

Responder LC Model 5901 Security and Remote Start Owner's Guide



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Government regulations

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 undesirable operation.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

Remote Controls

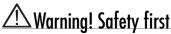
To satisfy FCC RF exposure compliance requirements, this device should be used in hand-held, hand operated configurations only. The device and its antenna must maintain a separation distance of 20 cm or more from the person's body, except for the hand and wrists, to satisfy RF exposure compliance. This device is designed to be used in a person's hands and its operating configurations do not support normal transmissions while it is carried in pockets or holsters next to a person's body.

Control Center

To satisfy FCC RF exposure compliance requirements, the device and its antenna must maintain a separation distance of 20 cm or more from the person's body, except for the hand and wrists, to satisfy RF exposure compliance.

This device complies with the Industry Canada Radio Standards Specification RSS 210. Its use is authorized only on a no-interference, no-protection basis; in other words, this device must not be used if it is determined that it causes harmful interference to services authorized by IC. In addition, the user of this device must accept any radio interference that may be received, even if this interference could affect the operation of the device.

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



The following safety warnings must be observed at all times:

Due to the complexity of this system, installation of this product must only be performed by an authorized Directed dealer.

When properly installed, this system can start the vehicle via a command signal from the remote control transmitter. Therefore, never operate the system in an enclosed area or partially enclosed area without ventilation (such as a garage). When parking in an enclosed or partially enclosed area or when having the vehicle serviced, the remote start system must be disabled using the installed toggle switch. It is the user's sole responsibility to properly handle and keep out of reach from children all remote control transmitters to assure that the system does not unintentionally remote start the vehicle. THE USER MUST INSTALL A CARBON MONOXIDE DETECTOR IN OR ABOUT THE LIVING AREA ADJACENT TO THE VEHICLE. ALL DOORS LEADING FROM ADJACENT LIVING AREAS TO THE ENCLOSED OR PARTIALLY ENCLOSED VEHICLE STORAGE AREA MUST AT ALL TIMES REMAIN CLOSED. These precautions are the sole responsibility of the user.

Remote starters on manual transmission vehicles operate differently than those with automatic transmission because you must leave your car in neutral. You must read this Owner's Guide to familiarize yourself with the proper procedures regarding manual transmission remote starters. If you have any questions, ask your installer or contact Directed at 1-800-753-0600.

Before remote starting a manual transmission vehicle, be sure to:

- Leave the vehicle in neutral and be sure no one is standing in front or behind the vehicle.
- Only remote start on a flat surface
- Have the parking brake fully engaged

WARNING! It is the responsibility of the owner to ensure the parking/emergency brake properly functions. Failure to do so can result in personal injury or property damage. We recommend the owner have the parking / emergency brake system inspected and adjusted by a qualified automotive shop biannually.

Use of this product in a manner contrary to its intended mode of operation may result in property damage, personal injury, or death. (1) Never remotely start the vehicle with the vehicle in gear, and (2) Never remotely start the vehicle with the keys in the ignition. The user must also have the neutral safety feature of the vehicle periodically checked, wherein the vehicle must not remotely start while the car is in gear. This testing should be performed by an authorized Directed dealer in accordance with the Safety Check outlined in the product installation guide. If the vehicle starts in gear, cease remote start operation immediately and consult with the authorized Directed dealer to fix the problem.

After the remote start module has been installed, contact your authorized dealer to have him or her test the remote start module by performing the Safety Check outlined in the product installation guide. If the vehicle starts when performing the Neutral Safety Shutdown Circuit test, the remote start unit has not been properly installed. The remote start module must be removed or the installer must properly reinstall the remote start system so that the vehicle does not start in gear. All installations must be performed by an authorized Directed dealer.

OPERATION OF THE REMOTE START MODULE IF THE VEHICLE STARTS IN GEAR IS CONTRARY TO ITS INTENDED MODE OF OPERATION. OPERATING THE REMOTE START SYSTEM UNDER THESE CONDITIONS MAY RESULT IN PROPERTY DAMAGE OR PERSONAL INJURY. YOU MUST IMMEDIATELY CEASE THE USE OF THE UNIT AND SEEK THE ASSISTANCE OF AN AUTHORIZED Directed DEALER TO REPAIR OR DISCONNECT THE INSTALLED REMOTE START MODULE. DIRECTED WILL NOT BE HELD RESPONSIBLE OR PAY FOR INSTALLATION OR REINSTALLATION COSTS.

