

VIPER[®]



MODEL

280 HF

OWNER'S GUIDE

05/00 and up

[Limited Lifetime Consumer Warranty]

Directed Electronics, Inc. ("DEI") promises to the original purchaser to repair or replace with a comparable reconditioned model any DEI unit (hereafter the "unit"), excluding without limitation the siren, the remote transmitters, the associated sensors and accessories, which proves to be defective in workmanship or material under reasonable use during the lifetime of the vehicle provided the following conditions are met: the unit was professionally installed and serviced by an authorized DEI dealer; the unit will be professionally reinstalled in the vehicle in which it was originally installed by an authorized DEI dealer; and the unit is returned to DEI, shipping prepaid with a legible copy of the bill of sale or other dated proof of purchase bearing the following information: consumer's name, telephone number and address; the authorized dealers name, telephone number and address; complete product description, including accessories; the year, make and model of the vehicle; vehicle license number and vehicle identification number. All components other than the unit, including without limitation the siren, the remote transmitters and the associated sensors and accessories, carry a one-year warranty from the date of purchase of the same. This warranty is non-transferable and is automatically void if: the original purchaser has not completed the warranty card and mailed it within ten (10) days of the date of purchase to the address listed on the card; the unit's date code or serial number is defaced, missing or altered; the unit has been modified or used in a manner contrary to its intended purpose; the unit has been damaged by accident, unreasonable use, neglect, improper service, installation or other causes not arising out of defects in materials or construction. The warranty does not cover damage to the unit caused by installation or removal of the unit. DEI, in its sole discretion, will determine what constitutes excessive damage and may refuse the return of any unit with excessive damage. **TO THE MAXIMUM EXTENT ALLOWED BY LAW, ALL WARRANTIES, INCLUDING BUT NOT LIMITED TO EXPRESS WARRANTY, IMPLIED WARRANTY, WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF NON-INFRINGEMENT OF INTELLECTUAL PROPERTY, ARE EXPRESSLY EXCLUDED; AND DEI NEITHER ASSUMES NOR AUTHORIZES ANY PERSON OR ENTITY TO ASSUME FOR IT ANY DUTY, OBLIGATION OR LIABILITY IN CONNECTION WITH ITS PRODUCTS. DEI DISCLAIMS AND HAS ABSOLUTELY NO LIABILITY FOR ANY AND ALL ACTS OF THIRD PARTIES INCLUDING ITS AUTHORIZED DEALERS OR INSTALLERS. DEI SECURITY SYSTEMS, INCLUDING THIS UNIT, ARE DETERRENTS AGAINST POSSIBLE THEFT. DEI IS NOT OFFERING A GUARANTEE OR INSURANCE AGAINST VANDALISM, DAMAGE OR THEFT OF THE AUTOMOBILE, ITS PARTS OR CONTENTS; AND HEREBY EXPRESSLY DISCLAIMS ANY LIABILITY WHATSOEVER, INCLUDING WITHOUT LIMITATION, LIABILITY FOR THEFT, DAMAGE**

AND/OR VANDALISM. THIS WARRANTY DOES NOT COVER LABOR COSTS FOR MAINTENANCE, REMOVAL OR REINSTALLATION OF THE UNIT OR ANY CONSEQUENTIAL DAMAGES OF ANY KIND. IN THE EVENT OF A CLAIM OR A DISPUTE INVOLVING DEI OR ITS SUBSIDIARY, THE PROPER VENUE SHALL BE SAN DIEGO COUNTY IN THE STATE OF CALIFORNIA. CALIFORNIA STATE LAWS AND APPLICABLE FEDERAL LAWS SHALL APPLY AND GOVERN THE DISPUTE. THE MAXIMUM RECOVERY UNDER ANY CLAIM AGAINST DEI SHALL BE STRICTLY LIMITED TO THE AUTHORIZED DEI DEALER'S PURCHASE PRICE OF THE UNIT. DEI SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO, ANY CONSEQUENTIAL DAMAGES, INCIDENTAL DAMAGES, DAMAGES FOR THE LOSS OF TIME, LOSS OF EARNINGS, COMMERCIAL LOSS, LOSS OF ECONOMIC OPPORTUNITY AND THE LIKE. NOTWITHSTANDING THE ABOVE, THE MANUFACTURER DOES OFFER A LIMITED WARRANTY TO REPLACE OR REPAIR THE CONTROL MODULE AS DESCRIBED ABOVE. Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights and you may also have other rights that vary from State to State.

