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All products for warranty repair must be sent postage prepaid to Omega Research & Development, Inc., P.O. Box 508, Douglasville, Georgia 30133, or send via UPS to: 981 N. Burnt Hickory Rd., Douglasville, Georgia 30134, with bill of sale or other dated proof of purchase. This warranty is nontransferable and does not ap cal misuse or abuse, i intended function, u God.

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BACK COVER PRINTER'S NOTE: production back cover is color; this is a place marker cover.

This device complies with F.C.C Rules part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and, (2) This device must accept any interference that may be received, including interference that may cause undesired operation.

The manufacturer is not responsible for any radio TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Omega Research and Development, Inc.
P. O. Box 508
Douglasville, Georgia 30133
www.caralarm.com

07/08 MO-RS-310 REV1

Omega
RS-310

OPERATION MANUAL

FRONT COVER PRINTER'S NOTE: production front cover is color; this is a place marker cover.

Table of Contents

Complete Programmable Features Matrix

	USER Features	Ignition on, off, then press Valet Switch **5** times			
#	**Feature**	**Lock Button**	**Unlock Button**	**Trunk / || Button**	**Start / ||| Button**
1	Remote Start Run Time	10 Min.	5 min.	15 min.	20 min.
2	Steady/Flash Lights Rem. Start	Steady	Flashing		
3	Confirmation Chirps/Volume	Low	Loud	On Demand/Loud	OFF
4	Pulsed Horn / Steady Siren	Pulsed Lo	Pulsed Med.	Pulsed Hi	Steady Siren
5	Doors Lock With Ignition On	ON	OFF		
6	Doors Unlock With Ignition Off	ON	OFF		
	INSTALLER Features	Ignition on, off, then press Valet Switch **10** times			
1	"Tach Wire" or "Tachless "	Tachless	Tach		
2	Gasoline or Diesel Engine	Gasoline	Diesel		
3	Sat. Port Green Wire Function	Starter	Pulse After Start	Pulse After Stop	Accessory Output
4	Ext. Starter Cranking Time	.7 (minimum)	1.25	1.75	2.5 (maximum)
5	Doorlock Functions	.8 second	3 Seconds	Double Unlock	Total Closure
6	Turbo Timer	OFF	1 min.	2 min.	3 min.

Coin batteries used in the transmitter which is used to operate this security system may contain Perchlorate Material - special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate

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- The second setting (programmed by the "**unlock**" button) changes the lock and unlock outputs to be a longer 3 second pulse output. This is for certain vehicles which require a longer output pulse from the system's control unit; typically cars having vacuum pump systems, although the longer setting is also more suitable in some newer vehicles.
- Some newer vehicles require a double pulse output to remotely unlock the doors and/or to disarm a factory-equipped security system, which is what the Double Pulse Unlock setting provides (it is programmed by the "**trunk**" button). The lock output pulse, in this setting, is 0.8 second.
- The Total Closure Lock Output (programmed by the "**start**" button) may be used with vehicles which are originally equipped with the total-closure feature. Typically, a total closure feature is when locking the vehicle's doors if the key in the door is held to "lock" for a period of time the vehicle will close all windows and the sunroof, in addition to locking the doors.
  Selecting this feature setting changes the system's door lock output pulse from a 0.8 second to as long as a 28 second duration output. The unlock output is 3 seconds in this setting.

Note: When this feature is turned on, during the 28 second period after arming the system, the lock output can be stopped on demand by pressing the "**lock**" or "**unlock**" button. Only the output will stop- pressing either button again will normally operate the system, and at any time after the 28 second lock output period ends.

If either of the programmable relays are set for lock or unlock operation (the next two Installer Programmable Features), the settings if this feature will operate the programmable relays accordingly, in addition to the primary system doorlocking outputs.

Feature #6 Turbo Timer

Factory Default Setting **Off**
(press "**lock**" button to program)

Options:

Run 1 Minute (press "**unlock**" button to program)
Run 2 Minutes (press "**trunk**" button to program)
Run 3 Minutes (press "**start**" button to program)

This feature when turned on configures the RS-310 to automatically keep the engine running briefly after it is turned off. This operation is designed specifically for vehicles having turbocharged engines (the user may temporarily bypass the feature if desired).

This feature should only be programmed by the installer, and the operation of this feature depends on the correct connection of the safety wire to the vehicle's parking brake. Please refer to the "Black/White wire" in the installation manual for the proper connection of this important wire.

