

# ***OWNER'S MANUAL***

*for*

**AL-1000-E**

This device complies with FCC 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 or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

One or more of these patents may apply to this product:

#5,612,669 #5,654,688 #5,663,704 #5,729,191 #5,818,329 #5,612,578 #5,739,747 #382,558 #385,878  
#5,750,942 #5,739,748 #5,719,551 #406,107 #701,285 #5,973,592 #5,982,277 #5,986,571 #6,011,460  
#6,037,859 #6,049,268 #6,130,605 #6,130,606 #6,140,938 #6,140,939 #6,150,926 #6,144,315 #6,184,780  
#6,188,326 #6,243,004 #6,249,216 #6,275,147 #6,297,731 #6,320,514 #6,320,498  
Foreign Patent #199700312 #EP0817734B1 #98906445.6 #2,320,248 #701,285

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# Introduction to the Excalibur Vehicle Security System

Pressing the “**lock/arm**” and “**unlock/disarm**” buttons together activates the 3rd channel output.

Pressing and releasing the “**arm/lock**” button arms the security system and locks the doors.\* Pressing and holding this button for three seconds will first arm, and then activate the Panic feature, locking the doors.

Lights when transmitting.

Pressing and releasing the “**disarm/ unlock**” button disarms the system and unlocks the doors unless the system is activated. The unlock operation may be configured so that pressing this button once disarms the system and unlocks only the driver's door, and pressing a second time unlocks all of the doors. Pressing and holding this button for three seconds will first disarm, and then activate the Panic feature, unlocking the doors.

Pressing the “**II**” button for two seconds can be used to activate an extra output, or “2nd channel”, for an optional function such as trunk release. Pressing and releasing this button twice arms or disarms the system without the confirmation chirps.

The red “**III**” button is multi-functional- it may be programmed activate the Panic feature, without locking or unlocking the doors, or instead it can operate the 3rd channel output.

\* The Excalibur system must be connected to existing power doorlocks. In some cases, this may require optional parts or labor.

Congratulations for your choice of a new Excalibur vehicle security and convenience system by Omega Research and Development. You will find that your new system will give you years of trouble-free convenience and protection. To learn how to operate your system, please take a few moments to become familiar with the following three principal user components: the **Remote Transmitter**, the **Status Light** and the **Valet Switch**.

The **Remote Transmitter** operates your system, and has four push-buttons, each having a pictograph as to function. The basic operations are described on the facing page. Each Excalibur system is capable of being operated by up to four different remote transmitters. In addition, this system may be easily upgraded to 2-way control, with the Omega Echo. This option allows you to both control your system's operations, and to receive status pages from it, which are audible alerts and as a visual display upon an easy-to-understand LCD screen. Programming additional or replacement transmitters, and a description of the Echo's operations, are in later sections of this booklet.

The **Status Light** shows at a glance the various conditions that the security system can be in, and also serves as a visual deterrent to break-ins and theft. The Status Light may be either red or blue.

The **Valet Switch** is used to place the system into "Valet Mode", which turns off any automatic system functions, such as Last Door Arming or Automatic Rearming, and also prevents arming the system via the remote transmitter. The Valet Switch is also used, with the ignition key, to disarm the security system in the event the transmitter becomes inoperable. It is also used for programming features and transmitters.

**The Status Light and Valet Switch can be mounted together, within a special housing, or independently custom-mounted by the installer. If the optional 2-way Echo controller is used, the Status Light and Valet Switch are likely on the window-mounted Echo transceiver unit.**

# Using the Excalibur System

Your Excalibur system is designed to deter theft of both your vehicle and its contents. **“Arming”** your system turns on its protection, disabling the vehicle’s starter and locking the doors. Once the system is **Armed**, any intrusion attempt will **Activate** it, sounding the electronic “Psyren” psycho siren and flashing the parking and interior lights to attract attention. The unique and patented Psyren psycho siren actually produces the sounds of two different sirens at once, ensuring that it won’t be ignored like all of the other “common” car alarms. **Disarming** the system turns off the protection, unlocking the doors and turning on the parking and interior lights, allowing lighted access to, and normal use of, the vehicle.

## There are two methods of arming the Excalibur:

- 1-** The first method is to use the transmitter, by pressing and releasing its **“lock/arm”** button. The system must not already be armed or be in Valet Mode, and the vehicle’s ignition key must be off.
- 2-** The second method is Last Door Arming, which configures the system to automatically arm itself every time you exit the vehicle. This method of arming is programmable, and may be used or not used as desired.

## Arming the System Using the Transmitter

The system can always be armed from the transmitter, if the ignition key is “off” and the system is not in the Valet Mode. To arm the system, exit the vehicle, close all of the doors, and simply **press and release the “arm/lock” button once**. The parking and interior lights will flash once, the siren will chirp once and the Status Light will begin to flash, confirming that the system is armed. In addition, the doors will lock and the starter interrupt will engage to prevent any attempt to start the vehicle. Your

security system is now fully armed, and is ready to respond if an intrusion attempt is detected.

The Excalibur system's separate **"arm/lock"** and **"disarm/unlock"** button design allows repetitive operation- if already armed, pressing the **"arm/lock"** button will simply rearm the system, and vice versa when pressing the **"disarm/unlock"** button.

**Arming Bypass:** Upon arming, if any system sensing circuit is inoperable, that circuit only will automatically be bypassed. When an unsecured sensing circuit is in a bypassed state, all other normally operating circuits will be protected. Should the bypassed circuit become secured, it will automatically be reinstated for protection 5 seconds later. When certain protection circuits are bypassed, such as the hood/trunk and impact sensor, and the system is armed, it will indicate this by chirping the siren three times and flashing the parking lights three times instead of the normal arming indication of one chirp and one flash.

For example, should the trunk be open, you can still arm the system with the transmitter, and in this case the arming indicator will be 3 siren chirps and 3 parking light flashes. Arming Bypass will only operate when arming the system with the transmitter.

**Sensor Bypass:** When arming the Excalibur system with the transmitter, you may conveniently and easily temporarily deactivate the impact sensor without affecting the system's other sensing circuits. To deactivate the sensor, arm the system by pressing the **"arm/lock"** button, then press and release the transmitter's **"II"** button within three seconds. You will hear a second siren chirp confirming that the security system has armed without the sensor protecting the vehicle. The next time the system is armed normally with one **"arm/lock"** button press, the sensor will again be part of your protection.