This product may be covered by a Guaranteed Protection Plan ("GPP"). See your authorized DEI dealer for details of the plan or call DEI Customer Service at 1-800-876-0800. DEI security systems, including this unit, are deterrents against possible theft. DEI is not offering a guarantee or insurance against vandalism, damage or theft of the automobile, its parts or contents; and hereby expressly disclaims any liability whatsoever, including without limitation, liability for theft, damage and/or vandalism. DEI does not and has not authorized any person or entity to create for it any other obligation, promise, duty or obligation in connection with this security system.

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

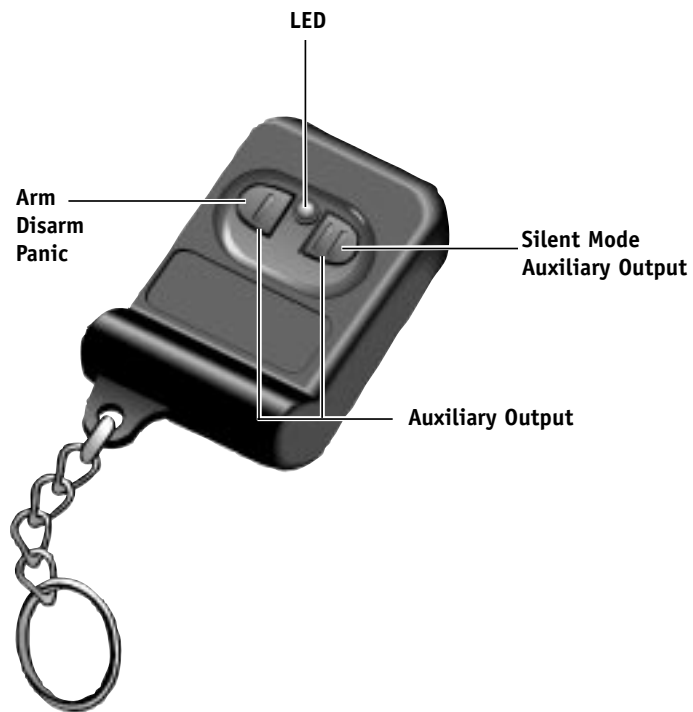
A clear copy of the sales receipt, showing the following:

- Date of purchase
- Your full name and address
- Authorized dealer's company name and address
- Type of alarm installed
- Year, make, model and color of the automobile
- Automobile license number
- Vehicle identification number
- All security options installed on automobile
- Installation receipts

[Table of Contents]

Limited Lifetime Warranty	i
What is Included	3
Important Information	3
FCC/ID Notice	3
Your System	4
System Maintenance	4
Your Warranty	4
Transmitter Functions	5
Using Your System	6
Arming	6
Arming While Driving	7
Disarming	8
Disarming Without a Transmitter	8
Silent Mode™	9
Panic Mode	9
Valet® Mode	10
Remote Valet	10
Nuisance Prevention® Circuitry, NPC™	11
Diagnostics	12
Arming Diagnostics	12
Disarming Diagnostics	12
Table of Zones	13
Code-Hopping™	14
Programming Options	14
Glossary of Terms	16
Security & Convenience Expansions	18
Quick Reference Guide (Removable)	21

[Standard Configuration]



[What is Included]

- The control unit
- A pair of two-button transmitters
- A Stinger® Doubleguard® dual-stage shock/impact sensor
- The Revenger® Soft Chirp® six-tone programmable siren
- The red Status LED indicator light
- A push-button Valet® switch
- Your warranty card
- Failsafe® starter-kill-ready circuitry (may require additional labor)

[Important Information]

FCC/ID Notice

This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

Your System

Congratulations on the purchase of your state-of-the-art vehicle security system. This system has been designed to provide years of trouble-free operation. Due to the complexity of this system, it must be installed by an authorized dealer only. Installation of this product by anyone other than an authorized dealer voids the warranty. All dealers are provided with preprinted dealer certificates to verify that they are authorized.

This owner's guide should help you to get the most out of your system. Please take the time to read it thoroughly prior to using the system.

System Maintenance

The system requires no specific maintenance. Your remote control is powered by a miniature 12V battery, type GP23A, that will last approximately one year under normal use. When the battery weakens, operating range will be reduced and the LED on the remote will light dim.


