

## GENERAL INFORMATION

The basic ProCar 1 automobile security system consists of the Logic Module (LM) and the Power Module (PM). An external and internal siren, a motion sensor, a remote control, and door locking/unlocking module may also be included. (The basic version does not include the siren, horn speaker, remote, door locking module or motion sensor). The under-dash LM module contains the system control, input sensors and voice chip, while the engine compartment PM module contains the fully electronic (MOSFET) lights flasher, engine cutout circuitry, and high-power siren amplifier. The siren amplifier can power up to four horn speakers.

The basic system is expandable so that any factory installed features such as keyless entry, or accessories from any other manufacturers such as special sensors or sirens may be integrated to customize the system.

The ProCar 1 system features true carjacker identification, and removes both fuel and ignition (or simple starter kill if desired) from the engine. ProCar 1 also features standard and high security modes, driver recognition, passive arming and disarming with auto-wait for package loading. The optional four-function remote adds remote panic, arm, disarm, and engine insta-stop functions. Also optional is a door locking module that allows ProCar 1 to lock and unlock the doors as it automatically arms and disarms, with ignition-on auto locking option.

Additional features of this system are two selectable security levels, protected valet, panic, and service/disarm functions that are selected with only one switch that already exists in the car. ProCar 1 uses a voice chip to confirm selections, and will also warn a carjacker that the engine will shut down in ten seconds. A three color LED mounts anywhere on the dashboard to indicate Armed, Disarmed, Monitoring, Anti-carjacking activated, vehicle entered while armed, or Disarmed for service mode. A backup battery may be used with the system and will run the system completely except for the lights flasher. The battery will automatically be charged in normal driving.

The use of two modules makes wiring and installation easier, as only one three conductor cable joins the modules across the firewall. There are hookups at both modules for any number of sensors.

The LM module mounts under the dash and has inputs for battery + and ground, accessory power, (keyless entry) disarm, customer ID (secret) switch, doors and motion sensor, and car stereo audio output. The outputs consist of stereo left front speaker, internal siren, armed/engine kill (and auto door lock/unlock) line, and external siren power.

The PM module has inputs for battery + and ground, engine power, and the wire from the IM module. The outputs consist of lights flash, ignition coil to ground kill, engine sensor defeat (ESD), external siren speaker(s), and power interrupt (to fuel injectors or fuel pump or starter).

#### LM MODULE DETAILS

The LM has a 15 pin plug with numbers stamped on the wire side of the plug. Mount the module under the dash behind the center console. The remote receiver must be mounted high so that the antenna wire is close to the windshield. If you wire the LM harness with the LM module connected, be sure that all wires are connected first except the RED battery power wire, which must be the last wire connected because ProCar 1 will auto-arm as soon as the RED wire becomes positive. If the optional remote receiver is installed, it should be plugged into the flat plug from the LM module. When power is applied after the system is wired, ProCar will start to arm. In the off chance that the remote receiver enters the panic mode immediately, the lights and sirens will activate immediately as power is applied. If this happens, reset the remote by pushing the left remote button ONCE to exit the panic mode, and push and hold the right button to reset the ProCar LM. The three color LED is mounted into any flat surface of the dash that is less than 3/16 inch thick. Start by drilling a 3/16 inch hole, then reaming it out carefully for a tight fit. A "cliplite" LED holder is included for a fancier look; it requires a 1/4 inch hole.

