Electronics International Inc.

MVP-50T Configuration Worksheet

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114201, Rev. B

General Information

Customer Name:		**Email:**		**Phone:**	
Aircraft (A/C) Make & Model:		**A/C Tail #:**		**A/C Serial #:**	
Engine Mfr & Model:				**Max HP:**	

Other certification options:

[ ] Include a Certificate of Conformance ($10)
[ ] Include an 8130-3 ($195). Can add up to 2 weeks to lead time.

For each order, this worksheet MUST be completed and submitted, along with the following items:

1. Specific pages from your POH/AFM:

- **POH/AFM Cover Page**
- **Engine/Operations Limitations Page + the page before it and the page after it.**
- **Power Plant/Engine Instrument Markings + the page before it and the page after it.**

2. Any ADs/STCs/AFMs that affect the original power plant instrument markings.

***** Closeup color photos of the primary gauges in your aircraft panel (helpful but not required).**

Function Selections: **The MVP-50T can display up to 29 functions. The first 3 functions are pre-selected below. Select the remaining functions by numbering them 4 through 29. All functions are included in the kit price except those with additional costs. Those prices are indicated below. Also indicate measurement units where applicable.**

Function #	Function & Units (if applicable)	Function #	Function & Units (if applicable)
1	Ng (N1, Nh, NR Other)		OAT in °F
2	Np (N2, NL, NF, Other)		OAT in °C
3	ITT (EGT, TOT, Other) [ ] °F [ ] °C		Pressure Altitude (additional $395) [ ] feet [ ] meters
4	Torque		Vertical Speed Indicator [ ] ft/sec [ ] m/sec
	Fuel Flow		Cabin Pressure (additional $150) [ ] psi [ ] kft [ ] "Hg
	Fuel Pressure		Cabin Differential Pressure (additional $150) [ ] "Hg [ ] psi
	Fuel Tank 1		CO Detector (additional $695)
	Fuel Tank 2		Hydraulic Pressure (additional $348) [ ] psi [ ] bar
	Fuel Tank 3		G-Meter (additional $495) Does not have Peak Hold feature.
	Fuel Tank 4		Vacuum Pressure (additional $150) [ ] psi [ ] "Hg
	Fuel Tank 5		Airspeed (additional $150) [ ] kts [ ] mph [ ] kph
	Fuel Tank 6		Oxygen Pressure (additional $250) [ ] "Hg [ ] psi
	Oil Pressure [ ] psi [ ] bar		RTDO (Real Time Data Output) (additional $667)
	Oil Temp [ ] °F [ ] °C		
	Volts [ ] 12V [ ] 24V		Other Annunciators/Status Indicators, Quantity: _____
	AMPS		
	2nd AMPS (includes FM-VA-3 Module)		
	3rd AMPS (includes FM-VA-3 Module)		
	4th AMPS (includes FM-VA-3 Module)		
	Cabin Altitude [ ] feet [ ] meters		

Fuel Units
[ ] US Gal
[ ] Brit/Imp Gal
[ ] Liter
[ ] Lbs, Fuel Density: _____

Choosing more than 4 fuel tanks will require a 2nd EDC-33T, additional $2,450.

All annunciators/status indicators count towards the total displayable functions. Use page 6 to configure these.

Continued on page 2
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Main Screen Layout Selection

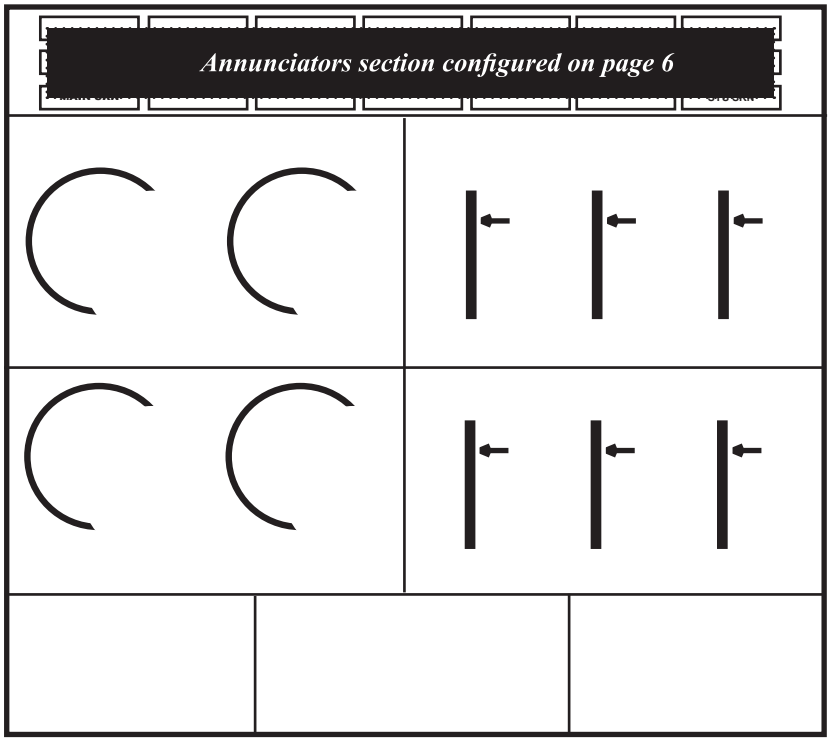
This section allows you to choose and configure your Main Screen layout. Electronics International may have to change the layout to meet standardization requirements. Please choose your layout from the options below (4-arc/6-strip, 8-arc, or 12-strip) and complete the layout function descriptions. The maximum number of characters allowed in each function name are indicated in the parenthesis below, these maximums include spaces.