Your Warranty

Your warranty card must be returned and the bar-code serial number must not be removed. If the warranty card is not returned you do not have a warranty. It is also necessary to keep your proof of purchase which reflects that the product was installed by an authorized dealer. Make sure you receive the warranty card from your dealer.




[Transmitter Functions]

The receiver uses a computer-based Learn Routine to learn the transmitter buttons. This makes it possible to assign any remote transmitter button, or combination of buttons, to any receiver function. The transmitter initially comes programmed with Standard Configuration, but may also be customized by an authorized dealer. The buttons in all of the instructions in this manual correspond to a Standard Configuration transmitter.

Button

The arm/disarm and panic functions, are usually controlled by .

Button

Silent Mode™ and an optional auxiliary function are controlled by pressing . Silent Mode™ works by pressing  for less than one second. An optional auxiliary function, such as trunk release, can be controlled by pressing and holding  for 1.5 seconds.

The auxiliary output controls _____.


and **Buttons**

An optional auxiliary convenience or expansion function that you have added to your system can be activated by pressing these buttons simultaneously.

The auxiliary output controls _____.

[Using Your System]

Arming



You can turn on, or arm, the system by pressing  of your transmitter for one second. When the system arms, you will hear a short siren sound, or chirp, and see the parking lights flash once. If the vehicle's power door locks are controlled by the system, the doors will lock. While the system is armed, the Status LED will flash about twice a second, showing that the system is actively protecting your vehicle. If you hear a second chirp after arming and see the Status LED flashing in groups, see Diagnostics section. This extra chirp is called Bypass Notification. The system also can be programmed to arm itself automatically (called passive arming). If the system is programmed for passive arming, it will automatically arm 30 seconds after the ignition is turned off and the system "sees" you leave the vehicle by opening and closing a door. Whenever the system is in its 30-second passive-arming countdown, the Status LED will flash twice as fast as it does when the system is armed.

NOTE: If any protected entry point (such as a door or a switch-protected trunk or hood) is open, the system will not passively arm (unless forced passive arming is programmed on. See Programming Options section). Additionally, each time a sensor is triggered during the arming countdown, the 30-second countdown starts over.


When armed, your vehicle is protected in the following ways:

- Light impacts will trigger the Warn Away® signal. When triggered, the siren will chirp and the parking lights will flash for a few seconds.
- Heavy impacts will trigger the system. The trigger sequence is 30 seconds of constant siren and flashing parking lights.
- If a door is opened, the system will immediately start chirping the siren and flashing the parking lights. Three seconds later, the siren output changes to a continuous blast. This progressive response gives you time to disarm the system with your transmitter if you inadvertently open the door while the system is armed, while still providing instant response (even if the door is immediately closed).
- Turning on the ignition key will trip the same two-stage response as opening a door.
- The optional starter kill prevents the vehicle's starter from cranking.



Arming While Driving

Your system can be armed while driving the vehicle! Simply press  on your transmitter while the vehicle is running. The system will chirp once and then once more to indicate that the ignition is on. The system will not respond to any input except the door triggers and the starter kill relay (if installed) will not be activated. Once you have reached your destination, the system must be disarmed by pressing  once more. The siren will chirp twice and the LED will stop flashing. If you do not disarm the system, it will trigger when any door is opened to exit the vehicle.

Disarming

To turn off, or disarm the system, press  again. You will hear two chirps, and the parking lights will flash twice. If power locks are controlled by the system, the doors will unlock. If the siren chirps either four or five times when disarming, see Diagnostics section. This is called Tamper Alert.

Your system includes a High Security Disarm feature. During the triggered sequence, using the transmitter to disarm it will only stop the triggered sequence (the siren will stop and the parking lights will stop flashing), however, the system will remain armed and the doors will stay locked. This is extremely useful if you must stop the system from sounding, but are unable to check the vehicle visually. The trigger will stop, but the vehicle will remain protected.

To disarm with the transmitter during a trigger, press  on your transmitter. The siren will stop sounding. Next press  once more and the system will chirp four or five times (reporting the trigger) and disarm.

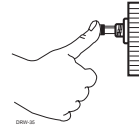
Disarming Without a Transmitter

This feature allows you to disarm the system without the transmitter should it be lost, damaged or disabled. In order to disarm without a transmitter, you must have the vehicle's ignition key and know where the Valet switch is. Be sure to check with the installer for the location of the Valet switch.