## **Automatic "Last Door Arming" of the System**

The Excalibur can also be programmed to automatically arm itself, and in this process, to lock or not lock the doors. When this feature is utilized, closing the vehicle's last door will cause the siren to

chirp once, the parking and interior lights to flash once and the Status Light to start flashing rapidly. Thirty seconds later the siren will chirp again and the lights will flash again, the doors will lock (which is separately programmable) and the Status Light will slow to a steady flash, confirming that the security system is fully armed. If a point of entry is reopened before the single siren chirp at 30 seconds, the Last Door Arming process stops, and will reset to start over when the point of entry is again closed. All protected entries must be closed to initiate the Last Door Arming sequence.

To temporarily prevent the system from automatically Last Door Arming, you have these options: put the system in Valet Mode (page 13), leave the door open, or, in most cases turning on the dome light may cause the system to detect that your door is still open. Leaving the ignition key turned "on" is not recommended.

Last Door Arming offers a high level of security, since you do not have to remember to arm the security system every time you leave the vehicle, and using it may entitle you to an insurance discount (please check with your agent or carrier).

## **While the System is Armed, and should it become Activated**

While the security system is armed, the Status Light is always flashing. Should any intrusion attempt be detected, the system will instantly activate, or "trigger". Once triggered, the Excalibur loudly sounds the siren and flashes the parking and interior lights on and off. When it is first triggered, the Status Light changes its flash pattern, and the doors will automatically relock. Should a door be open when the system triggers, it will wait until the door is closed, and at that time relock the doors. The automatic relocking of the doors denies access to the thief, and is just one of the many exclusive patented features of the Excalibur.

The siren will sound and the parking and interior lights will flash for 30 seconds unless you disarm the system first (60 seconds, instead of 30, is a programmable option). If all protected entries are secure at the end of 30 seconds, the system will stop and rearm itself, ready to detect further entry attempts.



If there is a protected entry still open or the impact sensor still in a violated state at the end of 30 seconds, the system will reactivate for two more 30 second cycles. In this case the system will stop after a total of 3 cycles and rearm automatically, and then ignore only the open entry or violated sensor. When the entry is closed or the sensor is reset, protection will begin instantly for the formerly affected circuit.

Anytime the security system triggers, the Status Light will indicate which protected zone triggered the system by flashing two, three or four times between pauses. This “Zone Violation” code will continue to flash, even after disarming. The system can hold two different violation codes in its memory, which is cleared by turning the ignition switch “on”.

Once the Excalibur has been activated and reset, the disarming confirmation changes to make the user aware that it has done so. This is explained in the next section.

## Disarming the System

### There are two methods of disarming the Excalibur:

- 1- The primary method is to use the **transmitter**, by pressing and releasing its “**unlock/disarm**” button. This is the normal “daily use” method.
- 2- The second method is an “**Emergency Override**” alternative, should the transmitter become lost or inoperable. This method uses the Valet Switch, but the vehicle’s ignition key is also required.

### Disarming the System Using the Transmitter

**Press and release the transmitter’s “disarm/unlock” button once** to instantly disarm the system, disengaging the starter interrupt and unlock the doors. If you have the optional unlock driver's door feature, then upon disarming only the driver's door will unlock, and if the transmitter’s “**disarm/ unlock**” button is pressed again at anytime thereafter, all of the doors will unlock.

Disarming is confirmed by the siren chirping twice, the Status Light turning off, and the parking lights flashing twice, then with the interior lights illuminating for 30 seconds for approach illumination. The lights will turn off instantly if the ignition switch is turned "on" before the 30 seconds expires.

**If the Excalibur was activated and reset itself:** The disarming confirmation will no longer be 2 siren chirps, and the parking lights flashing twice before staying with the interior lights. Instead, the system will respond with 4 siren chirps and the parking and interior lights flashing 4 times before staying on for 30 seconds. The Status Light will change to flashing two to four times between pauses as a "Zone Violation" code to indicate which protection circuit triggered the system (2 flashes, hood/trunk; 3 flashes, doors; 4 flashes, impact sensor). These special audible and visual disarming indications, and Zone Violation code, will remain this way until the ignition key is turned "on".

**Safety Disarm/Storm Mode:** While the system is activated, i.e. sounding the siren and flashing the lights, pressing the "**disarm/unlock**" transmitter button will disarm the system, but not unlock the doors. This safety feature ensures that the vehicle remain secure should the system require disarming due to being activated from nuisance or malicious false sensory inputs, such as typically produced by severe weather conditions. To remotely unlock the doors if the system is disarmed while activated, simply repeat the disarm operation by pressing and releasing the "**disarm/unlock**" transmitter button again. If disarmed from a panic mode, the normal disarm indications are present, including the unlocking of the doors.

**Automatic Rearming Feature:** Automatic Rearming is a programmable feature which ensures that your system is never inadvertently disarmed. It is possible to accidentally or unknowingly operate the transmitter from a pocket or purse. You may not even be aware of an accidental disarming due to the enhanced operating distance offered by the Excalibur's extended range transmitter.

Automatic Rearming can be paused by opening the door or stopped completely by turning the

ignition key "on". Also, Automatic Rearming can be cancelled by the Safety Disarm/Storm Mode feature; if the system is disarmed while triggered, Automatic Rearming will not occur. Automatic Rearming is confirmed by a fast flashing Status Light after disarming, unless the system was triggered, in which case a Zone Violation code will flash instead.

## **Disarming the System by Emergency Override**

Should the transmitter become lost, damaged, or its batteries become exhausted, the Valet Switch and the vehicle's ignition key may be used to disarm the system:

**Step 1** With the system in the armed condition, enter the vehicle via the driver's door (be aware that the system will activate to an alarm condition when the door is opened).

**Step 2** Using the ignition key, turn the vehicle's ignition switch on.

**Step 3** Within 5 seconds press and release the Valet Switch one time. The system will disarm.

**The number of Valet Switch presses which are required for the Emergency Override is custom-programmable!** This is the SecureCode feature, which is described on page 14. **The above Emergency Override instructions reflect the "as received from the factory" default setting.**

## **Remote Panic Feature**

Should you feel threatened, or the need to attract attention, you can activate your system's remote "Panic" feature at any time by pressing and holding for 3 seconds any of these three transmitter buttons: "arm/lock", "disarm/unlock" or the red "III" button. Your system will respond by sounding the siren and flashing the parking lights for the normal activated alarm period of 30 seconds. Further, the Excalibur system features an unique "enhanced" remote Panic operation, regarding additional

operations during Panic, and in association with the transmitter button used in it's activation or deactivation:

- Activating Panic with the “**arm/lock**” button will first lock the doors, arming the system and engaging the starter interrupt, preventing the engine from being started.
- Activating it with the “**disarm/unlock**” button will unlock the doors, disarming the system and disengaging the starter interrupt, which will allow the engine to be started.
- Activating Panic with the “**III**” button will not affect the system's armed or disarmed status; the doors locked or unlock condition; nor will it affect the starter disable circuit.