Introduction

Welcome to the convenience which is offered by your RS-310 keyless entry & remote start system. The RS-310 is designed and manufactured by Omega Research and Development, a world leader in vehicle convenience and security since 1975. Your system offers easy, carefree operation, and the modular design allows its many impressive features to be customized to suit your needs. Omega systems are designed for professional installation, and are available only through new car retail outlets and selected mobile electronics specialist dealers.

Please note that this guide is written to reflect:

- That a power doorlock interface is installed with your system (the RS-310 also operates your power doorlocks). The type of interface may vary from one vehicle to the other, and in some cases may involve optional components.
- That the RS-310 operating the vehicle's existing horn is an available option.
- That the Programmable Features are in the default settings; the operations of these features are also explained.

Your RS-310 system has two principal user components: the **Valet Switch**, and the Remote **Transmitter**. An **LED Status Light** can be added to the system by your installing dealer.

The **Valet Switch** is used to access Valet Mode, which allows the operator to suspend some of the system's normal functions for as long as desired. The Valet Switch may also be used, instead of the remote transmitter, to override a locked system. The Valet Switch is also used when programming remote transmitters and system features.
See "Using the Valet Switch" on pages 19-20.

Transmitters are used to operate the RS-310. Each system is capable of being operated by up to four different remote Transmitters, which are described on the following page. The remote transmitter has four push-button switches, each being labeled with an icon as to function.

The **OPTIONAL LED Status Light** informs you at a glance which of the different conditions the system is in, and also serves as a visual deterrent to break-ins and theft. Specific operations of this light are described on pages 9-10. A status light is not included with your system. If you do not have one and would like one, contact your installing dealer for more information.

The Valet Switch

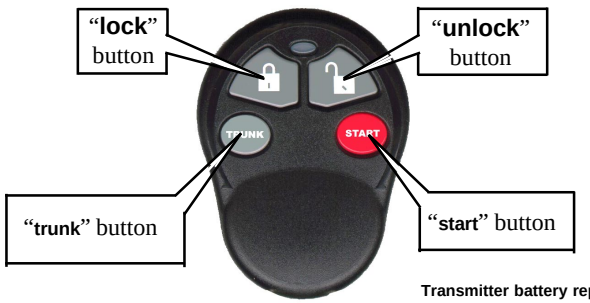
One of the components, mounted in the vehicle's interior, is the **Valet Switch** which is used for a variety of functions including transmitter and feature programming.

The Valet Switch has three main functions:

- The Valet Switch can be used to turn off the remote engine starting functions of the system placing it in "Remote Start Valet Mode".
- The Valet Switch can also be used, in conjunction with the vehicle's ignition key, to perform an emergency override when the system is in a "locked" state. This is used in the event the transmitter is lost or becomes inoperable. This is referred to as "performing an Emergency Override".
- The Valet Switch is used in the procedure of programming operational features and also for encoding transmitters to the system.

A complete description of the Valet Switch and its operations is on pages 19-20.

The Transmitter



Transmitter part number: 146-07B

Transmitter battery replacement: Remove the small screw from the lower back case, and separate the transmitter case halves. Replace the **CR2032** (or 2 CR2016 batteries) coin-type battery and reassemble the transmitter.

"**lock**"

- Pressing and releasing the "**lock**" button locks the doors.
- Pressing and holding this button for three seconds will first lock, then activate the Panic feature.

This feature changes the operation of the Green wire (negative) on the satellite relay port. This gives you the flexibility to accomodate certain vehicles that require any out-of-the-ordinary pulses or remote start timing.

- The first setting operates as a secondary START output. This will have the same pulse timing as the large Violet wire on the main harness.
- The second setting will give a 0.8 second pulse immediately after the large Violet wire's output stops.
- The third setting will give a 0.8 second pulse immediately after the remote start shuts down by any means.
- The fourth setting operates as a secondary ACCESSORY output. This will have the same operation as the large Orange wire on the main harness. **This feature should only be programmed by the installer**.