This product is designed for fuel injected vehicles only. Use of this product in a standard transmission vehicle must be in strict accordance with this guide.

This product should not be installed in any convertible vehicles, soft or hard top with a manual transmission. Installation in such vehicles may pose certain risk.

What is included

- 1 five-button, 2-way Supercode Responder LC remote control (p/n 7752V)
- 1 five-button, 1-way Supercode remote control (p/n 7652V)
- The control module with Stinger™DoubleGuard®two-stage shock sensor
- Control center with integrated status LED and Valet override switch (P/N 6711T)
- Revenger™Soft Chirp™six-tone siren
- A remote start defeat toggle switch
- Battery charger
- Window decals
- Your warranty registration

Important information

Congratulations on the purchase of your state-of-the-art remote start and alarm system. 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 a preprinted dealer certificate to verify authorization. By carefully reading this Owner's Guide prior to using your system, you will maximize the use of this system and its features. You can print additional or replacement copies of this manual by accessing our web site at www.directed.com.

> Your warranty

Your warranty registration must be completely filled out and returned within 10 days of purchase. Your product warranty will not be validat-

ed if your warranty registration is not returned. Make sure you receive the warranty registration from your dealer. It is also necessary to keep your proof of purchase, which reflects that the product was installed by an authorized dealer

> Replacement remote controls

Your system comes with one Responder LC remote control (P/N 7752V) and one companion remote control (P/N 7652V). If additional remote controls are desired, please see your authorized dealer or visit us at www.directedstore.com to order.

> Out of Range Notification

If a command is issued from the remote, but the remote is beyond the range of the vehicle to receive the command, the remote will respond with an Out of Range notification. If this occurs, the remote will emit a harsh tone and the out of range indicator will appear.

Since conditions will vary in different areas (ie: Weather, RF interference, etc) range may be affected and require you to be closer to the vehicle for successful transmission.

> System maintenance

The system requires no specific maintenance. Your One way remote is powered by small coin cell lightweight 3-volt lithium battery that will last approximately one year under normal use. The 1-way remote uses one CR2032 cell battery. The 2-way remote contains a non-replaceable rechargeable battery. When the battery begins to weaken, the operating range will be reduced.

Charging the Battery

- Plug in the USB charger (alternately a standard mini USB cable connected to any standard USB port on any laptop or desktop computer can also be used (cable not included).
- The LCD displays "CHARGE" while the battery level bars within the battery icon flash.
- When charging is complete the LCD then displays "FULL".

Note: If the battery has been severely discharged all remote functions are disabled for a short charge period. The battery status outline flashes and CHARGE is displayed on the LCD. Once the battery has accumulated enough charge for functionality, the LCD icons initialize with a beep sound, the battery status outline stops flashing and the remote becomes operational while still displaying CHARGE.



Warning! The temperature range over which the battery can be charged is 0°C TO 45°C (32°F TO 113°F). Charging the battery at temperatures outside this range may cause severe damage to the battery or reduce battery life expectancy.

> Low battery indicator

When the batteries are low on the 2-way remote it emits two groups of beeps, the battery icon flashes and low battery is indicated, the alarm then emits an additional chirp upon disarming of the alarm to let you know its time to change the battery. When the battery is low on the 1-way remote, the remote responds the same way audibly.

Note: The Arm/Disarm chirps should be programmed ON for the alarm to emit any additional chirps during disarm. Ask your authorized dealer if you have any questions.

> Battery Replacement

Slide the door up to expose the battery beneath the holder. Remove the expired battery. Place the new battery into the remote control. When power is returned the remote control is ready for use.

> Multi-car control capability

You can operate the 2-way remote control system for two cars, with full command capability for both vehicles.

To change the Car to be operated:

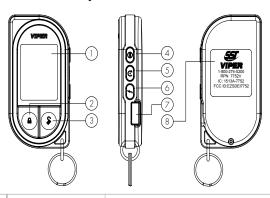
Two Way Remote

- 1. Press/hold the f button for 3 seconds or until the remote beeps. The \bigcap or \bigcap icon flashes and the text "Car 1" or "Car 2" is displayed.
- 2. Change car: While in this mode press the f button to switch between cars and the f or f icon changes accordingly indicating which car the remote currently operates.
- Select the car you want to operate and then press any command to operate the system. The selected car remains selected until the setting is changed.

One Way Remote

- 1. Press and hold the \boldsymbol{f} button until the amber light blinks once or twice indicating current vehicle (one blink = car 1, two blinks = car 2).
- 2. To change from one car to the other press the $m{f}$ button again.
- When using the remote to control the system, the amber light will flash in a sequence of 1 or 2 flashes indicating the current vehicle selected.