To disengage remote Panic, simply press and release any one of the same three transmitter buttons, or, allow it automatically stop after 30 seconds.

- Deactivating Panic with the “**arm/lock**” button will stop Panic, and leave the system armed with the starter interrupt engaged, and the doors locked.
- Deactivating it with the “**disarm/unlock**” button will stop Panic, and leave the system disarmed with the starter interrupt disengaged, and the doors unlocked.
- Deactivating Panic with the “**III**” button will stop Panic, and leave the system in the same state it was in at the moment Panic started, without locking or unlocking the doors.
- If the system is allowed reset itself from remote Panic, it will enter the armed state, locking the doors and engaging the starter interrupt, regardless of which of the three buttons was used to activate it.

Finally, enhanced remote Panic's flexibility makes it possible to move the 3rd channel output from the “**lock/arm**” and “**unlock/disarm**” buttons together to the red “**III**” button. When taking advantage of this programmable feature, the “**III**” button's Panic operation moves to the “**lock/arm**” and “**unlock/disarm**” buttons.

# Using the Valet Switch

The Valet Switch has several functions:

- Placing your Excalibur security system into **Valet Mode**, which prevents it from arming.
- Should your transmitter be lost or become inoperable, the Valet Switch, **and the ignition key**, can be used to disarm the system with an **Emergency Override**.
- It is also used in the procedures for programming features and programming transmitters to operate the Excalibur system. These uses of the Valet Switch are described in the programming sections.

The Valet Switch is an important part of your Excalibur system; be sure that you know its location!

**Valet Mode:** Anytime that the system is **disarmed**, simply press and hold the Valet Switch for 2 seconds to activate the Valet Mode. The system will confirm that it is entering Valet Mode by chirping the siren twice, flashing the parking lights twice, and the Status Light will illuminate and stay on. The system will remain in Valet Mode until it is removed. While in Valet Mode, although the system will not arm, the transmitters will still lock and unlock the doors, operate the remote Panic feature, 2nd channel and 3rd channel outputs. The doors will also lock when the ignition key is turned "on" and unlock when it is turned "off". While the security system is in the Valet Mode, every time the ignition key is turned "off", the siren will chirp once as a reminder.

To turn off Valet Mode, simply press the Valet Switch; the Status Light will turn off confirming the system's exit from Valet Mode.

**Emergency Override:** If the system is in the **armed** state or **activated** condition, however, it cannot be placed into Valet Mode. Instead, an Emergency Override must be used to disarm the system (after which it may be placed into Valet Mode if desired). To perform an Emergency Override, as

described on page 11, enter the vehicle (the system will most likely activate or already be activated to a triggered alarm condition. Using the ignition key, turn the vehicle's ignition switch on, and within 5 seconds press and release the Valet Switch. The system will disarm.

**SecureCode:** "SecureCode" allows the user to customize the number of Valet Switch presses which are required to successfully perform an Emergency Override. **The basic Emergency Override procedure is described on page 11.** Instead of a single "1 press" of the Valet Switch which would be required in order to perform an Emergency Override, two stages of Valet Switch presses must be made. In each of the two stages, the Valet Switch will need to be pressed 1 through 9 times, as programmed by the user. This is the Emergency Override procedure if the system has programmed with a customized SecureCode:

**Step 1** With the system in the armed condition, enter the vehicle via the driver's door (be aware that the system will activate to an alarm condition when the door is opened).

**Step 2** Using the ignition key, turn the vehicle's ignition switch on.

**Step 3** Within 5 seconds press and release the Valet Switch the same number of times that have been programmed for stage #1.

**Step 4** After a few seconds, the siren will stop sounding, chirp once, and then resume sounding.

**Step 5** Now, within 5 seconds press and release the Valet Switch the same number of times that have been programmed for stage #2. Within a few seconds the siren will stop sounding, and the unit will disarm.

Once the system is disarmed, if Valet Mode is desired, just press and hold the Valet Switch for 2 seconds to place the system into Valet Mode. Should a mistake be made entering the SecureCode, after

a failed attempt to achieve SecureCode, the ignition switch must be turned off, then on again before another attempt is made. Should two failed SecureCode attempts be made, the system will ignore any further presses of the Valet Switch for two minutes.

In addition to Emergency Override, if any of the three anti-carjacking features are utilized, a correct customized SecureCode would also be required to turn off anti-carjacking once it has become fully activated. How to program your own customized SecureCode is explained on page 25.

## The Status Light

The Status Light visually indicates the operational condition of the system, in addition to providing visual deterrence. The Status Light may be either red or blue; a blue light is included with the system, a red light is available as an option, and a red Status Light is used in the optional Echo 2-way controller window-mountable transceiver unit. Regardless of color, the Status Light operations are the same.

### Security System Status:

All of these Status Light indicators refer to the system's "alarm" operations:

- **Off** indicates that the alarm is disarmed, and also not in the process of Last Door Arming or Automatic Rearming (both of which are programmable, and must be turned on to operate).
- **On Constantly** indicates that the system is in Valet Mode.
- **Flashing Slow** indicates that the alarm operation is fully armed.
- **Flashing Fast** indicates that Last Door Arming or Automatic Rearming is in progress.

### Zone Violation:

Once it is armed, should the system trigger and enter an alarm condition, the Status Light will change from flashing slowly to flashing in a coded sequence which indicates which protected zone caused the alarm condition.

- **2 Flashes** indicates that the system was triggered by the hood or trunk being opened.
- **3 Flashes** indicates that the system was triggered by a door being opened.
- **4 Flashes** indicates that the system was triggered by the sensor detecting a shock or impact to the vehicle.

Once a Zone Violation code is set, the Status Light will continue to flash this code while the system is still armed, after it's disarmed, and until the vehicle's ignition is turned on. The system's Zone Violation memory can store two consecutive zone violations. If there have been multiple violations, the Status Light will replay the two most recent violations in the order in which they occurred.

### **Number of Authorized Transmitters:**

Every time the vehicle's ignition key is turned on, the Status Light will show the number of transmitters which are capable of operating the system:

- **1 to 4 Flashes** indicates the number of authorized transmitters. This display, Automatic Transmitter Verification, lasts for 10 seconds unless transmitters have been programmed to operate the system within the last 48 hours. In this case, the indicator changes to Unauthorized Transmitter Alert, extending the Status Light display to last for 90 seconds, and also adds a brief period of siren chirps when the ignition key is first turned on.

