

## REMOTE ENGINE STARTER

### AUTOMATIC TRANSMISSION

Vehicles equipped with an automatic transmission are easy to use, just press the designated button on the transmitter and the vehicle will start.

### MANUAL TRANSMISSION

We developed a safe system that does not need any add-on sensors and can be installed as quickly as an automatic. Based on an exiting sequence, the integrated software monitors the reference points (doors, hand brake, hood pin switch and TACH signal) to assure a safe operation.

### SEQUENCE:

*Important never activate the sequence with the vehicle's windows open. The vehicle can accidentally be put in gear without the doors being open and can cause an accident.*

1. You are seated in the vehicle, engine running, doors and windows closed.
2. Place shifter in neutral and pull the hand brake.
3. Press the designated button on your transmitter to activate the keyless running mode. The parking lights will flash once and stay ON.
4. Remove the key from the ignition, the engine is still running, exit the vehicle and close the door. The engine will shut down automatically after the door is closed.
5. The vehicle is now programmed and ready for remote starting.

Note: If a door is opened after the sequence is made, you will not be able to remote start the vehicle. This safety feature avoids the possibility of someone shifting the transmission in gear by accident.

## PROGRAMMING

The remote vehicle starter comes with a factory default setting. You can install it without any programming or you can customize it to your customer's demands. The P-8000U program offers a direct access to modify an option. It allows you to change only the desired option without having to revise the whole program.

**IMPORTANT:** *The installation must be completed before accessing programming mode.*

### ACCESSING PROGRAMMING MODE:

1. Open the hood (hood pin switch must be installed).
2. Turn ignition ON (engine must not be running)
3. Push 3 times on valet-switch within 15 seconds you will hear 5 beeps to confirm that the system is now in programming mode. The LED will flash slowly.

*Note: If the 15 seconds delay has expired, just turn the ignition OFF and repeat steps 2 and 3.*

### PROGRAMMING PROCEDURE:

- Step 1: Access programming mode.  
Step 2: Press then release valet switch to select options (see programming chart).  
Step 3: When you have reached the desired option, depress brake pedal to confirm.  
Step 4: Flip the programming switch once, twice or 3 times to choose between the different features (see programming chart)

*Note: if you have more than one option to modify, repeat steps 2 to 4.*

- Step 5: Exit programming mode (close the hood).

### TACH WIRE CONFIRMATION

If you have selected the proper tach wire on the vehicle the LED on the module will serve as tach confirmation. When the vehicle is started with the key the LED will flash steadily. When the engine is shut-off the LED will go out, this confirms a proper tach signal. If the LED flashes then stops, then flashes intermittently you do not have the proper tach wire. Select another location and test the system once more.

*Note: do not attempt to remote start the vehicle until you have selected the proper tach wire, damage may occur to the vehicle starting mechanism (solenoid).*

## REMOTE STARTER DIAGNOSTIC

1 Flash:	Brake pedal depressed	7 Flashes:	Crank time expired
2 Flashes:	Valet switch ON	8 Flashes:	Exiting sequence lost manual transmission only
3 Flashes:	Hood opened	9 Flashes:	Tach wire disconnected
4 Flashes:	Shut down via transmitter	10 Flashes:	Hand brake not pulled manual transmission only
5 Flashes:	Engine over revolution	11 Flashes:	Door opened manual transmission only
6 Flashes:	Running time expired	12 Flashes:	Ignition ON at start

