

REMOTE AUTO START

Optional Keyless Entry Instructions Included

SYSTEM MANUAL

STANDARD FEATURES

Some of the system's standard features include:

- 4-button remote transmitter
- Extended range receiver w/built-in LED status indicator & valet switch
- Flashing parking lights
- Auto cold Start feature
- Stop & go feature
- Programmable engine run-time
- Hood & brake pedal safety inputs

OPTIONAL FEATURES

This system has optional features that may require additional parts and/or labor. Please contact your dealer for more details.

- Remote keyless entry (door lock/unlock)
- Trunk/hatch release

Note: Some features may not be appropriate for certain vehicles.

REMOTE TRANSMITTER BUTTONS

Button 1 Button 2



Button 3 Button 4

START



Transmitter Icons

NOTE: Transmitter cosmetics may differ, but button functions remain the same as described:

Button 1 locks the doors* and also activates the Panic Mode* when held for 4 seconds.

Button 2 unlocks the doors*.

Button 3 controls the Remote Start feature.

Button 4 activates the Car Finder feature.

SYSTEM OPERATION

DOOR LOCKING

To lock the system press transmitter button 1:

- The parking lights will flash once.
- The horn will honk once.*
- The doors will lock.*
- The LED will begin flashing after 3 seconds.
- The Starter Defeat feature will activate.*

*Optional Feature

COMFORT CLOSURE

The optional Comfort Closure feature activates the lock output as long as button 1 is held. Using this feature will roll-up the windows and close the sunroof on some late model vehicles.

To activate the Comfort Closure feature:

1. Press and release transmitter button 1 to lock the doors.
2. Immediately press and hold button 1 again until the windows and sunroof are closed.
 - The LED will flash once.
 - The parking lights will flash once.
 - The doors will lock.*

*Optional Feature

DOOR UNLOCKING

To unlock the system press transmitter button 2.

- The parking lights will flash twice.
- The horn will honk twice.*
- The doors will unlock.*
- The LED will stop flashing.
- The Starter Defeat will deactivate.*

* Optional Feature.

SILENT LOCKING/UNLOCKING

If the optional Horn Honk feature is installed, pressing transmitter buttons 1&2 together provides one-time silent operation. The system locks or unlocks the doors without horn confirmation.

IGNITION CONTROLLED LOCKS

The ignition controlled locks feature automatically locks the doors after turning on the ignition, and unlocks when the ignition key is turned off. This feature may also be programmed for ignition lock without ignition unlock, and off (no ignition control).

VALET MODE

When the system is placed into the Valet Mode the remote start feature will be disabled. However, the optional keyless entry and trunk release features will still function if installed.

To enter mode:

1. Be sure the system is in unlock mode.
2. Turn ignition on.
3. Press and hold the valet switch for 5 seconds.
 - The LED will turn on solid 5 seconds after turning ignition off.
 - The horn will honk 5 times.*
4. Turn ignition off.

To exit valet mode:

1. Be sure the system is in unlock mode.
2. Turn ignition on.
3. Press and hold the valet switch for 5 seconds.
 - The LED will turn off.
 - The horn will honk twice.*
4. Turn ignition off.

OPTIONAL TRUNK RELEASE

To activate the system's auxiliary feature (or trunk release) press button 2 for three

seconds. NOTE: the Trunk Release feature may be programmed to activate with button 4 instead. See your dealer for more details.

CAR LOCATOR FEATURE

To activate the system's car locator feature press and hold button 4 for three seconds. The parking lights will flash and the horn will honk (optional) 5 times.

REMOTE START FEATURES

Important: Only start the vehicle in a well ventilated area. Do not use in a closed garage or indoors. Be sure to familiarize yourself with all features prior to using the remote start.

REMOTE STARTING THE VEHICLE

To remote start the vehicle press button 3.

- The parking lights will flash 4 times then remain on.
- The system will attempt to start.
- Once the car has started, the heater or air conditioner will turn on and run for the pre-programmed time. If the engine fails to start on the first attempt, it will attempt to start 2 more times. If the vehicle fails to start after a total of 3 times the system will shut down.

To drive the vehicle after Remote Starting:

Unlock the door by pressing button 2 on the remote transmitter. Enter vehicle, turn ignition key on position and press brake pedal

NOTE: Do not turn the key to the start position as the engine is already running.