Arc Example

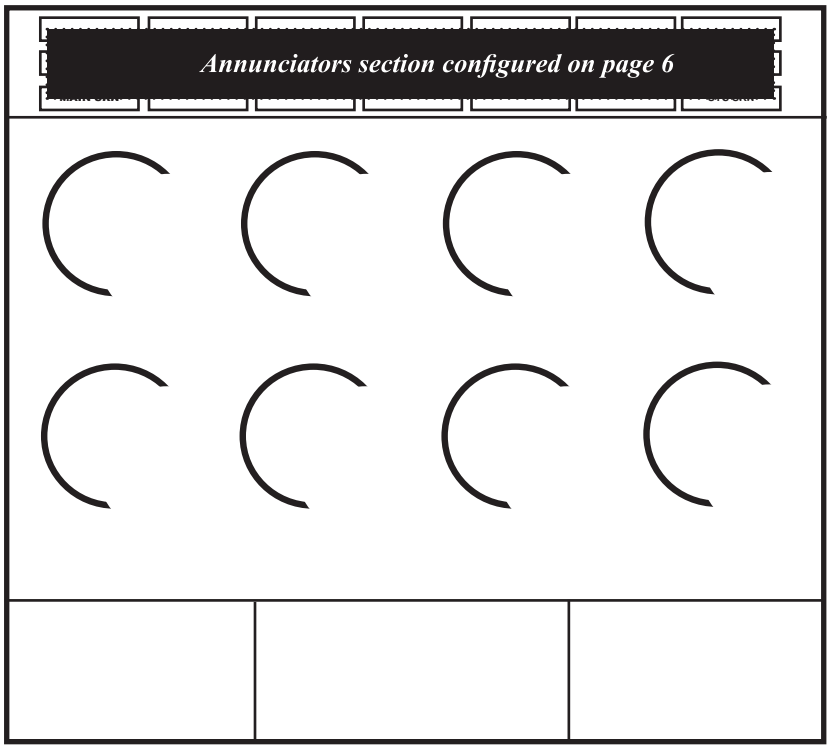
Strip Gauge Example

Digital Gauge Example

☐ **4-Arc, 6-Strip Layout**
STC'd & TSO'd

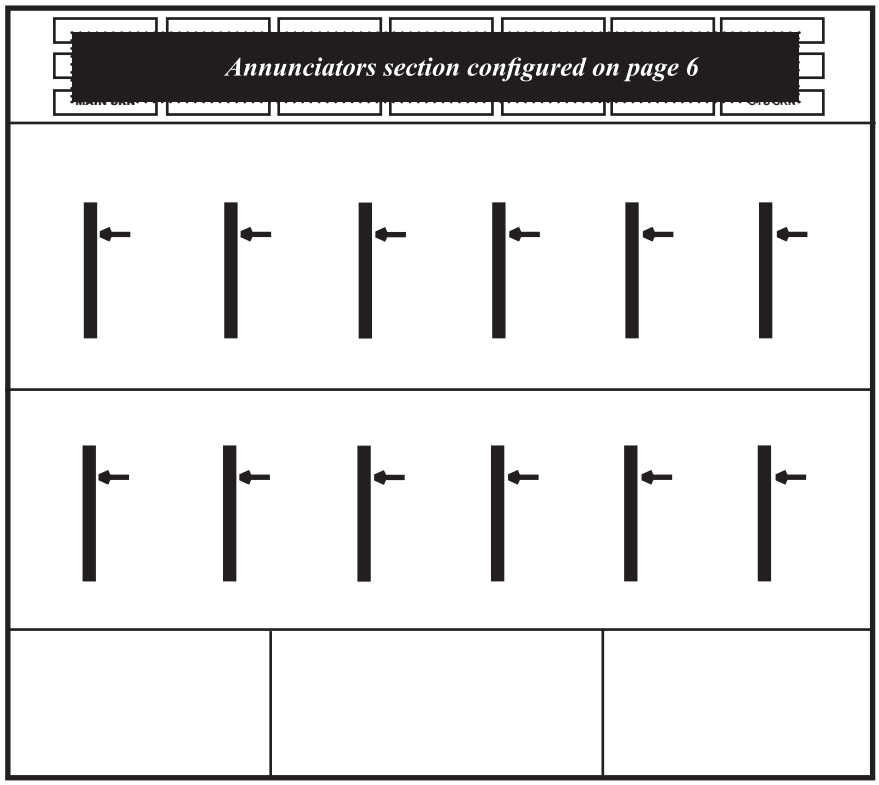


☐ **8-Arc Layout**
TSO'd



Main Screen Layout Selection (continued from page 2)

☐ **12-Strip Layout**
TSO'd



Ng (N1, Nh, ...)	**Select one: [☐] Ng [☐] N1 [☐] Nh [☐] NR [☐] 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).

Np (N2, NL, NF, ...)	**Select one: [☐] N2 [☐] NL [☐] NF [☐] Other** _____

On most engines the Np 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% Np reading. If the signal is from a Transmitter, we need to know the frequency of the signal 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.

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Note for all displayed functions. The MVP-50T cannot display symbols similar to factory gauges such as triangles, barber poles, etc. Contact EI Support for more details.

Torque	**Units:** [☐] Torque measured in PSI and displayed in PSI. [☐] Measured in PSI and displayed in %. Provide PSI for 100% Torque: _____ PSI [☐] Measured in PSI and displayed in FTLBS. _____ PSI equals _____ FTLBS

Please select your application:

[☐] 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).

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 TPE331engines, a replacement 8-probe EGT harness (P-908) is available. Call for information.

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AMPS (if selected)	Measurement of: [ ] Battery Current [ ] Alternator Current

[ ] Use the included 100-Amp Shunt.
[ ] Use the included 300-Amp Shunt. Rarely required and reduces resolution to one amp.
[ ] The aircraft's existing shunt will be used. Value is _____ Amps at _____ mV.

2nd AMPS (if selected)	Measurement of: [ ] Battery Current [ ] Alternator Current [ ] Other _____

[ ] Use the included 100-Amp Shunt.
[ ] Use the included 300-Amp Shunt. Rarely required and reduces resolution to one amp.
