

AUTOCOMMAND® OEM SERIES

Remote Control Car Starter Installation Manual for Model # 28623T

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PLEASE READ COMPLETELY BEFORE BEGINNING

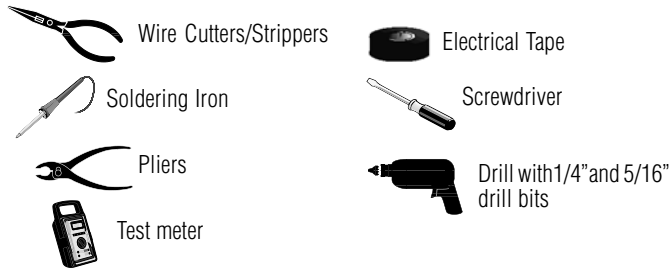
Congratulations on your purchase of the AutoCommand® OEM Series Remote Car Starter. The AutoCommand® OEM Series Remote Car Starter system allows you to start the car by remote control from the comfort of your home or office in order to cool it down in the summer or heat it up in the winter.

AutoCommand® OEM Series is for **automatic transmission/fuel injected vehicles only**. It is an extremely sophisticated system with multiple built-in safety and security features.

AutoCommand® OEM Series Car Starter:

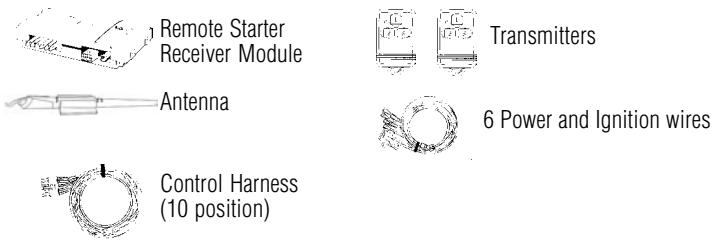
- Will start your car by remote control, and run the heater, defroster, or air conditioner to warm up or cool down the car.
- Is designed to start the car if it is in park, and only if the hood is closed.
- Will attempt to start the car for up to six seconds, but no longer (to avoid damage to the starter motor). Should the car not start, or if it stalls after starting, the remote starter will make two further attempts to start it.
- Will not let the car be driven without the key in the ignition.
- Shuts itself off automatically after 10 or 15 minutes (programmable) if you forget to come out to your car.
- Will shut off if the brake pedal is pushed, the hood is opened, or the transmission is shifted out of park - unless the key is in the ignition and in the "run" position.
- Allows you to remove the key while leaving the car running with the doors locked for up to 10 or 15 minutes utilizing the Quick Stop™ Option. (See Separate User Tip Sheet)
- Starts the car automatically whenever the temperature drops below 0°F (-18°C), or if the battery voltage drops below 11 volts when the Cold Start™ Option is used. (See Separate User Tip Sheet)
- Has the "Daily Start™" feature which allows the vehicle to be started at the same time the following day. (See Separate User Tip Sheet)
- Is quality engineered and microprocessor controlled to provide many years of reliable use.
- Comes with a Limited Lifetime Warranty.

Tools required to install the AutoCommand® OEM Series Unit:

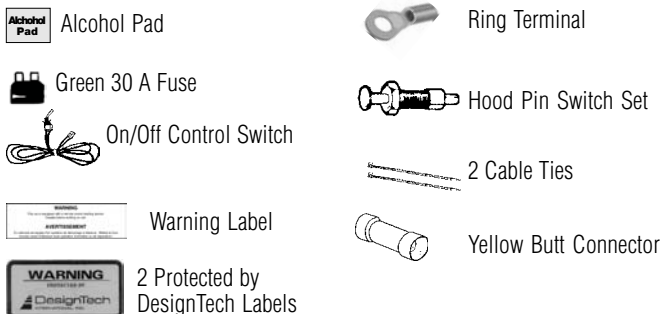


We highly recommend that all connections be soldered for reliability.

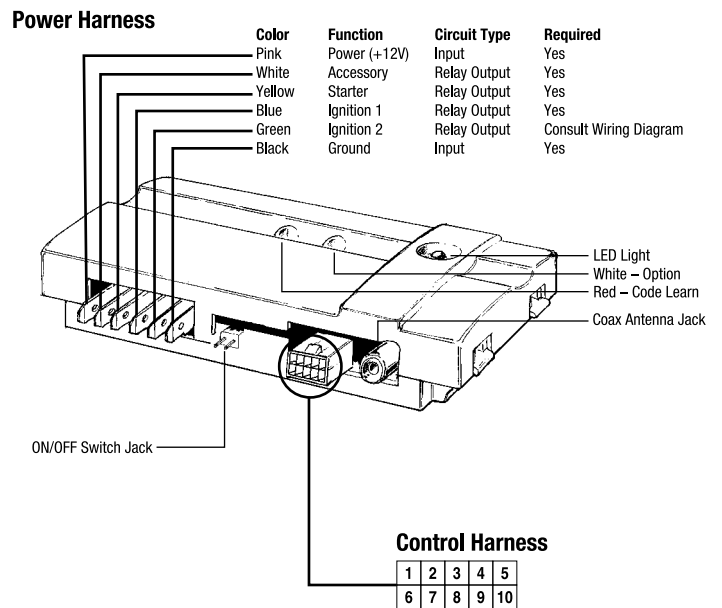
Parts List included with the AutoCommand® OEM Series Unit:



The following parts are included in the plastic bag:



Wiring Diagram



* For free vehicle specific wire information, consult our website at www.designtech-intl.com



On cars with airbags, you may notice bright yellow tubes or harnesses marked SRS (Supplemental Restraint System) underneath the steering column area. DO NOT tamper with these wires in any way, to prevent personal injury and/or damage to the air bag system.

Battery gases are explosive.
Do not smoke while working near the car's battery.

Note: Some installers connect a battery charger to the vehicle's battery during installation. This is fine, but it must be removed before running the vehicle under remote starter control.



All General Motors (GM), rear wheel drive vehicles built prior to 1995 with automatic transmissions and Dodge Dakota trucks (4 cylinder engines only) with automatic transmissions built prior to 1996 have a MECHANICAL TYPE of NEUTRAL SAFETY SWITCH. See important warning on the last page of these instructions.



When running the wires through the car's firewall, be sure to protect them from sharp metal edges and from hot surfaces on and around the engine.

INSTALLATION INSTRUCTIONS

1. Before You Start

Take time to read through the whole installation manual before beginning.

Always leave a window open to avoid locking your keys in your car.

IMPORTANT: After having read the entire manual, start the installation by putting the yellow WARNING STICKER in the engine compartment. Choose a surface that is clean and readily visible when the hood is open.

WARNING

This car is equipped with a remote control starting device.
Disable before working on car!

AVERTISSEMENT

Ce véhicule est équipé d'un système de démarrage à distance. Mettez-le hors fonction avant d'effectuer toute opération d'entretien ou de réparation!

POWER & IGNITION HARNESS

The remote starter module will be installed under the dash once all wiring has been completed. **Do not mount the module at this time! You will need to check the red diagnostic LED light as the installation progresses.** Locate (or drill) a hole in the firewall to run the PURPLE and GREEN wires of the **Control Harness** and the PINK wire of the **Power Harness** into the engine compartment. The remaining short wires stay in the passenger area. Leave about a foot of the wire harness under the dash for ease of working and visual access to the diagnostic light.

The **Installation Information** section of www.designtech-intl.com is available 24 hours/day to provide you with free, up-to-date vehicle wiring information for your particular vehicle.

Note: Always connect the **PINK** and **BLACK** wires before connecting any of the other wires. Do not insert the fuse until Step 11.

2. Black Wire (16 AWG) – Ground

Connect the BLACK wire to a very good, clean chassis ground in the driver's kick panel area. Use the small ring terminal. (The thin metal bracing around or beneath the dash board is not always adequate.)

3. Pink Wire (12 AWG) – Power (+12 Volts)

Connect the ring terminal at the end of the short PINK wire to the +12 Volt terminal of the battery. Run the long PINK wire through the firewall of your vehicle. Join the remaining ends of the power wire together by soldering them. Tape with electrical tape to leave no exposed wires. Alternatively, you may wish to use the yellow butt connector, but we recommend soldering. Wait to insert the 30 amp green fuse into the holder until Step 11. As the power is first applied to the unit the red diagnostic LED light will blink once.

Note: Failure to properly install the fuse holder and 30 amp fuse to the PINK wire to the battery voids all product warranties.

Ignition Key Diagram for Steps 4-7

The vehicle's wires are found coming off of the key switch. Remove the panel under the steering column to access these wires.



4. Blue Wire (14 AWG) – Ignition 1

Connect the BLUE wire to the ignition 1 wire of your vehicle. This wire will measure +12 Volts on the test meter in the "run" and "start" position, and is off in the "lock/off" and "accessory" positions.

5. Green (14 AWG) – Ignition 2

Connect the GREEN wire to the Ignition 2 wire in the vehicle. The Ignition 2 wire can function in several different ways in your vehicle. It is important to understand how it works. The Ignition 2 wire will usually measure +12 Volts in the "run" position and is off (ground) in the "lock/off" and "accessory" positions. In certain vehicles, it may also show +12 Volts in the "Start" position or Ignition 2 may turn OFF during "Crank" and turn back ON after the starter disengages. Carefully note the function of the Ignition 2 wire. If the Ignition 2 turns OFF during "Crank", set Option #4 (section 23). If Ignition 2 stays ON during "Crank", no options need to be changed.

6. White Wire (14 AWG) – Accessory

Connect the WHITE wire to the accessory wire which is +12 Volts in the "run" and "accessory" position, but off in the "start" and "off" positions. In GM vehicles, connect the white wire to the orange wire that is hot in "run" only.

7. Yellow (14 AWG) – Starter

Connect the YELLOW wire to the starter wire. This wire will measure +12 Volts on the test meter in the "start" position only.

Note: Most Nissan vehicles have two starter wires. Connect both starter wires of the vehicle to the YELLOW start wire of the remote starter.

8. Plug-In On/Off Switch

Mount the control switch so that it is easily accessible and so that the "ON" position is facing upward. Make sure there is enough clearance behind the mounted switch for the wire connections. Do not let the switch wires touch ground. Do not plug the switch into the unit until it is mounted first. Connection of this switch is mandatory. Use a 1/4" drill-bit for the mounting hole.

Plug the ON/OFF control switch into the module just to the right of the power wires. Turn the switch "on."

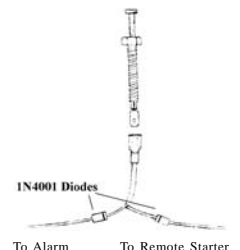
CONTROL HARNESS

ALL WIRES ARE THE SMALLER 18 AWG SIZE

9. Purple Wire – Hood Pin Switch – Control Harness

The hood pin switch MUST be installed with the remote starter. It prevents operation of the remote starter when the hood is open and is used to initialize the unit. Connect the PURPLE wire to the hood pin switch using the red connector.

Note: If you already have a hood pin switch which is being used by a car alarm system, you may share the wiring – but be sure to diode isolate each wire going to the hood pin switch with the bands of diodes pointing towards the pin switch as shown at right.



How to share a hood pin switch with an alarm

10. Orange Wire – Brake Shut-off – Control Harness

Connect the ORANGE wire to the brake wire which receives +12 Volts when the brake pedal is depressed. **This wire must be connected.** It arms a critical safety feature which disables the remote starter when the brake pedal is depressed.

Note: In some cars, the ignition must be in the "on" position to test the power in the brake wire.

Note: If the Ignition 1 and Ignition 2 wires come on whenever the brake is depressed and the hood is open this just means you need to initialize the unit in section 11.

11. Initializing the Remote Starter

BEFORE THE UNIT WILL DO ANYTHING FOR THE FIRST TIME, YOU MUST INITIALIZE THE REMOTE STARTER

- Insert the 30 amp fuse into the fuse holder on the large PINK wire.
- Turn the control switch on.
- The remote starter requires the installer to **open the hood** and then **press and hold the brake pedal**. Note: The ignition/dash lights will come on if the unit is not initialized.
- While depressing the brake (with the engine off and the hood open) turn the ignition key to the "RUN" (not "start") position.
- Put the car in "DRIVE" from the "PARK" position.
- Put the car back in "PARK" and release the brake.
- Turn the key off and remove the key.

Note: Confirm initialization by turning the ON/OFF control switch "OFF" and then "ON". The red LED light on the remote start module will flash once immediately as the switch is flipped from the "OFF" to the "ON" position.

If the red LED light did not flash when the control switch was turned "ON" REPEAT STEPS A THROUGH G. See the colored Trouble Shooting Sheets if necessary.