Feature #4 Extended Starter Cranking Time

Factory Default Setting **Minimum (.7 Second)**
(press "**lock**" button to program)

Options:

Medium Lo (1.25 Second) (press "**unlock**" button to program)
Medium Hi (1.75 Second) (press "**trunk**" button to program)
Maximum (2.5 Second) (press "**start**" button to program)

Extended Starter Cranking Time operates in conjunction with the feature #1's "Tachless" setting. When the system is set for "Tachless", this feature sets the duration of the starter output's for the 1st start attempt. If the engine doesn't start on the first attempt, the system will retry up to 3 more times. With each attempt, the output will be extended by 0.2 seconds. There are four different base starter output settings. While the default-set minimum is sufficient for most vehicles; the Extended Starter Cranking Time can be used for difficult-to-start engines. **This feature should only be programmed by the installer**.

Feature #5 Doorlocking Functions

Factory Default Setting **0.8 Second Lock & Unlock Output**
(press "**lock**" button to program)

Options:

3 Second Lock & Unlock Output (press "**unlock**" button to program)
Double Pulse Unlock Output (press "**trunk**" button to program)
Total Closure Lock Output (press "**start**" button to program)

This single feature gives the installer several needed options, to match the RS-310's doorlocking outputs to suite different vehicle requirements.

- The first setting (programmed by the "**arm/lock**" button) has the system produce both the lock and unlock outputs as 0.8 second in duration. This is the most common form of output needed, which interfaces most vehicles.

Use the step-by-step instructions on page 12 to change any of the Installer Programmable Features, along with the feature's option choices and related programming controller/transmitter button assignment found in the following individual feature descriptions.

Feature #1 "Tach Wire" or "Tachless" Starter Operation

Factory Default Setting **Tachless** (press "**lock**" button to program)
Options: **Tach Wire** (press "**unlock**" button to program)

This feature selects the RS-310 processor's method of determining the status of the engine running during remote start operation. As explained in feature 4's description, "Tachless" mode has an associated base starter output time duration. However, if the voltage fluctuation is detectable, the processor adjusts the starter output time accordingly. When this feature is set for "Tach Wire" operation, the base starter output increases to a maximum of 3 seconds, but the processor adjusts the actual starter engagement time accordingly. Connecting and use of the "Tach Wire" is the most reliable form of engine running information input, and its use is recommended. **Important:** Before this feature is programmed, please refer to the "Violet/White wire" section of the installation manual for proper wiring connection, and the Tach Learning Procedure. **This feature should only be programmed by the installer**.

Feature #2 Gasoline Or Diesel Engine

Factory Default Setting **Gasoline** (press "**lock**" button to program)
Option: **Diesel** (press "**unlock**" button to program)
This feature changes the system's timing of the ignition and starter output sequence for remotely starting vehicles with gas or diesel engines. When set for gasonline, the starter output will occur 3 seconds after the ignitions turn on. Also, when the system is in "Tachless" mode, the engine running status will be determined 10 seconds after cranking. When set for diesel, the starter output will occur 20 seconds after the ignitions turn on to allow for glow plug warming. Also, when the system is running in "Tachless" mode, the engine running status will be determined 40 seconds after cranking. This allows the vehicle battery(s) to recharge properly and show normal voltage levels due to the heavy drain diesel engines have on the electrical system during cranking. **This feature should only be programmed by the installer**.

Feature #3 Satellite Relay Port Green Wire Function:

Factory Default Setting **Starter** (press "**lock**" button to program)
Options:
Pulse After Engine Start (press "**unlock**" button to program)
Pulse After Engine Stop (press "**trunk**" button to program)
Accessory (press "**start**" button to program)

"**unlock**"
- Pressing and releasing the "**unlock**" button unlocks the doors
- Pressing and holding this button for three seconds will first unlock, then activate the Panic feature.

"trunk" / "||"
- Pressing the "**trunk**" button for two seconds can be used to activate an extra output, known as the "2nd channel", for an optional function such as trunk release.
- Pressing and releasing this button twice locks or unlocks the system without the confirmation chirps.

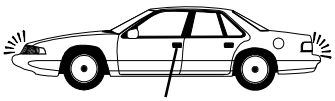
"start" / "|||" button (red)
- Pressing and holding the "**start**" button once will activate the remote start feature. Pressing during the remote start operation will stop the engine from running.

Using The RS-310 System

To Lock the Vehicle's Doors:

Press & Release the transmitter LOCK button

THE PARKING LIGHTS WILL FLASH ONCE



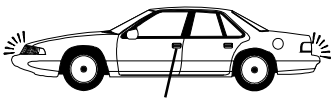
THE DOORS WILL LOCK

• The parking lights flash once to confirm locking, and optionally, the horn will chirp once. The optional Status Light will flash approximately once per second to indicate that the system is in a LOCKED state.