[ ] The aircraft's existing shunt will be used. Value is _____ Amps at _____ mV.

3rd AMPS (if selected)	Measurement of: [ ] Battery Current [ ] Alternator Current [ ] Other _____

[ ] Use the included 100-Amp Shunt.
[ ] Use the included 300-Amp Shunt. Rarely required and reduces resolution to one amp.
[ ] The aircraft's existing shunt will be used. Value is _____ Amps at _____ mV.

4th AMPS (if selected)	Measurement of: [ ] Battery Current [ ] Alternator Current [ ] Other _____

[ ] Use the included 100-Amp Shunt.
[ ] Use the included 300-Amp Shunt. Rarely required and reduces resolution to one amp.
[ ] The aircraft's existing shunt will be used. Value is _____ Amps at _____ mV.

Status Indicators

Each status indicator or function requires a VI-221 interface, these are included in each instrument kit. Please ensure that there are adequate channels on your EDC-33P to support your functions.

Select	Function ($995 Gear Status Option - Airspeed Always Included)	Voltage to the EDC: LIGHT ON	Voltage to the EDC: LIGHT OFF
[ ]	**If selected, please choose your aircraft configuration from the options below.**		
	[ ] **Option 1:**		
	Nose Gear Down		
	Main Left Gear Down		
	Main Right Gear Down		
	Gear Unsafe Light		
	[ ] **Option 2:**		
	Gear Down Combined (provides signal for all gear indications, or use the individual functions above)		
	Gear Unsafe Light		

Select	Function	Voltage Range for Trim
[ ]	**Rudder Trim** (OEM or Experimental Only)	
[ ]	**Elevator Trim** (OEM or Experimental Only)	
[ ]	**Aileron Trim** (OEM or Experimental Only)	
[ ]	**Flap Position** (OEM or Experimental Only)	

Oil Temp Probe Selection

[ ] Interface with my existing MS28034 Oil Temp Probe (common)
[ ] Interface with my existing resistive oil temp probe. Manufacturer/Model: _____ **Please attach the resistance vs. temp chart.**
[ ] Use Electronic International's P-120-PA1 probe (included in the kit).

