

**MVP-50T**  
**Signal Engine Turboprop**  
**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 & E-mail:		555-555-5555, 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.

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.

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.

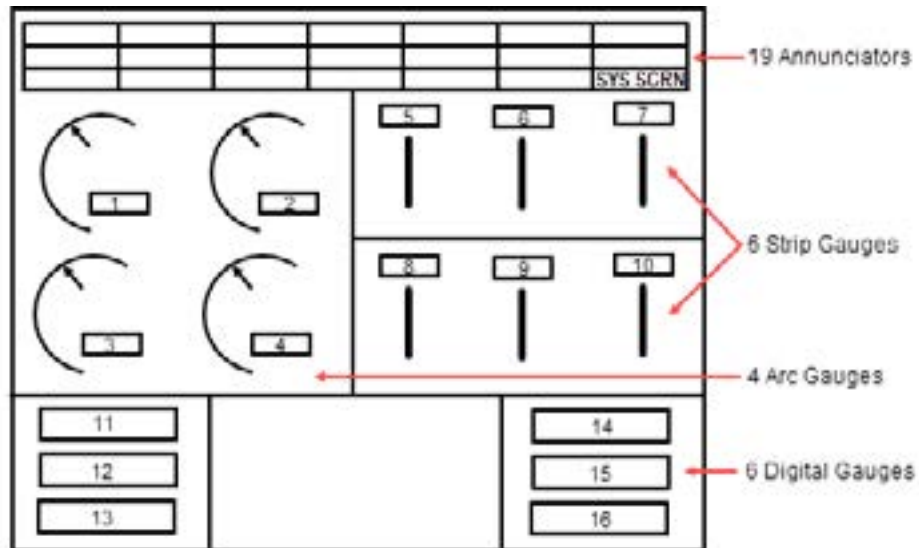
**Important Information:** The information in this document must be verified for accurate and match the aircraft's hardware and POH/AFM marking requirements. **If you have not ordered the probes and transducers to support the functions you have listed in this document, your order will be delayed. Also, 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.).

### Main Screen Layout:

On the Main Screen, you can have up to 19-Annunciators, 4-Arc Gauges, 6-Horizontal Strip Gauges and 6-Digital Gauges.



The layout and Function Names must be logical and is subject to approval.

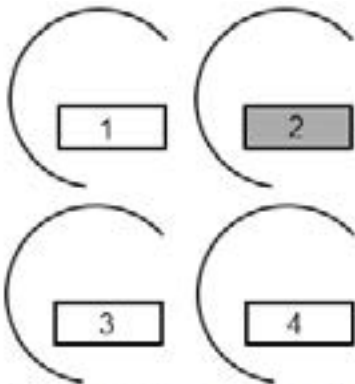
### 4-Arc Gauges:

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 for locations 1 to 4. If Np is not displayed, Fuel Flow can be displayed in its place.

Provide the following data for the 4-Arc Gauges in the left portion of the Mains Screen:

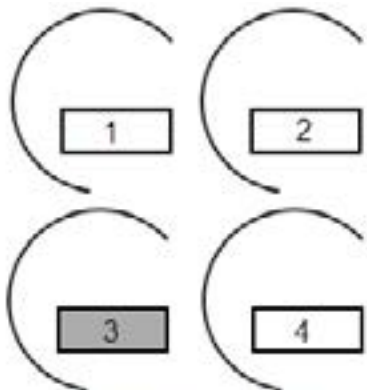
See below, more information may be required.

Function:		Units: <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>
Displayed Name: <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/> <input style="width: 20px;" type="text"/>		
Color:	Range:	Example:
		Red, <20:
		Grn, 20 to 100:
		Red, >100



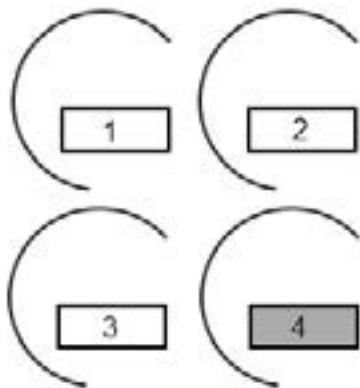
See below, more information may be required.