To Unlock the Vehicle's Doors:

Press & Release the transmitter UNLOCK button

THE PARKING LIGHTS WILL FLASH TWICE



THE DOORS WILL UNLOCK

• The parking lights flash twice then stay on for 30 seconds to confirm unlocking, and optionally the horn will chirp twice. The optional Status Light will turn off to indicate that the system is in an UNLOCKED state.

NOTE: The system has a horn/siren output though its connection is optional.

To Activate Trunk Release/2nd Channel:

Press & hold the transmitter "trunk" button for 2 seconds

• The parking lights flash twice then stay on for 30 seconds to confirm unlocking, and optionally the horn will chirp twice. The optional Status Light will turn off to indicate that the system is in an UNLOCKED state.

To Activate/Deactivate Remote Start:

Press & Release the transmitter "start" button

• The parking lights will turn on and the optional Status Light will flash fast to confirm the starting process has begun.

- The sytem will then turn on the ignition circuit.
- Within a few seconds the lights will turn off and the starter will engage.
- The engine will start, run, and the starter will be disengaged.
- The lights will turn back on and remain on while the system is controlling the engine. The optional status light will then continue to flash slowly.
- If the engine stalls, the system will make 3 more attempts to restart it.

When you leave your vehicle, simply set the climate controls for what you would like to have operating upon remote starting - the heater, defroster or air conditioning.

Upon entering the vehicle place the ignition key in the switch and turn it to the "On" position, pressing the brake pedal will deactivate the remote start operation. **Do not turn the key to the "Start" position!**

If you decide not to drive your car after remote starting, you can simply press & release the "|||" button again to deactivate the remote start. Otherwise, the system will "time-out" and turn off automatically after 10 minutes. **NOTE:** If you hear the horn honk when attempting to remote start, the system is telling you that a safety circuit is violated. This could mean that the hood is open, the gear selector is not in park, or that the brake pedal is being pressed

Feature #5 Doors Lock With Ignition On

Factory Default Setting **On** (press "**lock**" button to program)
Option: **Off** (press "**unlock**" button to program)

This feature configures the system to automatically lock the vehicle's doors every time that the ignition switch is turned on. The following feature #6 controls the automatic unlocking operations.

Feature #6 Doors Unlock With Ignition Off

Factory Default Setting **On** (press "**lock**" button to program)
Option: **Off** (press "**unlock**" button to program)

Similar to the previous locking feature, except this feature controls the unlock operation when the ignition is turned off.

The Installer Programmable Features

Installer Programmable Features should only be used by the original or other qualified installer, AND individual Installer Features should only be used, where applicable, with the correct wiring connections.

The second group of features, the Installer Programmable Features, are accessed as the second level of features' programming, which is pressing the Valet Switch 10 times instead of 5 times when entering Programming Mode (page 12). **Caution: These features have a critical affect upon the system's operations, and in many cases, also upon the system's wiring connections. These features should NEVER be changed, except by the installer or other qualified professional.** The installation guide should be consulted for the proper wiring connections, as associated with these programmable features.

The Excalibur RS-310's 6 **Installer Programmable Features**:

1 "Tachless" or "Tach Wire" Starter Operations
2 Gasoline or Diesel Engine
3 Satellite Relay Port Green Wire Operations
4 Extended Starter Cranking Times
5 Doorlock Functions
6 Turbo Timer

Feature #1 Remote Start Run Time

Factory Default Setting **10 Minutes**
(press "**lock**" button to program)

Options:

5 Minutes (press "**unlock**" button to program)
15 Minutes (press "**trunk**" button to program)
20 Minutes (press "**start**" button to program)

This feature sets the period of time that the engine will run after being remotely started. If the engine is not stopped by controller/transmitter command or a safety circuit violation, the engine will automatically stop upon the expiration of the selected time period. **Caution: The remote engine starting feature should NEVER be used when the vehicle is parked in an enclosed structure or garage.**

Feature #2 Steady/Flashing Lights During Remote Start

Factory Default Setting **Steady** (press "**lock**" button to program)
Option: **Flashing** (press "**unlock**" button to program)

This Feature configures the operation of the vehicle's parking lights during the remote start operation. The default setting turns on the parking lights during remote start; the other setting flashes the parking lights on and off during remote start.