To disarm without a transmitter:



Turn on the ignition. Push the Valet® switch within 15 seconds. The system should now disarm. If it does not, you may have waited too long, so turn the ignition off and on and try again.





Silent Mode

To temporarily turn off the arm or disarm chirps, use Silent Mode™. Simply press  briefly before arming or disarming, and the confirmation chirp(s) will be eliminated for that one operation only. If you want the arm/disarm chirps turned off permanently, your dealer can do this for you.

NOTE: The Warn Away® response to lighter impacts is bypassed if the system is armed using Silent Mode™. This ensures that no chirps will be emitted by the siren in an area you want chirp-free. The system is still fully able to trigger. Only the Warn Away response is defeated.

Panic Mode

If you are threatened in or near your vehicle, you can attract attention by triggering the system with your transmitter! Just press  for 1.5 seconds, and you will enter Panic Mode. The siren will sound and the parking lights will flash for 30 seconds. To stop Panic Mode at any time, press  on the transmitter again.

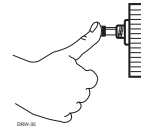
Valet® Mode

You can prevent your system from automatically arming and triggering by using Valet Mode. This is very useful when washing the vehicle or having it serviced. In Valet Mode, the system will not arm, even with the transmitter, but all convenience functions (door locks, trunk release, etc.) will work normally.

To enter or exit Valet Mode with the Valet switch:






Turn ignition to "run" position, then turn to "off" position. Press and release the Valet switch within 10 seconds. The Status LED will light steady if you have entered Valet Mode, and it will go out if you exited Valet Mode.



Remote Valet

You can also activate Valet® Mode using the remote transmitter.

Using Remote Valet as you enter or exit the vehicle:

1. Open any door.
2. Press  (or the arm/disarm button).
3. Press  (or the function 2 Button).
4. Press  again.

The Status LED will light steady if you have entered Valet Mode, and it will go out if you have exited Valet Mode.

Nuisance Prevention® Circuitry

Your system has DEI's Nuisance Prevention® Circuitry (NPC™). It prevents annoying repetitive trigger sequences due to faulty door pin switches or environmental conditions such as thunder, jack-hammers, airport noise, etc.

Here's how it works: Let's say the alarm triggers three times. Each time, the same sensor or switch is triggering the alarm. The three triggers are within 60 minutes of each other. NPC will interpret this pattern of triggers as false alarms. After the third trigger, NPC ignores, or bypasses, that sensor or switch (along with any other sensors or switches sharing the same zone).

If the bypassed sensor tries to trigger the system while it is being bypassed, the 60 minute bypass period will start over. This ensures that a sensor that continuously triggers will remain bypassed.

Doors are covered by NPC differently: If the alarm is triggered by an open door for three full cycles (one-and-one-half minutes), the doors will be bypassed until the trigger ceases.

NOTE: Arming and disarming the system does not reset this function! The only ways to reset a bypassed zone are for it to remain untriggered for 60 minutes, or to turn on the ignition. If testing your system, it is important to remember that the NPC programming can cause zones to be bypassed and seem to stop working. If five chirps are heard when disarming, NPC has been engaged. If you wish to clear the NPC memory, turn the ignition on.

[Diagnostics]

The microprocessor at the heart of your system is constantly monitoring all of the switches and sensors connected to it. It detects any faulty switches and sensors and prevents them from disabling the entire system. The microprocessor will also record and report any triggers that occurred during your absence.

Arming Diagnostics

If the system is armed with an input active (door open, sensor triggering, etc.) the unit will chirp once when arming and then one more time a few seconds later. This is called Bypass Notification.

NOTE: Bypass Notification will not occur when using Silent Mode or if chirps have been programmed OFF.

The system will ignore the input that was active when it was armed until it goes away. Three seconds later it will monitor that input normally. For example, if your car has interior light exit delay, and you arm the system before the interior light goes out, you may get Bypass Notification. Once the light goes out, however, the doors are monitored normally.

Disarming Diagnostics

Extra disarm chirps are the Tamper Alert. If four chirps are heard when disarming, the system was triggered in your absence. If five

chirps are heard, a zone was triggered so many times that Nuisance Prevention® Circuitry has bypassed that zone. In either case, the Status LED will indicate which zone was involved (see Table of Zones section). The system will retain this information in its memory, and chirp four or five times each time it is disarmed, until the next time the ignition key is turned on.