Function:		Units: <input type="text"/>
Displayed Name: <input type="text"/>		
Color:	Range:	Example:
		Red, <20:
		Grn, 20 to 100:
		Red, >100



See below, more information may be required.

Function:		Units: <input type="text"/>
Displayed Name: <input type="text"/>		
Color:	Range:	Example:
		Red, <20:
		Grn, 20 to 100:
		Red, >100



See below, more information may be required.

Function:		Units: <input type="text"/>
Displayed Name: <input type="text"/>		
Color:	Range:	Example:
		Red, <20:
		Grn, 20 to 100:
		Red, >100

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 receive signals from two EDC-33T units.

**6-Horizontal Strip Gauges:**

Strip Gauges 5 through 7, should be setup as Fuel P, Oil P and Oil T in that order. Strip Gauges 8 through 10 are setup as Fuel L, F. Flow and Fuel R in that order.

**Provide the following data for the 6-Strip Gauges in the right portion of the Main Screen:**

5	6	7	Function:		Units: <input type="text"/>
↓	↓	↓	Displayed Name: <input type="text"/>		
8	9	10	Color:	Range:	Example:
↓	↓	↓			Red, <20:
					Grn, 20 to 100:
					Red, >100

See below, more information may be required.

5	6	7	Function:		Units: <input type="text"/>
↓	↓	↓	Displayed Name: <input type="text"/>		
8	9	10	Color:	Range:	Example:
↓	↓	↓			Red, <20:
					Grn, 20 to 100:
					Red, >100

See below, more information may be required.

5	6	7	Function:	Units:
↓	↓	↓	Displayed Name: <input type="text"/>	
8	9	10	Color:	Range:
↓	↓	↓		Example:
				Red, <20:
				Grn, 20 to 100:
				Red, >100

See below, more information may be required.

5	6	7	Function:	Units:
↓	↓	↓	Displayed Name: <input type="text"/>	
8	9	10	Color:	Range:
↓	↓	↓		Example:
				Red, <20:
				Grn, 20 to 100:
				Red, >100

See below, more information may be required.

5	6	7	Function:	Units:
↓	↓	↓	Displayed Name: <input type="text"/>	
8	9	10	Color:	Range:
↓	↓	↓		Example:
				Red, <20:
				Grn, 20 to 100:
				Red, >100

See below, more information may be required.

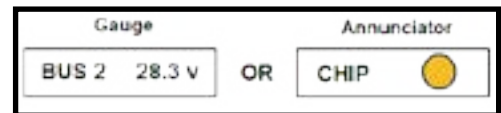
5	6	7	Function:	Units:
8	9	10	Displayed Name:	
			Color:	Range:
				Example:
				Red, <20:
				Grn, 20 to 100:
				Red, >100

See below, more information may be required.

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 receive signals from two EDC-33T units.

**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. Location 16 is normally used for OAT. This location can display OAT in degrees C and in degrees F at the same time. Some functions displayed in the Digital Gauges are Amps, Volts, Boom P, Time to Empty, G-METR, HYD P, BLEED Air, OXGEN, CABN P, CABN A, INVERT, etc.



Also, these six locations can be setup as Annunciators. If an Annunciator is to be displayed, provide the ON Color, ON State Voltage, OFF State Voltage and Displayed Name. The ON and OFF State Voltages can be Bus, 28V, Open, Ground, 0V, etc. Annunciators require a VI-221 Voltage Interface Module (\$19.95 ea.).

