

Window Switch Operating Instructions:

Setting up your Window Switch:

The RPM module requires you to set the upper and lower RPM thresholds, and the number of cylinders. Once these three pieces of information are set, they will not need to be reset unless to different values. However, if the settings are ever lost the light will notify you of the condition and you will need to reset both values.

The RPM module will remain in *Normal* mode by default. It will also return to this mode after settings have been recalled or changed

Pressing the pushbuttons while in normal mode will recall the current settings. The LED at the lower left corner will flash the settings back to you.

Button 1 – Lower RPM

Button 2 – Upper RPM

Both – Number of cylinders

Programming the number of cylinders:

- 1) Refer to the attached chart for selecting the proper DIP switch setting for your application.
- 2) Ensure that the Shiftlight has power, i.e. turn the ignition key on. The engine **does not** need to be running.
- 3) **Press and hold BOTH pushbuttons** (Refer to the picture) until the LED at the lower left corner begins to flash rapidly. Approximately two (2) seconds.
- 4) Release the button.
- 5) After a short pause, the LED will flash the setting back to you.

Note:

In actuality, you are setting the number of pulses the module receives per revolution of the engine. Use this information to make your setting selection from the chart if your application is non-distributor.

The LED will flash the number of cylinders you have set. Count the flashes to double check the setting. If the reported setting does not match with what you tried to set, double check the DIP switch settings. It is easy to be between ON and OFF with the switches. Re-check and repeat the procedure.

If an invalid setting is used, i.e. not in the chart, the LED will flash the “error flash”. The indicator will flash six (6) times. The pattern is, two quick flashes followed by a pause, repeated three (3) times. Total of 6.

For 2/4/6/8 cylinder settings, the indicator will flash 2/4/6/8. For Coil Per Plug setting, the indicator will flash once.

Programming the Lower RPM turn-on point:

- 1) Refer to the attached chart for selecting the proper DIP switch setting for your turn-on RPM.
- 2) Ensure that the module has power, i.e. turn the ignition key on. The engine **does not** need to be running.
- 3) **Press and hold Pushbutton #1** (Refer to the picture) until the LED at the lower left corner begins to flash rapidly. Approximately two (2) seconds.
- 4) Release the button.
- 5) After a short pause, the LED will flash the setting back to you.

Programming the Upper RPM turn-off point:

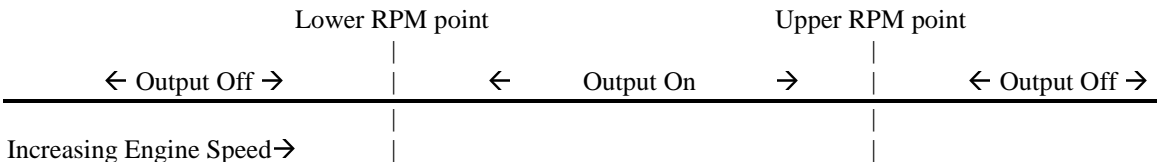
- 1) Refer to the attached chart for selecting the proper DIP switch setting for your turn-off RPM.
- 2) Ensure that the module has power, i.e. turn the ignition key on. The engine **does not** need to be running.
- 3) **Press and hold Pushbutton #2** (Refer to the picture) until the LED at the lower left corner begins to flash rapidly. Approximately two (2) seconds.
- 4) Release the button.
- 5) After a short pause, the LED will flash the setting back to you.

Note:

You are setting the turn-on and turn-off RPM points for the window in 100 RPM increments. Thus, the indicator will flash the upper two digits of your setting back to you. There is a lower limit placed on any RPM which you can set. The minimum RPM you can set is 500.

The settings you choose for each RPM threshold must make sense. The lower RPM setting should be less than the upper RPM setting. If you try to set the lower RPM setting above the current upper RPM setting, the module will flash the error flash, 6 flashes, and retain the current settings. The same applies for the opposite. Trying to set the upper RPM setting lower than the current lower RPM setting will result in an error indication and no change of the settings. You can recall the current setting by pressing and releasing the corresponding pushbuttons. Be sure to release the buttons before the 2 second programming delay expires. Otherwise you may inadvertently change the setting.

The window operates as follows: The output of the module is off while RPM is **below** the lower RPM setting, i.e. the turn-on RPM. Once engine speed exceeds the lower limit, the output remains on until the upper turn-off RPM is reached. The output is turned off when engine speed exceeds the upper limit, and remains off while above the limit. The output will reactivate when engine speed drops below the upper threshold.



Examples:

1) If you want to set the turn-on point to be 3000 RPM and the turn-off point to be 5800, refer to the chart for the DIP switch settings for each RPM. Follow the programming procedure above for the lower RPM setting. After a pause, the LED will begin flashing. It will flash three (3) times in a row, pause for about 1 second, then quickly flash two (2) times. The two quick flashes represent a zero (0). I couldn't figure out a way to flash 0. The module is flashing 30 back to you.