Other options are available, please contact EI Support for details.

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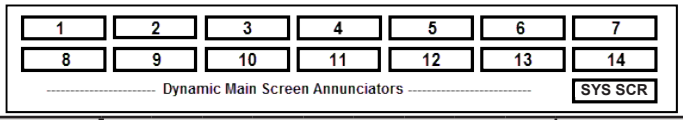
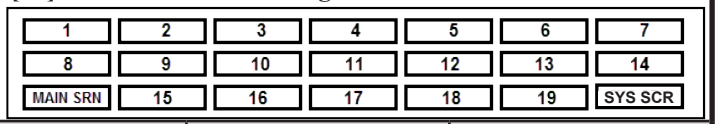
Annunciators

Each annunciator requires a VI-221 interface, these are included in each instrument kit. Annunciator signals are wired into the EDC-33T which converts all of the engine and aircraft system signals into serial data. Please ensure that there are adequate channels on your EDC-33T to your annunciators. Please choose from the two configuration options below, 14-annunciator or 19-annuciator configurations.

[ ] 14-Annunciator Config with Dynamic Main Screen Annunciators



[ ] 19-Annunciator Configuration



Location	Name (9 Character Max)	Pilot or Aircraft Activated?	ON-State Color (Red, Yellow, Green, Blue)	ON-State Voltage (12V, 24V, Bus, 0V, Ground or Open)	OFF-State Voltage (12V, 24V, Bus, 0V, Ground or Open)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Complete locations 15-19 only if the 19-annunciator configuration is chosen above.

Location	Name (9 Character Max)	Pilot or Aircraft Activated?	ON-State Color (Red, Yellow, Green, Blue)	ON-State Voltage (12V, 24V, Bus, 0V, Ground or Open)	OFF-State Voltage (12V, 24V, Bus, 0V, Ground or Open)
15					
16					
17					
18					
19					

Other Annunciators (Digital-Only Gauges)

On the Main and System Screens there are digital-only gauges that may be setup to display as an annunciator, please provide the following information for each annunciator you would like displayed for any digital-only gauges.

Name (9 Character Max)	Pilot or Aircraft Activated?	ON-State Color (Red, Yellow, Green, Blue)	ON-State Voltage (12V, 24V, Bus, 0V, Ground or Open)	OFF-State Voltage (12V, 24V, Bus, 0V, Ground or Open)

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Fuel Flow (if selected):	**Total Usable Fuel:** _____ **Units:** _____ **(if not specified, US Gallons will be used)** **Default Full Level 2:** _____

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.

Fuel Tank Configuration (if selected), tanks 5 & 6 require an additional EDC-33T (+$2,450)			
Fuel Tank 1 Name:		**Usable Fuel Level:**	
Fuel Tank 2 Name:		**Usable Fuel Level:**	
Fuel Tank 3 Name:		**Usable Fuel Level:**	
Fuel Tank 4 Name:		**Usable Fuel Level:**	
Fuel Tank 5 Name:		**Usable Fuel Level:**	
Fuel Tank 6 Name:		**Usable Fuel Level:**	

Fuel Tank Sensor Type: [☐] Resistive Sensor [☐] E.I. P-300M Magnetic Sensor [☐] E.I. P-300C Capacitive Sensor
[☐] CIES Volts [☐] CIES Frequency [☐] Penny Cap Capacitive or Other Sensor Type*

Bus Voltage: [☐] 12V [☐] 24V

*For Penny Cap & other probes contact E.I. Support to provide probe details.

Fuel sensors are not included in the kit price. Do you need to purchase fuel sensors? [☐] Yes [☐] No

[☐] E.I. P-300M Magnetic Sensor Quantity: _____ ($496/sensor)

[☐] E.I. P-300C Capacitive Sensor Quantity: _____ ($456/sensor)

I (the undersigned) have entered and verified all of the information listed on this worksheet to be correct and I have supplied all required excerpts of the aircraft's POH/AFM, including 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 information listed above and all documents that I am supplying are correct.

[☐] I have verified that my aircraft make and model are listed on the applicable STC/AML for this instrument.

[☐] My aircraft is experimental or I am working with the FAA for installation approval.

Any configuration changes after this form is submitted may incur a reconfiguration fee. I understand there is important safety information in the Installation and Operating Instructions that must be read before installing the MVP-50T and flying the aircraft.

Completed by: [☐] Owner [☐] Pilot [☐] Technician [☐] Other _____

Printed Name	Signature	Date

Hand Signature or **Encrypted Digital Signature** required.