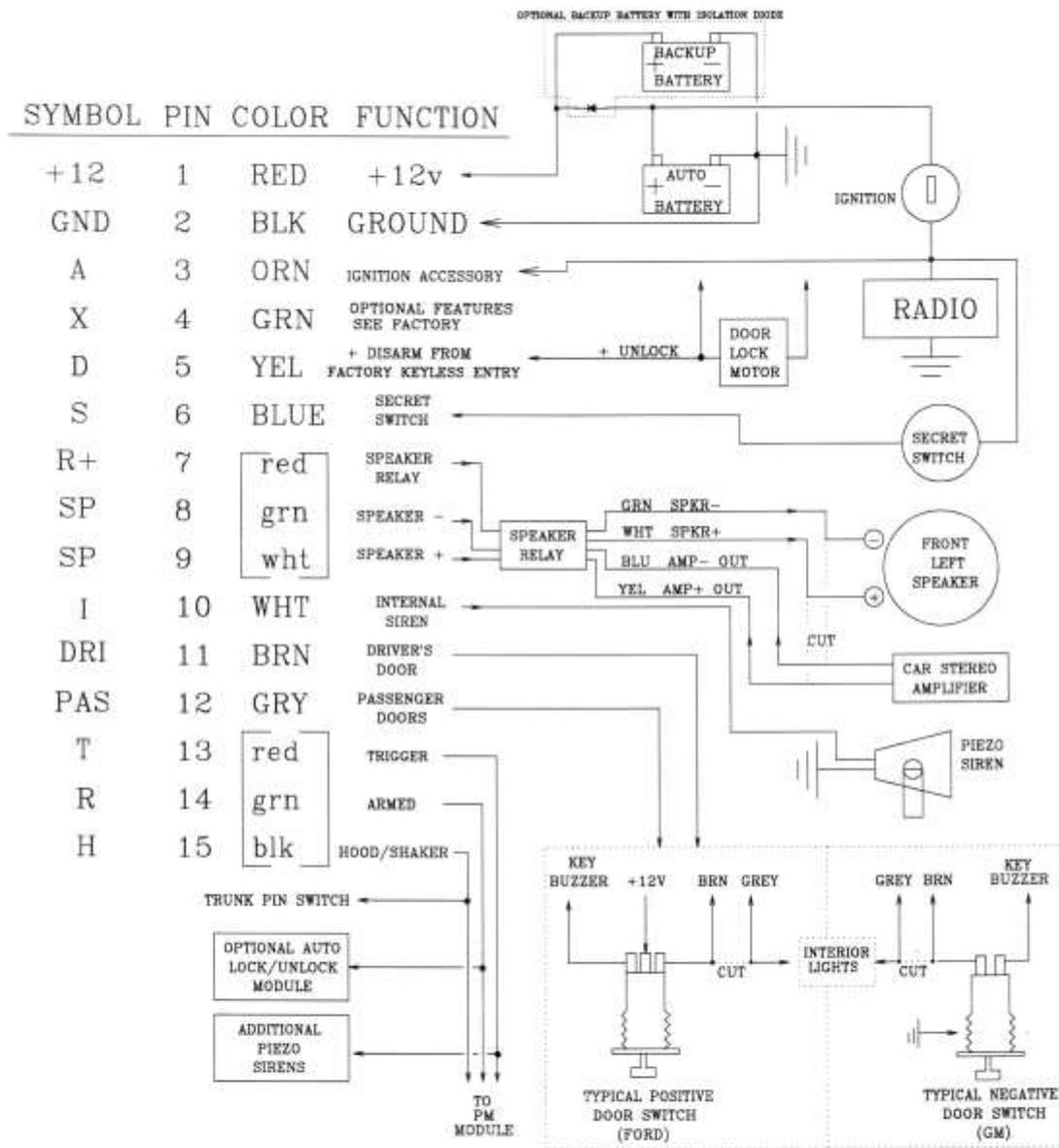


FIGURE 11: INTERNAL VEHICLE WIRING OF LOGIC MODULE

ProCar 1 LM MODULE WIRING DIAGRAM; Also see the diagram in figure 11.

Pin 1 RED: Positive to the battery (constant power). Be sure that the supply can handle at least 10 amps.

Pin 2 BLK: Negative ground.

Pin 3 ORN: Accessory power. Tie into the radio accessory power "ignition on" wire.

Pin 4 GREEN: no connection (consult factory. This can be used to control an engine computer or a stereo system when ProCar is told to expect a valet or mechanic.

Pin 5 YEL: Positive input disarm from factory installed keyless entry.

Pin 6 BLUE: Secret switch. Requires + to identify car owner, or to select features such as HIGH security, VALET, DISARM/service, or PANIC. Uses momentary voltage from door switch, or window UP switch, or windshield washer lever, or bright lights FLASH, etc.

Pins 7,8,9 Red (relay +), Green and Black (ProCar voice output). This harness wires to a relay (built into the harness) with four wires, used to switch the left front speaker from the stereo system to ProCar's voice module. **SPEAKER WIRES MUST BE FLOATING!**

Relay wiring: From car stereo:

YEL: Speaker + output

BLUE: Speaker - output

To left front speaker:

WHT: to Speaker +

GRN: to Speaker -

If you do not want to use the stereo's speaker system, you may use a single dedicated speaker wired to the WHT and GRN wires.

Pin 10 WHT: POSITIVE to internal piezo siren. Ground the siren's negative lead.

Pin 11 BRN: Driver's door. The LM must be opened and + or - door switching must be selected with pin headers. See specific directions.

Pin 12 GRY: Passenger doors. This wire is available at the DRIVER's door. See specific directions. Also must select + or - door switching same as the driver's door.

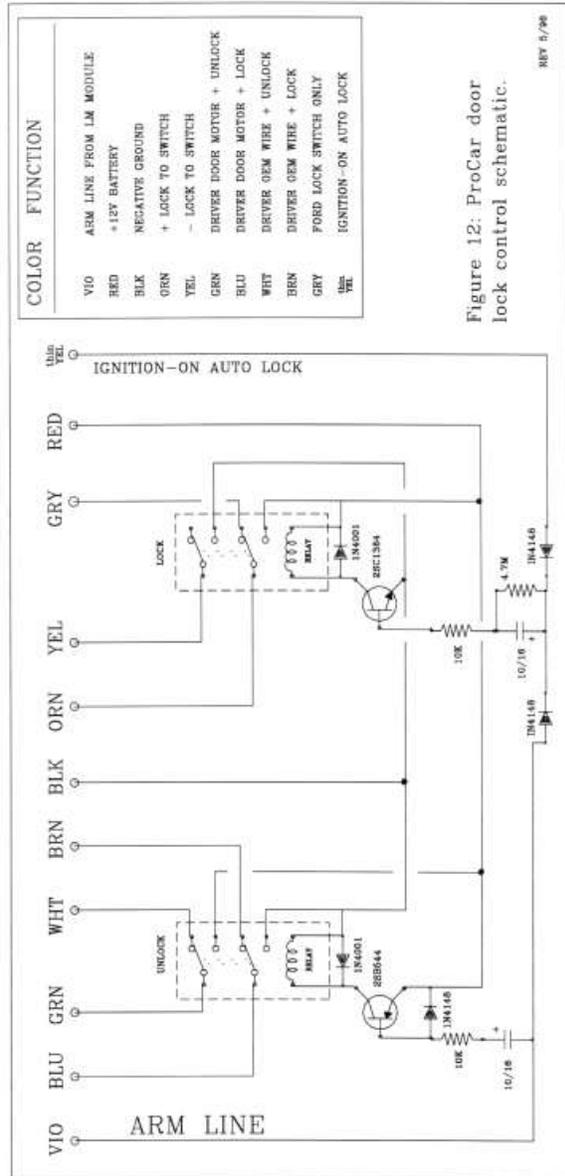
Pins 13 to 15: This wire harness is run through the firewall to the PM. The individual wires are:

Red: + output to PM to power external siren. This wire may be used for powering other sirens or relays as long as the current draw is less than 1 amp.

Grn: becomes + when system is armed to cut out engine. This line is also used to signal the optional

automatic door locking and unlocking module.

Blk: hood switch and motion sensor from PM. Any special sensors, such as microwave field sensors, should be connected to this black wire. (standard grounded switching.) You may join as many pin switches as you want.



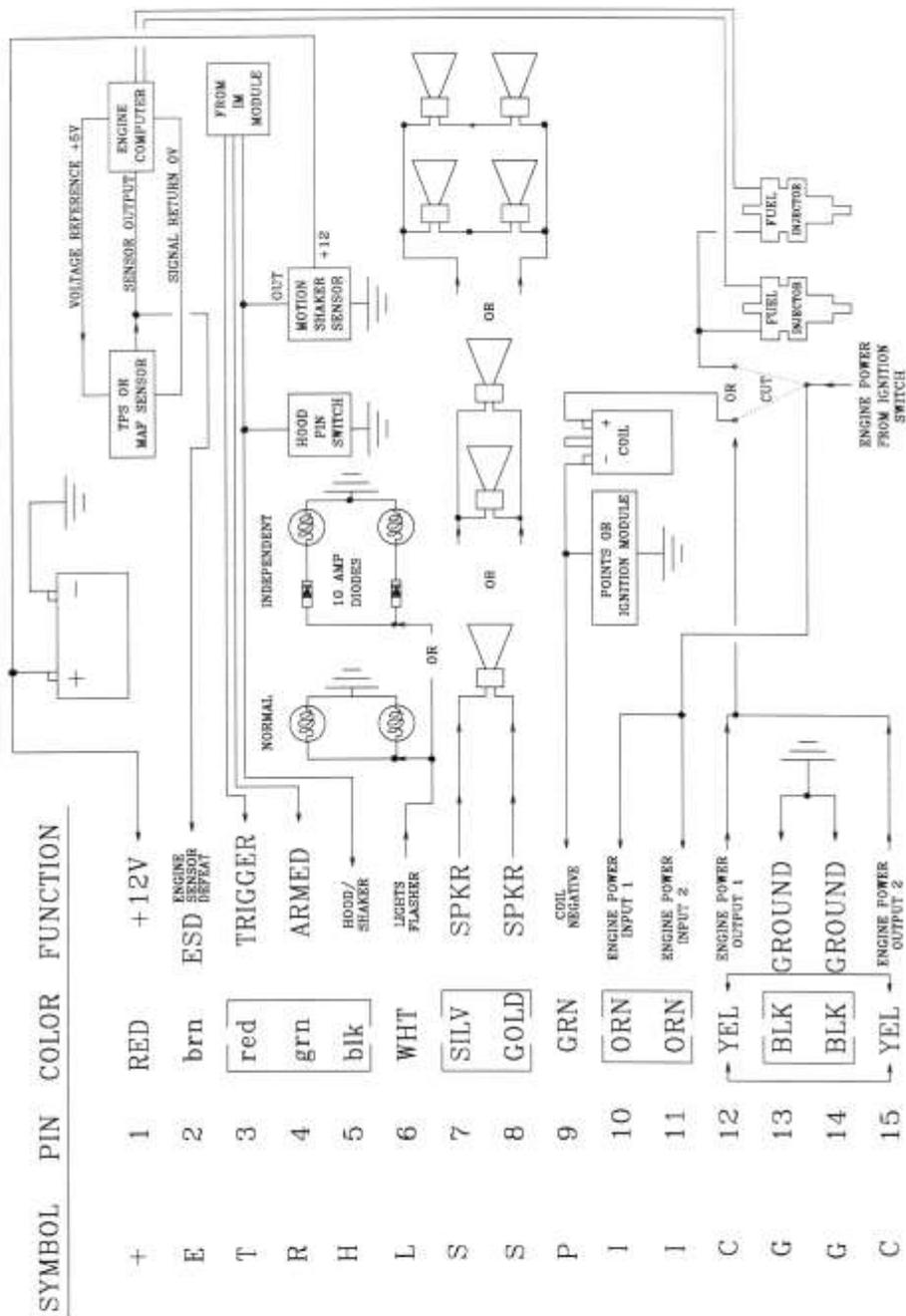


FIGURE 15: ENGINE COMPARTMENT WIRING OF PM MODULE

PM MODULE WIRING DIAGRAM figure 15.

The PM has a 15 pin jack with numbers stamped on the wire side of the jack.

Pin 1 RED: Battery positive for lights flasher power. Must be able to supply up to 15 amps.