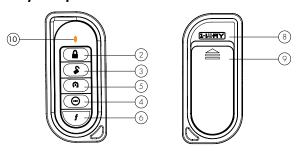
Responder LC 2-Way



Feature	Description	
1	LCD (2-way)	Activity/icon display
2	Lock button	Press for one second to arm.
3	Unlock button	Press for one second to disarm.
4	Auxiliary button	Press and hold for 1.5 second to activate optional trunk release.
5	Remote start button	Press for one second to activate remote start.
6	Function button	Allows access to programming and modifies operation of the other buttons.
7	Charge Port (2-way)	The battery charger plugs into this port.
8	label	Back of remote has label to identify the remote.
9	Battery Door (1-way)	For accessing batteries when necessary.
10	Transmit LED (1-way)	Active when communicating

Note: If the keypad is locked, first press ${m f}$ and then press ${m \xi}$ to exit.

LC 1-way companion



Note: See call-out table for 2 way on previous page.

> Transmitter configuration

Level Button	Direct Access	f × 1	f × 2	f × 3	f × 4
∆	Arm/Lock	Silent Arm	Sensor	Silent Mode	Silent Mode
	(Panic)		Bypass	Sensors	All Zones
\$	Disarm/Unlock	Silent Disarm	Valet On/Off	Car Finder	
ભ	Remote Start	Reset	Timer Mode	Smart Start	Defogger
	On/Off	Runtime	On/Off	On/Off	On
Avx	Trunk Release	AUX 1	AUX 2	AUX 3	
f	Advance Level	Temperature	Runtime	Event His-	
	Change Car	Check *	Remaining *	tory Report*	
	(3s), Enter				
	programming				
	(8s) *				

 $_{\star}\,f$ button must be pressed and held to access state, for example to

access "Request temperature" or "Runtime remaining" press the ${m f}$ button the specified amount of times, and then hold.

Note: Pressing more than one button simultaneously generates an Error tone.

Using the system

Please note the screen shot to the right of a feature indicates what the display looks like when this feature is activated.

△ Arm

Command: Press one time to Arm

Feedback: Lock Icon will appear, and one beep

from remote

Notes: Press/hold for 1.5 seconds to Arm

the system and then activate the

Panic output



Details: The siren in the vehicle will "chirp" once and the parking lights will flash once. If the power door locks have been connected, the doors will lock. The system will automatically check for errors when it arms. The 2-way remote will "chirp" once and the lock icon appear to confirm arming. If no arm confirmation is received, the remote will give the Out-Of-Range signal.

If errors are found when arming:

If an alarm trigger zone – such as a door, the trunk, the hood, or a sensor, was active at the time of arming, the system will "bypass", or ignore, this trigger zone. This allows the system to continue to protect your vehicle using the remaining trigger zones.

You are notified of this active zone immediately after arming the system. The siren in the vehicle will "chirp" again after arming. The Status LED indicator in the vehicle will blink in a pattern to indicate the active zone number error which was found (See Table of Zones). The 2-way remote control will sound a short "error" tone and the text will display the active zone..

Disarm

Command: Press one time to Disarm

Feedback: Unlock icon appears and remote beeps

twice

The siren in the vehicle will "chirp" twice, and the parking lights will flash. The 2-way remote will "chirp" **twice** and the **\$\sigma\$** unlock icon appears to

confirm disarming. The door locks (if connected) will unlock and the

parking lights will flash

Note: For additional chirps when disarming the system refer to the diagnostics section of this guide

Remote Start

Command: Press one time to activate Remote

Start

Feedback: Remote Start Icon appears on screen.

remote emits a tone and parking

lights flash

Notes:



Before using the remote start be sure the vehicle is parked in a safe area with proper ventilation.

The preset remote start run time is 12 minutes. This can be changed to between 12 and 60 minutes.

The system has a feature, if programmed \mbox{On} , that automatically notifies you when the runtime is running low. When the system reaches 3

minutes and 1 minute of runtime remaining, it sends the 2-way remote control a paging signal.

Points to remember:

If the hood is open or if the brake pedal is pressed, the vehicle will not remote start. The remote start shuts down:

- When the brake pedal is pressed.
- The hood is opened.
- When the remote start command is sent again from a remote control.
- When the runtime expires.

To drive your vehicle after it has been remote started:

- 1. Get in without stepping on the brake.
- 2. Insert the ignition key and turn it to the ON position.
- 3. Now, step on the brake.