## **Audible and Visual Indications**

The Excalibur security system's audible output and the vehicle's parking and interior lights are utilized to indicate a number of events or processes associated with the system's operation:

- 1) One siren chirp and one light flash upon closing the vehicle's door: *The system has started a passive Last Door Arming countdown and will become armed after the 30 second countdown expires. This*



*chirp indicates that the starter interrupt will engage and the doors will lock when the alarm becomes fully armed in 30 seconds.*

- 2) One siren chirp, one light flash, & doors lock: *The system has armed passively or actively from the transmitter. The starter interrupt has engaged and the doors have locked. The auxiliary sensor will become operational 5 seconds later.*
- 3) One siren chirp after the arming chirp previously mentioned: *The auxiliary sensor circuit is bypassed by pressing the "II" transmitter button within 3 seconds of pressing the "arm/lock" transmitter button.*
- 4) One siren chirp, and no light flash, but only at the moment the ignition switch is turned "off": *The system is in Valet Mode, and will not arm actively or passively.*
- 5) Two siren chirps and the parking lights stay on for 30 seconds:  
*The system has just been disarmed or 2nd channel output has been activated.*
- 6) Two siren chirps and two light flashes: *The system has been placed into the Valet Mode.*
- 7) Four siren chirps, four light flashes, and then lights stay on for 30 seconds: *The system has just disarmed and was activated while you were away. The system will have this disarming confirmation until the ignition switch is turned "on".*
- 8) Siren sounding, changing sounds every 5 seconds, and the parking lights flashing on and off: *The system is in an activated state. This will also relock the doors.*
- 9) A series of siren chirps lasting two seconds after the ignition switch is turned "on": *The Unauthorized Transmitter Alert feature (page 20-21) has been activated.*
- 10) Three siren chirps upon arming the system: *The Zone Bypass feature is indicating that the system is arming, but bypassing a violated protected zone.*
- 11) Three siren chirps while the system is armed: *The Prewarning feature has been activated.*

## Auxiliary Shock Sensor with Prewarning

Your Excalibur vehicle security system includes an auxiliary impact sensor which greatly increases the effectiveness of your system. A light shock or impact to the vehicle will initiate Prewarning, while a heavier shock or impact will fully activate the security system. Other sensors are available, including a radar-technology sensor that can detect moving objects inside and outside the vehicle.

The sensor may be temporarily bypassed using the transmitter- within 3 seconds after arming the system, by pressing the “II” button. The system will respond with one chirp, confirming that the sensor is bypassed. If the system is triggered by the shock sensor, the Zone Violation feature will flash the Status Light four times between pauses.

When the sensor is triggered by a light impact or shock to the vehicle, the security system will respond by chirping the siren 3 times and locking the doors. After this Prewarning circuit has been triggered five times it will automatically shutdown until the alarm system is disarmed, then armed. This will prevent the security system from being a nuisance to the general public, and in some cases allowing compliance with local noise ordinances.

## 2nd Channel and 3rd Channel Outputs

The **2nd channel output**, which is operated by pressing and holding the transmitter’s “II” button for 1 second, is designed specifically to operate your vehicle’s *electric* power trunk release. Your vehicle will respond by releasing the trunk lid or rear hatch, chirping the siren twice, turning on your parking and interior lights for 30 seconds, unlocking the doors, and disarming the system if it was armed. The 2nd channel output will not operate when the ignition switch is "on" unless the vehicle's door is open. If desired, the security system can be programmed to remain armed when this feature is used, and connection of the 2nd channel may require extra parts or installation.

The Excalibur also has a **3rd channel output** which is similar to the 2nd channel, but with special operational design differences which make it ideal for use with an optional remote engine starting module. To operate it, press and hold the transmitter's "**arm/lock**" or "**disarm/unlock**" buttons together for 1 second. Or, a programmable feature allows the pressing of the "**III**" button only to operate this output. The 3rd channel output will operate regardless of the ignition switch being "on" or "off", and there is no audible or visual confirmation. Activating it also puts the system into a mode in which, if it detects the engine being started, that it will remain armed but ignore the impact sensor so that remote starting can be accommodated. Connection of the 3rd channel may require extra parts or installation.

## **Anti-Carjacking Protection**

The Excalibur is equipped with three separate Anti-Carjacking protection features, whose operation may be selectively activated by the ignition, by an open door, or by the transmitter. All three are programmable, and must be turned on to operate. Once activated, the user has 53 seconds to cancel the Anti-Carjacking protection process by pressing the Valet Switch once. If Anti-Carjacking is not cancelled, 53 seconds after being activated the siren will begin to chirp for 7 seconds to alert the user that the system is about to enter into an alarm condition. The Valet Switch may still be pressed once during this period to cancel the Anti-Carjacking process.

If the Anti-Carjacking process is not cancelled before the 60 second countdown expires, the system will enter an alarm condition, sounding the siren and flashing the parking lights. 30 seconds after this occurs, or should the ignition be turned off in the meantime, the stater interrupt will engage.

Once the system enters the alarm condition, it will not respond to the transmitter, nor will the system reset automatically after 60 seconds, and it can only be disengaged by:

**Step 1** Turning the vehicle's ignition off.

**Step 2** Turning the ignition back on.

**Step 3** Within 5 seconds, perform an Emergency Override using the Valet Switch. If the Secure Code has been customized, the correct number of Valet Switch presses must be made.

The three types of Anti-Carjacking protection features are:

**Anti-Carjacking protection activated by the vehicle's ignition** has the process start every time the vehicle's ignition is turned on. The Valet Switch must be pressed within 60 seconds every time the vehicle is started to cancel Anti-Carjacking. This is programmable feature #21.

**Anti-Carjacking protection activated an open door** has the process start should a door be opened after the vehicle is started and the engine is running. The Valet Switch must be pressed within 60 seconds after the door is opened to cancel Anti-Carjacking. This is programmable feature #22.

**Anti-Carjacking protection activated using a transmitter** has the process start by pressing and holding the transmitter's "III" button for 3 seconds, but only if the vehicle's ignition is on. The Valet Switch must be pressed within 60 seconds after this is done to cancel Anti-Carjacking. This is programmable feature #23.

## Transmitter Protection

The Excalibur features several security safeguards in one of the most vulnerable areas of any remotely controlled system. A basic safeguard is Code Jumping; as the transmitter sends a signal over the air to operate the system, it is quite feasible for a thief to record these coded signals, for later playback to the system to operate it and thus defeat it. Excalibur's Code Jumping renders such "code grabbing" devices useless by randomly changing each signal that the transmitter sends.