If brake pedal is pressed prior to turning on ignition, engine will turn off.

REMOTE ENGINE SHUTDOWN

If the vehicle has been remotely started and you desire to turn the vehicle off, simply press and hold button 3 for 3 seconds.

STOP AND GO

The Stop and Go feature allows the vehicle to remain running without use of the ignition key during short stops.

To activate the Stop and Go feature:

1. Make sure the engine is running.
2. Press button 3.
3. Turn ignition off.
 - The doors will unlock.
 - The parking lights will turn on.
 - The engine will remain running.
4. Exit the vehicle and lock the doors using transmitter button 1.

To resume driver control:

1. Unlock the doors by pressing transmitter button 2.
2. Turn on the ignition.
 - The vehicle resumes driver control, when the brake pedal is pressed.

AUTO COLD START

This feature allows the system to start and run the vehicle every 2, 3, or 4 hours (user selectable) for up to 12 starts. This allows the engine to remain at an operational temperature in extremely cold weather. Auto Cold Start interval timing must be chosen during installation.

Engaging the Auto Cold Start feature:

To turn Auto Cold Start on:

1. Press and hold buttons 1 & 3 together for 3 seconds.
 - The parking lights will turn on for 10 seconds to confirm activation.
2. Press the button corresponding to the desired start cycle interval:
 - Button 2 = start every 2 hours
 - Button 3 = start every 3 hours
 - Button 4 = start every 4 hours
 - The parking lights will flash a number of times equal to the chosen interval.

Disengaging the Auto Cold Start feature:

Any of the following actions will cancel the Auto Cold Start feature:

Press and hold buttons 1 & 3 together for 3 seconds.

- The parking lights will flash twice and the horn will honk twice (optional) to confirm deactivation.

- or -

Press the brake pedal.

- or -

Turn ignition on.

SAFETY FEATURES

The System will not start the vehicle if the brake pedal is pressed, if the hood is open, or if the system is in Valet mode. Also, if the brake is pressed or the hood is opened while remote running, the remote start will shut down.

LED AND PARKING LIGHT DIAGNOSTIC INDICATIONS

Parking Light	LED Indication	Problem
3 Slow Flashes	On Solid	System in Valet Mode
5 Slow Flashes	No Flashes	Key is on during remote start attempt
5 Flashes	5 Flashes	Open hood warning (before start)
5 Flashes	5 Flashes	System shut down using brake pedal (when running)
7 Flashes	7 Flashes	Tachometer lock out (see dealer)

REMOTE AUTO START

Optional Keyless Entry Instructions Included

INSTALLATION INSTRUCTIONS

**BEFORE INSTALLING THIS PRODUCT PLEASE READ
THE INSTALLATION DIRECTIONS THOROUGHLY!!**

BEFORE YOU BEGIN

This system is compatible with electronic fuel injected engines only! Not intended for use with carbureted engines.

- This product must be installed by qualified personnel according to these instructions and observing all safety features.
- Check to see if the vehicle is equipped with any type of factory security system.
- Check to see if there is a pin switch for the hood, if not one must be installed.
- Verify that the vehicle starts and idles properly before beginning the installation.
- Always use a multi-meter to verify wiring.
- Before mounting the product, verify with the customer the desired location for the window mount receiver.

MOUNTING SYSTEM COMPONENTS

Mount the start module under the dash where it will be away from moving parts such as brake pedals, etc. Mount the receiver to the inside of the windshield using the supplied double-sided tape. Make sure the chosen location does not obscure the driver's view.

MODULE WIRING

12-Pin Main Harness

- **YELLOW WIRE** - Factory Alarm Arm output (-) 250mA. Connect to the wire that requires a ground pulse to arm the factory alarm. The YELLOW wire provides a ground pulse when

the remote transmitter is used to lock the doors or when the remote start shuts down. See *Programmable Features*

- **RED/WHITE WIRE** - Auxillary / trunk release output (-) 250mA. Connect to a relay for an optional feature such as trunk release. The RED/WHITE wire can instead be programmed for use as a negative parking light output if needed, and the WHITE positive parking light output then becomes a positive trunk release output. See *Programmable Features*

- **BROWN WIRE** - Factory Alarm Disarm output (-) 250mA. Connect to the wire that requires a ground pulse to disarm the factory alarm. The BROWN wire provides a ground pulse when the remote transmitter is used to unlock the doors or start the vehicle.