**Provide the following data for the 6-Digital Gauges in the bottom portion of the Main Screen:**

Type: <input type="checkbox"/> Digital Gauge <input type="checkbox"/> Annunciator  <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:33%;">Color</th> <th style="width:33%;">ON Voltage</th> <th style="width:33%;">OFF Voltage</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <input type="checkbox"/> 11  <input type="checkbox"/> 12  <input type="checkbox"/> 13                 </div> <div style="width: 45%;"> <input type="checkbox"/> 14  <input type="checkbox"/> 15  <input type="checkbox"/> 16                 </div> </div>	Color	ON Voltage	OFF Voltage				Function: <span style="float: right;">Units: <input type="text"/><input type="text"/><input type="text"/></span>  Displayed Name: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>  <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:25%;">Color:</th> <th style="width:45%;">Range:</th> <th style="width:30%;">Example:</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td>Red, &lt;20:</td> </tr> <tr> <td> </td> <td> </td> <td>Grn, 20 to 100:</td> </tr> <tr> <td> </td> <td> </td> <td>Red, &gt;100</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Color:	Range:	Example:			Red, <20:			Grn, 20 to 100:			Red, >100						
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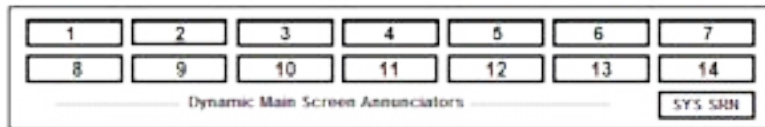


Type: <input type="checkbox"/> Digital Gauge <input type="checkbox"/> Annunciator	Function: _____ Units: <input type="text"/> <input type="text"/> <input type="text"/>																		
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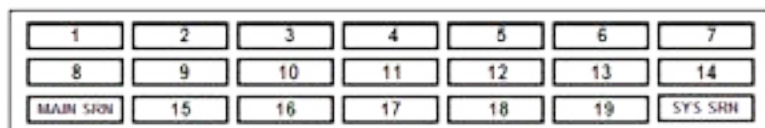
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The MVP-50T gets all its signals via an EDC-33T. Make sure you have the channels available on the EDC-33T to support your selections. An overview of the EDC-33T channels is provided in appendix A. The MVP-50T can receive signals from two EDC-33T units.

**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.



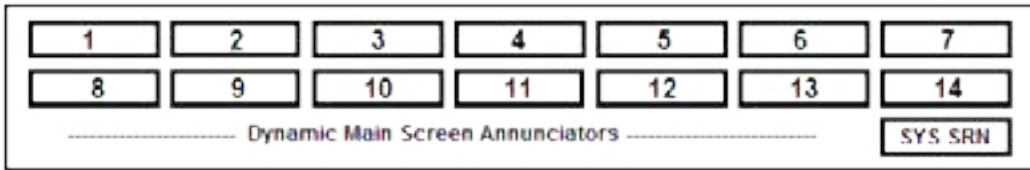
If 15 to 19 annunciators will be displayed in the CAS, the far left annunciator serves as a Master Caution & Warning for all functions on the Main Screen and again the far right annunciator serves as a Master Caution & Warning for all functions on the System Screen. Between the far left and right annunciators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

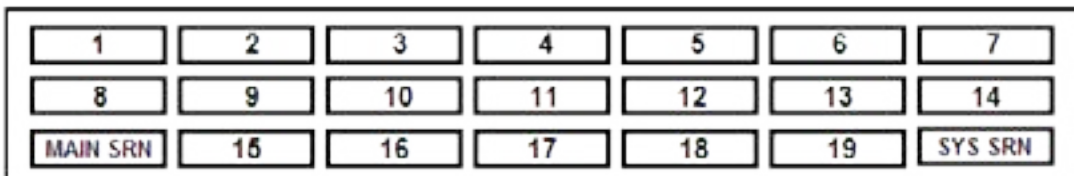
The MVP-50T gets all its signals via an EDC-33x. Make sure you have the channels available on the EDC-33x to support your selections. An overview of the EDC-33T channels is provided in appendix A. The MVP-50T can receive signals from two EDC-33T units.

**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, White, Cyan or Dark Blue.
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.