Another weakness found in all remote-controlled security and keyless entry systems lies in their

ability of being operated by more than one transmitter. Excalibur has patented, unique operations which shows the number of transmitters capable of operating it, and also has a special warning should transmitters have recently been programmed to operate the system.

**Automatic Transmitter Verification** shows the total number 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.

**Unauthorized Transmitter Alert** sounds a brief series of siren chirps every time the vehicle's ignition is turned on, if a transmitter has been programmed, for 48 hours thereafter. The 10 second visual display of number of operating transmitters, described previously, will also increase to being displayed for 90 seconds instead of 10 seconds. 48 hours after the programming occurred, the warning chirps disappear and the Status Light flashing the number returns to being displayed for 10 seconds.

## Optional Backup Battery

The Excalibur security system is designed for easy compatibility with a Backup Battery power option. The Backup Battery option will allow the security system to operate its most vital functions even if power is removed from the system's control module or if the vehicle's battery is disconnected. The Omega dealer from which you purchased your vehicle security system can provide more details on the exact operation of the system when it is equipped with this option.

# How to Program Transmitters

The Excalibur comes with two pre-programmed transmitters, but as many as four may be used to operate the system. Each transmitter has its own unique and ever-changing digital “code”, which is programmed to operate the system by a special “learning” procedure. When adding transmitters to operate the security system, all previous transmitter codes are deleted, so all transmitters which are to operate the system must be programmed at the same time. To program transmitters, follow this process:

- Step 1** Have all transmitters which are to operate the system at hand. Turn the ignition “on”.
- Step 2** Within 5 seconds of turning on the ignition, press the Valet Switch 5 times. The siren will briefly sound, confirming that for the next 10 seconds the system is ready to learn a transmitter code. To enter a transmitter code, simply press and release the transmitter’s **“arm/lock”** button (the button which is designed to arm the system). When the first transmitter code is learned all existing stored transmitter codes will be erased.
- Step 3** Press the **“arm/lock”** button on each remaining transmitter. The system will chirp the siren once to confirm that each transmitter code was learned. The other three transmitter button's functions will automatically be assigned when the **“arm/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.

**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.**

# How to Program Features

The Excalibur has 25 programmable features, most of which allow the user to customize the system's operation (several programmable features are installation-related). "Features Programming Mode" is the process for changing these features. The vehicle ignition key and the Valet Switch are used to enter the Programming Mode, then the transmitter is used to change features. Once the system is in Programming Mode, a 10 second period without programming activity will cause the system to automatically exit Programming Mode. Features can be selected in any order as desired.

## To Enter Programing Mode and Change Features:

**Step 1** Turn the vehicles's ignition on.

**Step 2** Turn the ignition off.

**Step 3** Within 5 seconds, press and release the Valet Switch 5 times.

- The siren will chirp then sound briefly and the Status Light will flash to confirm that the system is entering Programing Mode.
- Once in Programming Mode, if 10 seconds of no programming activity occurs, the system will exit Programming Mode. Programming activity is the pressing of the Valet Switch to select a feature or pressing a transmitter button once a feature is selected.

## To Access a Feature:

**Step 4** Within 10 seconds, press and release the Valet Switch the same number of times as the desired feature's number.

- The siren will chirp and the Status Light will flash the same number times as the Valet Switch was pressed to indicate the feature number which may now be programmed..

## To Change a Feature:

**Step 5** After accessing the desired feature, within 10 seconds press and release either the transmitter's "**arm/lock**" button or its "**disarm/unlock**" button.

- Pressing the "**arm/lock**" button turns the feature ON; the siren will chirp once and the Status Light will turn on.
- Pressing the "**disarm/unlock**" button turns the feature OFF; the siren will chirp twice and the Status Light will turn 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 and release the Valet Switch the number of times as the next desired feature's number.

- Again the siren will chirp and the Status Light will flash as many times as the Valet Switch was pressed to indicate the new feature number which is now accessed.
- Use the transmitter as described in **Step 5** to change the feature as needed.
- Repeat this **Step 6** for each additional feature until all features are programmed.

**Step 7** Turn the vehicles's ignition on or allow 10 seconds to pass without performing any programming actions.

- The siren will sound briefly and the Status Light will go out to confirm that the system has exited Programming Mode.

The pages following explain each of the programmable features in detail, and on pages 32-33 of this booklet is a convenient feature programming checklist, which greatly simplifies the features programming process.



# The Programmable Features

## **Feature #1 SecureCode (Factory Default Setting 1 Press)**

SecureCode is a unique patented feature which allows you to custom select the number of Valet Switch presses in two stages, instead of a single “1 press”, which would be required in order to perform an Emergency Override. If any of the three anti-carjacking features are utilized, a customized SecureCode would also be required to turn it off once it is fully activated. The SecureCode operation is described on page 14.

### **To custom program a new SecureCode:**

- Step 1** Follow Steps 1 to 4 in the previous “How to Program Features” instructions; at Step 4 the Valet Switch will be pressed and released once (the siren chirps once) to access “feature #1”.
- Step 2** Within 10 seconds slowly press and release the transmitter’s “**arm/lock**” button the number of times equal to the desired SecureCode for stage 1, allow the system to respond to each transmitter button press with a siren chirp before pressing the button again.
- Step 3** After entering the first stage by pressing the transmitter “**arm/lock**” button the desired number of times, and receiving a chirp for each press, wait for the system, after the final button press, to chirp the siren again the total number of times that the button was pressed.
- Step 4** Continue to configure stage 2 of the SecureCode by now pressing and releasing the “**disarm/unlock**” button the number of times desired for the stage 2. This should be done in the exact same fashion as the stage 1 entry- press the “**disarm/unlock**” button, wait for a single chirp before pressing the button again, and then when final button press is done, wait after the single chirp for the siren to chirp the total number entered Valet switch entry.

## **Feature #2 Last Door Arming**

**(Factory Default Setting Off)**

“Last Door Arming” has the system automatically arm itself every time you exit the vehicle (the complete operation is described on page 7). This feature turns that operation on or off.

## **Feature #3 Automatic Rearming**

**(Factory Default Setting Off)**

“Automatic Rearming”, described on page 10, prevents the system from becoming accidentally disarmed.

## **Feature #4 Automatic Starter Interrupt**

**(Factory Default Setting Off)**

Turning on this feature will cause the Starter Interrupt output to automatically engage 90 seconds after the ignition switch is turned "off", and also 90 seconds after disarming the system. This automatic engagement will occur even if the security system is in a disarmed state, but not if it is in Valet Mode. Once the Starter Interrupt output is activated, the system must be armed, then disarmed with the transmitter, or placed into the Valet Mode by pressing and holding the Valet Switch for 2 seconds to disengage it. There are no Status Light indications with this automatic form of Starter Interrupt.