12A. Green Wire – Tach Input – Control Harness

The remote starter has two ways of monitoring the car during the starting process. Both ways will ensure a clean, accurate start. **Read about both methods before deciding which one to use. Normally you should try the "No Tach"™ method first.**

"No Tach"™ Starting

This starting method **does not** require the connection of the GREEN tach wire. This method will start the car by reading the car's voltage before attempting to start, and then looking for a voltage increase when the alternator kicks in. This feature automatically takes into account voltage, temperature, and the time since the vehicle was last run. The "No-Tach"™ starting is preset at the factory and you can skip step 12B if you would like to use it. Note that if the vehicle is hard to start, set Option #3 (section 23) for "extended crank."

Tachometer sensing

If the vehicle is generally hard to start (i.e. requiring a cranking time of more than 1 second) you will get more accurate starting with the tachometer sensing starting method. This method starts the car by reading the engine speed (tach) information from a wire under the hood. If you choose tachometer sensing, connect the GREEN (18 awg) wire to the car's tach wire under the hood (normally the negative side of the coil or tach output of coil pack). After you have connected the GREEN wire, you need to teach the remote starter the vehicle's tach rate at idle. Proceed to step 12B.

Note: You must have already initialized the remote starter from Step 11.

12B. Tach Rate Learning

Note: Only use if the tachometer sensing method is chosen.

- Connect the GREEN wire to the car's tach wire under the hood.
- Turn the On/Off control switch to the "OFF" position. Wait 5 seconds for the red LED light flashes to stop.
- Program the unit to the tach mode by pushing the White "option" button once and watching the red LED light flash. Now push the start button on the transmitter for a second until you see the red LED light flash again. You are now in TACH mode. (If the red LED light flashed twice or sometimes three times – simply push the transmitter button again until you get only one flash).
- Wait 5 seconds for the red LED light to flash 3 times.
- Turn the On/Off control switch back to the "ON" position
- Start the car with the key and let it get to a *normal* idle. Do not press on the gas pedal.
- Push the red "code learn" button for a second.
- Watch the red LED light. It will come on after 3 or 4 seconds, indicating that the tach idle rate has been learned.

- Watch that the LED light remains on as the vehicle is running and turns off when you rev the engine RPMs to twice the idle rate. The LED light must go out when you rev the engine to about twice the idle rate to confirm correct tach learning.
- Turn the key to the "Lock/Off" position.
- Turn the ON/OFF control switch off and the red LED light will go out. You are now finished.

Note: Once these steps are complete – you cannot use the LED to confirm tach again. You can however repeat the above steps to learn tach over again at any time.

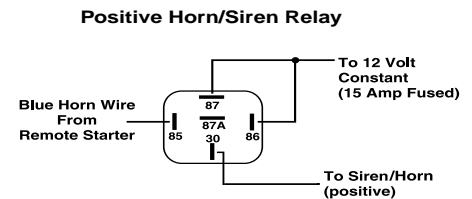
OPTIONAL STEPS

13. Yellow Wire – Headlights/Parking Lights – Control Harness

Connection of the YELLOW wire allows you to activate the **low beam headlights or parking lights for remote start and lock status**. After the remote starter has started the car, the lights will remain on until the remote starter shuts off after 10 minutes, or when the brake pedal is pushed, or when the car is put into gear. **This is a relay +12 Volts output.** Connect the YELLOW wire to the wire that has power when the lights are on.

14. Blue – Horn/Siren – Control Harness

The BLUE wire signals the horn to honk (or siren to chirp) once each time the remote starter starts the vehicle. Connect the blue wire to the factory horn wire which is often found running down the steering column. It will normally show +12 Volts at rest and the voltage will disappear when the horn is honked. **This is a 400 mA transistor ground output which MUST drive a relay if using a siren or positively triggered horn.**



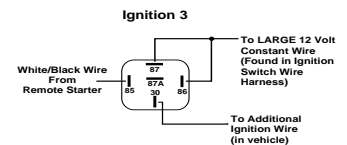
15. Brown/White – Alarm Disable – Control Harness

The BROWN/WHITE wire is Alarm Disable, which will give out a quick negative pulse just before starting the vehicle. This wire can be used to turn off the factory alarm system in vehicles which have them. In most vehicles, this wire is located in the driver's kick panel.

16. White/Black Wire – Ignition #3 – Control Harness

The WHITE/BLACK wire, is a ground output that acts just like the Ignition 1 or Ignition 2 relay outputs (active in the "run" and "crank" positions).

This wire is a 400 mA negative transistor output and MUST be set up to power a relay (not included). It can be used to power the third ignition wire at the key (necessary for most Ford vehicles).



This is the wire that can also be used to bypass a passive vehicle anti-theft system by hooking it up to the Universal Bypass Module. See the Factory Anti-Theft System section at the end of these instructions.

This is the wire that can also be used to bypass a passive vehicle anti-theft system by hooking it up to the Universal Bypass Module. See the Factory Anti-Theft System section at the end of these instructions.

17. Brown Wire – Accessory Pulse – Control Harness

The BROWN wire is the Accessory Pulse output which gives out a momentary transistor ground output 10 seconds after the vehicle is remotely started. This is important in some vehicles to control the defroster or to control the GM R.A.P. system. **Again, this is a 400 mA transistor ground output which MUST drive a relay** (not included).

18. Red/White Wire – Remote Input – Control Harness

The RED/WHITE wire is the Remote Input. This wire will accept any negative ground trigger to start the remote starter. This is not normally used since starting is with the remote control transmitter. Setting Option #11 (section 23) will require this wire to see two negative pulses within three seconds. This option will allow the RED/WHITE wire to be connected to the vehicle's door lock wire so you can use the factory remote transmitter to remotely start your car.

19. Red/Black Wire – Diesel “wait to start” – Control Harness

This wire is only used in diesel vehicle applications – and is optional. This wire can be hooked up to the “wait to start” light's switched wire behind the dash. If Option #9 (section 23) is set, this wire will feed information to the remote starter as to when to crank the vehicle over. This wire is not polarity sensitive.

REQUIRED FINAL STEPS

Note: You must have hooked up all required wires and completed Initialization (Step 11) to proceed forward.

20. Trying the Unit Out

WARNING: Be prepared to apply the brake during this testing.

- A. Close the hood and fully apply the emergency brake
- B. Place the vehicle in Park.
- C. Turn the On/Off switch off then on – the red LED light will flash once.
- D. Once all the wiring is checked and is correct, press the Start button on the transmitter.
- E. The car should start and continue to run for ten minutes. Make sure that the engine shuts down if the car is shifted out of park, the hood is opened, the brake is pressed or the start button is pushed again. If the car does not start, see Code Learning under Special Cases.

21. The Antenna

Feed the antenna around under the dash and up the inside of the right or left windshield post and over the top of the windshield. Use the 2 enclosed antenna clips to mount the last eight inches of the antenna behind the rear view mirror. Clean the windshield with the alcohol pad provided for maximum adhesion. The more exposed the clear tube section of the antenna is, the better the range performance. Now plug the end of the antenna into the remote starter module. **In most vehicles you will get better range performance if the antenna is pointing vertically downward from the top of the windshield.**

Note: The wiring section of the installation is now complete. Be sure to cap all unused wires so as to prevent short circuits, and mount the module securely under the dash. When tying up and mounting the unit, be sure to avoid any moving parts (steering column, pedals) and sharp edges.

22. Trouble Shooting with the Self Diagnostics

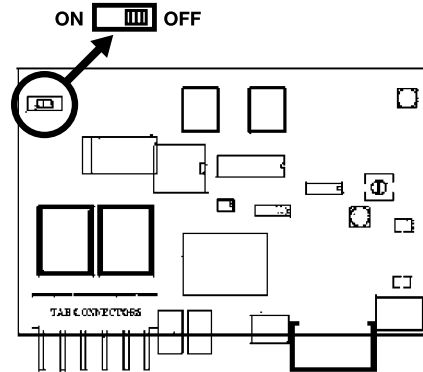
The remote starter contains a built in diagnostic routine that will indicate why the unit started or why the unit turned off the car the last time that the unit was used.

To activate the diagnostic mode for **why it turned off**, simply turn the On/Off control switch to the “OFF” position. In a few seconds, the red LED light on the module will flash 1 to 12 times to identify the problem. See the chart below for an explanation of the flashes:

- | | |
|------------------|---|
| 1 flash | 10/15 minute time out. Unit should be fine. Make sure transmitter is working properly. |
| 2 flashes | Unit turned off because Brake or Hood was activated. Check to make sure the hood pin switch is depressed when the hood is closed and the correct brake wire is hooked up. |
| 3 flashes | No Tach or Stalled. Review section 23 and make sure the no tach/tach wire option is programmed correctly. |
| 4 flashes | Received another remote input from the transmitter |

- | | |
|------------------|---|
| 5 flashes | Transmission was shifted into gear. Move the In-Gear switch inside the receiver module to the OFF position (see diagram below for location of In-Gear switch inside module case). |
|------------------|---|

In-Gear Sensing Switch



- | | |
|------------------|--|
| 6 flashes | Low battery voltage, or may be missing an ignition wire which powers up the alternator |
|------------------|--|

- | | |
|------------------|-----|
| 7 flashes | N/A |
|------------------|-----|

- | | |
|------------------|--|
| 8 flashes | Over current – One of the 400 mA (-) transistor outputs (Accessory Pulse, Alarm Disarm, horn, lights or Ignition 3) is drawing too much current. Make sure to use a relay where necessary. |
|------------------|--|

- | | |
|-------------------|--|
| 12 flashes | The Control Switch was turned off while the starter was running. |
|-------------------|--|

For reasons **why it last started**, simply put your foot on the brake while you turn the control switch OFF. Keep holding the brake down until the flashes start. The codes are as follows:

- | | |
|----------------|--|
| 1 flash | The unit has not started yet since it was last powered up. |
|----------------|--|

- | | |
|------------------|--|
| 2 flashes | Received a radio signal from the transmitter to start. |
|------------------|--|

- | | |
|------------------|-----|
| 3 flashes | N/A |
|------------------|-----|

- | | |
|------------------|-------------------------------------|
| 4 flashes | Temp reached 0° F in vacation mode. |
|------------------|-------------------------------------|

- | | |
|------------------|--|
| 5 flashes | Voltage reached 11 volts in Vacation Mode. |
|------------------|--|

- | | |
|------------------|--|
| 6 flashes | Received a start command from the remote input RED/WHITE wire. |
|------------------|--|

- | | |
|------------------|---|
| 7 flashes | Started from 24 hour Daily Start feature. |
|------------------|---|

23A. Setting Program Features

The remote starter unit has many special features available. You will not need to use these special features in most situations. The factory settings will operate most vehicles. **You must turn the On/Off control switch to the “OFF” position to program any features.**

Note: When turning off this control switch, the red LED light will flash a few times, giving the diagnostic code described in section 22. Wait a few seconds for it to finish before programming your new Options.

Feature Number	Factory Setting (2 flashes)	Option (1 flash)
1	“No-Tach”	Tach Mode
2	10 Min. Run Time	15 Min. Run Time
3	Normal Crank	Extended Crank
4	Normal	IGN 2 not active during crank
5	Normal Voltage Metering	Ignore Voltage Metering
6	Gasoline vehicles	Diesel vehicles
7	“Enable” feature	No “Enable”
8	Normal	Daytime Running Lights
9	Normal	Diesel “Wait to Start”
10	1 sec. alarm disarm pulse	0.45 sec. Alarm disarm pulse
11	Single Input Trigger	Double Input to trigger start

23B. Program Features Descriptions

Option #1 No-Tach

This option sets the starting method. The factory setting uses “No-Tach” starting. If you wish to use the tach to start, follow the instructions in the Tach Rate Learning (section 12).

Option #2 10 Min. Run Time

This option gives you a choice of run times.

Option #3 Normal Crank

This option will add 50% more crank time to the NoTach™ starting feature.

Option #4 Normal

This option will turn off the Ignition 2 output (thick GREEN wire) during cranking. It is used to exactly match the remote starter with the ignition key function.

Option #5 Normal Voltage Metering

This option is used in the “No-Tach” starting method for some diesel vehicles or vehicles with weak batteries and/or poorly performing alternators.

Option #6 Gasoline Vehicles

This option must be activated when installing on a diesel vehicle.

Option #7 “Enable” Feature

This option cancels the “enable” mode safety feature. The “enable” mode requires that the driver toggle the ON/OFF control switch “OFF” then “ON” each time the driver removes the key from the ignition in order to “enable” the vehicle for remote starter control. This feature guards against undesired starting of the vehicle by remote control. You must keep this option on all GM rear wheel drive and Dodge Dakota vehicles manufactured prior to 1996.

Option #8 Normal

This option will automatically turn the headlights on (for safety) about 10 seconds after it sees the key in the ignition position – and automatically turn the headlights off when the key is removed from the ignition.

Option #9 Normal

This option will control the time before cranking the diesel vehicle by looking at the “wait to start” light of the vehicle. Simply hook the RED/BLACK Input wire of section 20 up to the wire behind the “wait to start” light. Also set Option #6 (section 23) for diesel vehicles.