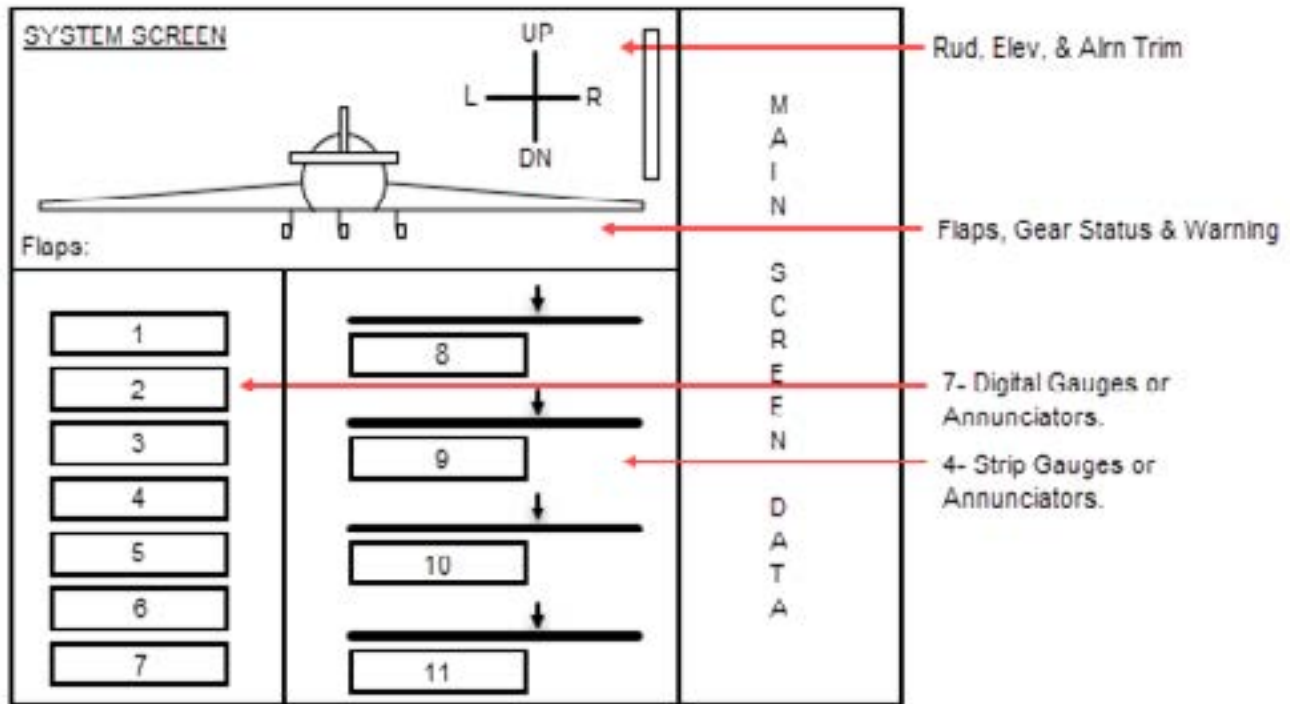
Location	Displayed Name (9)	ON Color	ON State Voltage	OFF State Voltage
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				



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

## System Screen Layout:

The upper section of the System Screen provides status indicators for Rudder, Elevator and Aileron Trim. Also, Flap Position, Gear Status and a Gear Warning (if airspeed is monitored) can be displayed. For EI's STC these indicators are only secondary to the primary indicators in the aircraft.



The lower left section provides locations for 7- Digital Gauges. These locations can also be used as Annunciators. The lower right section provides locations for 4-Strip Gauges and these locations can also be used as Annunciators.

## Status Indicators:

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 (\$19.95 ea.).

- Rudder Trim. Voltage Range: \_\_\_\_\_ (Experimental or OEM's Only)
- Elevator Trim. Voltage Range: \_\_\_\_\_ (Experimental or OEM's Only)
- Aileron Trim. Voltage Range: \_\_\_\_\_ (Experimental or OEM's Only)
- Flap Position. Voltage Range: \_\_\_\_\_ (Experimental or OEM's Only)

[ ] One input controls the indication of all the Gears. Gear-Up Voltage Level: \_\_\_\_\_.

In this case the Nose and Main Gear-up Voltage Levels are not required.