## **Feature #5 Doors Lock With Last Door Arming**

**(Factory Default Setting Off)**

This feature adds the automatic locking of the doors to the Last Door Arming operation. If this feature is added to feature #4, when the system becomes armed 30 seconds after closing the last door the doors will also lock . This feature will operate only if feature #2 is turned on.

## **Feature #6 Doors Lock With Automatic Rearming**

**(Factory Default Setting Off)**

This feature adds the automatic locking of the doors to the Automatic Rearming operation. If this feature is added to feature #3, when the system rearms itself 90 seconds after being disarmed the doors will also lock. This feature will operate only if feature #3 is turned on.

## **Feature #7 Doors Lock With Ignition On**

**(Factory Default Setting On)**

This feature has the system automatically lock the vehicle's doors every time the ignition key is turned on. An exception would be if feature #10 is turned on ("Open Door Bypass of Automatic Locking"), and a door is open when the ignition key is turned on.

## **Feature #8 Ignition Off Unlock #1**

**(Factory Default Setting On)**

Similar to the previous feature, this feature automatically unlocks the vehicle's doors every time the ignition key is turned off, with the same exception regarding a door being open when the ignition is turned off, and feature #10 being on. On Crime Guard models with "Driver Door Priority Unlocking", this feature may control all doors' unlock operation, or only the driver's door. If the later, the next feature controls the ignition key unlocking of the remaining doors.

## **Feature #9 Ignition Off Unlock #2**

**(Factory Default Setting Off)**

Explained in the previous feature, if Driver's Door Priority is installed this feature controls the automatic unlocking when the ignition key is turned off of all doors except the driver's door.

## **Feature #10 Open Door Bypass of Ignition Locking**

**(Factory Default Setting On)**

This feature cancels the automatic locking or unlocking of the vehicle's doors should one of the doors is open when the ignition switch is turned on or off.

## **Feature #11 Confirmation Chirps**

**(Factory Default Setting On)**

This feature removes the system's 1 arming and 2 disarming confirmation chirps. When this feature is used to remove these chirps, the system will still have 3 chirps upon arming if a protected zone is violated, and still have 4 chirps upon disarming if the system was previously activated. Using this feature to turn off the arm and disarming chirps will also not affect the Prewarning operation, Unauth-

orized Transmitter Alert, nor will it affect the chirps used in transmitter or features programming.

### **Feature #12 Confirmation Chirps in Valet Mode (Factory Default Setting Off)**

While the system is in the Valet Mode, the transmitter will still remotely lock and unlock the vehicle's doors. This feature adds the confirmation siren chirps if the transmitter is used to lock or unlock the doors while the system is in Valet Mode.

### **Feature #13 30 or 60 Second Alarm Duration (Factory Default Setting 30 Seconds)**

This feature allows the choice of a 30 or 60 second Alarm Duration, which is the system triggering, or activating, sounding the siren, flashing the parking lights and locking the doors. When programming, pressing the transmitter's "arm/lock" button will select the 60 second setting; pressing the "disarm/unlock" button will configure the 30 second setting.

### **Feature #14 Parking Light Illumination Upon Disarm (Factory Default Setting On)**

This feature affects the parking light operation when the system is disarmed. When this feature is turned on, the parking lights flash once, and then light continuously for external illumination for 30 seconds unless the ignition key is turned on during that time. If this feature is turned off, the parking lights flash once only, and do not illuminate. This feature only affects the Excalibur's parking light operation, and not the interior light operation.

### **Feature #15 2nd Channel Also Disarms System (Factory Default Setting On)**

"2nd channel" is most commonly used to remotely open the vehicle's trunk, in which case the alarm should also disarm. This feature, turned on, configures the system to disarm when the 2nd channel is used. If turned off, the 2nd channel output will still occur, with 2 chirps, but no light flashes and the alarm will not disarm.

## **Feature #16 Double Unlock Pulse**

**(Factory Default Setting OFF)**

This feature is for certain installation-related issues pertaining to the vehicle itself, and are provided for the installer's use only. Some newer vehicles require a double pulse output wiring connection to remotely unlock the doors and/or to disarm a factory-equipped security system, which is what this feature provides.

## **Feature #17 3 or 45 Second Arming Delay**

**(Factory Default Setting 3 Second)**

When the system is armed, either by the transmitter or automatically, there is a brief period of time in which a system activation cannot occur. This allows the system to completely process the arming operations, and the vehicle to stabilize. In some cases more time is needed than the factory-set 3 seconds. This feature offers a longer 45 second delay. When programming, press the transmitter's **"arm/lock"** button to select the 3 second setting; or press the **"disarm/unlock"** button to configure the 45 second setting.

## **Feature #18 Steady Siren or Pulsed Horn**

**(Factory Default Setting Steady Siren)**

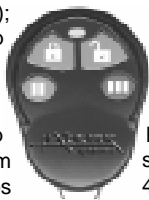
It is possible to utilize the vehicle's existing horn for the audible part of the system's operation. This feature changes the audible output of the system from the steady output required by the electronic siren to a pulsed output which is suitable for operating the horn. When programming, press the transmitter's **"arm/lock"** button to select the Pulsed Horn setting; or press the **"disarm/unlock"** button will configure the Steady Siren setting.

## **Feature #19 Confirmation Chirp Volume**

**(Factory Default Setting Medium Loud)**

This feature allows the choice of four different volume levels of the system's confirmation chirps. This feature operates regardless of the previous feature's "Steady Siren" or "Pulsed Horn" setting. All four transmitter buttons are used to program the four different levels, shown as follows:

Upper Left "arm/lock" Button =  
lowest chirp volume (8mS);  
system responds with 1 chirp



Lower Left "II" Button =  
medium high chirp  
volume (30mS); system  
responds with 3 chirps  
(default setting)

Upper Right "disarm/unlock" Button =  
medium low chirp volume (12mS);  
system responds with 2 chirps

Lower Right "III" Button=  
highest chirp volume (50mS);  
system responds with  
4 chirps

While program-  
ming this feature,  
the buttons can be repeat-  
edly and sequentially  
pressed, thus making it  
easy to hear and choose  
the setting with the best  
chirp volume.

## Feature #20 Total Closure Lock Output

(Default Setting OFF)

This is another installation-related feature, provided for the installer's use only. Should the vehicle have an existing "Total Closure" feature, this programmable feature gives the installer the option of configuring the Excalibur to operate this feature. Typically, on vehicles having total closure, 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. Should your vehicle be equipped with this operation, please inquire with the installer if it is possible to interface the Excalibur with the vehicle's total closure operation.