- **ORANGE WIRE** - Ground when running / Anti-grind output (-) 250mA. The ORANGE wire can be also programmed for use as a Starter Defeat output with Anti-grind or as a passive Starter Defeat output that activates 30 seconds after the ignition is turned off.

Ground when running (default): Provides a ground when the remote start is activated and is normally used to activate an optional factory security bypass module, a relay for anti-grind, a 3rd ignition relay, etc.

Starter defeat w/ anti-grind: Provides a ground when the remote start is activated and when button 1 is used to lock the doors.

Starter defeat w/ passive operation: Provides a ground to activate a starter defeat relay 30

seconds after the ignition is turned off and anytime button 1 is used to lock the doors.

- WHITE/BLUE WIRE - Horn output (-) 250mA. Connect to an optional relay to activate the vehicle's horn. The horn output is programmable for pulse duration and to set which functions will trigger the horn pulses.
- BLACK/WHITE WIRE - Not used.
- VIOLET WIRE - Not used.

- WHITE WIRE - Parking Light output (+) 10A relay. Connect to the vehicle's parking light wire. If the vehicle is equipped with more than four parking lights or with independent left and right parking light circuits a relay is required. For vehicle's with negative trigger parking lights, the RED/WHITE trunk release wire can instead be programmed for use as a negative parking light output if needed, and the WHITE wire output then becomes a positive trunk release output. See *Programmable Features*

NOTE: Do not connect the parking light output to the vehicle's headlight circuit.

- GREEN/WHITE WIRE - Hood trigger input (-). Connect to the hood pin switch that shows ground when the hood is open.
- GREEN WIRE - Not used.
- BLACK WIRE - Ground input (-). Connect to a chassis ground that is free of paint or dirt.
- PINK WIRE - Brake switch input (+). Connect this wire to the brake switch wire that provides +12V when the brake pedal is pressed.
- BLUE/WHITE WIRE - Tachometer input (A/C). Connect to the vehicle's coil, fuel injector or crank sensor wire.
- BLUE WIRE - Glow plug light input (+/-). For diesel vehicles without a glow plug wire, no connection is needed. A 15-second timer will engage before cranking the starter. Most diesel vehicles will have a glow plug wire located in the instrument cluster. For these vehicles, test the wire to confirm proper operation and connect

to it. Negative glow plug wire systems will show +12V when the glow plug (wait-to-start) light is on, then show ground when the light turns off. Positive glow plug wire systems will show ground when the wait-to-start light is on. The BLUE wire is programmable for the system polarity and should be connected directly to the glow plug wire. See *Programmable Features*

6-Pin Starter Harness

- YELLOW WIRE - Start output (+). Connect to the vehicle's starter wire.
- GREEN WIRE - Main accessory output (+). 12V output for heater and/or air conditioning system. For cars with more than one accessory wire add a relay(s) to power the extra accessory wire(s) or if the WHITE wire is not being used, it can be programmed for second accessory output.
- RED WIRE - Main power input (+). Using the supplied inline fuse holder, connect directly to the vehicle's battery or alternate power source with a minimum 30 Amp supply.
- RED WIRE - Main power input (+). Using the supplied inline fuse holder, connect directly to the vehicle's battery or alternate power source with a minimum 30 Amp supply.
- BLUE WIRE - Main ignition output (+). Connect to the main ignition wire that switches +12V and does not drop out during cranking.
- WHITE WIRE - Second ignition output (+). Connect to the wire that switches +12V and does not drop out during cranking. This wire may be optionally set via jumper for use as a second accessory wire or second starter wire. Remove top of housing and see *Jumper Settings*.

Module Connectors

3-Pin White Connector: Plug-in connector for door locks.

- GREEN WIRE - Lock output (-) 500mA.

- EMPTY - Not used.
- BLUE WIRE - Unlock output (-) 500mA.

4-Pin Blue Connector: Plug-in connector for extended range receiver.