Now, follow the programming procedure above for the upper RPM setting. After a pause, the LED will begin flashing. It will flash five (5) times in a row, pause for about 1 second, then flash eight (8) times. It is flashing 58 back to you.

2) You currently have the module set for 4 cylinder mode with an RPM setting of 800. You change the cylinder mode to Coil Per Plug. The module will change the cylinder mode to Coil Per Plug **AND** the RPM point will be set to 1000 (the minimum for Coil Per Plug)

Installation Instruction

The wiring for the module is pretty straight forward. The minimum number of connections needed for operation is three (3)

Exiting the back of the housing is a black cable containing three wires, Red, Black, and Green.

Red Wire – Connect this wire to a +12V source. The fuse block is a good choice for this connection, a switch accessory fuse is a prime choice. The will turn the module off when the key is off. But, any switched +12V source is ok.

Black Wire – This is the ground connection for the module. Chose a convenient ground location. A mounting screw or any other metal piece that makes a direct connection to the body will do. The radio ground is also a possibility.

Green Wire – This is the Tach input to the module. This can be either from the Tach line of the engine computer or from the switched side of an ignition coil.

Another Black wire exits the module. It provide the connections for driving an external device from the window switch.

Black Wire – This wire is the switched ground from the module. A connection to ground is made through this wire whenever the output of the module is “On”.

When driving external devices, there is a maximum current that the module can handle. It is small. To ensure proper operation and to avoid damage, use the black wire to control an external relay.

DO NOT try and directly ground external lights or solenoids with the module, you will fry it!

LS1 specific:

The RED connector on the PCM is the one closest to the flat top/cover. The BLUE connector is closest to the bottom (not flat).

98 LS1: Tach line is Pin 35 on the BLUE connector. Tach line is a white wire

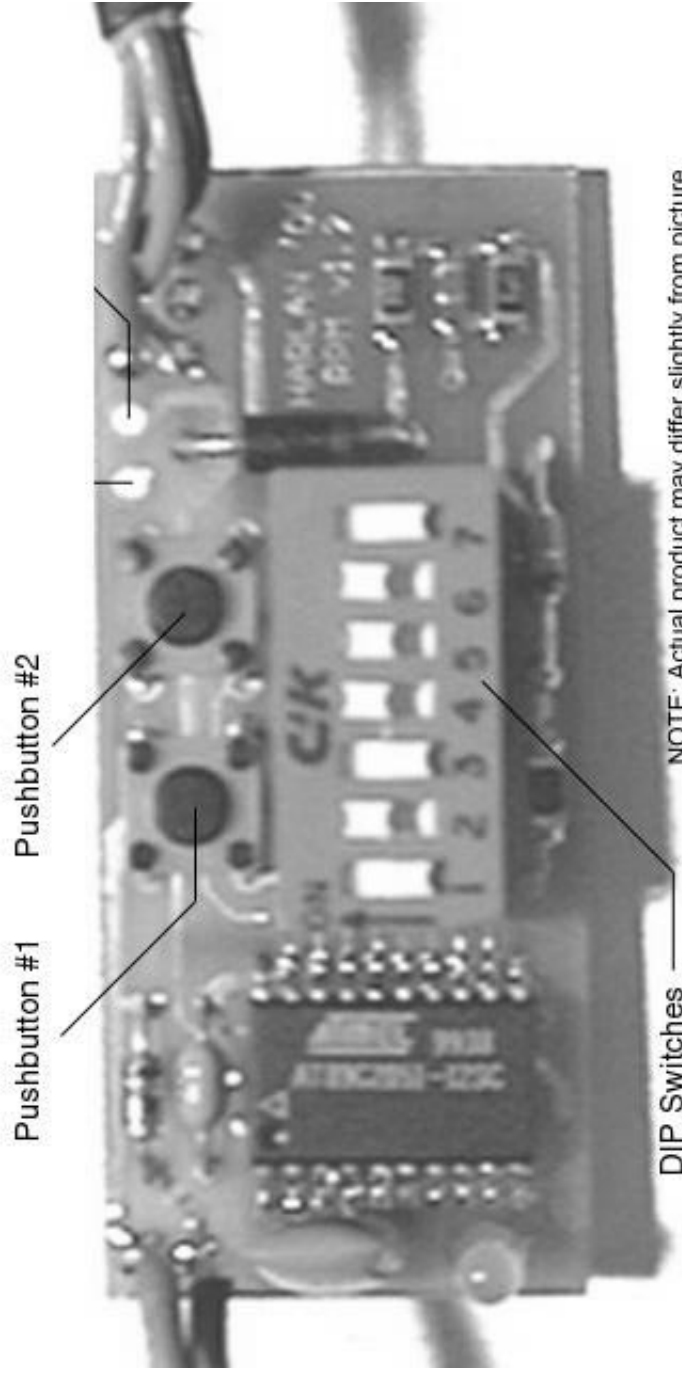
99-00 LS1: Tach line is Pin 10 on the RED connector. Tach line is a white wire

There are gray plastic covers on the connector. These will pop off. The wires are numbered under this gray cover. Pop the cover off, find the appropriate wire and splice into it. Run the wire into the vehicle and to your light.