## WIRING DESCRIPTION

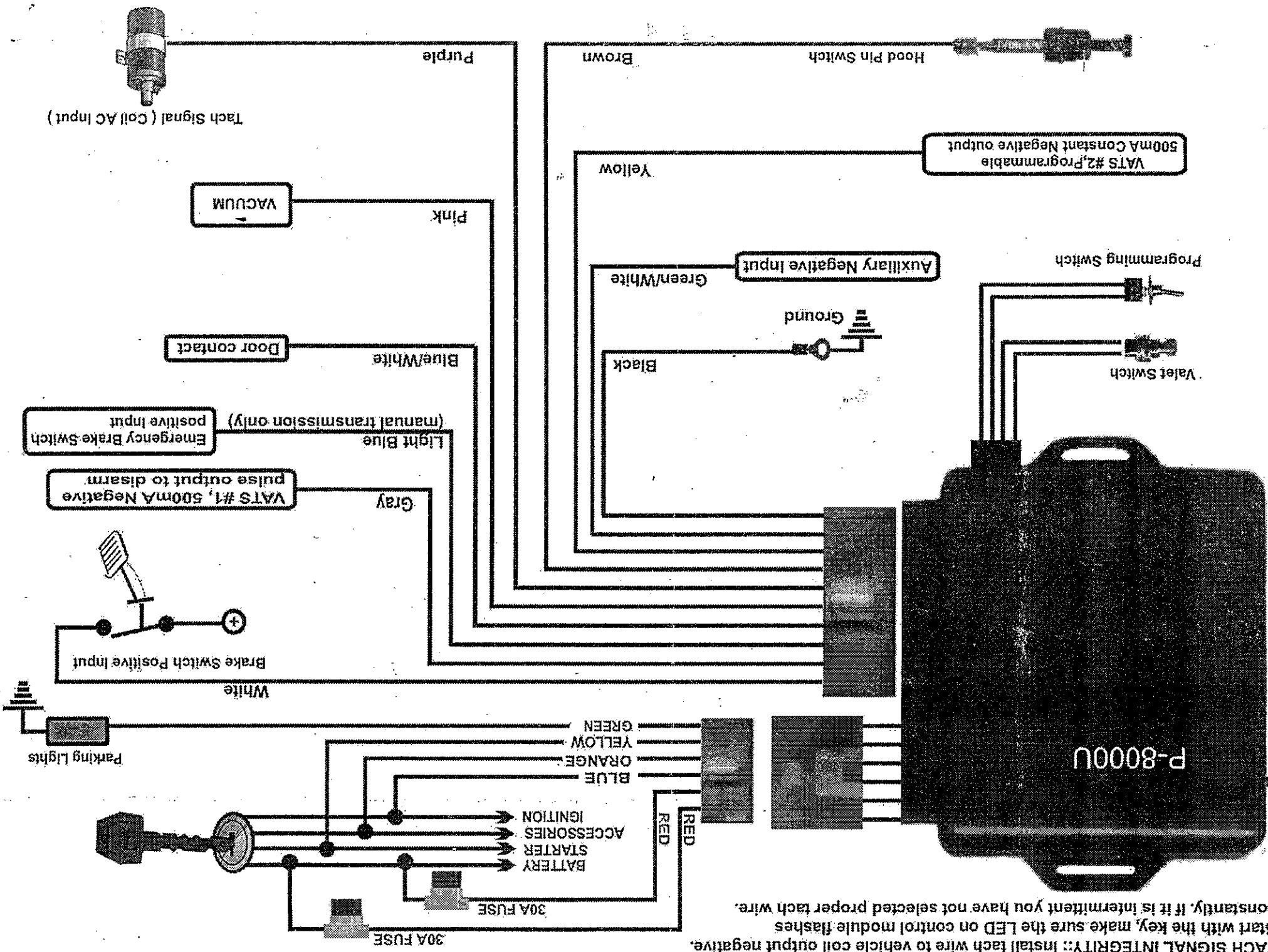
### 6 WIRE CONNECTOR (14 GAUGE WIRE)

<b>RED:</b> 12V constant wire (12V positive input) connect to a 12V constant, 30A fuse built-in	<b>ORANGE:</b> Accessories wire (12V positive output) connect to accessory wire that controls the heater/air conditioning fan
<b>RED:</b> 12v constant wire (12V positive input) connect to a 12V constant, 30A fuse built-in	<b>YELLOW:</b> Starter wire (12V positive output) connect to starter wire
<b>GREEN:</b> Parking lights wire (12V positive output) connect to parking light wire	<b>BLUE:</b> Ignition wire (12V positive output) connect to main ignition

### 10 PIN CONNECTOR (20 GAUGE WIRE)

<b>WHITE:</b> Brake wire (12V positive input) connect to the switched side of the brake pedal switch	<b>PURPLE:</b> TACH wire (AC input) connect to TACH signal wire (coil, injector)
<b>GRAY:</b> VATS #1 wire (500mA negative output) gives a pulse before ignition is ON	<b>BROWN:</b> Hood wire (negative input) connect to hood pin switch
<b>LIGHT/BLUE:</b> Hand brake wire (negative input) connect to the switched side of hand brake switch	<b>YELLOW:</b> VATS #2 wire (500mA negative output) programmable to give a negative constant or negative pulse to rearm factory anti theft system
<b>MANUAL TRANSMISSION ONLY</b>	
<b>BLUE/WHITE:</b> Door switch wire (program polarity input) connect to door switch	<b>GREEN/WHITE:</b> Programmable to be a remote external trigger or glow plug (negative input)
<b>PINK:</b> Vacuum wire (negative input) connect to a vacuum switch in case the tach signal is unavailable. Use a normally open vacuum switch	<b>BLACK:</b> Ground wire, <i>Important</i> connect to a proper ground

**TACH SIGNAL INTEGRITY:** Install tach wire to vehicle coil output negative. Start with the key, make sure the LED on control module flashes constantly. If it is intermittent you have not selected proper tach wire.