Option #10 1 sec. Alarm Disarm Pulse

This option shortens the Alarm Disarm Pulse from 1 second to 0.45 second. This feature is very useful with some Dodge/Chrysler vehicles that use a multiplexed system to disarm the alarm and unlock the doors with the same wire. Using this feature should eliminate the need to relock the doors after the alarm has been disarmed and the vehicle is remotely started.

Option #11 Single Input Trigger

This option changes the remote input wire (RED/WHITE) from a single start trigger to a double start trigger (within three seconds).

Tach Mode

15 Min. Run Time

Extended Crank

IGN 2 not active during Crank

Ignore Voltage Metering

Diesel Vehicles

No “Enable”

Daytime Running Lights

Diesel “Wait to Start”

0.45 sec. Alarm Disarm Pulse

Double Input Trigger

PROGRAMMING AN OPTION

If you want the factory setting, DO NOTHING and skip this section. If you want to change one or more of the features, TURN THE ON/OFF CONTROL SWITCH TO THE “OFF” POSITION. Wait for the red LED light to stop flashing, then continue with the following procedures:

- A. For options 1-11: Push the white code button on the remote start module. Each time you push the button the red LED light will flash 1 to 11 times signifying at which feature you are (press it once, the LED light flashes once. Press it again and it will flash two times. Press it again and it will flash three times, etc., to show what feature you are at).
- B. When you are at the feature level you desire, push the start button on the transmitter for one second and the red LED light will flash once to signify

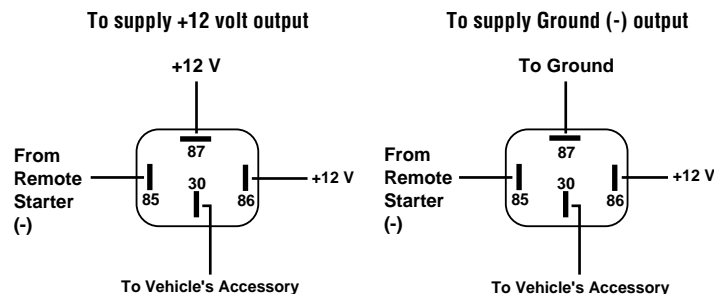
you are at the Option setting. You can push the transmitter button again and it will flash twice to signify you are at the Factory setting. Push the transmitter button again and you will go back to the Option setting.

- C. You can choose to change another feature by starting over again at Step A, in six seconds, the remote starter automatically exits the programming mode (three LED light flashes).
- D. When finished – switch the Control Switch back ON. The red LED light will flash once.

SPECIAL CASES

1. How to Use a Relay

Many of the optional steps require a relay to be hooked up. The most common relay used for this type application is the Bosch type relay (Radio Shack Cat.# 275-226). Use the diagram below for a typical hookup. If you have another relay then you need to know that pins 85 and 86 in this diagram relate to the coils of the relay. Pin 30 is the ‘common’, and pin 87 is the ‘normally open’ contact. If your relay has a pin 87A in the middle it is the normally closed contact and is not used.



2. Code Learning

Your transmitter is factory coded to the remote starter module with over 16,000,000 different codes. The remote starter module can learn the codes of up to 4 different transmitters. If you want to add additional transmitters to the receiver or if it does not respond to your transmitter – follow the steps below to teach the receiver the transmitter code(s):

- A. Turn the Control Switch ON.
- B. Push the red “code learn” button on the receiver module. The red LED light and the dash lights come on for a second. (The vehicle’s ignition and accessory wires come on).
- C. While holding the transmitter at least three feet from the module, hold down the Start button until the red LED light and the dash lights come on again for a second. The module has now learned the transmitter code. Release the transmitter button.
- D. To learn additional transmitters (up to 3 more), immediately (within 5 seconds) push the Start button on another transmitter for a few seconds until the red LED light and the dash lights come on for a second again.
- E. 5 seconds after the last time the transmitter was learned the unit exits the code-learning stage. (The red LED light, ignition and accessories flash 4 times).

Note: Teaching the module a new transmitter code will erase all previous codes – so all transmitters must be taught. You have only 5 seconds between transmitters to begin teaching a new transmitter.

3. Diesel Vehicles

For the most reliable starting, hook up the RED/BLACK wire referenced in section 19.

For difficult starting diesels connect and learn the tach (section 12) as well as the wait-to-start RED/BLACK wire (section 20). Set Option #6 (section 24) for diesel.

For most diesel vehicles, you can start the vehicle without needing to hook up a tach wire. The following table provides the mandatory option settings for “no-tach” operation in diesel vehicles. (Use the Chrysler settings for all other diesel vehicles.)

	Option #6 Diesel Engine	Option #3 Extended Crank	Option #5 Ignore Meter
Chrysler	■	■	
Ford	■	■	■
Chevrolet	■	■	■

4. Factory Anti-Theft Systems

Many vehicles come with an anti-theft system that must be temporarily bypassed for the vehicle to be remotely started. Some systems use a resistor in the key. Others use a transponder – a small device in the key that communicates a high security code to the vehicle before the vehicle will successfully start.

Check the list of vehicles and the types of security systems. If your vehicle is listed, your vehicle has an Anti-Theft System that the remote starter MUST temporarily bypass in order to start the vehicle. More information about the factory anti-theft systems and vehicle wire colors can be found at the DesignTech Website www.designtech-intl.com.

The Universal Alarm Bypass Module (model numbers 20402 or 29402) will temporarily bypass the factory anti-theft systems when using the remote starter. Check with your local retailer/installer to purchase this Universal Alarm Bypass Module.

LIST OF VEHICLES AND THE TYPES OF FACTORY ANTI-THEFT SYSTEMS

Vehicle Make/Model	System
Acura 3.2TL 98+	Transponder
Audi A4,A6,A8 98+	Transponder
Acura CL 97+	Transponder
Acura Integra	Transponder
Acura NSX	Transponder
Acura RL 98+	Transponder
BMW (all 97 +)	Transponder
Buick LeSabre 90 - 01	VATS
Buick Park Ave 91 - 96	VATS
Buick Park Ave 97+	Transponder
Buick Regal 93 -96	VATS
Buick Rendez Vous	Transponder
Buick Riviera 93 -96	VATS
Buick Roadmaster 93 - 96	VATS
Buick Skylark 96-98	Passlock
Cadillac Allante	VATS
Cadillac Brougham	VATS
Cadillac Catera 97+	Transponder
Cadillac DeVille 92 - 98	VATS
Cadillac DeVille 99+	Transponder
Cadillac Eldorado 89 - 98	VATS
Cadillac Eldorado 99+	Transponder
Cadillac Escalade 00+	Passlock
Cadillac Fleetwood 90 - 96	VATS
Cadillac Seville 90 - 98	VATS
Cadillac Seville 99+	Transponder
Chevrolet Astro Van 98+	Passlock II
Chevrolet Avalanche 01	Passlock
Chevrolet Blazer 98+	Passlock II
Chevrolet Camaro 86 +	VATS
Chevrolet Cavalier 96-99	Passlock
Chevrolet Cavalier 2000+	PasslockII
Chevrolet Corvette 88 +	VATS
Chevrolet Express 97+	Passlock
Chevrolet Impala 2000+	Passlock II
Chevrolet Lumina 96 -99	VATS
Chevrolet Malibu 97 -01	Passlock II
Chevrolet Monte Carlo 96-99	VATS
Chevrolet Monte Carlo 00+	Passlock II
Chevrolet Pickup Full-size 98+	Passlock II
Chevrolet S-10 98+	Passlock II
Chevrolet Silverado HD 01	PasslockII
Chevrolet SSR 01	Passlock
Chevrolet Suburban 98+	Passlock II
Chevrolet Tahoe 98+	Passlock II
Chevrolet Trailblazer 01+	PasslockII
Chevrolet Van 98+	Passlock II
Chevrolet Venture 99+	Transponder
Chrysler Concorde 98+	Transponder
Chrysler LHS 99+	Transponder
Chrysler PT Cruiser 00+	Transponder
Chrysler Sebring Conv. 98+	Transponder
Daewoo Leganza	Transponder

Dodge 300 M 99+	Transponder
Dodge Intrepid 98+	Transponder
Dodge Neon 00+	Transponder
Ford Contour 97 +	Transponder
Ford Crown Victoria 98+ (option)	Transponder
Ford Excursion 01+	Transponder
Ford Expedition 97+	Transponder
Ford Explorer 98+	Transponder
Ford Focus 01+	Transponder
Ford Mustang 98+	Transponder
Ford Pick Up (optional)	Transponder
Ford Ranger 99+(optional)	Transponder
Ford Sport Trac 01	Transponder
Ford Taurus 96 +	Transponder
Ford Windstar 2000 +	Transponder
GMC Envoy 01+	Passlock II
GMC Jimmy 98+	Passlock II
GMC Safari 98+	Passlock II
GMC Denali 99+	Passlock II
GMC Sierra	Passlock II
GMC Sonoma 98 +	Passlock II
GMC Suburban 98+	Passlock II
GMC Yukon 98+	Passlock II
Honda Accord 98+	Transponder
Honda Odyssey 98+	Transponder
Honda Prelude 98+	Transponder
Honda S2000	Transponder
Infiniti I30 98+	Transponder
Infiniti Q45 98+	Transponder
Infiniti QX4	Transponder
Jaguar (all 98+)	Transponder
Isuzu Hombre 98+	Passlock II
Jeep Grand Cherokee 99+	Transponder
Jeep Liberty	Transponder
Jeep TJ (Wrangler) 99+	Transponder
Lexus (all 97+)	Transponder
Lincoln Blackwood	Transponder
Lincoln Continental 97+	Transponder
Lincoln LS 2000+	Transponder
Lincoln Mark VIII 97+	Transponder
Lincoln Navigator 97+	Transponder
Lincoln Town Car 97+	Transponder
Mazda Tribute	Transponder
Mercedes (all 97+)	Transponder
Mercury Cougar 99+	Transponder
Mercury Grand Marquis	Transponder
Mercury Mountaineer 98 +	Transponder
Mercury Mystique 97+	Transponder
Mercury Sable 96+	Transponder
Mini Cooper 02	Transponder
Mitsubishi Eclipse	Transponder
Mitsubishi Galant	Transponder
Nissan Frontier S/C	Transponder
Nissan Maxima 98+	Transponder
Oldsmobile Achieva 95	Passlock I
Oldsmobile Achieva 96+	Passlock II
Oldsmobile Alero 99+	Passlock II
Oldsmobile Aurora	VATS
Oldsmobile Bravada 98	Passlock II
Oldsmobile Cutlass 97+	Passlock II
Oldsmobile Eighty-Eight	VATS
Oldsmobile Intrique 98+	Passlock II
Oldsmobile Ninty-Eight	VATS
Oldsmobile Silhouette 99	Transponder
Pontiac Aztek 01	Transponder
Pontiac Bonneville 89+	VATS
Pontiac Firebird 88+	VATS
Pontiac Grand Am 96 - 98	Passlock
Pontiac Grand Am 99+	Passlock II
Pontiac Grand Prix 92 - 96	VATS
Pontiac Grand Prix 97+	Transponder
Pontiac Montana 99+	Transponder
Pontiac Sunfire 96-99	Passlock I
Pontiac Sunfire 2000+	Passlock II
Porsche (all 97+)	Transponder
Saab (all 97+)	Transponder
Saturn 97-99	Factory Alarm
Saturn 00+	Transponder
Subaru Legacy 00+	Transponder
Subaru Outback 00+	Transponder
Toyota Avalon 98+	Transponder
Toyota Camry 98+	Transponder
Toyota Highlander 01+	Transponder
Toyota Land Cruiser 98+	Transponder
Toyota Solara 99 +	Transponder
Toyota Supra 98+	Transponder
Volkswagen Beetle 98+	Transponder
Volkswagen Golf 98+	Transponder
Volkswagen Passat 98+	Transponder
Volvo (all 98+)	Transponder

NOTICE to Installers of Remote Vehicle Starters



We **DO NOT** recommend installing ANY remote starter in the following vehicles: Audi 1998+, BMW 1998+, Jaguar 1998+, Land Rover 1998+, Mercedes 1998+, Range Rover 1998+, Volvo 1999+

As with any aftermarket installation, please research and learn as much as you can about the vehicle before you start the install.



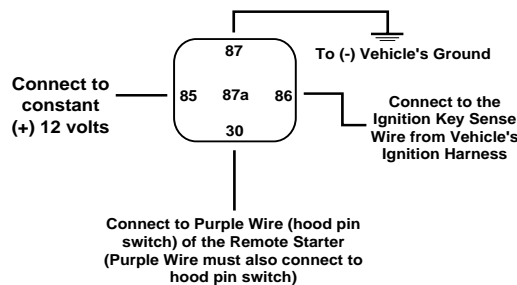
All General Motors (GM) vehicles (with rear wheel drive) built prior to 1995 with automatic transmissions and all Dodge Dakota trucks with 4 cylinder engines and automatic transmissions built prior to 1996 have a MECHANICAL type of NEUTRAL SAFETY SWITCH. All vehicles built after 1996 use an electrical type of neutral safety switch.