The remote control will play the remote start shutdown tone. You have now taken direct control from the remote start system.

Valet Take-Over

The Valet Take-Over feature allows the vehicle to remain running after the key has been removed from the ignition. This feature is useful for occasions when you wish to exit and lock the vehicle for short periods of time, but would like to leave the motor running and the climate controls on.

To enable Valet take-over; while the vehicle is running, press 1 time and the parking lights will flash after a couple of seconds turn off the ignition and the car should stay running. Once you exit the vehicle you can lock the system and the car will remain running. If the vehicle shuts down, then the unit did not enter valet take-over mode.

Aux Aux

Command: Press and hold for 1.5 seconds to

activate the Trunk Release.

Feedback: The trunk icon appears and the re-

mote plays a short tone.

Notes: This is an optional feature. See your

sales rep/installer for details. The

factory default icon and text is trunk.

The icon and text can be changed by your installer using

the Bitwriter programming tool.



f Function shift

Command: Press 1 to 4 times. (See Transmitter configuration table)

Feedback: Display shows a text message across the bottom for the

command received.

Notes: Each Press then release, shifts the function of the com-

mand button.

Valet mode

Command: Press f two-times and then

Feedback: Unlock Icon appears hollow and

text states Valet when entering Valet

mode.

Notes: Even if armed the remote beeps one

time and the doors remain locked.

When exiting Valet mode the Unlock

Icon appears solid, the text states Valet and the remote beeps two-times. The security system is disarmed but the

doors are still locked.



To enter or exit valet mode with the valet/program switch:



Turn the ignition key on and then off.



At anytime during the next 10 seconds, press and release the Valet switch. Now the Status LED lights constantly if you have entered Valet® Mode, and shuts off when exiting Valet Mode.

When locking the system in Valet Mode, the screen displays "valet" and the remote then emits an error tone. When unlocking in Valet Mode, the screen displays "valet" and the remote emits two error tones.

Car finder

Command: Press f three-times and then

Feedback: Icon of vehicle flashes and text reads car finder. On Vehicle: 1 long siren chirp and parking lights flash 10

times.

Notes: Arm/Disarm cancels the light flash-

es.



Cabin temperature

Command: Press and release $m{f}$ one time, then

Hold for 1.5 seconds.

Feedback: Screen will display current in cabin

temperature.

Notes: Cabin temperature is displayed on

the remote.



Additional arming features

> Arm Features:

Silent arm

Command: Press f one-time and then press $oldsymbol{igain}$

Feedback: Screen changes to the lock icon
Notes: Arms the system without chirps

The system arms without the confirmation chirp. The parking lights will flash once. The 2-way remote will not "chirp" and the lock icon will appear to confirm arming. If no arm confirmation is received, the 2-way remote will give the Out Of Range signal.

> While the system is armed

Fail-Safe Starter Kill

The starter is disabled by the system's Fail-Safe starter kill.

Alarm Responses

The security system can generate two levels of alarm: Warn Away - Soft siren chirps and flashing parking lights.

The purpose of Warn-Away is to warn a would-be thief next to your vehicle that the vehicle is protected, but in a manner that does not call attention to it from more than a few feet away.

Full Alarm Trigger

Sounds the siren at maximum volume and flashes the parking lights. The default duration of the Full Alarm is 30 seconds. This can be programmed to any duration from 30 to 60 seconds manually. Ask your authorized dealer for details.

Warn-Away response is triggered by:

- Lesser or lighter vibrations or impacts (detected by the Stinger Doubleguard shock sensor)
- An optional Proximity Sensor (508D) triggered in the outer zone

Full Alarm response is triggered by:

- Heavier impact to the vehicle (detected by the Stinger Double-Guard shock sensor).
- Opening the trunk or hood.
- Opening a door: the Progressive Door Trigger feature will first sound the Warn-Away response, followed immediately by Full Alarm.
- An optional sensor, such as an optional Proximity Sensor triggered in the inner zone.

Any attempt to start the car: the Progressive Ignition Trigger will first sound the Warn Away response, followed immediately by Full Alarm.

Paging Signals

If the Full Alarm response is triggered, the 2-way remote control will be sent a paging signal by the in-car system.

Note: Paging range varies with terrain and environmental conditions.

While the alarm is triggering:

Press the $m{\xi}$ button on the remote. The siren will stop sounding and disarm the alarm system.