Pin 2 Brn: ESD or Engine Sensor Defeat. Intermittently brings sensor output from throttle position sensor or mass air sensor to ground through protection resistor. Simulates engine problems to carjacker.

NOTE: IF THIS WIRE IS USED, DO NOT WIRE PIN 9 GREEN WIRE.

Pins 3,4,5: Harness from LM. Also, connect the thin black wire from pin 5 to the motion sensor, and to the HOOD pin switch. Any number or type of motion sensors or pin switches may be connected to the thin black wire.

Pin 6 WHT: Positive output to parking lamps. Maximum load 15 amps, protected by a 10 amp auto-reset circuit breaker.

Pin 7 and 8 SILVER, GOLD: To horn speakers from siren module. Wires are floating.

Up to four horn speakers may be powered, 4 ohm load MINIMUM. See diagram.

Pin 9 GRN: Ignition killer. Will intermittently short points coil negative to ground when siren is activated. See instructions and diagram.

NOTE: IF THIS WIRE IS USED, DO NOT WIRE PIN 2 BROWN WIRE.

Pins 10 and 11 ORN: Engine power INPUT. Positive power wire that powers the fuel injectors, or the main relay that is controlled by the computer. This wire is cut and the end with POSITIVE power joins to both ORANGE wires. Both ORANGE wires are connected together, as one is a backup.

Pins 12 and 14 YEL: Engine power OUTPUT. This powers the fuel injectors, or engine relay. Joins to the cut wire that normally powers the injectors or relay. Will supply up to 20 amps. Again, both wires are used, as one is backup.

\*\*\*NOTE: The connection between ORANGE and YELLOW wires is broken

as soon as ProCar is armed, unlike the Ignition Kill

GREEN wire or ESD engine sensor defeat BROWN wire, which

only pulse in conjunction with the siren.

Pins 13 and 14 BLACK: Black wires are grounded to the closest good ground.

## SPECIFIC INSTRUCTIONS FOR WIRING THE DOOR MONITORING CIRCUITS

The door switches in any car can either switch POSITIVE to the dome lamps, or with positive already to one side of the lamps, switch NEGATIVE (ground) to the other side of the lamps. Typically, General Motors and most manufacturers use the negative switching method while Ford uses positive.

Although ProCar 1 needs to monitor the doors individually, the system has been designed so that the installer needs only to get to the wiring of the switch in the driver's door. ProCar 1 has circuitry internally that will fool the car's electrical system into lighting the dome lights when any door is opened, yet will discriminate between the different doors.

### POSITIVE SWITCHERS

First you must identify the door light switching wire. Make sure all of the passenger doors, hatch or trunk are closed. Open the driver's door, and remove the door switch. On Ford, and other POSITIVE switchers, there will be three wires. One wire will be battery +, one wire will usually be key-in-ignition buzzer, and one will be for the lights. Measuring each wire with a test light, keep the door switch pushed in, and turn on and off the dome light switch on the dash, watching to see which wire is flashing with the switch. After identifying the door wire, turn off the dome light switch on the dash and release the door switch so the light stays on. Cut the wire about two inches from the switch; the dome light should go out. The short wire from the switch connects to the BROWN Driver's door wire from pin 11 of the LM. The remaining end connects to the GREY Passenger's door wire from pin 12 of the LM.

The LM module must be programmed to the car. Remove the four screws from the LM to expose the printed circuit boards. There are header pins on the IM board for the drivers and passenger doors for + and - switching. Be sure to program both doors for + switching.

### NEGATIVE SWITCHERS

First you must identify the door light switching wire. Make sure all of the passenger doors, hatch or trunk are closed. Open the driver's door, and remove the door switch. On GM, and other NEGATIVE switchers, there will be two wires. One wire will be for key-in-ignition buzzer, and the other will be for the dome lights. With the switch removed, the dome light will be out. Touch one wire, then the other, to ground. The wire that turns the light on is the one you will cut about two inches from the switch. The short wire from the switch connects to the BROWN Driver's door wire from pin 11 of the LM. The remaining end connects to the GREY Passenger's door wire from pin 12 of the LM.

The LM module must be programmed to the car. Remove the four screws from the LM to expose the printed circuit boards. There are header pins on the IM board for the drivers and passenger doors for + and - switching. Be sure to program both doors for - switching.

## SPECIFIC DIRECTIONS FOR INSTALLING THE PM MODULE

The PM contains circuitry for flashing the lights, powering the external siren speakers, supplying power for the fuel system, ignition killer and ESD circuits. The module must be mounted in a DRY area that has some air flow. Mount away from exhaust manifold. If the module is mounted first, be sure that the RED battery POSITIVE wire is the last wire to be hooked up. Remove the top cover and drill mounting holes where desired. Remove all burrs and mount on the firewall or fenderwall. The module should be completely sealed with silicone rubber after mounting to make the unit as water-tight as possible. If you have not bench-checked the system first, it would be a good idea to do this before sealing the module.

Although most of the wiring is self-explanatory, there are special instructions for hooking up the ignition killer, ESD circuit, fuel system power, and lights flasher circuits. Follow them EXACTLY.

### LIGHTS FLASHER

After mounting the PM, locate the auto's parking lights wire on the same side of the auto as the module. Identify the power wire to the lights by turning on the parking lights and finding the hot wire. DO NOT USE THE HEADLIGHTS WIRES! Join this wire to the WHITE wire from pin 6 of the PM. If ProCar only lights the driver's side lamps when activated, use heavy-duty diodes to isolate the two circuits. See diagram in figure 15.