Flashing LED for confirmation of programming and TACH signal

P-8000U

## PROGRAMMING CHART

OPTION	FUNCTION	FLIP TOGGLE SWITCH ONCE TO:	FLIP TOGGLE SWITCH TWICE TO:	FLIP TOGGLE SWITCH 3 TIMES TO:
1A	Tach learning			
1B	Tach fine tuning	Increase	Decrease	↓
2	Cranking adjustment	◆ Normal	Slight increase	Increase
3	Cranking time duration	6 seconds	◆ 8 seconds	12 seconds
4	Running time duration	10 minutes	◆ 15 minutes	25 minutes
5	Tach signal supervision	◆ Disable	Enable	
6	Glow Plug waiting time	◆ 0 seconds	10 seconds	20 seconds
7	Manual or Automatic vehicle	◆ Manual Vehicle	Automatic Vehicle	
8	NOT USED	NOT USED	NOT USED	NOT USED
9	Door trigger input	Door trigger (+)	◆ Door trigger (-)	
10	Pulse to trigger remote starter	◆ 1 Pulse	Double Pulses	
11 to 15	NOT USED	NOT USED	NOT USED	NOT USED
16	Dome light delay	◆ Disable	Enable	

◆ Factory Default Setting

DIAGRAM # 1

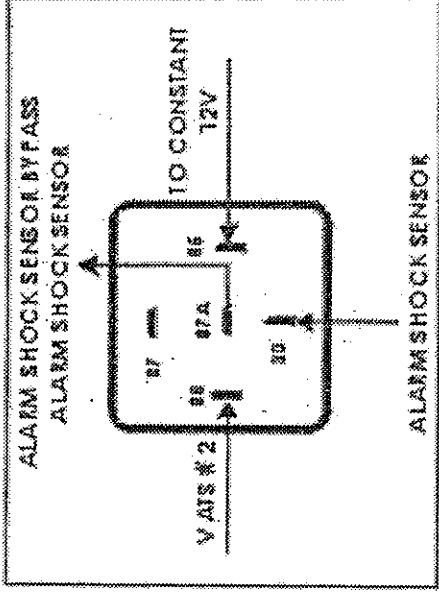


DIAGRAM # 2

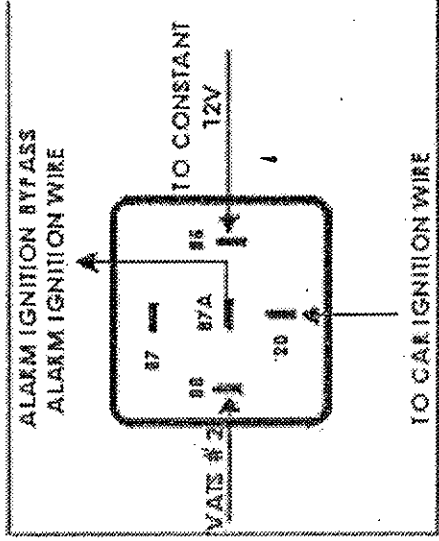
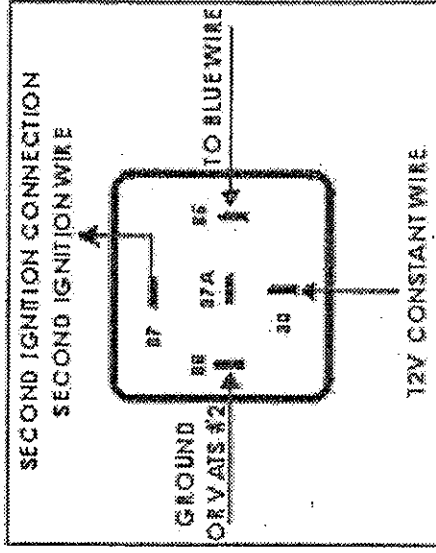


DIAGRAM # 3



VATS #2 IS A 500mA OUTPUT, IF YOU USE MORE THAN 2 RELAYS YOU WILL HAVE TO USE ONE RELAY AS A MASTER RELAY TO ENERGIZE THE OTHERS.

HOW TO PROGRAM VIA TOGGLE SWITCH

1 TIMES					
2 TIMES					
3 TIMES					

## PROGRAMMING OPTIONS

### OPTION 1A : TACH LEARNING

The factory default setting should normally operate with most vehicles on the market. After the installation is completed start the engine with the transmitter, most of the time you will have a perfect start. If the starter overcranks or releases too fast you must proceed with the TACH learning program or manual fine tuning.

### OPTION 1B : TACH FINE TUNING

Occasionally with factory default setting or TACH learning features you might not reach the exact setting. This option allows you to fine tune the TACH signal manually.

### OPTION 2 : CRANKING ADJUSTMENT

You can force the starter to slightly undercrank or overcrank if you expect that the vehicle needs this adjustment. It might necessary for some older vehicles or vehicles with a diesel engine, to assure a perfect start in extremely cold conditions.