SYSTEM PROGRAMMING

Entering Programming

To enter System Programming:

1. Within 3 seconds, turn the ignition on, off, on, off and leave on.
2. Press the valet switch.
 - The parking lights will turn on.
 - The horn will honk once (optional).
3. Press transmitter button corresponding to the desired programming menu:
 - Button 1 = Menu 1
 - Button 2 = Menu 2
 - Button 3 = Menu 3
 - Button 4 = Menu 4
4. Press the valet switch the number times equal to the Feature you want to change.
 - The LED will flash, and the horn will honk (optional) to indicate which feature step is selected. (Example: step 2 = 2 flashes and 2 honks.) The LED will continue flashing the step number until another step is chosen or ignition is turned off.
5. Press and hold the valet switch until the parking lights flash and the horn honks the number of times equal to the desired operating mode for that feature, then release the switch.
6. Press the valet switch to move to the next feature, or repeat step 4 to change menus.
7. Turn off ignition to save changes.

Default Reset

Follow this procedure to set the Programming Features to factory default settings.

NOTE: The system reset will clear changes made to the Tach setting as well. After a system

reset, the Tach must be re-learned before the remote starter will operate properly.

To reset all functions to their default settings:

1. Within 3 seconds, turn the ignition on, off, on, off and leave on.
2. Press the valet switch.
 - The parking lights will turn on.
 - The horn will honk once (optional).
3. Press and hold the valet switch until the parking lights flash and the horn honks (optional) 3 times to confirm reset.
4. Turn ignition off.

Remote Start Programmable Features

Menu 1

1. Ignition Lock/Unlock. Controls the door locks with the ignition. On/On mode- the doors will automatically lock or unlock when ignition is turned on and off. On/Off mode- the doors will automatically lock with ignition, but not unlock with ignition. Off mode- no ignition control of door lock system.
2. Horn Output. The horn output may be programmed to operate in one of three ways: honks with the Car Finder and Panic features only, honks with all features except start, or honks with all features.
3. Door Lock/Unlock Pulse. Selects between three door lock configurations: a .75-second lock and two .75-second unlock pulses (for some Japanese cars), a 3-second lock and unlock pulse (for vacuum locks), or a .75-second lock and unlock pulse (standard).
4. Short Unlock/Disarm Pulse. Some vehicles require a shorter unlock/disarm pulse. For these vehicles use the .125-second pulse.

Menu 2

1. Valet Mode Timing. Sets the length of time the valet switch must be held in order to enter the valet mode- either 15 or 5 seconds.
2. Parking Light Output. Selects one of three

PROGRAMMABLE FEATURES (default settings in bold)

<u>Step</u>	<u>Function</u>	<u>Setting 1</u>	<u>Setting 2</u>	<u>Setting 3</u>
Menu 1				
1.	Ignition Lock/Unlock	On/On	On/Off	Off
2.	Horn Honk Settings	Silent L/UL	No honk w/start	Normal
3.	Door Lock/Unlock Pulses	.75sec / UL x 2	3 seconds	.75 seconds
4.	Short Unlock/Disarm Pulse	.125 sec	Normal	
Menu 2				
1.	Valet Mode Timing	Hold 15 seconds	Hold 5 seconds	
2.	Parking Light Output	30 seconds w/UL	Swap w/ Trunk Output	Flash 2x w/UL
3.	Horn Honk Pulse	5ms (short)	15ms (long)	10ms (normal)
4.	Button 4 Operation	Trunk Release	Not used	Car Finder
Menu 3				
1.	Lock Control w/ Start Functions	UL before/L after	L after shutdown only	Normal L/UL pulses
2.	Engine Type	Diesel (+) Glow Plug	Diesel 15 sec Timer	Gasoline/(-) Glow
3.	Factory Alarm Rearm Pulse	After start & w/L	After start only	After stop & w/L
4.	Engine Run Time	4 minutes	45 minutes	15 minutes
5.	Crank Time	10 seconds max	3 seconds max	5 seconds max
6.	GWR / Starter Defeat	Starter Defeat/A-G	Passive Starter Defeat	GWR w/A-G
7.	Start Button	Press 2x within 3 sec	Press once	

operations for the parking light output: parking lights turn on for 30 seconds with unlock, parking light output can be set to exchange pin locations with trunk release output to provide negative parking light and positive trunk release outputs, or parking lights can be set to flash twice with unlock.

3. Horn Honk Pulse Length. Some vehicle horns may require a longer or shorter pulse to provide the best horn honk sound. The horn honk pulse can be set for 5ms, 15ms, or 10ms.

