.
- The aircraft's Existing Shunt will be used, Value is \_\_\_\_\_ Amps at \_\_\_\_\_ mV.

Markings: <input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			4.5   5.5   Green

## 2nd Amps:

Measurement of:       Battery Current       Alternator Current       Other \_\_\_\_\_

This function is an additional \$195 and includes the FM-VA-3 module. The EDC-33T has only one channel to monitor current however with the FM-VA-3, when connected to one EDC-33T temperature channel, allows three additional current measurements. If markings are not specified in the POH/AFM, write "No Limits". The MVP can be connected to the existing shunt. ***If you will using an existing shunt, the shunt value must be provided.*** Select one of the following:

- Use the 100 Amp Shunt that comes with the FM-VA-3 module.
- Use the 300 Amp Shunt that comes with the FM-VA-3 module.
- The aircraft's Existing Shunt will be used, Value is \_\_\_\_\_ Amps at \_\_\_\_\_ mV.

Markings: <input type="checkbox"/> Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			4.5   5.5   Green

Provide the Name for each Amp measurement and Markings that will be use for all of them:

Amps Measurement 1 Name:			
(Low)	Range	(High)	Color
			Example
			??   9999   Red
			0   700   Green

Amps Measurement 2 Name:			
(Low)	Range	(High)	Color
			Example
			??   9999   Red
			0   700   Green

Amps Measurement 3 Name:			
(Low)	Range	(High)	Color
			Example
			??   9999   Red
			0   700   Green

Amps Measurement 4 Name:			
(Low)	Range	(High)	Color
			Example
			??   9999   Red
			0   700   Green

**Hydraulic Pressure:** This function requires the PT-3000S Pressure Transducer (3000 psi max). \$250.00

Markings: Units:			
[ ] Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			Example
			0   1000   Red
			1000   2600   Green
			2600   9999   Red

**Oxygen Pressure:** This function requires the PT-3000S Pressure Transducer (3000 psi max). If higher pressures are required, the EDC-33T will need to interface with your existing pressure transducer. In this case data on your existing pressure transducer will need to be provided. \$250.00

Markings: Units:			
[ ] Markings are not specified in the POH/AFM.			
(Low)	Range	(High)	Color
			Example
			0   300   Yellow
			1550   1850   Green
			2000   9999   Red

**Vacuum Pressure:** If markings are not listed in the POH/AFM, we suggest using Green 4.5 to 5.5. This function uses the PT-05Diff Pressure Transducer (\$150.00). If the vacuum tube is a hard line, you may need a flare fitting.

Add a 1/4," 37 degree Flare Fitting to interface to the Vacuum Pressure Transducer (\$19.95 ea.)

**For Twin Installation Only:**

Vacuum is operated by a vacuum pump.

Vacuum is operated by an air pump.

Air pump is also used for de-ice boots. This is used to select proper source failure annunciators.

<b>Markings: Units:</b>				
<input type="checkbox"/> Markings are not specified in the POH/AFM.				
(Low)	Range	(High)	Color	Example
				0   3.7   Red
				3.7   4.8   Yellow
				4.8   5.2   Green
				5.2   999.9   Red

**Cabin Altitude:** This function requires the PT-30ABS module (\$150.00).

<b>Markings: Units:</b>				
<input type="checkbox"/> Markings are not specified in the POH/AFM.				
(Low)	Range	(High)	Color	Example
				0   12.5   Green
				12.5   999.9   Yellow

**Pressure Altitude:** This function requires the PT-30ALT module (\$150.00).

<b>Markings: Units:</b>				
<input type="checkbox"/> Markings are not specified in the POH/AFM.				
(Low)	Range	(High)	Color	Example
				0   12.5   Green
				12.5   999.9   Yellow

**Cabin Differential Pressure:** This function requires the PT-05Diff module (\$150.00).

<b>Markings:</b> Units:				
<input type="checkbox"/> Markings are not specified in the POH/AFM.				
(Low)	Range	(High)	Color	Example
				0   4.5   Green
				4.5   999.9   Red

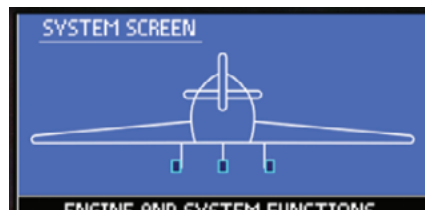
**G-Meter:** This function requires the GS-3 module. The GS-3 measures three axes of g-force. A pressure channel on the EDC-33x is required for each axes. Usually only the vertical axis is monitored (\$495.00).

The GS-3 module will be mounted in the cabin under the instrument panel. The G-Meter function provides a real time g-force display on the MVP-50T. The MVP-50T 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.

<b>Markings:</b> <input type="checkbox"/> Markings are not specified in the POH/AFM.				
(Low)	Range	(High)	Color	Example
				-999.9   -1.5   Red
				-1.5   3.8   Green
				3.8   999.9   Red

**Flaps and Trim Status Indicators (Experimental or OEM Only):** Select each function that will be displayed in the upper portion of the System Screen and provide the voltage range of the signal to the EDC-33T (Example: 0 to Bus Voltage or 0 to 5Volts). All of the following functions are secondary to the existing indicators in the aircraft. Each function requires a VI-221 Voltage Interface.