High-Security Disarming

If you want the Full Alarm response to stop without unlocking the doors, press the $oldsymbol{\Omega}$ button. The system will re-arm and the current alarm re-

sponse will reset.

> System override

To disarm the system without a remote control:

You will need to use your Override Switch located on your systems control center (see diagram below) to disarm the system. The Override Switch disarms the system only if you have the vehicle key.



To check proper operation:

• Open the door. The alarm will sound.

Immediately insert the key into the ignition and turn it to the RUN or ON position. (all the indicators in the dash will turn on).

Press the Override Switch once, the alarm should shut off and now the vehicle should start with the key.

Note: The Override Switch feature allows you to select a specific number of presses needed to disarm the alarm. If the Override Switch has been programmed to a new number of presses by your authorized dealer, that number should be indicated below.

Override	Switch	Number	
----------	--------	--------	--

➤ Modified Arming Modes

The Responder LC gives you an unprecedented level of control over how it will protect your car. "Normal arming" means that all the Responder LC security features are active automatically. You can turn some security features off on a one-time basis.

Turning off the Warn Away response

After arming, you can turn off the Warn-Away response on a one-time basis.

- 1. Press the $m{f}$ button twice.
- 2. Press the button. The text displays "bypass warn" and the remote sounds an error tone.

Now, slight impacts or vibrations will not trigger Warn-Away. Heavy impacts will still trigger Full Alarm.

Note: The next time you arm the system, Warn-Away will work normally.

Turning off the Sensor Full Trigger response

You can completely disable the Stinger Doubleguard Shock Sensor and any added optional sensors on a one-time basis. The entry points (doors, hood, etc.) will still be monitored. All sensors will not be able to trigger the Warn-Away response or the Full Alarm response.

- 1. After disabling Warn-away response, press the $m{f}$ the button twice.
- 2. Press the button. The text displays "Bypass full" and the remote sounds 2 error tones

Note: You can turn the zones back on by going through the above procedure again and the text will display "Bypass off" and the remote

will beep once.

Silent Mode 2 - Turning off the siren

You can turn off the vehicle siren and flashing lights on a one-time basis, leaving the system's paging feature as the only alarm response.

Note: Call the police immediately if you witness a crime in progress. Paging range varies with terrain and environmental conditions.

Sensor Silent Mode

In this mode, a sensor cannot trigger the siren, but will cause the 2-way remote to be paged. All entry points (doors, hood, etc.) will still trigger the siren.

Press the f button three times, and then press the h button. The text will display "sensor silent arm" confirming entry into sensor silent mode. **Note:** The next time you arm the system, it will function normally.

Full Silent Mode.

In this mode, the siren cannot be triggered, but any trigger will cause the 2-way remote to be paged.

Press the f button four times, and then press the $oldsymbol{\Omega}$ within five seconds. The text will display "full silent arm" confirming entry into full silent mode.

> Disarm Features:

Silent disarm

Command: Press f one-time and then press \mathcal{L} .

Feedback: Screen changes to unlock icon
Notes: Disarms the system without chirps

Additional remote start features

Manual Transmission

If the vehicle has a manual transmission the proper steps must be followed before leaving the parked vehicle or the remote start feature is disabled.

- Make sure the engine is running and the doors on the vehicle are closed.
- 2. Put the transmission in neutral.
- 3. Press on the brake in the vehicle.
- 4. Apply the emergency brake.
- 5. Release the brake.

Note: Pressing the brake pedal again after this step will disable the remote start feature.

- 6. Within 15 seconds activate the remote start from the remote.
- 7. The parking lights flash 5-times confirming that the remote start is active. If the parking lights do not flash 5-times, then repeat steps 1 6.
- 8. Turn off the ignition (the car stays running when key is turned off).
- 9. Exit the vehicle.
- Arm the alarm (the vehicle should shut off when arming the system).

You can now remote start the vehicle. If a door is opened or the alarm is triggered before the next remote start activation the system will not remote start.

Note: To enable Valet take-over with a manual transmission, open the door and enter into manual transmission mode, as described above. The parking lights flash one-time when entering Valet take-over. Once you exit the vehicle you can lock the system and the car will remain

running. If the vehicle shuts down when locking, then the unit did not enter valet take-over mode.

Timer mode

Command: Press f two-times and then \mathfrak{D} .

Feedback: Small timer icon appears and text reads "timer start on".

The vehicle will confirm with 4 fast parking light flash-

es.

Notes: Enables or disables the remote start timer mode.