Chose an appropriate mounting location for the module. The indicator is some what directional. It will appear brighter when aimed directly at you.

Questions:

Email me at harlan@sketchy.net



Pushbutton #1

Pushbutton #2

DIP Switches

NOTE: Actual product may differ slightly from picture.
Relative position of buttons and switches is unchanged.

SWITCH POSITIONS

RPM	1	2	3	4	5	6	7
500	OFF	ON	OFF	OFF	OFF	OFF	OFF
600	OFF	ON	ON	OFF	OFF	OFF	OFF
700	ON	ON	ON	ON	OFF	OFF	OFF
800	OFF	OFF	OFF	ON	OFF	OFF	OFF
900	ON	OFF	OFF	ON	OFF	OFF	OFF
1000	OFF	ON	OFF	ON	OFF	OFF	OFF
1100	ON	ON	ON	ON	OFF	OFF	OFF
1200	OFF	OFF	ON	ON	OFF	OFF	OFF
1300	ON	OFF	ON	ON	OFF	OFF	OFF
1400	OFF	ON	ON	ON	OFF	OFF	OFF
1500	ON	ON	ON	ON	OFF	OFF	OFF
1600	OFF	OFF	OFF	OFF	ON	OFF	OFF
1700	ON	OFF	OFF	OFF	ON	OFF	OFF
1800	OFF	ON	ON	OFF	ON	OFF	OFF
1900	ON	ON	OFF	ON	ON	OFF	OFF
2000	OFF	OFF	ON	OFF	ON	OFF	OFF
2100	ON	OFF	ON	OFF	ON	OFF	OFF
2200	OFF	ON	ON	OFF	ON	OFF	OFF
2300	ON	ON	ON	OFF	ON	OFF	OFF
2400	OFF	OFF	ON	ON	ON	OFF	OFF
2500	ON	OFF	OFF	ON	ON	OFF	OFF
2600	OFF	ON	OFF	ON	ON	OFF	OFF
2700	ON	ON	OFF	ON	ON	OFF	OFF
2800	OFF	OFF	ON	ON	ON	OFF	OFF
2900	ON	OFF	ON	ON	ON	OFF	OFF
3000	OFF	ON	ON	ON	ON	OFF	OFF
3100	ON	ON	ON	ON	ON	OFF	OFF
3200	OFF	OFF	OFF	OFF	OFF	ON	OFF
3300	ON	OFF	OFF	OFF	OFF	ON	OFF
3400	OFF	ON	OFF	OFF	OFF	ON	OFF
3500	ON	ON	OFF	OFF	OFF	ON	OFF
3600	OFF	OFF	ON	OFF	OFF	ON	OFF
3700	ON	OFF	ON	OFF	OFF	ON	OFF
3800	OFF	ON	ON	OFF	OFF	ON	OFF
3900	ON	ON	ON	OFF	OFF	ON	OFF
4000	OFF	OFF	OFF	ON	OFF	ON	OFF
4100	ON	OFF	OFF	ON	OFF	ON	OFF
4200	OFF	ON	OFF	ON	OFF	ON	OFF
4300	ON	ON	OFF	ON	OFF	ON	OFF
4400	OFF	OFF	ON	ON	OFF	ON	OFF
4500	ON	OFF	ON	ON	OFF	ON	OFF
4600	OFF	ON	ON	ON	OFF	ON	OFF
4700	ON	ON	ON	ON	OFF	ON	OFF
4800	OFF	OFF	OFF	OFF	ON	ON	OFF
4900	ON	OFF	OFF	OFF	ON	ON	OFF
5000	OFF	ON	OFF	OFF	ON	ON	OFF
5100	ON	ON	OFF	OFF	ON	ON	OFF
5200	OFF	OFF	ON	OFF	ON	ON	OFF
5300	ON	OFF	ON	OFF	ON	ON	OFF
5400	OFF	ON	ON	OFF	ON	ON	OFF
5500	ON	ON	ON	OFF	ON	ON	OFF
5600	OFF	OFF	OFF	ON	ON	ON	OFF
5700	ON	OFF	OFF	ON	ON	ON	OFF
5800	OFF	ON	OFF	ON	ON	ON	OFF
5900	ON	ON	OFF	ON	ON	ON	OFF
6000	OFF	OFF	ON	ON	ON	ON	OFF
6100	ON	OFF	ON	ON	ON	ON	OFF
6200	OFF	ON	ON	ON	ON	ON	OFF