### OPTION 3 : CRANKING TIME DURATION

Controls the cranking time in case the system is not reading the TACH signal or non starting (programmable for 6, 8 or 12 seconds).

### OPTION 4 : RUNNING TIME DURATION

This option allows you to set the running time to 10, 15 or 25 minutes. The vehicle engine will run for the selected time when started with the transmitter.

### OPTION 5 : TACH SIGNAL SUPERVISION

This option allows the system to detect the presence of the TACH signal before starting via the transmitter. If no signal is detected the system will shut down immediately without trying to start the engine. Disable this option if you use a vacuum switch, diesel engines or vehicles with TACH check.

### OPTION 6 : GLOW PLUG WAITING TIME (DIESEL ENGINE)

Diesel engines need to warm up through glow plug before starting, turn the ignition to ON and count the number of seconds it takes for the glow plug light to turn OFF, select the closest waiting time (0, 10 or 20 seconds).

### OPTION 7 : MANUAL AUTOMATIC TRANSMISSION VEHICLE

This option allows you to select either Automatic or Manual transmission vehicle. By factory default, manual transmission is selected.

### OPTION 9 : DOOR TRIGGER INPUT

Door trigger input is necessary for the alarm and imperative for manual transmission installation. If voltage measured with door opened is 0V and 12V with door closed, select door trigger negative. If voltage measured with door opened is 12V and 0V with door closed, select door trigger positive.

### OPTION 10 : PULSE TO TRIGGER REMOTE STARTER

This option allows you to select either 1 or 2 pulses.  
Example: 2 pulses from keyless entry system such as lock twice within 5 seconds.

### OPTION 16 : DOME LIGHT DELAY (FOR MANUAL TRANSMISSION ONLY)

If the vehicle is equipped with a dome light delay it is important to enable this option.

### OPTION 19 : FACTORY DEFAULT SETTING

This option allows you to reinitialize factory default settings in case of confusion or if you reinstall the system in another vehicle and you do not want to rework the current programming.

## PROGRAMMING EXAMPLES

### EXAMPLE # 1: CHANGING RUNNING TIME DURATION, OPTION # 4

Option # 4 current setting is 15 minutes, you want to change it to 10 minutes.

1. Access programming mode.
2. Press then release programming switch 4 times and count 4 beeps.
3. Depress brake pedal to confirm, you should hear 1, 2 or 3 beeps to confirm what option is currently programmed. If you hear 1 beep, current option is 10 minutes. If you hear 2 beeps, current option is 15 minutes. If you hear 3 beeps, current option is 15 minutes.
4. Flip toggle switch to change the option.  
Flip once for 10 minutes, you will hear 1 beep.  
Flip twice for 15 minutes, you will hear 2 beeps.  
Flip 3 times for 15 minutes, you will hear 3 beeps
5. Close the hood to exit programming mode.

### EXAMPLE # 2: TACH LEARNING, OPTION # 1A

The factory default setting should normally operate with most vehicles on the market. Note that some vehicles equipped with multi coils systems have a very low TACH signal. The TACH learning feature will allow the system to adjust itself to the TACH signal of the vehicle.

Important note: engine must be warm, at idle speed (800RPM) before proceeding with the TACH learning option.

1. Access programming mode.
2. Press then release programming switch once, you will hear 1 beep.
3. Depress brake pedal to confirm, you should hear 3 beeps. LED on the control module flashes rapidly.
4. Start the engine and wait for it to idle.
5. Flip the programming switch once, you should hear 1 beep, TACH signal is learned.
6. Close the hood to exit programming mode.

### EXAMPLE # 3: FINE TUNING THE TACH SIGNAL, OPTION # 1B

Even with the factory default setting or TACH learning features, you might not reach the exact setting. This option will allow you to fine tune the signal manually.

*Example: you start the engine with the transmitter, if the starter is overcranking decrease the number of beeps, if the starter is releasing too fast increase the number of beeps. Make sure the engine is not running.*

1. Access programming mode.
2. Press then release programming switch once, you will hear 1 beep.
3. Depress brake pedal and count the number of beeps, minimum 1 beep maximum 7 beeps. If you miscount or forget the number of beeps heard, depress brake pedal again and count the number of beeps. At this step you must carefully count the number of beeps when you depress the brake pedal in order to fine tune the TACH signal, decrease when TACH signal is weak and increase when signal is strong.
4. Flip the programming toggle switch the number of times corresponding to the number of beeps you want to reach. EX: you want to each 5 beeps, flip the programming toggle switch 5 times.
5. Depress brake pedal again to count the number of beeps. The amount of beeps should be more or less than the beeps counted at step # 3. It confirms that you have changed the setting.
6. Close the hood to exit programming mode.