Applying +12 volts to the starter wire on any vehicle using a mechanical neutral safety switch will engage the vehicle's starter, regardless of the shifter's position. When the shifter is in Park or Neutral, the vehicle will just start up normally. If the vehicle is accidentally left in gear and power is applied to the start wire, such as by a remote starter, **the vehicle will lurch forward or back as it attempts to start.**

To test if your GM or Dodge vehicle is using a mechanical neutral safety switch system, you will only be able to remove the key from the ignition switch when the shifter is in the Park or Neutral position.

To prevent this problem from occurring when installing a DesignTech International remote starter on the above mentioned GM vehicles or Dodge Dakota vehicles:

1. You must leave the Enable Feature (option #7 in the factory setting). This is a safety feature that requires the user to turn the control switch OFF and then ON again each time they exit the vehicle in order for the unit to be operational. This feature will ensure that the user of the vehicle with the remote starter installed has made a conscious decision to allow the remote starter to start the vehicle the next time the transmitter button is depressed.
2. You must use the relay drawing below to create a circuit that will prevent the remote starter on these GM and Dodge vehicles from starting the vehicle unless the key is completely removed from the ignition switch.



As with any aftermarket installation, please research and learn as much as you can about the vehicle before you start the install. Instructions, technical tips and detailed wiring information is available on www.designtech-intl.com. Please refer to the information on the website before starting ANY install or call Directed Electronics Technical Support at (800) 876-0800.

The company behind this system is Directed Electronics, Inc.

Since its inception, Directed Electronics has had one purpose, to provide consumers with the finest vehicle security and car stereo products and accessories available. The recipient of nearly 100 patents and Innovations Awards in the field of advanced electronic technology, DIRECTED is ISO 9001 registered.

Quality Directed Electronics products are sold and serviced throughout North America and around the world.

Call **(800) 876-0800** for more information about our products and services.



Directed Electronics, Inc. is an ISO 9001 registered company

Directed Electronics is committed to delivering world class quality products and services that excite and delight our customers.

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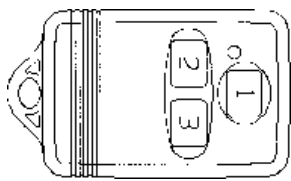
The Remote Car Starter must be “enabled” each time the driver has finished driving and taken out the key in order to start the vehicle remotely.

After the key has been removed, you must turn OFF the control switch and then turn it back ON again while no key is in the ignition. This “control switch” or “set switch” prevents unauthorized starting of the car by someone unfamiliar with the system who may be using the vehicle. If you forget to set the switch, it may also be activated by pushing the transmitter and holding the button down for ten seconds. To eliminate the need for this, see **Option #7**.

The AutoCommand® Remote Car Starter will turn the car off if the driver does not insert and turn the key within 10 or 15 minutes. After the AutoCommand® Remote Car Starter has started your car, simply put in the key and turn it to the “run” or “on” ignition position (not the crank position) to drive away.

The AutoCommand® Remote Car Starter has numerous safety and security features that make it difficult to steal your car without the key being in the ignition. Putting your car in gear, tapping the brake pedal or opening the hood will turn the unit off unless your key is in the ignition and turned to the “run” or “on” position.

If all features are hooked up, your transmitter will function as follows:



Button 1: Do not push for your main vehicle
 Once: To operate vehicle #2-then any of the 4 buttons (LED flashes red and green)

Button 2: Once - Start the car will all accessories left on
 Again: For vehicle #4-then any of the 4 buttons (LED flashes green)

Button 3: Once - Turn on the headlights for 30 seconds
 Again - Turn off the headlights
 Hold for 4 seconds - Panic Mode (horn and lights) 45 seconds

The LED on the transmitter will display 3 different colors - Red for button #2, Yellow for button #3. The unit is powered by a long life lithium battery (CR 2032 style). The transmitter and receiver module are FCC and DOC approved.

The Quick Stop Option™: You can leave the car running and take the key with you for a quick visit to a store. With the car running, push the Start button on the keychain transmitter just before pulling out the key. The car will run for 10 minutes or until you tap the brake or put the car in gear.

The Cold Start Option™: This automatically starts and runs the car for the preset run time (10 or 15 minutes) if the temperature drops below 0°F or if the battery voltage drops below 11 volts. Tapping the brake at any time after programming disables this feature. Here is how to set this feature: Hold the Start button down while the vehicle starts, runs, turns off and the lights begin to flash 5 times. Release the transmitter button. You have set the Cold Start Option™.

limited lifetime consumer warranty

Directed Electronics, Inc. (hereinafter “Directed”) promises to the original purchaser to repair or replace with a comparable reconditioned Directed remote start unit if this Directed remote start unit (hereinafter “Unit”), excluding without limitation, any remote transmitters or associated accessories, proves defective in materials or workmanship under normal use for the life of the vehicle which the Unit is originally installed. During this period, so long as the Unit remained installed in the original vehicle, Directed will at its option, repair or replace this Unit if it is proved defective in workmanship or material PROVIDED the Unit is returned to Directed’s warranty department at One Viper Way, Vista, CA 92081, along with \$20 postage and handling fee, a bill of sale or other dated proof of purchase bearing the following information: Date of purchase, name and location of the merchant who sold the Unit, and product description. This warranty does not cover labor costs for the removal or reinstallation of the Unit. This warranty is non-transferable and does not apply to any Unit that has been modified or used in a manner contrary to its intended purpose, and this warranty does not cover damage to any Unit caused by installation or removal of the Unit. This warranty is void if the Unit has been damaged by accident or unreasonable use, neglect, improper service or other causes not arising out of defects in materials or workmanship. Directed makes no warranty against theft of a vehicle or its contents.

THE FOREGOING WARRANTY IS THE EXCLUSIVE PRODUCT WARRANTY, OTHERWISE, ALL WARRANTIES INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED AND DISCLAIMED TO THE MAXIMUM EXTENT ALLOWED BY LAW, AND DIRECTED NEITHER ASSUMES NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT ANY LIABILITY IN CONNECTION WITH THE SALE OF THE PRODUCT. DIRECTED HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS AUTHORIZED DEALERS OR INSTALLERS. SOME STATES DO NOT ALLOW THE LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

LIMITATION OF DAMAGES AND LIABILITY. CONSUMER’S REMEDY IS LIMITED TO REPAIR OR REPLACEMENT OF THE UNIT, AND IN NO EVENT SHALL DIRECTED’S LIABILITY EXCEED THE PURCHASE PRICE OF THE UNIT. IN ANY EVENT, DIRECTED SHALL NOT BE LIABLE FOR ANY DAMAGES INCLUDING, BUT NOT LIMITED TO, ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, LOST PROFITS, LOST SAVINGS, OR, TO THE EXTENT ALLOWED BY APPLICABLE LAW, DAMAGES RESULTING FROM DEATH OR INJURY ARISING OUT OF OR IN CONNECTION WITH THE INSTALLATION, USE, IMPROPER USE, OR INABILITY TO USE, THE PRODUCT, EVEN IF THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OF LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSION MAY NOT APPLY TO YOU. THE CONSUMER AGREES AND CONSENTS THAT ALL DISPUTES BETWEEN THE CONSUMER AND DIRECTED SHALL BE RESOLVED IN ACCORDANCE WITH CALIFORNIA LAWS IN SAN DIEGO COUNTY, CALIFORNIA.

IMPORTANT NOTE:

This product warranty is automatically void if its date code or serial number is defaced, missing, or altered.

Make sure you have all of the following information from your dealer:

- A clear copy of the sales receipt, showing the following:
 - Date of purchase
 - Authorized dealer’s company name and address
 - Item number

Daily Start™: This allows you to start the vehicle at the same time the next day. For example, if you leave for work at the same time each morning you can use the Daily Start™ feature to automatically start your car the next day. Here is how: Start your car with the transmitter as usual. When you enter the vehicle and before you put the key in the ignition, put your foot on the brake to turn the AutoCommand® off. Now within five seconds toggle the control switch off and on once while your foot is still on the brake. The dash lights will flash once to signal the setting of this option. Your vehicle will now start approximately 23 hours and 50 minutes later and run its normal cycle. You can still start the vehicle with the key or via the transmitter anytime without cancelling out this option.

Safety Notices:

- 1. When taking your car in for any service or repairs, disable the remote starter by switching the Control switch to the OFF position. Inform the mechanic.**
- 2. Never leave your keys in the ignition when the vehicle is unattended.**
- 3. Do not use this product in a closed garage to avoid excessive carbon monoxide build-up.**

Available Accessories:

Universal Alarm Bypass Module allows remote car starter installation on newer vehicles with factory anti-theft systems such as VATS, P.A.T.S., Passlock I, Passlock II, Pass-Key III, Saturn, Securlock, and Transponder systems.

Extra transmitters for more than one user in the family. Up to four transmitters can be used with each receiver in the vehicle.

These products can be purchased through your dealer.



Directed Electronics, Inc.
Vista, CA 92081
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www.directed.com

Trouble-Shooting Guide

Unit won't respond	<p>Make sure unit has power and ground.</p> <p>Make sure unit is initialized (See 'Initializing the unit' in the manual)</p> <p>Re-program transmitter. (See 'Code Learning' under Special Cases in the manual).</p> <p>Check Diagnostic Code as described in Trouble Shooting with Self Diagnostics in the manual.</p>
What is the Diagnostic Code, and how do I get it?	<p>The Self-Diagnostics built into every DesignTech brand remote start will help identify problems in both the unit and your installation. To get an accurate diagnostic code, flip the toggle switch off and back on; the LED light (on module) should flash once if the unit is initialized. Press the start button on your transmitter for second. Now allow the unit to try and start your vehicle 1-3 times. (Note that the unit will attempt to start the vehicle up to 3 times unless codes 2,5,7 or 8 are being triggered, when it will try and start the vehicle once). Allow it up to a minute to try to start again on its own - Don't do ANYTHING to the unit during this time, unless something goes obviously wrong. At the end of the starting cycles, turn the toggle off and count the first series of flashes- this will be the diagnostic code.</p>
Diagnostic Code 1 flash	<p>The unit may not have attempted to start the vehicle yet or the unit may have started and timed out.</p> <p>Is the toggle switch upside down? When the switch is turned on the LED will flash once immediately.</p> <p>Something might be causing the unit to reset, such as a poor connection to ground or power, or you may have a relay wired improperly. Typically the wires in the control harness require a relay unless otherwise stated.</p> <p>The transmitter may need to be programmed.</p>
Diagnostic Code 2 flashes	<p>The unit thinks the hood is open. Make sure the hood pin-switch is properly adjusted and installed.</p> <p>The unit thinks the brake is being depressed. Make sure the brake wire has 12 volts on it only when the brake is depressed. There should be no voltage on the brake wire at any other time</p> <p>You might be experiencing feedback if you have connected the parking or head-lights. If disconnecting the lights wire allows the unit to start then you might power the headlights, or you can isolate the brake wire of the unit from the vehicle with a relay.</p>
Diagnostic Code 3 flashes	<p>If the unit is programmed for tach, the tach wire is not connected or the tach rate may not yet have been learned.</p> <p>If the unit is programmed for 'No-Tach' the vehicle may not have all the required ignition wires connected, or may be equipped with a factory security system – thus causing it to stall.</p> <p>Sometimes a unit may have an option programmed even though you did not specifically set that option. Try re-setting the unit. Unplug everything from the module except the black ground wire and LED (if you have a plug-in LED). While pressing the white button on the module, connect the power lead. The LED on the unit should turn on and stay on. Release the white push button and the LED should remain illuminated. (If not, repeat the process being sure to hold in the white button while connecting power.) Now remove power and wait 2 minutes. Then connect the power without pushing any buttons. <i>Re-Initialize</i> the unit and it should work for you.</p>
Diagnostic Code 4 flashes	<p>Make sure the remote input wire (usually red/white) is not touching anything. (This wire is not on all models). If you have a stick shift unit – this is not relevant to you.</p> <p>You might be pressing the remote control again before the unit has completed its cycle(s)---See 'Diagnostics: What is the Diagnostic code and how do I get it?' – at the top of this page.</p> <p>If installing a manual transmission unit, this code means the unit did not see the door pin-switch.</p>
Diagnostic Code 5 flashes	<p>This code means the unit thought the transmission was shifted into gear.</p> <p>If the transmission was not shifted: Switch the “in-gear” switch inside the module to the off position. This disables 'Transmission in Gear' sensing, and should solve the problem.</p>
Diagnostic Code 6 flashes	<p>Code 6 is caused by the unit not seeing the battery voltage increase enough when the vehicle starts. It can also be caused if you are not bypassing the factory theft system, such as PATS, VATS, or similar, if equipped.</p> <p>Double-check the ignition wiring against the vehicle-wiring guide. Your vehicle may require ignition 2, or in some cases ignition 3, in order to allow the alternator to function – thus bringing up the voltage.</p> <p>If the wiring is correct, and you are properly bypassing any security system the vehicle may be equipped with, then connecting the unit into tach mode should solve the problem. (Your alternator may not be functioning properly).</p>
Diagnostic Code 7 flashes	<p>An alarm sensor was triggered, causing the vehicle to shut down. (Only applies to units that have alarm features).</p>
Diagnostic Code 8 flashes	<p>Something in the control harness is not connected properly. One of the transistor outputs is driving too much current. There may be a wire connected without a required relay, or if you are using a relay, the relay may not be connected properly.</p>
Diagnostic Code 9 flashes	<p>Applicable only to manual transmission units. Indicates the unit did not see the emergency brake.</p>
Diagnostic Code 10/11 flashes	<p>These are not a valid codes.</p>
Diagnostic Code 12 flashes	<p>Make sure you have an accurate code. Please see 'What is the Diagnostic Code, and how do I get it?' at the top of this page. If you still get code 12, one of the toggle switch wires may have touched ground, possibly damaging the unit. Or maybe the switch was just turned off while it was running. Or maybe a defective switch?</p>