Feature #3 Confirmation Chirp Function & Volume

Factory Default Setting **Low**
(press "**lock**" button to program)

Options:

High (loudest) (press "**unlock**" button to program)
On Demand / High (press "**trunk**" button to program)
OFF (no chirps) (press "**start**" button to program)

This feature allows the choice of two different volume levels of the system's confirmation chirps and the ability to turn OFF chirps or have them on demand. When programming, the you can hear and choose the setting with the best chirp volume. The "On Demand" setting allows you to lock and unlock the doors without chirps. Pressing either function a 2nd time, will produce confirmation chirps.

Feature #4 Steady Siren or Pulsed Horn

Factory Default Setting **Pulsed Horn Low**
(press "**lock**" button to program)

Options:

Pulsed Horn Medium (press "**unlock**" button to program)
Pulsed Horn High (press "**trunk**" button to program)
Steady Siren (press "**start**" button to program)

This feature changes only the audible output, in three different pulse timings, which allow a degree of customizing of the horn's sound during the alarm activation. The Steady Siren setting is exactly that- a steady output which an optional electronic siren would require.

To Activate Panic Mode:

Press & Hold the LOCK or UNLOCK button for 3 seconds

THE PARKING LIGHTS WILL FLASH REPEATEDLY

THE DOORS WILL LOCK or UNLOCK

• The horn will sound, the parking lights will flash and the doors will lock or unlock, depending on the transmitter button used. To deactivate Panic, simply press either the LOCK or UNLOCK button again- Panic stops with either locked doors or unlocked doors, depending on which button is used.

Using The Valet Switch

Valet Mode

The system may be placed into a "valet mode" which prevents the remote start feature from being activated. It also disables confirmation chirps when locking or unlocking the doors. Valet Mode should always be used when you do not wish for remote starting to be operated, such as when you have your vehicle serviced or leave it with someone else. The Valet Switch, is used to engage Valet Mode:

• With the system in an unlocked state, simply press and hold the Valet Switch for 3 seconds; the optional Status Light will light steady, to indicate Valet Mode, and stay illuminated continuously while the system is in Valet Mode. The horn will chirp once and the lights will flash twice.

Once in Valet Mode, an attempt to remote start will result in no response from the system. Keep this in mind if remote start stops functioning. The system may have accidentally been placed in valet mode. To check for valet mode, turn the ignition key to the RUN/ON position, then back OFF. If the system is in valet mode, the horn will chirp once.

• To turn off Valet Mode, simply press & release the Valet Switch once. The optional Status Light will turn off.

Valet Mode only prevents the remote starting operation; the lock, unlock, and trunk release functions all continue to operate when in Valet Mode.

Emergency Override

If the system is in a locked state, you cannot perform some functions like transmitter or feature programming. If the system is locked and you do not have a transmitter to unlock the system, you can perform an emergency override to access the programming functions.

• With the system in a locked state, simply turn the ignition key to the RUN/ON position.
• Press and release the valet switch once.
You should now be able to access programming functions.

Pit-Stop Feature

This feature allows you to turn off the ignition switch, remove your keys, leave the vehicle and lock your doors while leaving the engine running. To use this feature, have the engine running normally from the ignition switch, have the gear selector in "park", and your foot off of the brake pedal. Press the Valet Switch twice; the parking lights will flash once and the horn chirps 5 times; then turn the ignition off. The engine will remain running for the programmed run time, or it will turn off if another transmitter signal is received, a safety circuit is violated, or if the Valet Switch is pressed.

This feature may be used anytime; it does not have to be specially programmed to operate.

Other Remote Start Features

Low Battery Automatic Starting Feature

This feature may be used anytime. Setting this feature to operate has the RS-310 automatically start the engine should the vehicle battery voltage drop to 10.5 volts. This feature is very useful if the vehicle is to parked unattended for a long period of time, such as extended parking at the airport while away. Low Battery automatic starting must be activated for each occasion in which you desire it to operate, as follows:

- Turn the ignition switch "on", then "off" (engine not running), and within 7 seconds press the brake pedal twice. The system will chirp 6 times. Then, within 5 seconds, exit the vehicle and press the transmitter's "**lock**" button to lock the vehicle.

The feature is now turned on, and until the system is disarmed or the ignition turned "on", if the system detects the vehicle battery voltage dropping to 10.5 volts, it will automatically start the engine.