### IGNITION KILLER

The GREEN wire from pin 9 of the PM is designed to intermittently short the negative of the ignition coil to ground through an internal ballast only when the siren is activated, to simulate an intermittent engine problem. It is designed for typical single-coil ignition systems, but can be wired to only one coil of a multi-coil system if desired.

\*\*\*NOTE: If the GREEN ignition kill wire is used, DO NOT wire the ESD kill BROWN wire.

On conventional vehicles with one coil and a distributor, locate the coil. There will be two or more small wires to the coil. Do not concern yourself with the high voltage distributor wire. Start the car and measure the voltage at the small wires. One wire will be +12 volts power, the other wire(s) are switching to the ignition amplifier module (or points on older cars) and should measure a lower voltage that varies with engine RPM. If you are using a scope, there will be ignition pulses on this wire as the coil fires. This is the correct wire to join to the GREEN wire on pin 9 of the PM.

Some cars use a dual coil distributorless system; you can wire the GREEN wire to just one coil. This will make the engine run very poorly when ProCar is triggered.

On more recent engine systems, the engine electronics may seem very complicated and confusing. The BROWN ESD kill wire from the PM can be wired to many sensors on a fuel-injected engine that will cause the engine to sputter and stall without damage, for example, the airflow sensor, the manifold air pressure sensor, or the throttle position sensor.

On these cars, a voltage is varied as the engine is revved. A sensor has two or three wires; one or two wires will always be the same voltage, but one wire will vary voltage as the engine is revved. It is this wire with the changing voltage that you can tie into the BROWN wire to the PM. The installer can use his imagination and is encouraged to experiment with different cars. No engine electronics damage will occur, as long as ONLY THE WIRE WITH THE CHANGING VOLTAGE IS WIRED to the BROWN wire. This will cause the engine to run poorly and the "check engine" light will illuminate.

\*\*\*NOTE: If the BROWN ESD kill wire is used, DO NOT wire the Ignition Kill GREEN wire.

#### POWER CUTOFF CIRCUIT

On cars with automatic transmissions, to totally shut off the engine will cause the steering and brakes to become heavy. On these cars, you may not want to hook up the ORANGE and YELLOW power cutoff wires to kill the fuel system if liability is a concern for you. The GREEN or BROWN wires will pulsate to ground, which will make the car jerk and slow down, and will generally be undrivable without attracting attention, but will not cause the driver to lose control. On cars with standard transmissions, the direct link between engine and transmission will allow the engine to turn as the car coasts down, and the brakes and steering will be unaffected. You might want to use the power cutoff circuit to disable the starter instead. This is described later as a third choice.

#### POWER CUTOFF to FUEL SYSTEM

Fuel-injected cars have an electric fuel pump, fuel injectors, and a fuel control relay. The dual ORANGE and YELLOW wires from the PM act as a switch, normally conducting to run the engine, or opening the connection when told to shut down the engine by the LM. ProCar 1 uses two identical switchers, wired in parallel for failsafe operation. Always use BOTH orange and BOTH yellow wires. Together, they will switch up to 20 amperes.

First choice is wiring to the fuel relay, as this is usually in the engine compartment, and requires the least amount of current. With someone turning the ignition key on and off, listen in the engine compartment for a clicking relay. Find the wire that actuates the relay coil and cut it. Try to start the car, it should not start. Wire the ORANGE wire from the PM to the voltage source, and the YELLOW wire to the relay coil. It is MOST IMPORTANT that the ORANGE wire get the voltage and the YELLOW wire deliver the power to the load. The MOSFETS used are directional and if the wires are reversed, the PM may be damaged!

Second choice is to cut power to the fuel injectors. The injectors appear to be wired together, with the wire bundle terminating at a multi-pin connector. Measure the voltage at each wire as the engine is running. Only one wire will be constant 12 volts, the others measuring slightly lower with small negative pulses as the injectors fire. It helps to rev the engine for a better reading, as the injector wires measure LOWER as the engine is revved HIGHER. If you are using a scope, the injector wires have a very narrow negative pulse riding on the 12 volts. You will wire into the CONSTANT POWER WIRE that supplies ALL of the injectors.

Cut the constant 12 volt wire to all injectors and connect the 12 volt side (supply) to the dual ORANGE wire of the PM, and the other (to injectors) side to the dual YELLOW wire of the PM. Remember that if these wires are reversed, the PM may be damaged!

The third choice of using the fuel power cutoff circuit is to use the circuit as a starter interrupter. Some customers may feel uncomfortable about having the engine cut completely off upon an attempted carjacking, especially if the vehicle uses an automatic transmission. Simply cut the small START wire from the ignition key to the starter solenoid and wire the power source to the ORANGE wire, and the solenoid wire to the YELLOW wire.

#### CARS WITH MECHANICAL FUEL SYSTEMS

On these cars, you may use the power cutoff circuit to cut off power to the ignition coil. Recall the wiring of the Ignition Kill circuit listed above. The coil has 12 volt ignition input, and points or ignition module output. You have already wired the Ignition Kill GREEN wire to the ignition module (coil negative) wire; simply cut the 12 volt ignition power to the coil positive, wire the dual ORANGE wire to the power source, and the dual YELLOW wire to the coil power input.