Initialization - What is it?	Initialization is a process which proves to the unit that you have connected the required safety features and that the unit has been installed in an automatic vehicle. See “Initializing the Remote Starter” in the manual.												
Initialization - What if the unit will not initialize?	<p>DO NOT ATTEMPT TO INITIALIZE or INSTALL ANY AUTOMATIC UNIT ON ANY MANUAL TRANSMISSION VEHICLE! Attempting to force an automatic unit to function on a manual stick-shift vehicle could result in serious property damage or personal injury!</p> <p>Is the unit already initialized? Make sure the switch is not upside down. Toggle the switch off and then back to on. As the switch is turned on, the LED light on the unit (or that plugs into the unit) will flash once if the unit is initialized.</p> <p>One of the ignition wires may have voltage on it. Make sure all ignition wires measure a “dead” 0 volts when the key is “off.” (It is normal to measure a small amount of voltage from the unit’s start wire.)</p> <p>Check that there is 12 volts on the orange wire in the control harness only when the brake is pressed.</p> <p>Check that there is continuity to ground on the purple wire in the control harness only when the hood is open. (A good way to test both the hood and brake at the same time is to connect a test light – the kind with a real light bulb – with one lead to the orange wire and the other lead from the test light connected to the purple wire. If you open the hood and press the brake, the light will illuminate if both connections are correct.)</p> <p>You may have the wrong start wire. Make sure the yellow start wire from the unit is connected to a wire in the vehicle which shows 12 volts only when the key is in the start (cranking) position. The wire should have power at no other time.</p> <p>Did you mistakenly switch the “in-gear” switch inside the module? If so, the unit will not initialize. This switch disables transmission in-gear sensing, and should only be switched if you have been instructed by a technician to do so or you are getting a diagnostic code of 5 flashes.</p> <p>Your vehicle may not have a neutral safety switch, such as pre 95 GM rear-wheel drive vehicles or Dodge Dakotas built prior to 1996. Try this: Open the hood and place your foot on the brake. Start the vehicle with the key. Turn the engine off and release the brake. If all of your connections are correct the unit should be initialized at this point.</p> <p>Try bypassing the toggle switch temporarily in case a wire or connection to it is broken. Just unplug the switch and jump across the two pins on the module that the switch plugs into with any metal object. As you jump (short) the two pins together the LED should flash if the unit is initialized. NOTE- DO NOT short any toggle switch wire to ground or probe the connector with a test light. Doing so may damage the unit.</p>												
I have a GM Truck and the “Check Engine” light is on after remote starting. What should I do?	<p>You most likely have one of the ignition wires connected wrong. Make sure you have connected:</p> <table border="0" data-bbox="440 1203 1162 1325"> <tr> <td><u>From Unit</u></td> <td>to</td> <td><u>Vehicle</u></td> </tr> <tr> <td>Ign1 (Blue)</td> <td></td> <td>PINK (hot in run and start)</td> </tr> <tr> <td>Ign2 (Green)</td> <td></td> <td>WHITE or PINK/WHITE (hot in run and start)</td> </tr> <tr> <td>ACC(White)</td> <td></td> <td>ORANGE (hot in run only)</td> </tr> </table> <p>If you have the ignition wires connected as above and still have a check engine light it is possible the unit has been programmed to have ignition 2 “off during crank.” Please review the programming options within the installation manual.</p>	<u>From Unit</u>	to	<u>Vehicle</u>	Ign1 (Blue)		PINK (hot in run and start)	Ign2 (Green)		WHITE or PINK/WHITE (hot in run and start)	ACC(White)		ORANGE (hot in run only)
<u>From Unit</u>	to	<u>Vehicle</u>											
Ign1 (Blue)		PINK (hot in run and start)											
Ign2 (Green)		WHITE or PINK/WHITE (hot in run and start)											
ACC(White)		ORANGE (hot in run only)											
The vehicle cranks but fails to actually start	Please see “What is the diagnostic code and how do I get it?” Follow the steps for the diagnostic code you receive. You are probably missing one of your second or third ignition wires. Or if it is a Nissan – you probably have 2 starter wires which need to be shorted together.												
<p>My 3 button remote control will lock the doors but will not unlock them.</p> <p>My 5 button remote will not control lock/unlock individually.</p>	Re-program the transmitter. Use the left button when teaching 3 button remote controls. When programming the 5 button remote, use the start button. (Refer to the installation manual for the complete steps on how to make the unit enter the code learning process.)												

The vehicle runs – but without the heater or air-conditioner.	You are missing the 2 nd (or 3 rd) ignition wire or the accessory wire is not hooked up. Make sure the heater or air-conditioner is left on when you leave the vehicle. On diesel vehicles – they may not come on for a few minutes until after the vehicle is up and running.
I have poor range.	The antenna coax wire may be crimped, cut or otherwise damaged. Try the antenna both vertically and horizontally to determine the best performance. Make sure the receiver unit has a good chassis ground. Note that the higher you hold the transmitter off the ground when pushing the button – the further distance you will get from the system.
My vehicle has Passlock I or II and I cannot get a resistance reading.	<p>Many meters have a known issue with measuring passlock. This is not a fault of the meter, the installer, or the manufacturer. These issues can cause problems such as getting a consistent reading of the resistance, or the reading may be artificially inflated. It is our belief that the mid-to-high-end meters seem to experience more problems measuring passlock than less expensive digital meters.</p> <p>One wire will have 0 volts - This is the wire you "tap" into-- we'll call this WIRE #1 USUALLY BLACK OR ORANGE/BLACK. One wire will have 5 volts or less- This is the wire you cut in half-- we'll call this WIRE #2 USUALLY YELLOW. One wire will have approximately 12 volts - This is the wire you leave alone USUALLY WHITE OR BLACK/WHITE. With all PASSLOCK wires intact, turn the vehicle on and bump the starter. Measure the voltage between the wire #1 and wire#2. Your meter should be set on the 12 volt DC scale. RECORD THIS VOLTAGE. Without turning the key off - go ahead and separate WIRE #2. Reconnect the Universal Alarm Bypass Module (Part #20402 or 29402) as described in the installation manual with one exception - GROUND the wire that goes to the ignition 3 wire; you should hear the bypass module click. Now measure the voltage between the ENGINE side of WIRE #2 and wire #1. Your meter should be set on the 12 volt DC scale. Adjust the dip-switches and trim-pot on the bypass module until the voltage being measured EXACTLY matches the recorded voltage obtained without the module. Remove ground from the ignition 3 wire of the bypass module, turn the vehicle off and then restart it. Look at the voltage again - and while monitoring it ground the ignition 3 wire of the bypass again. If the module is set correctly the voltage should NOT change. Repeat again to verify - if you get the same voltage every time then the module is set up perfectly. There is no chart to help you with this, it is just trial and error -- but it will work regardless of the meter you are using.</p>
Can I use the DesignTech Transmitter with other brands of products?	NO. Due to proprietary technology DesignTech brand products will operate only with DesignTech brand Transmitters. Likewise, a DesignTech transmitter will not operate another brand's products.
The LED on the unit flashes constantly	<p>The alarm within the unit, if equipped (as are most units with 3 or 5 button remotes) may be armed, or the unit may be in valet mode.</p> <p>Make sure the wires going to the toggle switch are not broken, and that the toggle switch is on.</p> <p>Reset the unit - See "Resetting all options to the factory setting" in the instructions</p>
The LED remains illuminated at all times	<p>It is normal for the LED to glow dimly. This indicates the unit is receiving power.</p> <p>If the LED is at full brightness then one of the push-buttons may have been depressed when you applied power, the LED may be plugged into the wrong jack, or something may be wrong within the unit.</p>
The starter stays engaged for 6 seconds.	<p>If the unit is in tach mode – make sure the tach wire is properly connected and receiving the correct tach rate.</p> <p>If using the "No-Tach" method, make sure the unit is not programmed for tach mode, extended crank, or super crank.</p> <p>Make sure you have the correct start wire connected - the start wire in the vehicle should have 12 volts only when the key is in the start position.</p> <p>Some vehicles such as Toyotas and Nissans, experience a starter feedback problem. Try temporarily isolating the start wire from the key switch to identify this problem - simply cut the start wire in half between the connecting point of the units start wire and the key switch. Get Installation Note #133 from off our web-site or Fax On Demand.</p>
How will I know if I need a relay?	<p>If the output is labeled as a "+12 relay output" the unit contains a relay on that output - and you will only need to use a relay if the vehicle requires a negative output.</p> <p>If the output is labeled a "400ma Transistor Ground Output", this means the unit supplies a ground up to a maximum of 400ma. If more than 400ma is drawn through the output, the unit may shut down or it may be damaged. Generally speaking, if the vehicle requires a ground and the unit supplies a ground you will not need a relay. If the vehicle requires a positive and the unit supplies a ground, you will need to use a relay. Likewise, if the vehicle requires a ground capable of more than 400ma you would need to use a relay. See Installation Note 111, Basic Uses of the Relay from our web site or our Fax On Demand.</p>

Vehicle only remote starts if I flip the toggle switch off and back on	This condition is perfectly normal. This is a safety feature designed to prevent unauthorized starting. If you have forgotten to flip the switch off and back on, you can still remote start the vehicle. Just hold the start button down for 6 to 10 seconds instead of the usual 1 second. If you do not like this safety feature, it can be permanently bypassed by programming option 7, explained under "Setting Programming Features" or a similar section within the installation instructions.
The car turns off when the brake is pressed- but as soon as I release the brake the vehicle starts again	The remote input wire available on some units (usually a red/white) may be connected to ground. The remote input wire should be taped up if not being used so that it does not touch ground.
The lights flash (and maybe even the horn) when I step on the brake.	The alarm has been armed and triggered – even if you did not hook it up. If the alarm features are not being used, you must ground the ‘alarm trigger’ wire permanently, or set option 24 if available.
The unit tries 2 or 3 times before getting the vehicle up and running	Program extended crank, or use tach mode.

Some General Comments:

- **For Your Safety, never install an automatic unit into a manual transmission (stick-shift) vehicle! Serious property damage or personal injury including death may occur! Instead, use one of our special manual transmission units, which will operate safely in a manual transmission vehicle.**
- **When testing wires use only a digital multimeter, unless otherwise instructed. A test light (especially the kind with a real light bulb) can severely damage electrical components in modern vehicles if used improperly. Also, “computer safe” LED type test lights - with a red and/or green LED- are NOT airbag safe! NEVER test ANY wire within an airbag system harness.**
- Always roll down at least one window in the vehicle before beginning work. This will prevent you from being accidentally locked out of the vehicle.
- It’s okay to have a battery charger on the battery while you are working on the vehicle, but the car starter will not function correctly with the charger attached.
- Specific vehicle information is available directly from www.designtech-intl.com. If you have trouble with the colors in the wiring guide "matching up" then you may be in the wrong harness. You can make sure you are in the correct harness by unplugging the wires. For example: With the ignition switch, if you unplug it and then the vehicle no longer cranks, the blower and radio do not work, and the vehicle is for all purposes "dead" with the key- then you have found the “ignition switch harness.” (Otherwise, you will need to continue searching...) The same technique can be used for the brake, lights, horn, etc. Once you are sure you are in the correct harness, if the wire colors still fail to match up then you will have to test the wires using a digital multimeter. It is always best to verify any wire before connecting to it.
- Most of the common questions that people ask are actually answered within the installation manual. Make sure you have thoroughly reviewed it before calling for technical support. We recommend going through the installation manual with two different colored markers. Read through each step and check it off after you have read it. Use the second marker to make a check when you have completed the step in the vehicle. This will help to make sure you have completed all steps, and that you have not missed any features the unit offers.