4. Button 4 Operation. Button 4 can be programmed to operate in one of three ways: as a dedicated button for trunk release (the Car Finder feature is lost), as a no function button, and as a dedicated Car Finder feature button.

Menu 3

1. Door Lock Control For Factory Alarm. This feature allows three different door lock control functions to aid integration with factory security

systems. Setting 1 pulses unlock before start and pulses lock both after starting and after shutdown. Setting 2 pulses the lock only after remote start shutdown. Setting 3 provides only normal operation for the lock/unlock pulses.

2. Engine Type. Selects between gasoline and diesel engine types. There are three operation choices for diesel engine equipped vehicles, a 15-second timer mode for vehicles without a glow plug wire and both positive and negative glow plug monitor modes for vehicles with a wait-to-start indicator light.

(+) Glow Plug Monitor Mode: For vehicles with a wait-to-start wire that shows +12V when the indicator light goes out, connect to the proper vehicle wire and set Engine Type to setting 1.

15-Second Timer Mode: For diesel engines where a proper glow plug wire cannot be located, set the Engine Type to setting 2 which automatically cranks the starter after a 15-second warm up period for the glow plugs.

(-) *Glow Plug Monitor / Gas Mode*: For vehicles with a wait-to-start wire that shows ground when the indicator light goes out, connect to the proper vehicle wire and set Engine Type to setting 2.

3. **Factory Alarm Rearm Pulse**. Sets the timing of the factory alarm rearming pulse to one of three settings: pulse after remote starting and with lock, pulse after remote starting only, or pulse with lock and after shutdown.

4. **Engine Run Time**. Selects between 4, 45, and 15 minute run cycles.

5. **Crank Time**. Sets the maximum allowable cranking time for the starter to one of three settings: 10 seconds, 3 seconds, or 5 seconds.

6. **GWR / Starter Defeat**. Selects between three operation modes for the Ground When Running output: Starter Defeat mode with Anti-Grind that activates with lock and also during remote start, Passive Starter Defeat mode that activates when the doors are locked or 30 seconds after the ignition is turned off, and Ground When Running output that activates only during remote start and can be used for a factory bypass module or an anti-grind relay.

7. **Start Button**. Sets the remote start feature to require one or two pulses to start the vehicle. The two-pulse mode offers a bit more safety against accidental starting, but is less convenient.

REMOTE START NOTES

Smart Start and Tach Start

In order for the system to properly start and run the vehicle, the unit must be able to determine if the engine is cranking or if the engine is actually running. This system is equipped with two means of detecting the engine's run status: Smart Start and Tach Start. The system detects if a tach wire is connected and then sets the proper mode automatically. In either mode, the system must properly learn

the vehicle's engine characteristics before the remote start can function. See *Engine Learning*

The *Smart Start* feature detects the engine's run status using specially designed software that interprets certain characteristics of the engine, without connection to the vehicle's tachometer wire. This feature allows a faster installation, but may not be work as well with all vehicles, or under extreme temperatures.

The *Tach Start* feature requires connection the the vehicle's tachometer wire, coil wire or an injector wire. The Tach Start provides reliable operation with virtually any vehicle, even under extreme temperatures.

ENGINE LEARNING

Auto Learn Mode

After completing installation, follow these steps to automatically "learn" the engine operation. This "learns" proper tach signal or Smart Start signal operation. It is important to note that while this auto method works fine for most vehicles, a few vehicles may have problems properly remote starting if the engine idle speed was too high when the tach signal was learned. For these instances, see the *Manual Learn Mode* and *Forced Low Idle Learn Mode*.

To enter the Auto Learn mode after completing the installation:

1. Turn ignition on.
 - The parking lights will turn on. If the parking lights do not turn on, make sure the BLUE ignition wire is properly connected and perform a Default Reset.
2. Start the vehicle using the key.
 - The LEDs will begin to flash then turn on solid when a tach signal is present.
3. Wait approximately 35 seconds for the tach signal to be properly learned.
 - The parking lights will flash and the horn will honk twice (optional) to confirm the

tach setting has been learned, or four times to confirm the Smart Start mode has been learned. If the parking lights do not flash to confirm tach learning, choose a different tach source.