Turning this feature on changes the system's door lock output pulse from a .75 second pulse to be a 28 second duration output. **Note:** When this feature is turned on, during the 28 second period after arming the system, should either Upper Button be pressed, "Lock" or "Unlock", only the system's lock output will be stopped. Pressing either button again will normally operate the system, and at any time after the 28 second lock output period ends.

**Feature #21 Ignition Activated Anti-Carjacking Protection** (Factory Default Setting Off)

This form of Anti-Carjacking is initiated by the ignition key being turned on.  
The Anti-Carjacking protection, and the three ways to initiate it are described on pages 19-20.

**Feature #22 Door Activated Anti-Carjacking Protection** (Factory Default Setting Off)

This form of Anti-Carjacking is initiated by a door being opened.  
The Anti-Carjacking protection, and the three ways to initiate it are described on pages 19-20.

**Feature #23 Transmitter Activated Anti-Carjacking Protection** (Factory Default Setting Off)

This form of Anti-Carjacking is initiated by a signal from the transmitter.  
The Anti-Carjacking protection, and the three ways to initiate it are described on pages 19-20.

**Feature #24 Open Door Warning Upon Arming** (Factory Default Setting OFF)

When this feature is turned on, if one of the vehicle's doors is open when the system is armed via the transmitter, the siren will chirp 3 times and the parking lights will flash 3 times instead of once.

**Feature #25 "III" Button Operates Panic or 3rd Channel** (Factory Default Setting Panic)

This feature changes how the transmitter operates the remote Panic feature and the 3rd channel output. When this feature is in its optional setting, pressing the transmitter's "III" button for 1 second will operate the 3rd channel output. Panic can still be operated, by the alternative methods of pressing either the "arm/lock" or "disarm/unlock" button for 3 seconds.

When programming this feature, press and release the transmitter's "disarm/unlock" button to have the "III" button operate the 3rd channel output; or, press the "arm/lock" button to have it operate remote Panic.

# Features Programming Checklist

This checklist helps when programming features. Before attempting feature programming, please first carefully read pages 23-24 to become familiar with the programming procedure, and features' descriptions on pages 25-31. Mark each applicable box with "\" next to the feature to be changed before entering Features Programming Mode. As each feature is programmed, change its mark to "X".

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**Step 1** - Turn the ignition "off", and press the Valet Switch 5 times.

(the system will respond by briefly sounding the siren)

**Step 2** - Press the Valet Switch the same number of times as the feature number.

(the system will acknowledge the Valet Switch entry by repeating the same number of chirps)

**Step 3** - Press the transmitter's "**arm/lock**" button to turn the feature "on", or press the "**disarm/unlock**" button to turn the feature "off". (turning the feature "on" is indicated by one siren chirp; turning the feature "off" is indicated by two siren chirps)

**Repeat - Steps 2 and 3 for each feature to be changed**



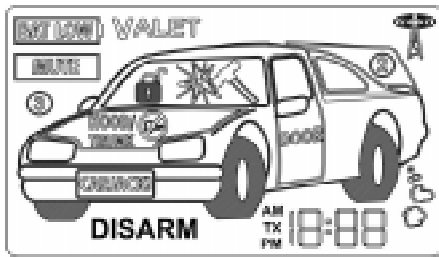
1	<input type="checkbox"/>	SecureCode	1 & 0 (see page 25)
2	<input type="checkbox"/>	Last Door Arming	OFF
3	<input type="checkbox"/>	Automatic Rearming	OFF
4	<input type="checkbox"/>	Automatic Starter Interrupt	OFF
5	<input type="checkbox"/>	Doors Lock With Last Door Arming	OFF
6	<input type="checkbox"/>	Doors Lock With Automatic Rearming	OFF
7	<input type="checkbox"/>	Doors Lock With Ignition On	ON
8	<input type="checkbox"/>	Ignition Off Unlock #1	ON
9	<input type="checkbox"/>	Ignition Off Unlock #2	ON
10	<input type="checkbox"/>	Open Door Bypass of Ignition Locking	ON
11	<input type="checkbox"/>	Confirmation Chirps	ON
12	<input type="checkbox"/>	Confirmation Chirps in Valet Mode	OFF
13	<input type="checkbox"/>	30 or 60 Second Alarm Duration	30 Seconds (" <b>disarm/unlock</b> ")
14	<input type="checkbox"/>	Parking Light Illumination Upon Disarm	ON
15	<input type="checkbox"/>	2nd Channel Also Disarms System	ON
16	<input type="checkbox"/>	Double Unlock Pulse	OFF
17	<input type="checkbox"/>	3 or 45 Second Arming Delay	3 Seconds (" <b>arm/lock</b> ")
18	<input type="checkbox"/>	Steady Siren or Pulsed Horn	Steady Siren ( " <b>disarm/unlock</b> ")
19	<input type="checkbox"/>	Confirmation Chirp Volume	Medium Loud (" <b>III</b> ")
20	<input type="checkbox"/>	Total Closure Lock Output	OFF
21	<input type="checkbox"/>	Ignition Activated Anti-Carjacking Protection	OFF
22	<input type="checkbox"/>	Door Activated Anti-Carjacking Protection	OFF
23	<input type="checkbox"/>	Transmitter Activated Anti-Carjacking Protection	OFF
24	<input type="checkbox"/>	Open Door Warning Upon Arming	OFF
25	<input type="checkbox"/>	"III" Button Operates Panic or 3rd Channel	Panic (" <b>arm/lock</b> ")

## The **OPTIONAL** Omega **ECHO** Transceiver / Controller

### An exiting upgrade option to your Excalibur

is a 2-way remote “transceiver” controller, the Omega Echo. The remote transceiver, in addition to operating your system just like the standard transmitter, also receives signals from the system and emulates the siren chirps and displays a variety of system conditions on its LCD screen. Your Excalibur can be operated by as many as four standard transmitters and/or Echo transceivers.

The Echo has the same four operational buttons as the standard transmitter- the “**arm/lock**”, the “**disarm/unlock**”, the “**II**” 2nd channel output button, and “**III**” button for remote Panic or 3rd channel output. The Echo transceiver has a fifth button, the “**Programming**” button; pressing this button will illuminate the LCD screen.