The system must be armed for the timer mode to operate. The system will start every 3 hours for a maximum of six cycles until canceled by the brake, hood, or neutral safety shut-down wires. The remote will respond with the Start and Stop remote start notification during each Start and Stop of the Vehicle while in Timer mode.

Important: Use Timer Mode in open areas **only**. Never start and run the vehicle in an enclosed space such as a garage or carport.

To activate timer mode with a manual transmission:

- 1. Enter the MTS mode.
- Exit the vehicle and arm the alarm.
- Enter the timer mode. The parking lights quickly flash 4 times to confirm entry into timer mode (vehicle does not remote start at this point). Vehicle begins the timer mode sequence.

To exit timer mode with transmitter:

• Press f twice and then press Parking lights flash slowly four times confirming timer mode is exited.

To exit timer mode without transmitter:

1. Make sure the remote start system is not operating the engine.

Turn the ignition on. Timer Mode is exited and the parking lights flash slowly four times.

Note: The Bitwriter can change the amount of times the remote start activates and, it can change the intervals between activations in timer mode.

Turbo Timer mode

Short run turbo mode keeps the engine running after arriving at your destination for a programmable period of 1, 3, 5 or 10 minutes. This allows the system's timer to conveniently cool down the turbo after you have left the vehicle.

To activate Turbo Timer Mode with an automatic transmission:

- Make sure the Turbo timer feature is turned on in the features grid.
- 2. Open the vehicle door.
- 3. While the vehicle is running; press the f button twice followed by the \circlearrowleft button.
- 4. The parking lights flash once and the remote plays the remote start activation tone confirming that the remote start is activated (the one way remote only flashes the parking lights).
- 5. Turn off the ignition (car stays running).
- 6. Exit the vehicle and arm the system.
- 7. At this point the vehicle stays running for the programmed runtime.

To activate turbo timer mode with a manual transmission:

- 1. Enter MTS mode with the door open.
- 2. Transmit the timer mode feature with the remote by pressing f two-times, and then f.
- 3. After exiting the vehicle, lock the system and the vehicle remains running for the programmed runtime. (The remote start feature is

still enabled).

You can still remote start the vehicle after the turbo timer has timed out and shut off the vehicle. For safety reasons, if a door is opened or if the alarm is triggered while you are away, the remote start exits the manual transmission mode and does not remote start until the MTS sequence is re-initiated

Note: An optional push button can be hard wired to the (-) activation input (H1/10) on the remote start. This allows the user to activate the turbo timer without having to use the remote.

When the vehicle is running follow the procedures listed above, but instead of pressing the remote, press the push button the appropriate number of times to activate the remote start (factory setting is for 1 pulse). The remote emits the remote start confirmation tone, after which you can turn off the ignition and exit the vehicle. The car remains running for the pre-programmed amount of time.

Runtime check

Command: While the remote start is running, press $m{f}$ two-times,

and then Hold for 1.5 seconds.

Feedback: Text reads runtime and displays time left

Notes: This feature is only available on the 2way remote.

Runtime reset

Command: While the remote start is running, press $m{f}$ one-time and

then 🧐.

Feedback: Remote start ON tones.

Notes: Re-starts the remote start runtime counter if remote start

is active. Note: If remote start is not active, the 2-WAY

remote will respond with error tone.

Rear defogger

Command: Press f four times, and then \odot . (Only after remote

start is on.)

Feedback: Defogger icon appears on remote and text reads Defrost

On.

Notes: While the remote start is running the defroster will manu-

ally be turned on for one remote start cycle. When the remote start shuts down, the defroster will work normally. The defroster turns on when the temperature inside the vehicle is 55 degrees or below when this feature is

wired and enabled.

Smart start

Command: Press f three-times and then press \odot .

Feedback: The vehicles parking light flash 5 times fast and the text

on the 2way remote reads Smart Start On

Notes: Enables or disables the SmartStart feature. The smart

start feature of this system will allow you to have the remote start activate when the vehicle reaches a certain temperature (hot or cold) or a certain voltage. The factory setting for temperature high is 100 °F the setting for

low is 0 °F. The voltage setting is for 10.5V.

These settings can be adjusted or turned off by your

installer when using the Bitwriter.

To activate the Smart Start Mode with a manual transmission:

1. Enter the MTS procedure.

2. Exit the vehicle and press the button on the remote (the vehicle

- will shut down when locking).
- 3. Press the f button on the remote 3 times and then press the \mathfrak{D} button.
- 4. The 2 way remote will beep once and flash the \mathfrak{D} LED once.
- 5. The parking lights on the vehicle will flash 5 times fast confirming entry into smart start mode
- The vehicle will now remote start when the cabin temperature reaches the programmed thresholds or when the vehicle battery reaches the programmed voltage.