Make/model	Year	START	IGN 1	IGN 2	IGN 3/THEFT	ACC	BRAKE LIGHTS	TACH	ALARM DISARM	PARKING LIGHTS	HORN	NOTE
ACURA												
2.5TL	1995-97	BLK / WHT	BLK / YEL	YELLOW	N/A	ORANGE	GRN / WHT(+)	BLUE***	GRN / BLK in DKP	RED / BLACK (+)	BLUE / RED(-)	*** at tach test connector
3.2TL	1999-02	BLK / WHT	BLK / YEL	YELLOW	99+ Transponder	ORANGE	GRN / WHT(+)	BLUE***	GRN / BLK in DKP	RED / BLACK (+)	BLUE / RED(-)	*** at tach test connector
3.5FL	1995-02	BLK / WHT	BLK / YEL	YELLOW	99+ Transponder	ORANGE	GRN / WHT(+)	BLUE***	GRN / RED in driver door	RED / BLACK (+)	BLUE / RED(-)	*** at tach test connector
CL	1997-02	BLK / WHT	BLK / YEL	YELLOW	99+ Transponder	ORANGE	GRN / WHT(+)	BLUE***	BLK / RED(-)*** use relay mode	RED / GREEN (+)	ORANGE(-)	*** under pass seal
Integra	1994-01	BLK / WHT	BLK / YEL	YELLOW	N/A	ORANGE	GRN / WHT(+)	BLUE***	GRN / WHT(+)	RED / BLACK (+)	BLUE / RED(-)	*** air distributor assembly
Legend	1994-05	BLK / WHT	BLK / YEL	YELLOW	N/A	ORANGE	GRN / WHT(+)	BLUE	GRN / WHT(+)	RED / GREEN (+)	BLUE / RED(-)	*** left of steering column
SLX	1996-00	WHT/GRN	BLK/YEL	BLACK/RED	N/A	ORANGE	GRN/YELLOW	BLACK/RED	ORANGE / BLACK	YELLOW (+)	LT GREEN (-)	ALARM RELAY IN DRIVER KICK PANEL
SLX	1998-00	WHT/GRN	BLK/YEL	BLACK/RED	N/A	ORANGE	GRN / WHT(+)	BLUE	ORANGE / BLACK	YELLOW (+)	LT GREEN (-)	*** 18 pin pass kick panel
Audi												
Audi	1991-94	BLK / WHT	BLK / YEL	YELLOW	N/A	ORANGE	GRN / WHT(+)	BLUE	ORANGE / BLACK	YELLOW (+)	LT GREEN (-)	*** behind glove box
80	1988-92	RED / BLK	BLACK	BLACK	N/A	N/A	GRN / BLACK	GREEN	ORANGE / GREEN	GREEN / BLACK (+)	BRW / YEL(-)	*** at theft module in trunk
90	1993-95	RED / BLK	BLACK	BLACK	N/A	N/A	GRN / BLUE	GREEN	BROWN / GREEN	GREEN / BLACK (+)	BRW / YEL(-)	*** at theft module in trunk
100	1989-94	RED / BLK	BLACK	BLACK	N/A	N/A	WHT/BLK OR GRN	WHT/BLK OR GRN	BROWN / GREEN	GREEN / BLK (+)	BRW / YEL(-)	*** driver kick panel
A4	1997-01	RED / BLK	BLACK	BLACK	99+ Transponder	N/A	GRN / BLUE	GRN / BLUE	BROWN / WHITE	GREEN / RED (+)	BLACK	*** driver kick panel
A4	1995-96	BLUE	BLACK	BLACK	N/A	N/A	WHT / YEL	WHT / YEL	GRN / WHITE	GREEN / RED (+)	BLACK	*** driver kick panel
A6	1995-96	BLUE	BLACK	BLACK	N/A	N/A	BLK / YEL	BLK / YEL	GRN / WHITE	GREEN / RED (+)	N/A	*** driver kick panel
A6	1999-02	BLUE	BLACK	BLACK	99+ Transponder	N/A	YEL / BLK	YEL / BLK	BROWN / YELLOW	GREEN / RED (+)	N/A	*** driver kick panel
A6	1997-98	RED/BLK	BLACK	BLACK	N/A	N/A	YEL / BLK	YEL / BLK	GRN / YELLOW	GREEN / RED (+)	BLK/GREEN (-)	*** driver kick panel
A8	2000-02	BLK/RED	BLACK	BLACK	N/A	N/A	YEL / BLK	YEL / BLK	BROWN / RED	GREEN/BLACK (+)	BLK/GREEN (-)	*** driver kick panel
A8	1998-99	RED / BLK	BLACK	BLACK	Transponder	N/A	YEL / BLK	YEL / BLK	BROWN / RED	GRAY / RED (+)	BLK/GREEN (-)	*** at vacuum motor
A8	1997	RED / BLK	BLACK	BLACK	Transponder	N/A	YEL / BLK	YEL / BLK	BROWN / RED	GRAY / RED (+)	BLK/GREEN (-)	*** driver kick panel
A8	1995-96	BLK / WHT	BLACK	BLACK	N/A	N/A	YEL / BLK	YEL / BLK	BROWN / RED	GRAY / RED (+)	BLK/GREEN (-)	*** driver kick panel
Cabriolet	1993-94	RED / BLK	BLACK	BLACK	N/A	N/A	YEL / BLK	YEL / BLK	GRAY / BLACK (+)	GRAY / BLACK (+)	BLK/GREEN (-)	*** driver kick panel
BUICK												
S4	1997-02	YELLOW	PIPK	DK-GRN	VATS	ORANGE	WHT	WHT	LT-GREEN	LT-BLUE	BLACK(-)	*** in driver kick panel
Century	1994-96	YELLOW	PIPK	WHT	VATS	ORANGE	WHT	WHT	NO ALARM PRESENT	BROWN (+)	BLACK	*** 6 cylinder each pig/white
Century	2000-02	YELLOW	PIPK	WHT	N/A	ORANGE	WHT	WHT	LT-GREEN	BROWN/WHITE	BLACK	*** PASSEKEY III
Lesabre	1998-99	YELLOW	PIPK	N/A	N/A	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Lesabre	1996-97	YELLOW	PIPK	N/A	N/A	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Park Avenue	1998-02	YELLOW	PIPK	WHT	Transponder	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Park Avenue	1994-97	YELLOW	PIPK	WHT	Transponder	ORANGE	WHT	WHT	LT-GREEN	GRAY / BLACK (-)	BLACK	*** in driver kick panel
Park Avenue Ultra	1997-02	YELLOW	PIPK	WHT	Transponder	ORANGE	WHT	WHT	LT-GREEN	GRAY / BLACK (-)	BLACK	*** in driver kick panel
Regal	1998-02	YELLOW	PIPK	WHT	N/A	ORANGE	WHT	WHT	LT-GREEN	LT-BLUE (-)	BLACK	*** in driver kick panel
Regal	1993-97	YELLOW	PIPK	WHT	N/A	ORANGE	WHT	WHT	LT-GREEN	LT-BLUE (-)	BLACK	*** in driver kick panel
Regal RWD	1996	YEL OR PPL	PIPK	N/A	N/A	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Riviera	1995-99	YELLOW	PIPK	WHT	N/A	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Riviera	1998-94	YELLOW	PIPK	BL / WHT	N/A	ORANGE	WHT	WHT	LT-GREEN	BLU OR BROWN (+)	BLACK	*** in driver kick panel
Roadmaster	1994-96	YELLOW	PIPK	N/A	N/A	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Skyhawk	1996-98	YELLOW	PIPK	WHT	PASSLOCK	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** 6 cylinder each pig/white
Sunmeset	1987	YELLOW	PIPK	N/A	N/A	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** see note 238 for passlock bypass
Cadillac												
Atalante	1993	YELLOW	PIPK	WHT	VATS	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK(-)	*** in driver kick panel
Firewood (RWD)	1990-96	YELLOW	PIPK	N/A	VATS	ORANGE	WHT OR BLU (+)	WHT	LT-GREEN	BROWN (+)	BLACK(-)	*** in driver kick panel
Coque DeVille	1992-93	YELLOW	PIPK	N/A	VATS	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK(-)	*** in driver kick panel
Eldorado	1992-94	YELLOW	PIPK	N/A	VATS	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK(-)	*** in driver kick panel
Calera	1997-02	BLK / RED	BRWN	RED	Transponder	ORANGE	BLK / YEL (+)	WHT	LT-GREEN	GRAY / GREEN (+)	BRW / WHT (-)	*** pin 80 of cam on front of eng comp
Concorss	1995-99	YELLOW	PIPK	N/A	VATS	ORANGE	WHT	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
DeVille	2000-02	YELLOW	PIPK	LT-BLUE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN/ WHT	BLACK	*** in driver kick panel
DeVille	1994	YELLOW	PIPK	WHT	N/A	ORANGE	WHT (+)	PURPLE/WHT	LT-GREEN	BROWN (+)	BLACK	*** PASSEKEY III
Eldorado	1995-02	YELLOW	PIPK	N/A	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Eldorado	1986-89	YELLOW	PIPK	BL / WHT	PPL/WHT	ORANGE	WHT (+)	WHT	LT-GREEN	GRAY / BLACK (-)	BLACK	*** in driver kick panel
Escalade	1999-01	YELLOW	PIPK	WHT	PASSLOCK II	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Escalade	1994-02	YELLOW	PIPK	WHT	PASSLOCK II	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK	*** in driver kick panel
Escalade	1998-02	YELLOW	PIPK	WHT	PASSLOCK II	ORANGE	WHT (+)	WHT	LT-GREEN	GRAY / BLACK (-)	BLACK	*** in driver kick panel
Seville SL5 STS	1992-97	YELLOW	PIPK	LT-BLUE	Transponder	ORANGE	WHT (+)	WHT	LT-GREEN	BRN OR GRV/BLK (+)	BLACK	*** in driver kick panel
Chevrolet												
Astro	1996-02	YELLOW	PIPK	WHT (96+)	See Note	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II
Beretta / Z26	1994-96	YELLOW	PIPK	N/A	N/A	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II
Biazer	1995-01	YELLOW	PIPK	WHT (96+)	See Note	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Biazer	1994	YELLOW	PIPK	ORANGE	N/A	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer Full Size	1978-94	YELLOW	PIPK	ORANGE	N/A	BROWN	WHT (+)	WHT	N/A	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT	LT-GREEN	BROWN (+)	BLACK (-)	1998 + Equipped with Passlock II (95 912-pink/white)
Blazer	1994-96	YELLOW	PIPK	ORANGE	VATS	ORANGE	WHT (+)	WHT				

