INSTALLATION INSTRUCTIONS

Digital Pro Shift Controller

IMPORTANT
WEAR SAFETY GLASSES

2650-1941-77

QUESTIONS:

If after completely reading these instructions you have questions regarding the operation or installation of your instrument(s), please contact AutoMeter Technical Service at **866-248-6357.**
You may also email us at **service@autometer.com.**
Additional information can also be found at **http://www.autometer.com/tech_faq.aspx**

INTRODUCTION

Thank you for your purchase of the Digital Pro Shift Controller (DPS) from AutoMeter Products, Inc.
The following basic features are included on this product:

- Single precise user-programmable set point
- Digital RPM display
- RPM display blanking
- Multiple shift point settings
- Full engine RPM playback capability with 80 secs. of record time.
- Launch Lite

Please read and follow the instructions below regarding the installation and operation of your Controller to receive maximum benefit and accuracy from this product. **Failure to follow the information below will void the product warranty and may result in damage to your vehicle, this product, and/or personal injury.**

INSTALLATION

1. Disconnect the negative (-) battery cable.
2. The box can be mounted with the supplied mounting self tapping mounting screws. Alternatively, double-sided tape may be used on clean flat surfaces.
3. Wire controller as indicated. See schematic on following page for more info:

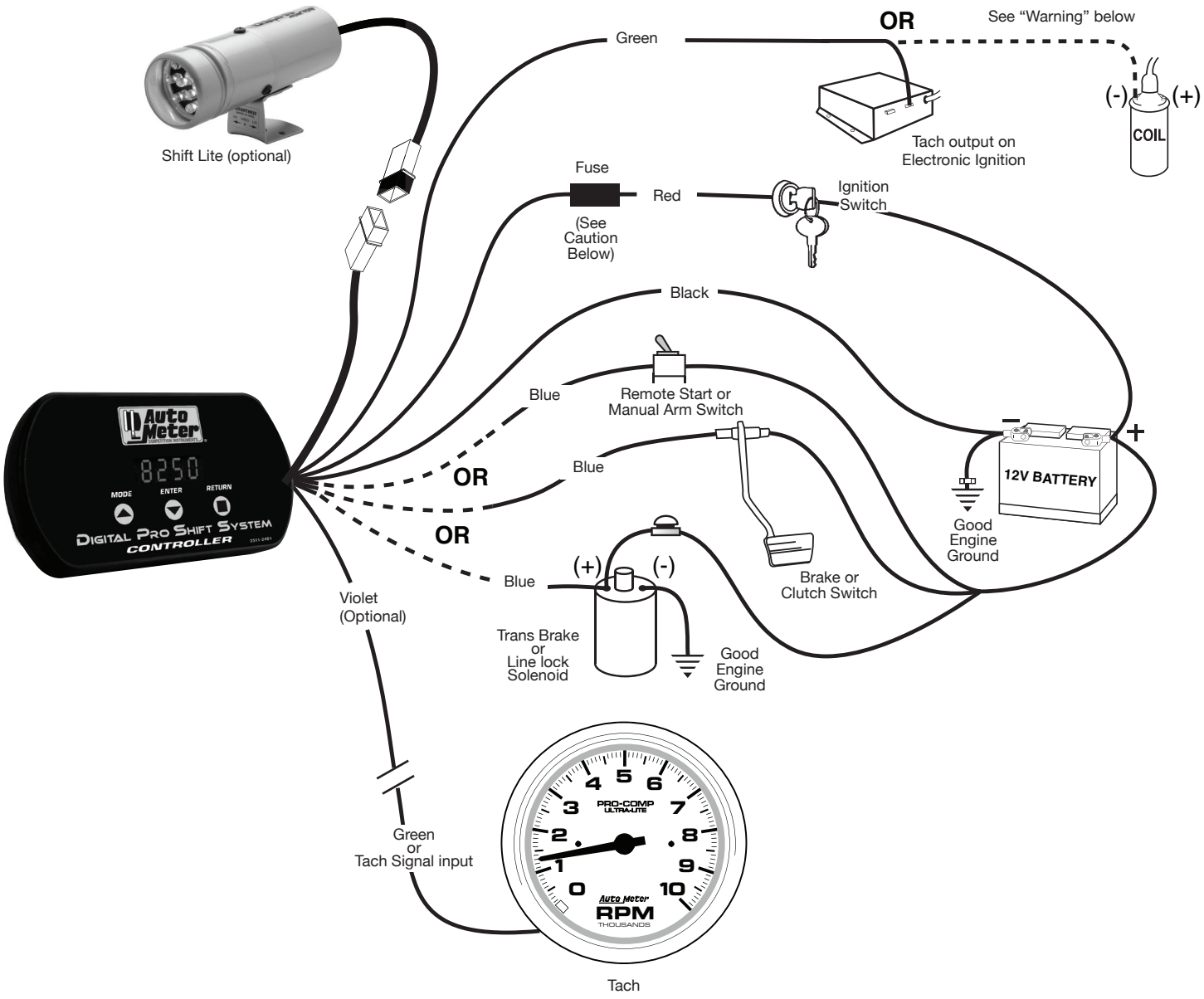
Red Wire: Connect to a fused and switched 12V positive source that is turned on and off with the ignition switch.
Black Wire: Connect to a good engine, chassis, or battery ground.
Green Wire: Connect to the negative terminal of a standard ignition coil, or to the "Tach Output" terminal on the Electronic Ignition Module or ECU. (See diagram)
Blue Wire: (Optional) Connect to switched terminal of Trans-Brake or Line Lock Solenoid. Alternatively, connect to the Brake Light Switch, Clutch Switch, or a dedicated Remote Start Switch (normally open, momentary closed).
Violet Wire Connect this wire to the input (green wire) of a standard AutoMeter tachometer.
Twin Lead: Any AutoMeter Shift Lite or Quick Lite.