Turbo Timer Feature

It is typically recommended that vehicles equipped with turbocharged engines allow the engine to idle for a few minutes before turning it off. When this Installer Programmable Feature is programmed on, the RS-310 will automatically keep the engine running as follows:

- With the engine running, hold the brake pedal and engage the parking brake. When the brake pedal is released, the RS-310 will keep the engine running for the selected time, and then automatically turn it off.

To Access and Change further Features:

Step 6 If there are more features to be programmed, within 10 seconds of the previous action Press & Release the Valet Switch the same number of times as the next desired feature's number.

- Again the horn will chirp, the parking lights, (and the Status Indicator Light) will flash as many times as the Valet Switch was pressed to indicate the new feature number which is now accessed. Then use the controller or transmitter as described in Step 5 to change the newly accessed feature as desired.

Step 7 Allow 10 seconds to pass without performing any programming actions, or turn the vehicle's ignition on.

- The horn will sound briefly (and the Status Indicator Light will go out).

The User Programmable Features

- SEE THE PREVIOUS SECTION FOR PROGRAMMING INSTRUCTIONS -
Each of the Programmable Features is described in detail in the following pages. The User Programmable Features are described as a first group, and the Installer Programmable Features as a second group.

This group of User Programmable Features are all accessed as a group in the first level of features' programming. These features have a direct affect upon the system's operations, so the programming and operation of each are described.

The Excalibur RS-310's 6 **User Programmable Features**:

1 Remote Start Run Time
2 Steady / Flashing Lights During Remote Start
3 Confirmation Chirps / Volume
4 Pulsed Horn / Steady Siren
5 Doors Lock With Ignition On
6 Doors Unlock With Ignition Off

Use the step-by-step instructions on page 12, and the complete features matrix on page 19, to change any of the programmable features. Each feature, the option choices and related programming controller/transmitter button assignment are described in detail in the following pages.

Once the Unauthorized Transmitter Alert feature is turned on, the warning will sound for 48 hours after any transmitter programming, including the programming session which was used to turn it on.

Programming Features

Step 1	Turn the vehicles's ignition on.
Step 2	Turn the ignition off.
Step 3	Within 5 seconds, Press & Release the Valet Switch **5** times for User Programming OR **10** times for Installer Programming

- The horn will chirp then sound briefly (and the Status Light will turn on) to confirm that the system is entering Programing Mode.
- In the case of accessing the Installer Mode, the horn chirp then brief sounding will be heard at the fifth valet switch press, and then again at the tenth valet switch press.
- In either Programming Mode, if 10 seconds of no programming activity occurs, the system will exit Programming Mode.

Access a Feature:

Step 4	Within 10 seconds, Press & Release the Valet Switch the same number of times as the desired feature's number.

- The horn will chirp, the parking light output will flash, (and the Status Indicator Light will flash) as many times as the Valet Switch was pressed to indicate the feature number accessed.

Change the Feature:

Step 5	After accessing the desired feature, within 10 seconds Press & Release the appropriate controller or transmitter button.

- Pressing the "**lock**" button typically turns the feature on; or sets the feature's first option. The horn will chirp once and the parking lights will flash once when this button is pressed.
- Pressing the "**unlock**" button also typically turns the feature off; or, sets the feature's second option. The horn will chirp twice and the lights will flash twice.
- Many features have third, and even fourth setting options. Pressing the "**trunk**" and "**start**" buttons select these options. Confirmation chirps when these buttons are pressed are three and four chirps respectively.

The turbo timer feature must be programmed by the installer, and turning it on offers three run time choices- 1, 2, or 3 minutes. The system may be locked while the engine is running. Turbo Timer can be prevented form engaging, or "bypassed" if desired, by turning the engine off first and then engaging the parking brake, or if it's already engaged simply step on the brake pedal to turn the running engine off.

The Optional Status Light

When this option is added, the Status Light helps to visually confirms the status of the system and provides a high level of visual deterrence. The Status Light is typically located in the vehicle interior, mounted in the dash panel.

Normal System Status

1) Off = The system is unlocked and the remote starter system is off, but in standby mode.
2) On Constant = The system is in the Valet Mode, with the remote starter system disabled.
3) Flashing Slow = The system is locked, programming functions are disabled and the remote starter system off and in standby mode.