[ ] Nose Gear-up Voltage Level: \_\_\_\_\_.

[ ] Mains Gear-up Voltage Level: \_\_\_\_\_.

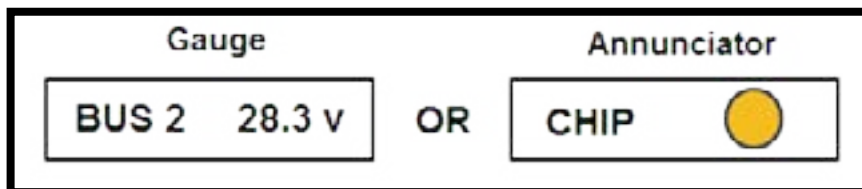
[ ] Unsafe Voltage Level: \_\_\_\_\_. If Gear status is displayed, the Unsafe status is required.

**7-Digital Gauges (or Annunciators):**

Note: If any of these seven locations displays a function in red or yellow, the “SYS SRN” Annunciator on the Main Screen will blink in the color of its operating range.

**Provide the following data for the 7-Digital Gauges in the lower left portion of the System Screen:**

If a Digital Gauge is to be displayed: Under “Type” select “Gauge and provide the data on the right.



If an Annunciator is to be displayed: Under “Type” select “Annunciator” and provide the ON Color, ON Voltage State, OFF Voltage State and Displayed Name. The ON and OFF State Voltages can be Bus, 28V, Open, Ground, OV, etc. Annunciators require a VI-221 interface module (\$19.95 ea.).

Type:	<input checked="" type="checkbox"/> 1	Function:	Units: <input type="text"/>
<input type="checkbox"/> Digital Gauge	<input type="text"/> 2	Displayed Name: <input type="text"/>	
<input type="checkbox"/> Annunciator	<input type="text"/> 3	Color:	Range:
Color: <input type="text"/>	ON V.: <input type="text"/>	OFF V.: <input type="text"/>	Example:
	<input type="text"/> 4		Red, <20.
	<input type="text"/> 5		Gm, 20 to 100:
	<input type="text"/> 6		Red, >100
	<input type="text"/> 7		
See below, more information may be required.			

Type:	<input type="checkbox"/> Digital Gauge	<input type="checkbox"/> Annunciator	1	Function:	Units: <input type="text"/>
			2	Displayed Name: <input type="text"/>	
			3		
			4	Color:	Range:
			5		Example:
			6		Red, <20:
			7		Gm, 20 to 100:
					Red, >100

See below, more information may be required.

Type:	<input type="checkbox"/> Digital Gauge	<input type="checkbox"/> Annunciator	1	Function:	Units: <input type="text"/>
			2	Displayed Name: <input type="text"/>	
			3		
			4	Color:	Range:
			5		Example:
			6		Red, <20:
			7		Gm, 20 to 100:
					Red, >100

See below, more information may be required.

Type:	<input type="checkbox"/> Digital Gauge	<input type="checkbox"/> Annunciator	1	Function:	Units: <input type="text"/>
			2	Displayed Name: <input type="text"/>	
			3		
			4	Color:	Range:
			5		Example:
			6		Red, <20:
			7		Gm, 20 to 100:
					Red, >100

See below, more information may be required.

Type:	<input type="checkbox"/> Digital Gauge	<input type="checkbox"/> Annunciator	1	Function:	Units: <input type="text"/>
			2	Displayed Name: <input type="text"/>	
			3		
			4	Color:	Range:
			5		Example:
			6		Red, <20:
			7		Grn, 20 to 100:
					Red, >100

Color    ON V.    OFF V.

--	--	--

See below, more information may be required.

Type:	<input type="checkbox"/> Digital Gauge	<input type="checkbox"/> Annunciator	1	Function:	Units: <input type="text"/>
			2	Displayed Name: <input type="text"/>	
			3		
			4	Color:	Range:
			5		Example:
			6		Red, <20:
			7		Grn, 20 to 100:
					Red, >100

Color    ON V.    OFF V.

--	--	--

See below, more information may be required.