Table of Zones

The zone number is the number of LED flashes used by the system to identify that input. The standard input assignments are listed below, along with spaces to write in any optional sensors or switches you have had installed.

ZONE (Number of LED Flashes)	DESCRIPTION	DEALER-INSTALLED OPTIONS
1	Instant trigger - hood pinswitch or optional sensors	
2	Instant trigger - a heavier impact detected by the shock sensor	
3	Door switch trigger	
5	Ignition	

If the Warn Away® response is triggered, the LED will not report it.

[Code-Hopping™]

The receiver and transmitters each use a mathematical formula called an algorithm to change their code each time the transmitter is used. This technology has been developed to increase the security of the unit. The control unit knows what the next codes should be. This helps to keep the transmitter synchronized with the control unit even if you use the remote control out of range of the vehicle. However, if the transmitter has been pressed many times out of range of the vehicle, or the battery has been removed, it may get out of sync with the control unit and fail to operate the system. To resynchronize the remote control simply press the arm/disarm button of the remote control several times within range of the vehicle. The alarm will automatically resynchronize and respond to the transmitters normally.

[Programming Options]

Programming options control what your system does during normal operation, and require little or no additional parts. However, some may require additional installation labor. The factory settings are in **bold**.

- **Active** arming (only with the transmitter) or passive arming (automatic arming 30 seconds after the last door is closed).

- Arming/disarming confirmation chirps **on** or off.
- Passive door locking (with passive arming) or **active** door locking (only when arming with the transmitter). This feature only works if passive arming has been selected for step one.
- The ignition-switch-controlled door-locking feature **on** or off. With this feature on, the doors will lock 3 seconds after the key is turned on, and unlock when the key is turned off.

NOTE: If the door is open when the ignition is turned on, the doors will not lock.

- Panic mode **enabled**/disabled with the ignition on. (Some states have laws against siren capability in a moving vehicle).
- Automatic Engine Disable (AED) on or **off**. This feature deters theft of the vehicle, whether or not the alarm is armed. If AED is programmed on, the starter of the vehicle will be disabled 30 seconds after the ignition is turned off. The LED will flash slowly (one-half its normal armed rate) to indicate the AED arming cycle. 30 seconds later, the starter of the vehicle will be disabled. To start the car, you will need to arm the car with the remote and then disarm it with the remote. You can also disarm the AED feature by turning the ignition on and pressing the valet button once. AED is also disabled when in valet mode.

NOTE: This feature will only function if the optional FailSafe starter kill relay has been installed.

- Forced passive arming on or **off**. If your system is programmed to passively arm and this feature has been programmed on, the system will passively arm after one hour,

even if a protected entry has been left open. If a door has accidentally been left ajar when leaving the vehicle, forced passive arming ensures that the system will arm in one hour.

NOTE: When forced passive arming occurs, the entry point that has been left open, and anything connected to the same zone, is bypassed and cannot trigger the system. The remaining inputs to the system are fully operational.

- Siren tones and chirp volume. The output of the Revenger Soft Chirp® siren consists of six different tones in sequence. Any of these tones can be eliminated by your dealer, resulting in a unique, easily identifiable siren sound. The siren chirps can be either full volume or **6 decibels quieter** than the full alarm blast.

[Glossary of Terms]

Control Unit: The “brain” of your system. Usually hidden underneath the dash area of the vehicle. It houses the microprocessor which monitors your vehicle and controls all of the alarm's functions.

Failsafe® Starter Kill: An automatic switch controlled by the security system which prevents the vehicle’s starter from cranking whenever the system is armed. The vehicle is never prevented from cranking when the system is disarmed, in valet mode, or should the starter kill switch itself fail. Your system is ready for this feature; however, installation of this feature may require additional labor.

Input: A physical connection to the system. An input can be provided by a sensor, pinswitch or to existing systems in the vehicle, such as ignition or courtesy lights.

LED: Red light mounted somewhere in the vehicle. It is used to indicate the status of your system. It is also used to report triggers and faults in the system or sensors.

Shock Sensor: This system is packaged with a Doubleguard® Shock Sensor. This sensor is designed to pick up impacts to the vehicle or glass.

Siren: Noise generating device usually installed in the engine compartment of the vehicle. It is responsible for generating the “chirps” you hear, as well as the six tones you hear while the alarm is triggered.

Transmitter: Hand-held, remote control which operates the various functions of your system.