The Smart Start Mode can be exited by following the activation procedure with the remote or can be deactivated manually by turning on the ignition or pressing the brake pedal in the vehicle. The parking lights will flash 5 times slow confirming that Smart Start Mode is exited.

Details: Smart start uses temperature and voltage settings to determine when the vehicle should start and run. If any changes to temperature or voltage are made using the Bitwriter programming tool Smart start activation is affected

The Smart Start function works similar to the Timer mode. The system must be in the locked mode, and using the system default settings, it has a maximum of 6 starting cycles and checks the voltage/cabin temperature every 3 hours to see if the thresholds have been met.

If thresholds have been met then the remote start will start the vehicle and run for the pre programmed time. It counts the first start as one successful start, leaving 5 start cycles.

If the threshold has not been met then the system will not start the vehicle, and 6 start cycles are left. The unit continues to check threshold levels every 3 hours.

Auxiliary features

Aux 1

Command: Press f one time and then press \bullet .

Feedback The screen will show a text of the item activated * Notes: This is an optional feature. See your sales rep/installer

for details. The Auxiliary output controls: ____

Aux 2

Press f two times and then press \bullet Command: Feedback Text will display the item activated *

This is an optional feature. See your sales rep/installer Notes:

for details. The Auxiliary output controls:

Aux 3

Press f three times and then press \bullet . Command: Feedback

Text will display the item activated *

Notes: This is an optional feature. See your sales rep/installer

for details. The Auxiliary output controls: _

^{*} Factory default is trunk. the icon and text can be changed by your installer using the Bitwriter programming tool.

Remote control feature programming

The Responder LC 2-way remote control has menus for configuring the remote control user features and for programming the remote to the system control module.

Before you start make sure the keypad is unlocked. (See page 14)

To program the remote user features:

Press and hold the ${\pmb f}$ button on the remote for about 8 seconds. (ignore the car indicator at 3 seconds). The status screen clears and "Main Menu" is displayed in the text display area of the screen.

Release the $m{f}$ button to display the remote options menu.

Remote options menu

Options	Description		
Remote Setup	Allows feature programming of the remote		
Sensor Adjust			
Pair Remote	Sets up remote for programming to the system		
Demo mode	Places remote in demo mode		
Exit	Exits programming		

Press the 🐷 button to scroll up the Main Menu.

Press the Dutton to scroll down the Main Menu.

From the Main Menu, once a feature name is displayed in the text

display area of the screen, press and hold the $m{f}$ button until the remote beeps to confirm entry into the selected feature menu.

To access feature menu options, scroll up pressing the 🗭 button, or scroll down by pressing the 🤔 button.

When the feature option that you want to program is displayed in the LCD text area, press and hold the \boldsymbol{f} for 1 second to save the selected feature. The LCD screen returns to previous options menu.

You can save and exit the programming mode anytime by pressing the or . Programming mode is automatically exited without saving if there is no remote activity for 30 seconds.

Note: Selecting "Back" returns to the previous menu without saving the setting.

> Remote setup options

Feature	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5
Auto keypad lock	On	Off	Back		
Page	On	Off	Power save	Back	
Page alert	Vibe	Tone	Both	Screen only	Back
Remote start display	Clock	Тетр	Runtime	Back	
Low runtime alert	On	Off	Back		
Car 2	On	Off	Home	Back	
Back light	Off	1-7	Back		
Temp units	F°	C°	Back		

Feature	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5
Button press beep	On	Off	back		
System type	Remote start & Security	Remote start	Back		
Clock set	Clock time	Back			

> Menu option descriptions

Auto keypad lock

Automatically locks the remote buttons when the buttons are not used for 60 seconds. Prevents "accidental" presses of the remote.

Press f then Δ to unlock the keypad.

Note: If the auto keypad lock feature is programmed On, the remote automatically unlocks when the vehicle ignition is turned Off. The remote stays unlocked to allow time to exit and unload the vehicle, and then lock the doors with the remote. When the button is pressed, the keypad auto lock feature resumes normally.

Page On or Off and Power save
 When paging is "On" the remote checks the status of the system every
four seconds, and reports any alarm triggers (if the system is within the
operating range).

In the paging "Off" setting, the remote does **not** check the status of the system. In the paging Off mode the remote will only beep and report when a button on the remote is pressed.