Type:	<input type="checkbox"/> Digital Gauge	<input type="checkbox"/> Annunciator	1	Function:	Units: <input type="text"/>
			2	Displayed Name: <input type="text"/>	
			3		
			4	Color:	Range:
			5		Example:
			6		Red, <20:
			7		Grn, 20 to 100:
					Red, >100

Color    ON V.    OFF V.

--	--	--

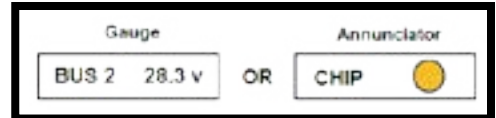
See below, more information may be required.

**4-Strip Gauges (or Annunciators):**

Note: If any of these seven locations displays a function in red or yellow, the “SYS SRN” Annunciator on the Main Screen will blink in the color of its operating range.

**Provide the following data for the 7-Digital Gauges in the lower left portion of the System Screen:**

If a Digital Gauge is to be displayed: Under “Type” select “Gauge and provide the data on the right.



If an Annunciator is to be displayed: Under “Type” select “Annunciator” and provide the ON Color, ON Voltage State, OFF Voltage State and Displayed Name. The ON and OFF State Voltages can be Bus, 28V, Open, Ground, OV, etc. Annunciators require a VI-221 interface module (\$19.95 ea.).

Type:	↓	Function:	Units: <input type="text"/>
<input type="checkbox"/> Strip Gauge	8	Displayed Name: <input type="text"/>	
<input type="checkbox"/> Annunciator	↓	Color:	Range:
	9		Example:
Color	ON V	OFF V	Red, <20:
			Gm, 20 to 100:
	10		Red, >100
See below, more information may be required.	↓		
	11		

Type:	↓	Function:	Units: <input type="text"/>
<input type="checkbox"/> Strip Gauge	8	Displayed Name: <input type="text"/>	
<input type="checkbox"/> Annunciator	↓	Color:	Range:
	9		Example:
Color	ON V	OFF V	Red, <20:
			Gm, 20 to 100:
	10		Red, >100
See below, more information may be required.	↓		
	11		



Type:		↓	Function:	Units: <input type="text"/>
<input type="checkbox"/> Strip Gauge		8	Displayed Name: <input type="text"/>	
<input type="checkbox"/> Annunciator		9		
Color	ON V.	OFF V.	Color:	Range:
				Example:
		10		Red, <20:
		11		Grn, 20 to 100:
				Red, >100
See below, more information may be required.				

Type:		↓	Function:	Units: <input type="text"/>
<input type="checkbox"/> Strip Gauge		8	Displayed Name: <input type="text"/>	
<input type="checkbox"/> Annunciator		9		
Color	ON V.	OFF V.	Color:	Range:
				Example:
		10		Red, <20:
		11		Grn, 20 to 100:
				Red, >100
See below, more information may be required.				

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. The ON and OFF State Voltages can be Bus, 28V, Open, Ground, OV, etc. The MVP-50T can receive signals from two EDC-33T units.

## More Information May Be Required:

Depending on the function, more information may be required. Please read the following and provide the information required for the selected functions. Also, we have included some information on various functions that may be helpful.

**Setting Limits:** Inappropriate limits will cause nuisance alarms. Also, you are not allowed to set red or yellow limits unless they are listed in the POH/AFM.

**Ng (N1, Nh, ....):** 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 10.2 KHz. The FM-RPM-xx module will handle frequencies up to 30 KHz (\$395.00).

**Np (N2, NL, NF, ....):** 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, there 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 \_\_\_\_\_ RPM Prop (or 100%) reading (select one)

Example: 4200 Hz for a 2200 RPM Prop (or 100%) Reading.

**Torque:** Select your application and provide the data below:

Torque is measured in PSI and displayed in PSI.

PSI for Max Torque: \_\_\_\_\_

Torque is measured in PSI and displayed in %.

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

Torque is measured in PSI and displayed in FTLBS.