Automatic Transmitter Verification

For the first 10 seconds after the vehicle's ignition is turned on, the Status Light will flash Red a number of times that equal the number of transmitters that are capable of operating the system:

4) 1 Flash /pause = 1 transmitter is programmed.
5) 2 Flashes /pause = 2 transmitters are programmed.
6) 3 Flashes /pause = 3 transmitters are programmed.
7) 4 Flashes /pause = 4 transmitters are programmed.

Starting System Status

The Status Light also indicates the status of the remote starting part of the system:

8) Off = The remote starter system is off and in standby mode.
9) Flashing Slow (after sending the remote start command) = The engine is running via the remote starting system.
10) Flashing Fast (after starting the remote start sequence) = A remote start command has been received, and the system is in the process of starting the engine.

Remote Starting Diagnostics

Whenever the system is placed into Valet Mode, the Status Light illuminates solid. However, when this first occurs, the Status Light will flash 1 to 6 Green flashes before resuming solid illumination. This indicates why the engine stopped running from the last previous remote starting attempt.

11) 1 Flash = Programmed run time expired.

12) 2 Flashes = Brake was pressed or hood opened.

13) 3 Flashes = Engine stalled or bad tach signal.

14) 4 Flashes = Received transmitter command to stop.

15) 5 Flashes = Gear selector removed from “park”.

16) 6 FLashes = Low voltage.

Transmitter Protection

The Omega RS-310 features several security safeguards in one of the most vulnerable areas of any remotely controlled system.

Code Jumping™ It is quite easy, with the proper equipment, to record an alarm or keyless entry system’s transmitter signal, and simply play the captured signal back to the system to defeat it. The RS-310’s Code Jumping renders such “code grabbing” devices useless by randomly changing each signal that the transmitter sends.

Automatic Transmitter Verification™ shows the total number of transmitters which can operate the system, by flashing the Status Light with this number for 10 seconds every time that the ignition key is turned on. **An Optional Status Light needs to be added to the system to utilize this feature**.

Unauthorized Transmitter Alert™ (UTA) is a protection feature which may be turned on by the user (see the next section, “How to Program Transmitters”). When this protection feature is utilized, whenever a transmitter is added to operate the system, for 48 hours afterward a warning consisting of a brief series of horn chirps sounds every time the vehicle’s ignition is turned on.

Also during this 48 hour warning period, the 10 second Automatic Transmitter Verification visual display will increase to being displayed for 90 seconds instead of 10 seconds. When this feature is used and activated, after 48 hours the warning chirps disappear and the Status Light flashing the number of transmitters returns to being displayed for 10 seconds.

How to Program Transmitters

The RS-310 system is capable of being operated by as many as four transmitters. Additional transmitters must be programmed to the system in order to operate it (the originals, were programmed at the factory).

It is during the programming procedure that the Unauthorized Transmitter Alert feature may be turned on.

Standard Programming: Using this method to program additional or replacement transmitters does not turn on or otherwise affect the Unauthorized Transmitter Alert (UTA) feature.

Step 1 Have all transmitters which are to operate the system at hand. Then, turn the ignition “on”.

Step 2 Within 5 seconds of turning on the ignition, press the Valet Switch 5 times. The horn will briefly sound, confirming that for the next 10 seconds the system is ready to learn a transmitter/controller code. To enter a code, simply press and release the “**lock**” button. When the first code is learned all existing stored codes will be erased.

Step 3 Press the “**lock**” button on each remaining transmitter one at a time. The system will chirp the siren once to confirm that each was learned. The transmitter’s other three button's functions will automatically be assigned when the “**lock**” button is learned. If a code is not received within a 10 second period, the learning process will automatically terminate, as indicated by another siren burst.

If the Unauthorized Transmitter Alert feature is on, programming a transmitter to the system will activate the Unauthorized Transmitter Alert warning and the extended Status Light visual display; for the next 48 hours the siren will sound a brief series of chirps every time the vehicle’s ignition key is turned on. The following special procedure programs the transmitters and also turns the Unauthorized Transmitter Alert feature on.

Special Programming procedure to turn On the UTA feature: Using this method to program transmitters or optional controllers, and to turn on or turn off the Unauthorized Transmitter Alert feature.

Follow the same steps as the Standard Programming, but on any transmitter/controller being programmed instead of pressing the “**lock**” button, press the “**lock**” and the “**unlock**” buttons together. This action turns **on** the Unauthorized Transmitter Alert feature and at the same time programs the transmitter or controller to operate the system.