QUICK SET OPTIONS:

Launch RPM Quick Set – If you need to change your Launch Light Setting quickly, do so when the vehicle engine is running and the Digital Pro Shift is in "Tach Mode" by raising the engine RPM until you have reached the desired set point. Press and release the **ENTER(▼)** button to confirm your new Launch Light Setting. You should see the Decimal indicator flash quickly to confirm.

Remove RPM Display – Sometimes fewer distractions are better for a driver. If you want to be able to focus on just the shift light when you're making a performance run and don't want to be distracted by the digital RPM display, you can disable the display function. To turn on/off the display function, from "Tach Mode," press and hold the **ENTER(▼)** button for 2 seconds w/ engine running. The display will indicate "on" or "off" to indicate which mode you will be changing too.
NOTE: This function takes affect in all modes. The Shift-Lite output and the "Preset/Record" indicator LED will be the only active elements on the display.

WIRING



⚠ Caution!!! ⚠

As a safety precaution, the red wire of this product should be fused before connecting to the 12V ignition switch. We recommend using a 3 AMP automotive type fuse.

⚠ WARNING ⚠

Warranty will be void if connected to coil when using an aftermarket ignition box such as, but not limited to products from the following manufacturers: MSD, Crane, Jacobs, Mallory, Holley, Etc. Prior to installation of your tachometer, check with the ignition box manufacturer for recommended tachometer signal location.

SETUP and OPERATION MODES

A.) RECORD MODE – The Controller must be in "Preset" mode before the Record mode can be started. This is accomplished by applying +12v to the Blue wire. This can be done with a remote start switch, trans brake or line lock solenoid, brake switch or clutch switch (refer to the Wiring diagram). The right most decimal point should now be blinking indicating that you have entered "Preset" mode.

While in Preset mode, the Launch Lite function will become active. In this mode, the Shift-Lite output will perform as follows:

When the RPM is below the Launch RPM Set Point: the Shift-Lite will be off.
When the RPM is at the Launch RPM set point +/-100 RPM: the Shift-Lite will be on.
When the RPM is above the Launch RPM set point: the Shift-Lite will be flashing.
Once the unit enters Record mode, the Launch Lite function will no longer be active.

To start a recording from Preset mode, remove the +12 volts to the blue wire (refer to the Wiring diagram). The right-most decimal indicator will change to a constant lit state indicating recording is in progress.