Remember that you can use the power cutoff circuit to disable the starter in these cars instead of removing ignition power.

Alternatively, you may use an electric fuel cutoff solenoid, available at any auto parts store.

**\*\*\*REMEMBER THAT USING THE POWER CUTOFF CIRCUIT TO CUT POWER TO THE FUEL OR IGNITION SYSTEM WILL CAUSE THE ENGINE TO SHUT DOWN COMPLETELY TEN SECONDS AFTER THE VOICE WARNING!**

#### MOTION SENSOR and PIN SWITCH DETAILS

The motion sensor should be mounted to a vertical METAL wall on the driver's side inside the engine compartment or inside the passenger compartment, as close to the firewall as possible. **DO NOT MOUNT TO ANY SOFT PLASTIC SURFACES**, as they will not conduct sound properly to the shock sensor. The trigger wire is connected to the thin BLACK wire from pin 5 of the PM, the power and ground wires are tapped into the heavy RED and BLACK wires of the PM (pins 1 and 13). When adjusting the motion sensor, remember to temporarily disconnect any pin switches. The motion sensor should be adjusted so that a fist needs to be pounded hard from one foot away on front and rear bumpers.

Any number of grounded pin switches may be connected to the thin black wire (pin 5 of the PM). ProCar 1 has been calibrated so that a pin switch can be saturated with water or corrosion without affecting the system in most cases. A pin switch should be zero ohms when actuated and infinite when open. ProCar considers anything less than 400 ohms as "zero" and anything more as "infinite". If you measure the voltage at this point, it should measure 11 volts when all entry points are closed (ProCar does not have to be armed to measure). If the reading is lower than 10 volts, suspect a defective pin switch or motion sensor. If the sirens are being activated right after the system arms itself, the only cause will be a leaky pin switch or other sensor that is intermittent. Any "stuck" sensor that pulls the voltage to zero will keep

the system from arming itself and the status indicator will remain green at all times. Use a polycarbonate or stainless steel pin switch instead of a steel switch to eliminate falsing due to moisture or corrosion. Also, spray the entire switch with WD-40 after installation.

#### WIRING PROCAR INTO A VEHICLE'S EXISTING KEYLESS ENTRY SYSTEM

The LM module has the ability to be wired into a vehicle's existing keyless entry system using a positive pulse from the door lock solenoid. Pin 5 (YELLOW) will disarm ProCar immediately with a + pulse. To integrate the system into an already existing vehicle remote, or keyless entry system, simply tap into the lock motor wire that becomes + when UNLOCKED.

If the HIGH security level is selected, the keyless entry will only unlock the doors; ProCar will let the driver in, but the system will sound if ProCar does not receive the secret signal within 15 seconds.

#### WIRING THE FOUR-FUNCTION REMOTE

The receiver is plugged into the flat plug as described on page 1. Let the antenna wire hang clear from other wires or metal surfaces. The range is dependent on the height of the receiver, so mount it as high in the dash as possible.

NOTE: When the system is powered up, ProCar will auto-arm, and the remote receiver MAY enter the panic mode immediately. If the sirens and lights flasher start immediately after power-up, push the left PANIC button on the remote once, then disarm the system by holding the right RESET button for three seconds.

#### INSTALLING OPTIONAL AUTOMATIC DOOR LOCKING AND UNLOCKING CIRCUIT

This feature will allow the factory power door locks to synchronize with ProCar 1, and optionally to automatically lock all doors when the ignition is turned on. The lock/unlock module VIOLET wire ties into the thin GREEN wire (Armed line, pin 14) of the LM. The circuit will lock ALL door locks as ProCar 1 arms, and the unlocking relay will unlock the driver's door ONLY when ProCar 1 disarms. Because the locking feature will lock the keys inside the car if someone leaves the keys in the ignition and closes all of the car doors, ProCar gives plenty of time and verbal warnings before it arms and locks. Of course, the driver should keep the remote in his pocket, so he can unlock the driver's door as he disarms ProCar 1.

The diagrams in figure 17 show typical Ford 5-wire, GM positive switching, and foreign negative switching.

After you have installed the ProCar system in the vehicle, every circuit will be tested in the next section.