Make/model	Year	START	IGN 1	IGN 2	IGN 3/THEFT	ACC	BRAKE LIGHTS	TACH	ALARM DISARM	PARKING LIGHTS	HORN	NOTE
JEEP												
Cherokee	1997-01	YELLOW	D BLUE	BLKORANGE	N/A	BLK/WHT	WHITE/GREEN	GRAY	VIOLET/YELLOW (-)	BLACK/YEL	BLK/RED	
Cherokee	1993-95	YELLOW	D BLUE	ORANGE	N/A	VIOLET	WHITE/TAN (+)	PURP/YELLOW	D BLUE/RED (-)	D BLUE/RED (+)	BLK/RED (-)	
Cherokee	1991-92	YELLOW	D BLUE	ORANGE	N/A	VIOLET	WHITE/TAN (+)	GRAY	BLACK/YELLOW	BLACK/YELLOW (+)	BLACK/RED	SEE SPECIAL NOTE FOR PARKING LIGHT
Grand Cherokee	1999-02	YELLOW	D BLUE	ORANGE	N/A	BLK/WHT	WHITE/TAN (+)	n/a	BLACK (-) in driver door	BLACK/YELLOW (+)	BLACK/RED	
Grand Cherokee	1996-98	YELLOW	BLU/GRAY	ORIG/BLK	N/A	RED/BLACK	WHITE/TAN (+)	GRAY/WHITE	VIOLET/YELLOW (-)	DK BLUE/RED (+)	GRAY/ORG	
Grand Cherokee	1993-95	YELLOW	BLU/GRAY	ORIG/BLK	N/A	BLK/WHT	WHITE/TAN (+)	GRAY/WHITE	VIOLET/YELLOW (-)	DK BLUE/RED (+)	GRAY/ORG	
Liberty	2002	YELLOW	D BLUE	BLK/ORG	N/A	BLK/WHT	WHITE/TAN (+)	GRAY	N/A	BLACK/YELLOW	RED/YELLOW	
Wrangler	1997-02	YELLOW	D BLUE	BLK/ORG	N/A	BLK/WHT	WHITE/TAN (+)	GRAY	N/A	BLACK/YELLOW	BLACK/RED (-)	
Wrangler	1993-96	YELLOW	D BLUE	BLK/ORG	N/A	BLK/WHT	WHITE/TAN (+)	GRAY	N/A	BLACK/YELLOW	BLK OR ORG/WHT	
Wrangler	1991-92	GREEN	YELLOW	VIOLET	N/A	ORANGE	L BLUE	GRAY	N/A	BLU/RED (+)	N/A	
Kia												
Sephia	1994-98	BLACK/YEL	BLACK/WHT	BLU/RED	N/A	N/A	GRN/YELLOW (+)	YELLOW/GRN	BLU/YELLOW (+)	RED/GREEN (+)	N/A	
Sportage	1995-98	BLK/WHT	BLK/WHT	BLU/RED	N/A	BLK/RED	GRN/YELLOW (+)	YELLOW/GRN	RED/GREEN (+)	RED/GREEN (+)	GREEN/ORG (-)	
Sephia	1999-00	RED	YELLOW	BLU/RED	N/A	GREEN	RED/BLACK	YELLOW/WHT	N/A	RED/GREEN (+)	BLU/RED (-)	
Sephia	1999-02	BLACK/RED	BLACK/YEL	BLU/RED	N/A	ORIG/BLK	ORIG/BLK	n/a	RED/GREEN (-)	BLACK/RED (-)	BLACK/RED (-)	
Sephia	2000-02	BLACK/YEL	WHITE/BLU	WHITE	N/A	GREEN	RED/BLACK	YELLOW/WHT	YELLOW/WHT	PINK/BLACK	GREEN/ORANGE	
LEXUS												
ES 300	1999-01	RED	BLACK/RED	BLACK/YEL	Transponder	BLU/RED	GREEN/WHITE	BLACK	RED/GREEN (-)	GREEN/BLACK (+)	GREEN/BLACK	Equipped with Transponder
ES 300	1997-98	BLACK/WHT	BLACK/ORG	BLACK/YEL	N/A	PINK/BLU	GREEN/WHITE (+)	BLACK	RED/BLU (-)	GREEN (+)	GRN/BLK (-)	Equipped with Transponder
ES 300	1992-96	BLACK/WHT	BLACK/ORG	BLACK/YEL	N/A	PINK/BLU	GREEN/WHITE (+)	BLACK	RED/BLU (-)	GREEN (+)	GRN/BLK (-)	Equipped with Transponder
GS300	1998-02	BLACK	BLACK/YELLOW	BLACK/WHT	See Note	BLU/YELLOW	GREEN/WHITE	BLACK/YELLOW	YELLOW/BLU	GREEN	GRN/BLK (-)	May have Transponder
GS300	1993-97	BLK/BLU	BLACK/ORG	BLACK/YEL	See Note	YELLOW	GREEN/RED (+)	BLACK	RED/BLACK (-)	GREEN (+)	GRN/WHTE (+)	1998 + Equipped with Transponder
GS400	1998-02	BLACK/RED	BLACK/ORG	BLACK	See Note	WHITE/GRN	GREEN	YELLOW/WHITE	GREEN (-)	GREEN (+)	GREEN (-)	1998 + May have Transponder
LS 400	1996-00	BLACK/RED	BLACK/ORG	BLACK	See Note	WHITE/GRN	GREEN	YELLOW/WHITE	GREEN (-)	GREEN (+)	GREEN (-)	1998 + May have Transponder
LS 400	1990-95	RED	BLACK/ORG	BLACK	See Note	PINK/BLU	GREEN/ORANGE	BLACK	RED/YELLOW (-)	GREEN (+)	GREEN (-)	Equipped with Transponder
LS 430	2001-02	BLK/WHT	BLACK/RED	BLACK/YEL	N/A	WHITE/GREEN	GREEN/WHITE (+)	BLACK	RED/YELLOW (-)	GREEN (+)	GREEN (-)	Equipped with Transponder
LX460	1998-97	BLACK/WHT	BLACK/RED	BLACK/YEL	N/A	WHITE/GREEN	GREEN/WHITE (+)	BLACK	RED/YELLOW (-)	GREEN (+)	GREEN (-)	Equipped with Transponder
LX470	1998-00	BLACK/WHT	BLACK/RED	BLACK/YEL	N/A	WHITE/GREEN	GREEN/WHITE (+)	BLACK	RED/YELLOW (-)	GREEN (+)	GREEN (-)	Equipped with Transponder
RX 300	1999-02	BLACK/WHT	BLACK/RED	BLACK/YEL	N/A	PINK	GREEN/WHITE (+)	ORANGE	DISARM WHEN START	GREEN (+)	WHITERED	Equipped with Transponder
SC300	1995-01	BLK/WHT	BLACK/ORG	BLACK/YEL	N/A	PINK	GREEN/WHITE (+)	BLACK	RED/BLACK (-)	GREEN (+)	GRN/WHTE (-)	1998 Equiped with Transponder
SC300	1992-97	BLK/BLU	BLACK/ORG	BLACK/YEL	N/A	YELLOW	GREEN/WHITE (+)	BLACK	RED/BLACK (-)	GREEN (+)	GREEN (-)	1998 + May have Transponder
SC400	1992-01	BLACK/WHT	BLACK/ORG	BLACK/YEL	See Note	RED	GREEN/WHITE (+)	BLACK	GREEN (-)	GREEN (+)	GREEN (-)	Equipped with Transponder
Lincoln												
Continental	1998-02	RED/LT BLU	BROWN/PINK	GRAY/YEL	GRAY/YEL	BLK/LT GRN	LT GREEN	LT GRN/WHITE	DK GREEN/PURPLE (-)	ORANGE/BLACK (+)	DK BLUE (-)	Some are equipped with Transponder
Continental	1997-95	RED/LT BLU	RED/LT GRN	GRAY/YEL	GRAY/YEL	BLK/LT GRN	LT GREEN	DK GRN/VL	DK GREEN/PURPLE (-)	BROWN	YELT GREEN	Equipped with Transponder
LS	2000-02	GRAY/BLK	GREEN/BLK	YELLOW	PINK/YEL	PINK/WHT	ORANGE/YEL (+)	GRAY/VL	GRAY/ORANGE (-)	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
Mark VIII	1997-99	RED/BLK	WHT/YEL	GRAY/YEL	DK GRN/VL	BLK/ORG	LT GREEN (+)	DK GRN/VL	DK GREEN/PURPLE (-)	WHT/BLACK (+)	D BLUE (-)	Late model equipped with Transponder
Navigator	1997-02	RED/BLU	D BLU/GRN	GRAY/YEL	RED/BLACK	PINK/BLK	LT GREEN (+)	WHT/RED	DK GREEN/PURPLE (-)	BROWN (+)	DK BLUE (-)	Equipped with Transponder
Towncar	1998-02	RED/LT BLU	WHT/YEL	PINK/BLK	PINK/BLK	BLK/LT GRN	LT GREEN	WHT/RED	DK GREEN/PURPLE (-)	BROWN	DK BLUE (-)	Has a second acc wire Black/Lt-Green
Towncar	1992-97	WHT/PINK	BROWN/PINK	PINK/BLACK	BLK/GREEN	RED/GREEN	LT GREEN	TAN/YELLOW	DK GREEN/PURPLE (-)	BROWN	DK BLUE (-)	Equipped with Transponder
Mazda												
626	2000-02	GREEN	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	RED	RED/WHITE	RED/WHITE	GREEN/RED	Equipped with Transponder
626	1998-99	GREEN	BLACK/WHT	BLACK/RED	N/A	N/A	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
626	1993-96	BLACK/YEL	BLACK/ORG	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	GREEN	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
929	1998-96	WHT/RED	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	GREEN	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
B-Series	1994-00	WHT/RED	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	GREEN	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
Millenia	2001-02	RED/BLU	BLACK/YEL	GRAY/YEL	ZGRAY/YEL	BLACK/LT GRN	LT GREEN (+)	TAN/YELLOW	DK GREEN/PURPLE (-)	BROWN (+)	DK BLUE (-)	Equipped with Transponder
Millenia	1998-00	BLACK/YEL	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
Millenia	1995-96	BLACK/YEL	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MPV	2000-02	BLU/YEL	BLACK/YEL	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MPV	1998-99	BLACK/YEL	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MPV	1996-97	BLACK/YEL	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MPV	1991-95	BLK/YEL	BLK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MPV	1994-95	BLK/YEL	BLK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MX3	1994-95	BLK/BLU	BLU	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MX3 / Malata	1999-02	WHT/BLK	BLU	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MX5 / Malata	1990-98	BLK/BLU	BLU	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW	N/A	ORANGE (+)	GREEN/ORG (-)	Equipped with Transponder
MX6	1998-97	BLACK/RED	BLACK/RED	GRAY/YEL	ZGRAY/YEL	BLACK/GRN	GREEN	TAN/YELLOW	N/A	RED/BLACK (+)	YELT GRN	Equipped with Transponder
Navajo	1991-94	RED/BLU	RED/GRN	GRAY/YEL	ZGRAY/YEL	BLACK/GRN	GREEN	TAN/YELLOW	N/A	RED/BLACK (+)	GREEN/ORG (-)	Equipped with Transponder
Protege	1990-02	BLK/BLU	BLU	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	WHITE	N/A	RED/BLACK (+)	GREEN/ORG (-)	Equipped with Transponder
RXT	1993-95	BLK/BLU	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW/BLU	N/A	RED/BLACK (+)	GREEN/ORG (-)	Equipped with Transponder
Mercedes Benz												
ML 320	1998-00	WHITE	TAN	ORANGE	N/A	GRAY	TAN	BLUE	WHITE (-)	LT GREEN	N/A	
Mercury												
Capri	1991-94	BLACK/YEL	BLACK/WHT	BLACK/RED	N/A	BLUE	WHITE/GREEN (+)	YELLOW/BLU	N/A	WHT/GRN	GREEN/RED (-)	Equipped with Transponder
Capri	1999-02	GRAY/WHT	GREEN	N/A	N/A	YELT/GRN	ORANGE/BLU	BROWN/BLU	WHT/GRN	RED/BLU (+)	BLACK/BLU (+)	Equipped with Transponder
Cougar	1989-97	RED/BLU	RED/GRN	GRAY/YEL	ZGRAY/YEL	BLK/LT GRN	LT GREEN (+)	WHT/BLK	DK GRN/PURPLE (-)	BROWN (+)	YELT GREEN	Late model equipped with Transponder
Grand Marquis	1989-02	WHT/PINK	BROWN/PINK	PINK/BLACK	ZGRAY/YEL	BLACK/GRN	LT GREEN (+)	TAN/YELLOW	DK GREEN/PURPLE (-)	BROWN (+)	YELT GREEN	Late model equipped with Transponder
Montclair	1997-01	RED/BLU	RED/GRN	GRAY/YEL	ZGRAY/YEL	BLACK/GRN	LT GREEN (+)	TAN/YELLOW	DK GREEN/PURPLE (-)	BROWN (+)	YELT GREEN	Late model equipped with Transponder
Montclair	2002	RED/BLU	RED/GRN	GRAY/YEL	ZGRAY/YEL	BLACK/GRN	LT GREEN (+)	TAN/YELLOW	DK GREEN/PURPLE (-)	BROWN (+)	YELT GREEN	Late model equipped with Transponder
Mystique	1995-00	GRAY/WHT	GREEN	N/A	N/A	YELLOW	ORANGE/YEL (+)	WHT/BLK	BROWN (+)	RED/BLU (+)	BLACK/BLU (+)	Equipped with Transponder
Sable	1989-02	RED/BLU	RED/LT GRN	GRAY/YEL	ZGRAY/YEL	RED/BLACK	RED/GREEN (+)	TAN/YELLOW	DK GREEN/PURPLE (-)	BROWN (+)	PURPLE/ORG (-)	Equipped with Transponder
Topaz	1986-94	WHT/PINK	RED/LT GRN	GRAY/YEL	ZGRAY/YEL	BLK/LT GRN	RED/GREEN (+)	TAN/YELLOW	DK GREEN/PURPLE (-)	BROWN (+)	PURPLE/ORG (-)	Equipped with Transponder
Tracer	1989-98	BLK/BLU	DK GRN	BLACK/RED	N/A	BLK/WHT	DK GREEN (+)	YELD BLU	N/A	RED/BLACK (+)	DK GRN/ORG	Equipped with Transponder
Tracer Wagon	1993-95	BLK/BLU	DK GRN	BLACK/RED	N/A	BLK/WHT	DK GREEN (+)	YELD BLU	N/A	RED/BLACK (+)	DK GRN/ORG	Equipped with Transponder
Villager	1995-02	RED	BROWN	RED/GREEN	N/A	WHITE/GRN	YEL/BLACK (+)	WHITE/GRN	RED/BLACK (-)	PINK	YELLOW (-)	Equipped with Transponder
Villager	1993-94	RED	BROWN	RED/GREEN	N/A	WHITE/GRN	YEL/BLACK (+)	WHITE/GRN	RED/BLACK (-)	PINK	YELLOW (-)	Equipped with Transponder
Mitsubishi												
3000GT	1991-99	BLACK/YEL	BLK/WHT	BLU/BLK	N/A	BLUE	GREEN (+)	WHT/BLACK	LIGHT GREEN	ORANGE/SILVER	GREEN/BLACK	Equipped with Transponder
Diamante	1998-02	BLACK/RED	BLK/WHT	BLU/BLK	N/A	BLUE/WHITE	GREEN/WHITE	N/A	GREEN/WHITE	GREEN/WHITE (+)	GREEN/SILVER	Equipped with Transponder
Diamante	1992-97	BLACK/YEL	BLK/WHT	BLU/BLK	N/A	BLUE/WHITE	GREEN (+)	WHITE	N/A	GREEN/WHITE (+)	GREEN/RED (-)	Equipped with Transponder