Echo Display Screen Icons

**Echo Remote Transceiver Icons:** The LCD screen on the remote transceiver has various icons which indicate system status. When the remote transceiver is used to operate the system, it receives back a signal which causes it to chirp (emulating the siren) and display the appropriate icons. Brief descriptions of each of the icons are:

- The digit readout is a clock, with AM and PM indication. This readout also shows how many transmitters/transceivers can operate the system.
- The “DISARM” will also show “ARM”; this indicates the Armed or Disarmed status of the system. Neither icon is present when the system is in Valet Mode.
- The locked or unlocked padlock (windshield) reflects the true locked or unlocked status of the doors (certain programmable features can automatically arm the system, but not lock the doors, and the doorlocks can be operated without affecting the alarm, as in Valet Mode). Arming with the transmitter/transceiver always locks the doors; disarming with the transmitter/transceiver will unlock the doors unless the system is activated and sounding.
- “VALET” indicates Alarm Valet Mode, replacing the “ARM” or “DISARM” icons. A musical tone occurs when placing the system into Alarm Valet Mode.
- When “BAT LOW” appears the transceiver’s 1.5 volt AAA battery should be replaced with a new battery. The Echo also periodically double chirps when the battery is low.
- The transceiver’s chirps and musical tones may be turned off, which makes the unit vibrate instead; “MUTE” indicates this state.
- The “3” within a circle appears when the 3rd channel output is operated.
- “HOOD/TRUNK” indicates that this zone the vehicle is or has been violated. If associated with the system being activated, the transceiver also emits chirps, until any button is pressed. In this case, the icon remains flashing until the ignition switch is turned on.
- If a remote starting attempt is made, and systems aborts it due to a violated safety circuit, the “crossed-out key” on the hood area will appear (this is accompanied by a musical tone).
- The “CARJACK” icon within the vehicle’s front tag frame indicates that this operation has been activated, which can be performed by any of three methods.
- On the vehicle’s windshield is a “hammer” and “impact” icon. When the shock sensor detects light

impact, causing the system to prewarn, the “impact” icon alone will momentarily appear, accompanied by three chirps. If the sensor detects a harder impact or breaking glass, activating the system, the full hammer and impact icon appears, and the transceiver chirps until any button is pressed, and the icon remains flashing until the ignition switch is turned on.

- The “DOOR” icon will indicate that the system was activated via the door detection circuit. The transceiver chirps until any button is pressed, and the icon remains flashing until the ignition is turned on.
- The “start” icon at the rear of the vehicle confirms remote starting. This icon is accompanied by a musical melody, and stays on while remote starting is operating; during which the puffs will change to appearing sequentially.
- The “2” within a circle indicates use of the 2nd channel output, which is most commonly used for a remote trunk release feature.
- The “transmitting tower” icon is an in-range indicator. It is present if the last transmission from the transceiver was answered by a return signal from the system. Should the transceiver be operated, and no return signal is received, this icon will disappear.
- The various lines at the upper rear of the vehicle graphic represent a unique Omega feature which allows the user to customize the vehicle type represented by the display. Options are: passenger car, pickup truck, and sport utility/van.

### **Other Omega Echo Notes:**

- The system will only transmit a signal to the Echo transceiver if the Echo was last used to operate the system. Example: if the transmitter is used to arm the system, the system will not transmit a signal which will cause the Echo to chirp and change its icons.
- If multiple Echo transceivers are programmed to operate the system, the system will send its signal to only one transceiver- the last one used.

- When the system does send a signal to the Echo transceiver, a few seconds is needed for this “handshake” to occur. If the system is operated rapidly, as in quickly repeating arm and disarm cycles, the Echo will not have time to receive the signal from the system, and therefore it will stop responding and reporting the system’s status. This symptom does not occur in normal operation.
- A final point to remember is that the Echo transceiver cannot receive a signal from the host alarm system while it itself is transmitting. For normal operations, the Echo’s buttons are pressed and released. Even when “Panic” is operated, the Echo button should be released as soon as “Panic” engages. Otherwise, the Echo cannot receive the signal from the system.

### Programming the Omega Echo:

The optional Omega Echo transceiver has several user-programmable features:

- ✓ **Chirp or Mute** The chirps may be turned off, and replaced with vibration.
- ✓ **Vehicle Type** Choices are a passenger car, pickup truck, or van/SUV.
- ✓ **Time Adjust** To set the Echo’s clock time.
- ✓ **Start Melody; and Stop Melody** These are played with remote starting.

Programming these features is a sequential process- the controller is placed into programming mode, then each programmable operation is accessed in turn, and either changed as desired, or left as is, and then the next step is accessed. Programming is done using the Echo unit’s three round side buttons:

- 1) **Press and hold the “P” button** **A-** At this time **Chirp or Mute** can be chosen by pressing the “:” button for 1 second.  
**OR**  
**B-** Hold this button for 5 seconds to enter programming mode.
- 2) **After 5 seconds the Echo chirps twice; release the “P” button;** the upper rear of the vehicle will flash; **Vehicle Type** may be chosen now.

- 3) **Press and release the “:” button**; each press of the button changes the vehicle from Passenger Car, then to Pickup Truck, and then to Van/SUV. When the desired type is flashing, **press and release the “P” button**; the **Time’s “Hours”** will flash, and may be set now.
  - 4) **Press and release the “:” button** to advance the hours, or **press and release the “:” button** to reverse the hours. When the Hours are correct (please note “AM” or “PM”), **press and release the “P” button**. The **Time’s “Minutes”** will flash, and may be set now.
  - 5) **Press and release the “:” button** to advance the minutes or **press and release the “:” button** to reverse the minutes. When the minutes are correct **press and release the “P” button**. The Echo will play a musical melody; this is the **Start Melody** which plays upon remote starting. One of five melodies may be chosen now.
  - 6) **Press and release the “:” button**. Each press of the button changes to the next melody, note that the LCD screen displays “S” and a numeral, which is the melody number. When the desired musical tone has been the last one played **press and release the “P” button**.
  - 7) The Echo will play another musical melody; this is the **Stop Melody** which plays when remote start engine run period ends. There are five different melody choices which can be made. **Press and release the “:” button**. Each press of the button changes to the next melody, note that the LCD screen displays a numeral, which is the melody number. When the desired musical tone has been the last one played, you may  
**leave the Echo undisturbed for 12 seconds, until it chirps once**  
**OR**  
**press and release the “P” button to scroll back through the features.**
- While the Echo programming must be “scrolled” through, programming mode can be exited at any

point within the menu by simply not pressing any buttons for 12 seconds. The Echo chirps once when it exits programming mode.

- If the Echo is configured for “MUTE” operation (vibrates instead chirping), then in programming it will not play the musical melodies. Instead, it vibrates when the remote start Melody and Stop Melody are accessed for programming.

**COLOR BACK COVER**  
**from a separate file**