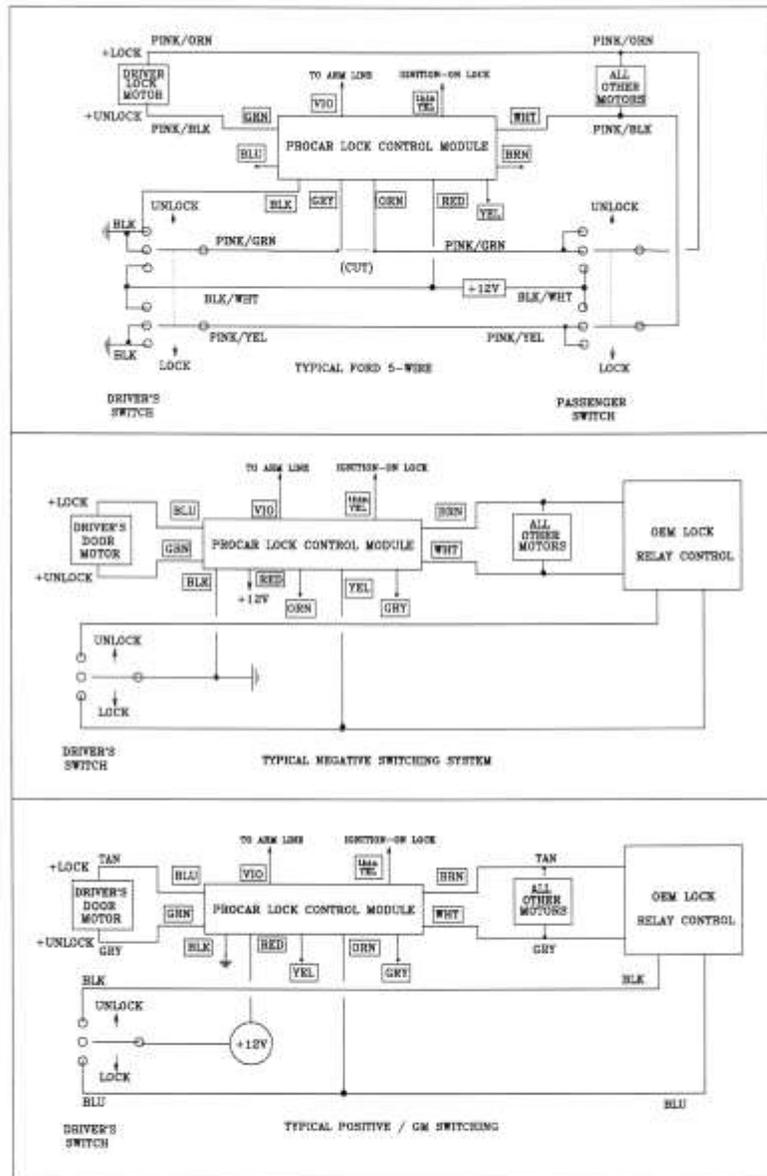


Figure 17: Typical door lock installation wirings.  
 ProCar colors shown boxed

## TESTING PROCEEDURE FOR THE PROCAR ONE SYSTEM

The following 29 tests will check every circuit of the system. If any test fails, check that circuit for proper components, polarities and solder connections. **WARNING: HEARING PROTECTION SHOULD BE WORN DURING ALL TESTS!**

@ 1: Be sure that the LM module door polarity headers are set for the proper polarity of the auto's interior lighting system.

@ 2: After powering up the system for the first time, turn on the ignition and hold your "secret switch" for three seconds to clear the system. The doors should all lock if the ignition-on thin yellow wire to the locking module is wired.

@ 3: With all doors, hood and trunk closed, open, then close the DRIVER door. Check that the green LED lights for 15 seconds, then the LED should turn orange and ProCar should announce that the system has been activated. After another 15 seconds, the LED should turn red, and all door locks should lock (if the locking module is installed).

@ 4: Check the shock sensor by pounding the bumper. The internal and external sirens should sound and the lights should flash. Reset by holding the right remote button down for three seconds. The DRIVER door lock should unlock (if the locking module is installed) and ProCar should announce System Reset.

@ 5: Open, then close the DRIVER door to start the arming process again, but reopen any door within ten seconds. The system should not arm, and the green LED should remain lit. This checks the arm delay circuit for package loading.

After 30 seconds, close the door and the system should arm fully within 30 seconds.

@ 6: With the system fully armed, start a 60 sec timer, open, then close the PASSENGER door. The sirens and lights should be activated, then reset within 60 seconds.

@ 7: Open the DRIVER door and get inside, then close door. The sirens and lights should NOT activate, and ProCar should warn that the system has been activated. After 10 seconds, the external siren and internal siren should activate. Try to start the engine. The car should not start.

@ 8: With the ignition key still on, hold your secret switch in for three seconds. ProCar should system reset.

@ 9: Get out of the vehicle and close the door to allow the system to rearm.

@ 10: After the system is fully armed, open the DRIVER door, get in and close the door. Within ten seconds, turn the ignition key on and start the car. ProCar should announce system reset and the car should start.

@ 11: Turn off the engine, leave the car and close the door. Before ProCar rearms, push and hold the right remote button for three seconds, and the green LED should turn off. Push the left remote button

once for PANIC/FORCED REARM, then push the left button once again. With the first push, the outside siren and lights should activate, the red LED should light, and ProCar should announce that the system is activated; with the second push, the sirens and lights should turn off, but ProCar should be fully armed within 15 seconds.

@ 12: If your car has a factory installed keyless entry, check it now to make sure ProCar disarms when you unlock the DRIVER door; otherwise, continue to the next step.

@ 13: Enter the car, close the door and start the engine. While the engine is running, open the PASSENGER door and close it; the LED should remain off.

@ 14: Open and close the DRIVER door to simulate a carjacking. The LED should turn green for 15 seconds, then the ProCar has been activated warning should be heard when the LED turns orange.

@ 15: Turn the ignition key off and on several times to simulate a carjacker trying to disarm the system; ProCar should ignore this and the engine should become inoperative within 10 seconds. After another 10 seconds, a second ProCar has been activated warning should be heard; then 10 seconds later, the sirens and lights should become activated.

@ 16: Turn the ignition off and close the door. ProCar should sound all alarms for 45 seconds.