SWITCH POSITIONS

RPM	1	2	3	4	5	6	7
6300	ON	ON	ON	ON	ON	ON	ON
6400	OFF	OFF	OFF	OFF	OFF	OFF	ON
6500	ON	OFF	OFF	OFF	OFF	OFF	ON
6600	OFF	ON	OFF	OFF	OFF	OFF	ON
6700	ON	ON	OFF	OFF	OFF	OFF	ON
6800	OFF	OFF	ON	OFF	OFF	OFF	ON
6900	ON	OFF	ON	OFF	OFF	OFF	ON
7000	OFF	ON	ON	OFF	OFF	OFF	ON
7100	ON	ON	ON	OFF	OFF	OFF	ON
7200	OFF	OFF	OFF	ON	OFF	OFF	ON
7300	ON	OFF	OFF	ON	OFF	OFF	ON
7400	OFF	ON	OFF	ON	OFF	OFF	ON
7500	ON	ON	OFF	ON	OFF	OFF	ON
7600	OFF	OFF	ON	ON	OFF	OFF	ON
7700	ON	OFF	ON	ON	OFF	OFF	ON
7800	OFF	ON	ON	ON	OFF	OFF	ON
7900	ON	ON	ON	ON	OFF	OFF	ON
8000	OFF	OFF	OFF	OFF	ON	OFF	ON
8100	ON	OFF	OFF	OFF	ON	OFF	ON
8200	OFF	ON	OFF	OFF	ON	OFF	ON
8300	ON	ON	OFF	OFF	ON	OFF	ON
8400	OFF	OFF	ON	OFF	ON	OFF	ON
8500	ON	OFF	ON	OFF	ON	OFF	ON
8600	OFF	ON	ON	OFF	ON	OFF	ON
8700	ON	ON	ON	OFF	ON	OFF	ON
8800	OFF	OFF	OFF	ON	ON	OFF	ON
8900	ON	OFF	OFF	ON	ON	OFF	ON
9000	OFF	ON	OFF	ON	ON	OFF	ON
9100	ON	ON	OFF	ON	ON	OFF	ON
9200	OFF	OFF	ON	ON	ON	OFF	ON
9300	ON	OFF	ON	ON	ON	OFF	ON
9400	OFF	ON	ON	ON	ON	OFF	ON
9500	ON	ON	ON	ON	ON	OFF	ON
9600	OFF	OFF	OFF	OFF	ON	ON	ON
9700	ON	OFF	OFF	OFF	OFF	ON	ON
9800	OFF	ON	OFF	OFF	OFF	ON	ON
9900	ON	ON	OFF	OFF	OFF	ON	ON
10000	OFF	OFF	ON	OFF	OFF	ON	ON
10100	ON	OFF	ON	OFF	OFF	ON	ON
10200	OFF	ON	ON	OFF	OFF	ON	ON
10300	ON	ON	ON	OFF	OFF	ON	ON
10400	OFF	OFF	OFF	ON	OFF	ON	ON
10500	ON	OFF	OFF	ON	OFF	ON	ON
10600	OFF	ON	OFF	ON	OFF	ON	ON
10700	ON	ON	OFF	ON	OFF	ON	ON
10800	OFF	OFF	ON	ON	OFF	ON	ON
10900	ON	OFF	ON	ON	OFF	ON	ON
11000	OFF	ON	ON	ON	OFF	ON	ON
11100	ON	ON	ON	ON	OFF	ON	ON
11200	OFF	OFF	OFF	OFF	ON	ON	ON
11300	ON	OFF	OFF	OFF	ON	ON	ON
11400	OFF	ON	OFF	OFF	ON	ON	ON
11500	ON	ON	OFF	OFF	ON	ON	ON
11600	OFF	OFF	ON	OFF	ON	ON	ON
11700	ON	OFF	ON	OFF	ON	ON	ON
11800	OFF	ON	ON	OFF	ON	ON	ON
11900	ON	ON	ON	OFF	ON	ON	ON
12000	OFF	OFF	OFF	ON	ON	ON	ON

SWITCH POSITIONS

# Cylinders	1	2	3	4	5	6	7
2	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	OFF	ON	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF
Coil Per Plug	OFF	OFF	OFF	OFF	ON	OFF	OFF

NOTE: LS1 uses 4 cylinder mode