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

**Note:** For the above application a pressure transducer will be provided in the kit. This transducer can be mounted in the engine compartment on the firewall away for heat and vibration. A flexible hose will be routed from the engine torque pressure port to the transducer.

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

\_\_\_\_\_ Volts equals \_\_\_\_\_ (PSI, % or FTLBS)

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).

### **ITT (EGT, TOT):**

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.

**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 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.

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)

**Oil Pressure:** You can choose to use your existing Oil Pressure Transducer or our PT-100GA 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 firewall away from heat and vibration. A flexible hose will be routed from the engine port to the transducer.

I will be using my existing Oil Pressure Transducer (not the most common choice):

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

\_\_\_\_\_.

**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 \*\*\*\*\* 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.

E.I.'s P-120 Oil Temp Probe will be used.

**Fuel Level:** 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 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 (\$349.00).

P-300C Mini: This is a 3/16” OD capacitive probe (\$298.00).

P-300M: Magnetic Float Sensor, replacement for Resistive Sensor (\$395.00).

RFLM-4: Provides the current for up to 4 resistive fuel level sensors (\$98.00).

FLAM -4: Monitors up to 4 capacitive fuel level probes in one tank and outputs the signal to the EDC-33T as single tank (\$475.00).

For each Fuel Level Probe we require the following information:

Displayed Name	Probe Type	Tank Configuration
	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 will come from the signal conditioner box. <input type="checkbox"/> The signal will come from the probes.	Full 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.
	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 will come from the signal conditioner box. <input type="checkbox"/> The signal will come from the probes.	Full 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.

<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: 40px;"><input type="checkbox"/> The signal will come from the signal conditioner box.</p> <p style="padding-left: 40px;"><input type="checkbox"/> The signal will come from the probes.</p>	<p>Full 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>
--	--

If some other fuel level probe is to be used, provide specification for the probe.

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

**Amps:** A 300 Amp shunt is provided in the kit or the MVP-50T can be connected to the aircraft's existing shunt. To do this, the value of the existing shunt must be provided.

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

**Note:** The EDC-33T only has only one channel to monitor current. The FM-VA-3 module (when connected to temp channels on the EDC-33T) allows three more current measurements (\$195.00).

- Add the FM-VA-3 to the Kit (\$195.00).
- Add the following number of S-300 Shunts to the kit: \_\_\_\_\_ (\$49.00 ea.).

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

**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

**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.)

**Airspeed:** This function requires the PT-05Diff module. Airspeed on the MVP cannot be used as a Primary Functions (\$150.00).

**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.

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

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

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

**Any 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. Call E.I. for assistance.

**Flaps, Gear and Other Status Indicators:** 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 (\$19.95 ea.).



Rudder Trim. Voltage Range: \_\_\_\_\_ (Experimental or OEMs Only)

Elevator Trim. Voltage Range: \_\_\_\_\_ (Experimental or OEMs Only)

Aileron Trim. Voltage Range: \_\_\_\_\_ (Experimental or OEMs Only)

Flap Position. Voltage Range: \_\_\_\_\_.

One input controls the indication of all the Gears. Gear-Up Voltage Level: \_\_\_\_\_.

In this case the Nose and Main Gear-up Voltage Levels are not required.

Nose Gear-up Voltage Level: \_\_\_\_\_.

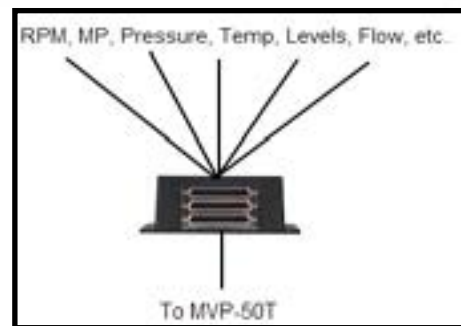
Mains Gear-up Voltage Level: \_\_\_\_\_.

Unsafe Voltage Level: \_\_\_\_\_. If Gear status is displayed, the Unsafe status is required.

## 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.

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

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.

-----  
Owner/Pilot's Printed Name

-----  
Owner/Pilot's Signature

-----  
Date