NOTE: Whenever a Record Mode is started, any previously recorded run information will be over-written.

The device will continue to record for the specified maximum time period (80 seconds), or until RETURN (■) is pressed, or +12 volts is re-applied to the Blue wire, whichever comes first. The decimal indicator will turn off at the end of the recording.

NOTE: During the Record Mode:

- 450 RPM "Short Shift Protection" is provided. This will advance the shift-lite setting from one shift point to the next when the engine drops 450 RPM or more. For example, if shift point #1 is set at 6,000 RPM and you short shift at 5,000 RPM the tach will automatically advance to shift point #2 even though you never reached 6,000 RPM and the light never turned on.
- During a run, after the last shift point, the Shift-Lite will always come on at the RPM Setting of the last shift point.

If the unit is powered down during a recording, the tach will return to "Tach" mode when power is applied and the engine is running. The recording will be available for playback up to the point that power was removed.

B.) PLAYBACK MODE – Press and release the **MODE (▲) Button** . The display will indicate "Play." Press **ENTER(▼)** to confirm your choice and begin "playing back" the run stored in the memory on the display at ⅓ real time.

To "Rewind" the current run being played back, press and hold the **ENTER(▼)** button. The display will play the run backwards from its current position in real time, for as long as Rewind/Pause is pressed. Once Rewind/Pause is released, playback will be "Paused".
To resume playback at ⅓ real time, press and release the **MODE (▲)** button. Pressing and holding the **MODE (▲)** will play the run forward in real time. When the **MODE (▲)** is released, playback will resume at ⅓ real time. During Playback, the Tach Output on the violet wire will be active. Playback can be cancelled at anytime by pressing **RETURN (■). Playback mode only operates when power is on and engine is off**

C.) PEAK Recall – The DPS features a "peak" recall or memory to recall the highest RPM reached during a recorded run. Press and release the **MODE (▲) button** until the display reads "PEAC" then press **ENTER(▼)**. This will display the highest RPM achieved. To clear the peak press **MODE (▲)**.
Peak RPM will not be displayed on external tachometer. It will only be displayed on the digital display of the DPSS Box.

D.) SHIFT POINT SET – Press and release the **MODE (▲) button** until "SptS" is shown on your display, press **ENTER(▼)** to confirm that you would like to set your shiftpoint or points. "SP1" will now be displayed. To set your shift point, press **ENTER(▼)** to confirm the shiftpoint you would like to set. The display will now show you the current shift point setting. Use the **MODE (▲)** and **ENTER(▼)** buttons to raise and lower this number. A single press results in a 10 RPM increment change. Push and hold each button to scroll more quickly through the RPM scale. Once you have dialed in the desired set point, press **RETURN (■)** to confirm your choice. Navigate to additional shift point settings by pressing the **MODE (▲)** button. Set these additional points using the process described above.

NOTE: It is recommended that you set the shift point to 3000 RPM (or a similarly mid to low point in your engine's rev range) to confirm proper installation. With the DPS on and in Tach mode, bring the revs of the vehicle to 3000 RPM and verify that the light activates as specified. Once this test is completed dial up your shift point to your desired, or engine builder specified RPM setting.

NOTE: If a set point has been changed, all higher Shift-Lite set points will also be changed to the same value. All lower Shift-Lite set points will be left unchanged. For example, if Shift-Lite set point #2 is changed to 6,000 RPM, set points #3 and #4 will also be changed to 6,000 RPM. Set point #1 will not be changed. Set point #5 is the Launch RPM and will not change when set points #1-4 are changed.

E.) *LAUNCH LITE SET – The Digital Pro Shift Controller has a Launch Lite setting for drag racing applications and other forms of motorsport that can benefit from a precise launch RPM from a dead stop. When the Launch Lite is active, the shift light will perform as follows:

- When the RPM is below the Launch RPM Set Point: the shift light will be off.
- When the RPM is at the Launch RPM set point +/-100 RPM: the shift light will be on.
- When the RPM is above the Launch RPM set point: the shift light will be flashing.