- Rudder Trim. Voltage Range: \_\_\_\_\_
- Elevator Trim. Voltage Range: \_\_\_\_\_
- Aileron Trim. Voltage Range: \_\_\_\_\_
- Flap Position. Voltage Range: \_\_\_\_\_



**Gear and Unsafe Indicator:** All of the following functions are secondary to the existing indicators in the aircraft. Each function requires a VI-221 Voltage Interface (\$19.95 ea.).

If the Gear Position Airspeed is monitored, the MVP-50 will provide a gear-up warning during final approach based on N1 and Airspeed.

**Select one:**

Individual Gear Indicator Option: Requires 4 EDC channels (Temperature or Fuel Level).

Function	Voltage to the EDC: Gear <b>UP</b>	Voltage to the EDC: Gear <b>DOWN</b>	Example
Nose Gear			0V, 12V
Main Left Gear			0V, 12V
Main Right Gear			0V, 12V
	Voltage to the EDC when the UNSAFE Light is ON	Voltage to the EDC when the UNSAFE Light is OFF	
UNSAFE Light			0V, 12V

Combined Gear Indicator Option: Requires 2 EDC channels (Temperature or Fuel Level).

Function	Voltage to the EDC: Gear <b>UP</b>	Voltage to the EDC: Gear <b>DOWN</b>	Example
Nose Gear (provides sig- nal for all gear indications)			0V, 12V
	Voltage to the EDC when the Unsafe Light is ON	Voltage to the EDC when the Unsafe Light is OFF	
UNSAFE Light			0V, 12V

**Airspeed:**

This function requires 1 EDC Pressure Channel and the PT-05Diff module (\$150.00) It may only be used as a backup instrument. Yellow and Red markings are not allowed.

Select markings option:

Green operating range, Flaps-up: \_\_\_\_\_ to \_\_\_\_\_.

Regular markings option

<b>Markings:</b> <input type="checkbox"/> Markings are not specified in the POH/AFM.		
Color	Range	Example
		Green, 80   180 kts

**RTDO:** This feature provides real time data out of a RS232 port on the MVP-50T (\$667.00)

[ ] Add RTDO to the kit.

**Any Other Function:** Almost any function can be monitored by the EDC-33T and scaled by the MVP-50T to provide a digital and analog display of its value or to drive an annunciator. Provide data below:



## Appendix A:

### EDC-33T Overview

The EDC-33x (Engine Data Converter, “EDC”) converts all of the engine and aircraft system signals into serial data. This data is transmitted to the MVP display via two wires. The EDC reduces the wire bundle to the instrument panel by over 100 wires (\$2450.00).

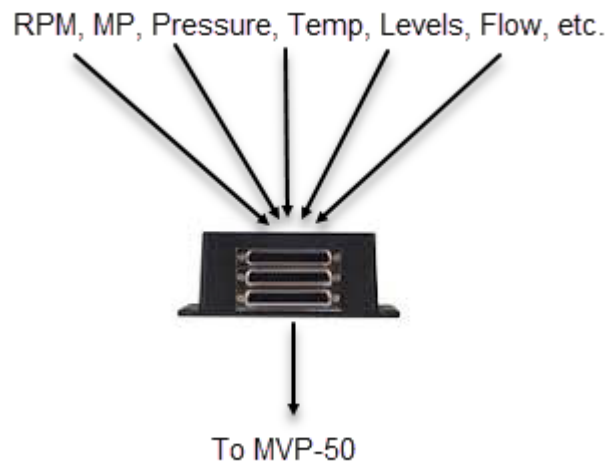
There are three 37-pin D-sub connectors that interface the EDC to the various probes, transducers and modules. The EDC’s Temperature, Pressure and Fuel Level inputs can be used to monitor voltage outputs from almost any transducer. In this way almost any function can be displayed on the MVP. Up to two EDC’s can be connected to a MVP display. This significantly increases the total number of functions that can be displayed on the MVP. Make sure you have sufficient channels on the EDC-33T to support all the functions and annunciators you will be displaying on the MVP-50T. The channels available on an EDC are as follows:

#### **These Channels can be used for various functions and annunciators:**

- 13** – Temp Channels: Maybe used to monitor any voltage or thermocouple.
- 9** – Pressure Channels: Maybe used to monitor any voltage (very high input impedance).
- 4** – Resistive Fuel Level Channels: Maybe used to monitor any voltage.

#### **These Channels are dedicated to specific functions:**

- 1** – Ng RPM input.
- 1** – Np RPM input.
- 1** – Fuel Flow.
- 1** – Volts.
- 1** – Amps.



- \* Be sure you have ordered the hardware to support all the functions listed in this document.
- \* Check that all range and configuration information is complete and accurate.

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**FAILURE TO SIGN THIS DOCUMENT WILL RESULT IN AN INCOMPLETE FORM AND WILL DELAY YOUR ORDER**

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I (the undersigned) have entered and verified all the limits, markings and aircraft configurations listed in this worksheet to be correct and taken from the information in the aircraft's POH/ AFM which includes any changes mandated by any AD's, Supplements and STC's. When necessary, I have checked with my FAA certified mechanic to insure all of the data listed above is correct.

I understand there is important safety information in the Installation and Operating Instructions that must be read before installing the MVP-50T system and flying the aircraft.

Completed by:  Owner  Pilot  Technician  Other \_\_\_\_\_

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Completed By Printed Name

-----  
Completed By Signature

-----  
Date

**Hand signature or Encrypted Digital signature required.**