4. Turn ignition off.

NOTE: If the tach setting is not properly learned, the system will not be able to remote start and the parking lights will flash 7 times when button 3 is pressed. Also note that anytime a Default Reset is performed, or the tach wire is changed or disconnected, the tach signal must be relearned. If the system seems to be over or under cranking the starter, please see *Cranking Adjustments*.

Manual Learn Mode

The manual learn mode aids in setting the tach signal for vehicles which may not remote start properly after auto learning. The Manual Learn mode allows a simple way to learn the proper idle speed for vehicles which may

1. Start the vehicle using the key.
2. Let the vehicle run until the engine idle speed drops. If the idle speed does not drop, skip to *Forced Low Idle Learn Mode*.
3. Press and hold the brake pedal.
4. Press the valet switch.
5. Press the valet switch again and hold until the parking lights flash to confirm manual learning is complete.

Forced Low Idle Learn Mode

To manually force the idle speed down for proper learning on some vehicles:

3. Set the parking brake.
4. Press and hold the break pedal while putting the vehicle into reverse gear.
 - The idle speed should drop.
5. Press the valet switch.

6. Press the valet switch again and hold until the parking lights flash to confirm manual learning is complete.

Cranking Adjustments

There may be instances where even with proper tach learning, the vehicle may slightly over or under crank the starter. To fine-tune the starter crank time, follow the steps below.

Over-Cranking Adjustment:

1. Within 3 seconds, turn the ignition on, off, on, off and leave on.
2. Press the valet switch.
 - The parking lights will flash.
 - The horn will honk once (optional).
3. Press and release transmitter button 4.
4. Press the valet switch twice.
 - The LED will flash twice and repeat.
5. Press and hold the valet switch again.
 - The parking lights will flash and the horn will honk (optional) to indicate that the crank time setting has been decreased by one step.
6. Release the valet switch to exit.
7. Test remote starter and if necessary repeat steps 1-6.

Under-Cranking Adjustment:

1. Within 3 seconds, turn the ignition on, off, on, off and leave on.
2. Press the valet switch.
 - The parking lights will flash.
 - The horn will honk once (optional).
3. Press and release transmitter button 4.
4. Press the valet switch three times.
 - The LED will flash three times and repeat.
5. Press and hold the valet switch again.
 - The parking lights will flash and the horn will honk (optional) to indicate that the

crank time setting has been increased by one step.

- Release the valet switch to exit.
- Test remote starter and if necessary repeat steps 1-6.

Gas and Diesel Modes

The default engine type setting is **Gasoline**. For diesel vehicles, the engine type must be set to one of the three **Diesel** options. If a glow plug wire is not available, the unit has a built-in timer that waits 15 seconds before cranking the starter. For vehicle's with a glow plug light (wait-to-start indicator) the BLUE wire should be connected to verify the glow plugs are warm before the engine begins cranking.

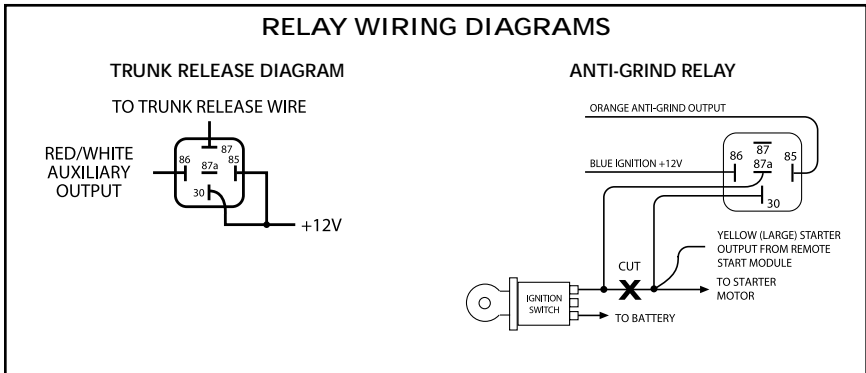
ADDING TRANSMITTERS

To add a new transmitter to the system have the desired transmitters ready and follow the Code Learning sequence.