Press the **MODE (▲)** button until "SptS" is displayed, press **ENTER(▼)** to confirm this choice and then press **MODE (▲)** until "LnCH" is displayed. Press **ENTER(▼)** to confirm your choice to set your launch light RPM. Use the **MODE (▲)** and **ENTER(▼)** buttons to scroll up and down until your desired RPM set point is displayed. Press **RETURN (■)** to confirm your Launch Lite set point.

***LAUNCH RPM QUICK SET –** If you need to change your Launch Light Setting quickly, you can do so when the vehicle engine is running and the Digital Pro Shift is on by raising the engine RPM in "Tach Mode" until you have reached the desired set point. Press and release the **ENTER(▼)** button to confirm your new Launch Light Setting. You should see the Decimal indicator flash quickly to confirm your new setting.

F.) PULSE PER REVOLUTION SET (CYL. CALIBRATION) – Use this feature to calibrate your Digital Pro Shift Controller to your engine and ignition type. To enter Pulse Per Revolution Set, press the **MODE (▲)** button until "PPr" is displayed, then press **ENTER(▼)** to confirm your selection. You may now use the **"▲"** and **"▼"** buttons to cycle up and down through the pulse settings available on this product. Press the **RETURN (■)** to accept the PPR. Pulse per revolution settings refer to the number of pulses or "plug firings" provided by the ignition to the device per engine crank revolution. For example a single coil ignition on a 4-cylinder engine will typically fire two cylinders per crank revolution. If your ignition matched this type, you would need to set your PPr value to "2" († See below). Below is a list of common ignition pulse settings. If you need further assistance calibrating this unit for your application please visit our Tech Tips and FAQ section on our website **(http://www.autometer.com/tech_faq.aspx)** or contact AutoMeter tech support personnel via the information included with the warranty information shown later on this sheet.

*PPR	# of cyl. (typ.)
.5	1
1	2
1.5	3
2	4
3	6
4	8
5	10
6	12

G.) Launch Lite Enable - The Launch Lite feature can be Enabled or Disabled.
Press and release the **MODE (+)** button until "L En" is shown on your display, press **ENTER (■)** to confirm that you would like to Enable or Disable this feature. The current setting will be displayed, either "LEoF" for Disabled or "Leon" for Enabled. Press the **MODE (+)** button to en able, or the **ENTER (■)** button to Disable. Press the **RETURN (-)** button to save the setting.

SERVICE

For service send your product to AutoMeter in a well packed shipping carton. Please include a note explaining what the problem is along with your phone number. If you are sending product back for Warranty adjustment, you must include a copy (or original) of your sales receipt from the place of purchase.

12 MONTH LIMITED WARRANTY

AutoMeter Products, Inc. warrants to the consumer that all AutoMeter High Performance products purchased from an Authorized AutoMeter Reseller will be free from defects in material and workmanship for a period of twelve (12) months from date of the original purchase. Products that fail within this 12 month warranty period will be repaired or replaced at AutoMeter's option, when determined by AutoMeter that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of parts in the AutoMeter High Performance product and the necessary labor done by AutoMeter to effect the repair or replacement of the AutoMeter High Performance product. In no event shall AutoMeter's cost to repair or replace an AutoMeter High Performance Product under this warranty exceed the original purchase price of the AutoMeter High Performance Product. Nor shall AutoMeter Products, Inc. be responsible for special, incidental or consequential damages or costs incurred due to the failure of an AutoMeter High Performance Product. This warranty applies only to the original purchaser of the AutoMeter High Performance Product and is non-transferable. This warranty also applies only to AutoMeter High Performance Products purchased from an Authorized AutoMeter Reseller. All implied warranties shall be limited in duration to the said 12 month warranty period. Breaking the instrument seal, improper use or installation, accident, water damage, abuse, unauthorized repairs or alterations voids this warranty. AutoMeter disclaims any liability for consequential damages due to the breach of any written or implied warranty on all products manufactured by AutoMeter Products, Inc. For a comprehensive listing of Un-Authorized AutoMeter Resellers please visit www.autometer.com/autometerlocator/index/unauthorized.

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