@ 17: After ProCar resets the sirens and lights, enter the vehicle. ProCar should announce the activated warning. Try to start the engine; the car should not start. ProCar should have set itself for HIGH security (owner identification required). The sirens and lights should be activated again.

@ 18: Identify yourself using your secret switch, and ProCar should system reset and allow the engine to be started.

@ 19: With the ignition on, tap your secret switch 3 times; there should be no response except for the normal switch function.

@ 20: With the ignition on, QUICKLY tap your secret switch FOUR times for HIGH SECURITY test. ProCar should announce High Security within four seconds.

@ 21: Turn the ignition off and leave the car. Allow the system to arm.

@ 22: Enter the car and attempt to start the engine. ProCar should announce that the system has been activated and the engine should not start. Reset using your secret switch.

@ 23: With the ignition on, tap your secret switch FIVE times for VALET. ProCar should respond Valet parking enabled. Open, then close the drivers door to simulate a change of drivers. Wait 45 seconds; the green LED should light but the anti-carjack circuit should not be activated.

@ 24: Turn the ignition off and leave the auto. ProCar should start to automatically rearm itself within 25 seconds.

@ 25: After ProCar is armed, enter and start the vehicle; the system should system reset and allow normal operation.

@ 26: With the ignition on, tap SIX times for DISARM, and check that ProCar announces that the system is fully disarmed for Service. Turn off the ignition and leave the vehicle.

@ 27: The system should start to arm, up to the orange LED, but no announcements should be heard and the LED should remain orange indefinitely.

@ 28: Open the DRIVER door, turn the ignition on, and ProCar should again announce that it is fully disarmed.

@ 29: Reset using your secret switch, and with the ignition still on, QUICKLY tap 7 or more times to check the PANIC mode, then reset the system.



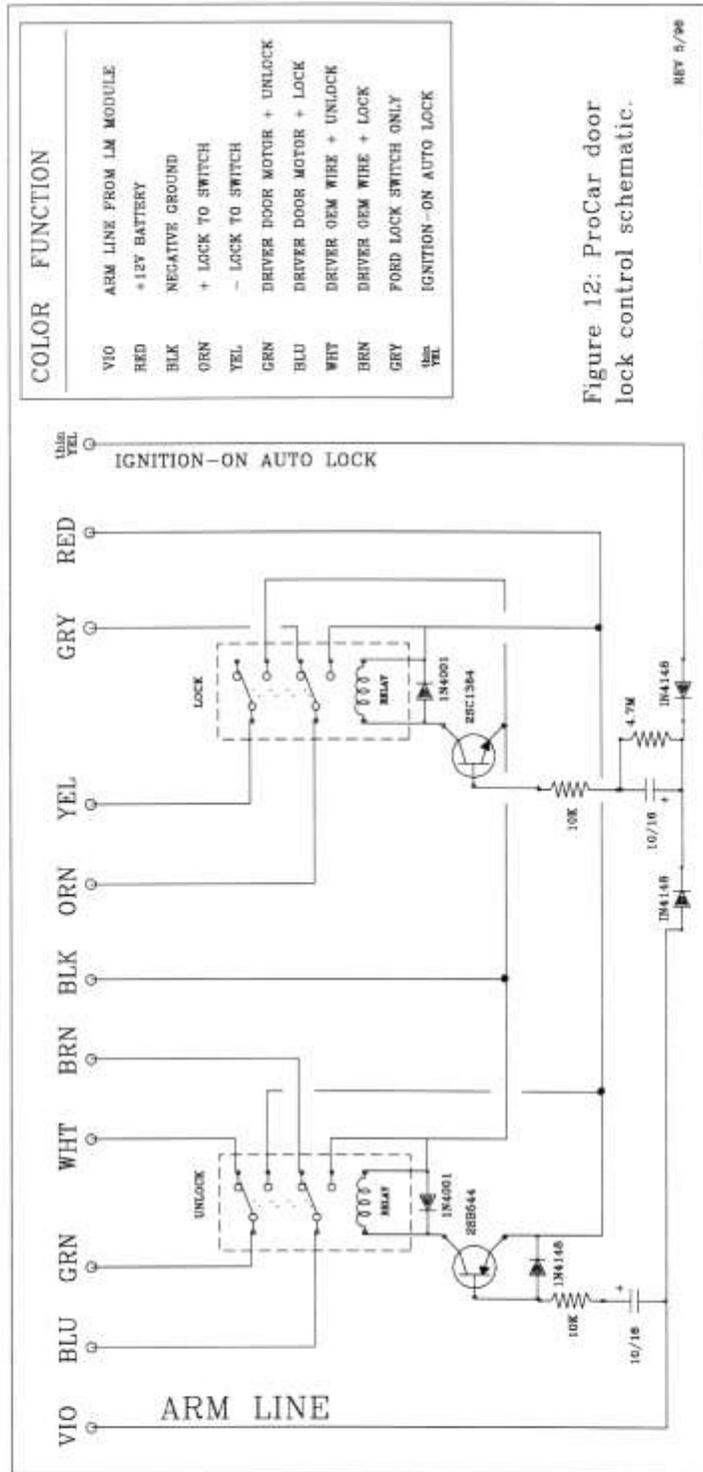


Figure 12: ProCar door lock control schematic.

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ProCar passes all of these tests, then all circuits are operating normally. The Operations manual should be placed in the automobile's owner's manual or glove box. The installation manual should be kept in a safe place.