Make/model	Year	START	IGN 1	IGN 2	IGN 3/THEFT	ACC	BRAKE LIGHTS	TACH	ALARM DISARM	PARKING LIGHTS	HORN	NOTE
Elipse	2000-02	BLACK/RED	GREEN	BLU/RED	NA	BLU/BLACK	GREEN/ORG	WHITE	ORANGE (-)	PINK/BLACK (+)	VOLET (-)	Equipped with Transponder
Elipse Spider	1991-99	BLACK/RED	BLK/WHT	BLU/BLK	NA	BLU	GREEN/WHITE	WHITE	GREEN/YELLOW (+)	GREEN/WHITE (+)	GREEN/RED (-)	
Expo	1992-96	BLACK/RED	BLK/WHT	BLU/BLK	NA	BLU	GREEN/WHITE	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/BLACK	Equipped with Transponder
Galett	1999-02	BLACK/YEL	WHITE/BLK	BLU/BLK	NA	BLU	GREEN/STYLER	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Galant	1987-98	BLACK/RED	BLK/WHT	BLU/BLK	NA	BLU/WHITE	GREEN (+)	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Marage	1996-01	BLACK/YEL	BLK/WHT	BLU/BLK	NA	BLU/WHITE	GREEN (+)	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Montero	2001-02	BLACK/YEL	BLK/WHT	BLU/BLK	NA	BLU/WHITE	BLU/ORGANGE	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Montero	1999-00	BLACK/YEL	BLK/WHT	BLU/BLK	NA	BLU/WHITE	GREEN	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Montero	1995-96	BLU/BLK	BLK/WHT	BLU/BLK	NA	BLU/WHITE	GREEN	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Montero	1990-94	BLU/BLK	BLK/WHT	BLU/BLK	NA	BLU/WHITE	GREEN	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Montero	1989	BLU/BLK	BLK/WHT	BLU/RED	NA	BLU	GREEN	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Montero Sport	1997-02	BLU/BLK	BLK/WHT	BLU/RED	NA	BLU	GREEN	WHITE	GREEN/WHITE (+)	GREEN/WHITE (+)	GREEN/WHITE	
Nissan												
200 SX	1995-98	BLACK/WHITE	BLACK/RED	BLK/PNK	NA	WHITE/BLU	RED/GREEN (+)	BLUE/ORGANGE	GREEN/YELLOW (+)	RED/BLU (+)	GRAY/YEL (-)	
200SX	1989-90	BLACK/YEL	BLK/WHT	NA	NA	WHITE/BLU	L GRN/RED (+)	RED/WHT	GREEN/YELLOW (+)	RED/BLU (+)	GRAY/YEL (-)	
340 ZX	1989-98	BLACK/YEL	BLACK/RED	NA	NA	WHITE/BLU	RED/GREEN (+)	YELLOW/RED	GREEN/YELLOW (+)	RED/BLU (+)	GRAY/YEL (-)	
Altima	1997-96	BLACK/YEL	BLACK/RED	NA	NA	BLU	RED/BLACK	YELLOW/RED	GREEN/YELLOW (+)	RED/BLU (+)	GRAY/YEL (-)	
Altima	1998-01	BLACK/YEL	BLACK/RED	NA	NA	BLU	RED/BLACK	LT GRN/ORG	GREEN/YELLOW (+)	RED/BLU (+)	GRAY/YEL (-)	
Altima	1993-97	BLACK/YEL	BLACK/RED	BLK/ORG/PNK	1999 have Transponder	WHITE/BLU	RED/GREEN (+)	BLU/BLACK	GREEN/YELLOW (+)	RED/BLU (+)	GRAY/YEL (-)	1999 have Transponder
Altima	2002	BLACK/RED	BLACK/RED	RED	2001 have Transponder	WHITE/BLU	RED/GREEN (+)	BLU/BLACK	GREEN/YELLOW (+)	RED/BLU (+)	GRAY/YEL (-)	2001 have Transponder
Frontier	1998-02	BLACK/YEL	BLK/WHT	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Frontier/Pickup	1998-00	BLACK/YEL	BLK/WHT	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Maxima	1999-01	BLK/BLU	BLK/RED	RED	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Maxima	1997-98	BLACK/RED	BLACK/RED	RED	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Maxima	1995-96	BLK/WHT	BLACK/RED	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Maxima	1987-94	BLACK/YEL	BLACK/RED	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Maxima	2002	BLACK/YEL	BLACK/RED	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Pathfinder	1996-02	BLACK/YEL	BLACK/RED	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Pathfinder	1990-95	BLACK/YEL	BLK/WHT	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Pathfinder	1987-97	BLACK/YEL	BLK/WHT	NA	NA	WHITE/BLU	GREEN/YEL (+)	PINK/BLU	L GREEN (-)	BLU/RED (+)	GRAY/YEL (-)	
Pickup	1996-02	BLACK/GRN	BROWN	RED/GRN	NA	WHITE/GRN	GREEN/YEL (+)	WHITE or BLU	GREEN/YEL (+)	PINK/BLU (+)	GRAY/YEL (-)	
Quest	1993-95	RED/GRN	WHITE/RED	BROWN	NA	WHITE/GRN	GREEN/YEL (+)	WHITE or BLU	GREEN/YEL (+)	PINK/BLU (+)	GRAY/YEL (-)	
Quest	2000-02	BLACK/YEL	BLACK/RED	WHITE	NA	WHITE/GRN	GREEN/YEL (+)	WHITE or BLU	GREEN/YEL (+)	PINK/BLU (+)	GRAY/YEL (-)	
Sentra	2000-02	BLACK/YEL	BLACK/RED	WHITE	NA	WHITE/GRN	GREEN/YEL (+)	WHITE or BLU	GREEN/YEL (+)	PINK/BLU (+)	GRAY/YEL (-)	
Sentra	2000-03	BLACK/YEL	BLACK/RED	WHITE	NA	WHITE/GRN	GREEN/YEL (+)	WHITE or BLU	GREEN/YEL (+)	PINK/BLU (+)	GRAY/YEL (-)	
Sentra	2000-03	BLACK/YEL	BLACK/RED	WHITE	NA	WHITE/GRN	GREEN/YEL (+)	WHITE or BLU	GREEN/YEL (+)	PINK/BLU (+)	GRAY/YEL (-)	
Xterra	2000-04	BLACK/YEL	BLACK/RED	RED/YEL	NA	WHITE/BLU	GREEN/YEL (+)	BLUE	GREEN/YEL (+)	RED/BLU (+)	GRAY/YEL (-)	
OLDSMOBILE												
Activia	1993-98	YELLOW	PNK	WHITE	NA	ORANGE	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Alero	1999-01	YELLOW	PNK	DK-GREEN	NA	ORANGE	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Alero	2001-02	PURPLE	PNK	WHITE	NA	ORANGE	WHITE (+)	PURPLE/WHITE	L GREEN	BROWN/WHITE	BLACK (-)	Equipped with passlock II
Alero	1995-99	YELLOW	PNK	PURP/WHT	WHITE	ORANGE	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Arona	1995-02	YELLOW	PNK	ORANGE	NA	ORANGE	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Bravada	1991-94	YELLOW	PNK	ORANGE	NA	ORANGE	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Ciera	1987-96	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Cruiser	1990-95	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Cultus	1987-89	YELLOW	PNK	PURP E	NA	ORANGE	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Eighty-Eight	1982-88	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Inspire	1988-02	YELLOW	PNK	D GREEN	NA	ORANGE	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
LSS	1986-88	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Ninety Eight	1994-96	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Regency	1997-98	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Regency	1990-91	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
Silhouette	1990-02	YELLOW	PNK	WHT or ORNG	NA	ORNG or BRWN	WHITE (+)	WHITE	NA	BROWN (+)	BLACK (-)	
PLMOUTH												
Acclaim	1989-95	YELLOW	DARK BLUE	BLACK/ORG	NA	BLACK/WHT	WHITE/TAN (+)	BLACK/GRAY	NA	BLACK/YELLOW (+)	BLACK/RED (-)	
Breeze	1996-02	YELLOW	PARK/WHT	BLACK/ORG	NA	BLACK/WHT	WHITE/TAN (+)	BLACK/GRAY	NA	BLACK/YELLOW (+)	BLACK/RED (-)	
Voyager	2001-02	YELLOW	BLU	NA	NA - Transponder	BLACK/WHT	WHITE/TAN (+)	BLACK/GRAY	NA	BLACK/YELLOW (+)	BLACK/RED (-)	
Voyager	1996-00	YELLOW	BLU	GRN/RED	NA	BLK/ORG	WHITE/TAN (+)	BLU/TAN	VIOL/TLT BLUE	RED/BLACK (+)	GREEN/BLK (-)	
Voyager	1991-95	YELLOW	BLU	BLK/ORG	NA	BLK/ORG	WHITE/TAN (+)	BLU/TAN	WHITE/RED (-)	BLACK/YELLOW (+)	BLACK (-)	
Voyager	1987-94	BLACK/YEL	BLACK/WHT	BLU/BLK	NA	BLU	GREEN	WHITE	NA	GREEN/WHITE (+)	GREEN/BLK (-)	
Coil	1993-94	BLACK/YEL	BLACK/WHT	BLU/BLK	NA	BLU	GREEN	WHITE	NA	GREEN/WHITE (+)	GREEN/BLK (-)	
Coil	1991-94	BLACK/YEL	BLACK/WHT	BLU/BLK	NA	BLU	GREEN	WHITE	NA	GREEN/WHITE (+)	GREEN/BLK (-)	
Laser	1995-02	YELLOW	DARK BLUE	BLACK/ORG	NA	BLACK/WHT	WHITE/TAN (+)	GRAY/YL BLU	BLACK/YELLOW (+)	BLACK/YELLOW (+)	BLACK/RED (-)	
Neon	1997-00	YELLOW	DARK BLUE	RED/WHT	NA	BLACK/ORG	WHITE/TAN (+)	GRAY/YL BLU	LT GREEN/BLK (-)	BLACK/YELLOW (+)	BLACK/RED (-)	
Pontiac	1993-94	YELLOW	DARK BLUE	BLACK/ORG	NA	BLACK/WHT	WHITE/TAN (+)	BLACK/GRAY	NA	BLACK/YELLOW (+)	BLACK/RED (-)	
PONTIAC												
Bonneville	2000-02	YELLOW	PNK	WHITE	NA	PK3	ORANGE	WHITE	L-Green	BROWN/WHT	BLACK (-)	
Bonneville	1992-98	YELLOW	PNK	ORANGE	NA	BROWN	L BLU (+)	WHITE	L-Green	BROWN (+)	BLACK (-)	
Bonneville	1998-02	YELLOW	PNK	ORANGE	NA	BROWN	L BLU (+)	WHITE	L-Green	BROWN (+)	BLACK (-)	Equipped w/ VATS. *In 1992-95 Brake wire is White
Bonneville	1987-97	YELLOW	PNK	ORANGE	NA	BROWN	L BLU (+)	WHITE	L-Green	BROWN (+)	BLACK (-)	Equipped w/ VATS
Firebird	1989-02	YELLOW	PNK	DK-GREEN	NA	ORANGE	WHITE (+)	WHITE	ORANGE/BLACK (-)	BROWN (+)	BLACK (-)	
Grand Am	1997-02	YELLOW	PNK	WHITE	NA	ORANGE	WHITE (+)	WHITE	ORANGE/BLACK (-)	BROWN (+)	BLACK (-)	
Grand Prix	1998-96	YELLOW	PNK	PURPLE	NA	ORANGE	WHITE (+)	WHITE	ORANGE/BLACK (-)	BROWN (+)	BLACK (-)	
Grand Prix	1998-02	YELLOW	PNK	WHITE	NA	ORANGE	WHITE (+)	WHITE	ORANGE/BLACK (-)	BROWN (+)	BLACK (-)	
Montana	1993-94	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	ORANGE/BLACK (-)	BROWN (+)	BLACK (-)	
Sunbird	1997-89	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	ORANGE/BLACK (-)	BROWN (+)	BLACK (-)	
Sunbird	2000-02	YELLOW	PNK	ORANGE	NA	BROWN	WHITE (+)	WHITE	ORANGE/BLACK (-)	BROWN (+)	BLACK (-)	
Sunfire	1995-99	YELLOW	PNK	WHITE	NA	ORANGE	WHITE (+)	WHITE	DISARM WHEN START	BROWN (+)	BLACK (-)	
Sunfire	1997-98	YELLOW	PNK	WHITE	NA	ORANGE	WHITE (+)	WHITE	DISARM WHEN START	BROWN (+)	BLACK (-)	
Transport	1990-96	YELLOW	PNK	WHT or ORNG	NA	BROWN or ORANGE	WHITE (+)	WHT OR PPL	GREEN/BLACK (-)	BROWN (+)	BLACK (-)	
SATURN												

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