Trigger or triggered response: This is what happens when the alarm “goes off” or “trips.” The triggered response of your system consists of 30 seconds of siren sounding and parking light flashing.

Valet® Switch: A small push button switch mounted somewhere inside the vehicle. It is used to override the alarm when a transmitter is lost or damaged, or to put it into valet mode.

Warn Away® response: Lighter impacts to the vehicle will generate the Warn-Away response. It consists of several seconds of siren chirps and parking light flashes.

Zone: A zone is a separate input that the alarm can recognize as unique. Each input to the system is connected to a particular zone. Often two or more inputs may share the same zone.

[Security & Convenience Expansions]

Here we have listed only some of the many expansion options available. Please consult your dealer for a complete explanation of all the options available to you.

Field Disturbance Sensor: An invisible dome of coverage is established by the 508D “radar” sensor. Your system can react to any intrusions into this field with the triggered sequence.

Backup Battery: The 520T backup battery keeps the system armed, triggers the alarm and keeps the starter kill active if main battery power is disconnected.

Electronic Hood Lock: This prevents the vehicle’s hood from being opened whenever the system is in alarm mode, keeping thieves away from the system’s siren, the battery connections, or other components under the hood.

Audio Sensor: Metal on glass, glass cracking, or breaking glass produce distinctive acoustic signatures. The 506T audio sensor uses a microphone to pick up sounds, and then analyze them with

proprietary acoustic software to determine if the glass has been struck.

Power Trunk Release: The auxiliary output of the system can operate a factory power release for the vehicle's trunk or hatch. (An optional relay may be required.) If the factory release is not power-activated, the DEI's 522T trunk-release solenoid can often be added.

Power Locks: This system offers lock outputs that can control some manufacturers' power door lock systems. For other systems, additional parts may be required.


Valet® Start System: For the ultimate in convenience, the Valet Start System can start your vehicle, monitor engine functions, and power your climate control system with a push of a button! Over-rev protection, open-hood lockout, brake-pedal shutdown, and automatic timer shutdown are all included. (Only for automatic-transmission, fuel-injected gasoline vehicles).

Power Window Control: Automatic power window control is provided with the 529T or 530T systems. These can operate power windows, and can roll them up automatically when the system is armed, and down when you transmit with the auxiliary function button. The 530T also provides one touch switch operation.


Cut along dotted line and fold for a quick and easy reference to keep in your purse or wallet.

QUICK REFERENCE GUIDE:


Arming

- Press  of your transmitter for one second. When the system arms, you will hear a short chirp, and the parking lights will flash once. If the vehicle's power door locks are controlled by the system, the doors will lock.

Arming While Driving

- Press  on your transmitter while the vehicle is running. The system will chirp once and then once more to indicate that the ignition is on.


Disarming

- Press . You will hear two chirps, and the parking lights will flash twice. If power locks are controlled by the system, the doors will unlock.


Disarming Without a Transmitter

- Turn on the ignition. Press the Valet switch within 15 seconds. The system should now disarm. If it does not, you may have waited too long; turn the ignition off and on and try again.

Silent Mode™

- Press  briefly before arming or disarming, and the confirmation chirp(s) will be eliminated for that one operation only.




Panic Mode

- Press  for 1.5 seconds, and you will enter Panic Mode. The siren will sound and the parking lights will flash for 30 seconds.

To enter or exit Valet® Mode with the Valet switch

- Turn ignition to "run" position, then turn to "off" position. Press and release the Valet switch within 10 seconds. The Status LED will light steady if you have entered Valet Mode, and it will go out if you exited Valet Mode.

Using Remote Valet® as you enter or exit the vehicle:

- Open any door. Press . Press . Press  again. The Status LED will light steady if you have entered Valet Mode, and it will go out if you exited Valet Mode.

The company behind this system is Directed Electronics, Inc.

Since its inception, DEI® has had one purpose, to provide consumers with the finest vehicle security and car stereo products and accessories available. The recipient of more than 20 patents in the field of advanced electronic technology, DEI is ISO 9001 registered.

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

Call **(800) 274-0200** for more information about our products and services.



DEI is an ISO 9001 registered company.

DEI is committed to delivering on time, the best products we know how to provide, and to constantly work with our customers and vendors to improve our products, quality, delivery and customer friendly features.



Directed Electronics, Inc.

Vista, CA 92083

www.dei.com

© 1999 Directed Electronics, Inc. - All rights reserved

G430 7/99