To enter Code Learning Mode:

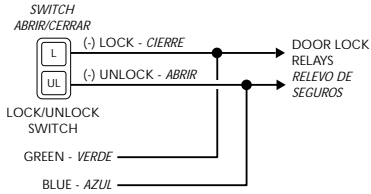
- Within 3 seconds, turn the ignition on, off, on, off and leave on.
- Press and hold the Valet switch.
 - The parking lights will turn on.
 - The horn will honk once (optional).
- Continue to hold the Valet switch.
 - The parking lights will turn off.
 - The horn will honk 5 times (optional).
- Release the Valet switch.
- Press Button 1 on the transmitter.
 - The parking lights will flash and horn will honk (optional).
- Repeat step 5 for each additional transmitter, up to four total transmitters.
- Turn off the ignition.

NOTE: If a transmitter is lost or stolen, make sure to code all 4 transmitter memory locations. (Example: If only one transmitter is used, repeat step 3 three more times to remove any previously programmed transmitters.)

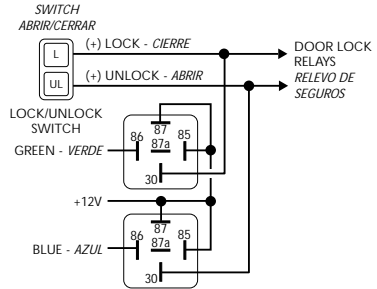


DOOR LOCK WIRING DIAGRAMS

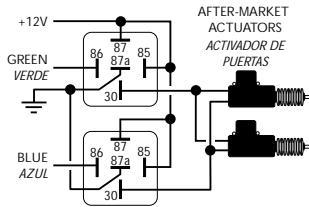
NEGATIVE PULSE LOCK SYSTEM



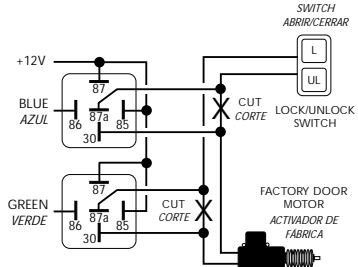
POSITIVE PULSE LOCK SYSTEM



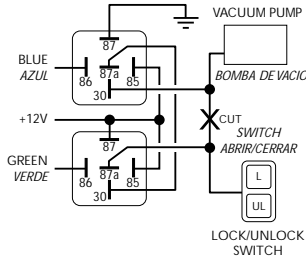
ADDING ACTUATORS



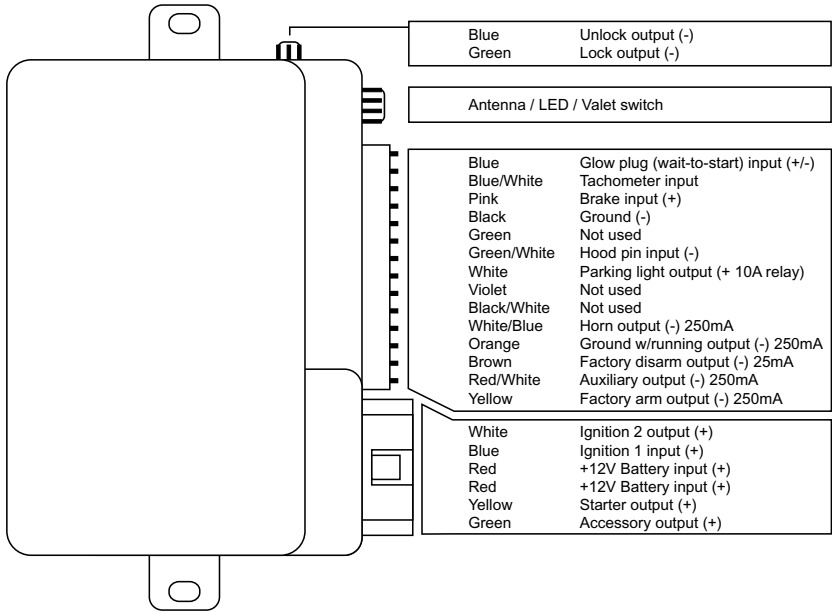
REVERSE POLARITY LOCK SYSTEM



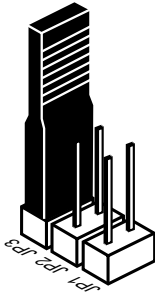
VACUUM LOCK SYSTEM



WIRING DIAGRAM



JUMPER SETTINGS



Ignition 2 Programming Jumpers (White Wire Output)

JP3 = Ignition 2

JP2 = Starter 2

JP1 = Accessory 2