In the "battery saver" mode, the remote goes into sleep mode if no buttons are pushed for 72 hours. The timer resets each time a button is pressed.

 Page Alert / Vibe/Beep Tone/Both or /Screen only Receive command confirmations on the remote with vibrations, beeps or both, or with display only. Remote start display: Clock, temperature or runtime
 Allows you to choose what is displayed in the text during the remote start
 sequence. Clock displays the current time during remote start.
 Temperature displays the current cabin temperature during the remote start.

 Runtime displays the runtime remaining during the remote start.

Low Runtime Alert

The remote reports with one short beep followed by 1 short error tone (repeated twice) and the text area displays "run time" when the remote start runtime is at the 3-minutes remaining and one more time at 1 minute remaining. You have the option to let the remote start timeout or use the "runtime reset" feature . When programmed "Off" you will not receive a low runtime alert on the remote.

- Car 2 On or Off/Home
 Turns Off or On, 2 car operation from the remote. The option for "home"
 is not available.
- Backlight Color Off/1 8
 Turn Off the LCD backlighting or changes the color of the backlighting.
 Color options include: Blue, green, red, aqua, purple, lime, clear
- Temperature Units F and C
 Display temperature in Fahrenheit or Celsius
- Button Press Beep On or Off
 Turn Off beeps when a button on the remote is pressed
- System Type Remote Start & Security or Remote Start
 Select the type of system you are using, security system with remote start
 or a keyless entry system with remote start (to ensure that the correct icons
 are displayed on the LCD)
- Clock Set
 To enter clock set mode, Press the f button. The LC text display reads
 "hour" to confirm entry in the clock set menu.

Press the button to move up the menu, press the 🐯 button to move

down the menu

After you select the time increment (hour /min), press f. The hour or minute flashes. Press the button to move up to the hour or minute, and press the button to move down to the hour or minute you want to set. Once the desired time has been reached you can either choose "back" in the menu or press or save and exit.

> Sensor adjust

Used to adjust the onboard impact sensor, it is recommended that your installer adjust the sensor.

> Pair Remote Mode

It is recommended that this feature for programming the remote to the system is performed by your installer.

> Demo Modes

- One-time with sound
 The LCD icons display one at a time with icon name displayed in the text field, while the remote is playing tones.
- One-time without sound
 The LCD icons display one at a time until they are all turned on. The remote does not play any tones.

Note: If the charger is plugged into the remote and demo mode is activated, the remote plays the demo mode continuously. The continuous loop demo mode is exited when the charger is disconnected.

Safety features

This system has several important safety features to ensure proper operation of the motor and prevent accidental damage to the engine or its components.

> Starter anti-grind circuitry

Whenever the vehicle is remote started, advanced anti-grind circuitry prevents the starter from engaging, even if the key is turned to the start position. This prevents damage to the starter motor if the key is turned to the start position during remote start operation.

Note: Anti-grind circuitry only works when the remote start system is operating the motor and the Failsafe® Starter Kill relay is installed.

> Disabling the remote start system

This feature allows the remote start unit to be temporarily disabled to prevent the vehicle from being remote started accidentally. This feature is useful when the vehicle is being serviced or stored in an enclosed area.

To disable the remote start, move the shutdown toggle switch to the OFF position. Check with your installer for the location.

Location of Shutdown Switch	Location of Shutdown	n Switch	
-----------------------------	----------------------	----------	--

Diagnostics

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

Refer to System Status Chirps and Table of Zones sections of this guide for diagnostic information.

➤ Last trigger

Press f three times and then hold for 1.5 seconds. The display scrolls last trigger and the remote recalls the last zone that has triggered the security system.

> Arming

If the security system is armed at the same time that an input is active (such as a door opening or sensor triggering), you will hear one siren chirp to indicate arming and a second siren chirp to indicate Bypass Notification.

A Bypass Notification chirp means that the security system ignores the input that was active when the system was armed, until that input ceases. Three seconds after that input ceases, the security system will resume normal monitoring.

For example: if your vehicle has an interior light exit delay and you arm your security system before the interior light turns off, you may hear a second Bypass Notification chirp.

Once the light turns off, the security system resumes normal monitoring.

Note: Bypass Notification does not occur when the system is in Silent Mode or if the notification chirps have been programmed off by the installer.

> Disarming

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

If five chirps are heard when disarming the system, the system was triggered so many times that the Nuisance Protection® Circuitry has bypassed the intended zone. In either case, the status LED will indicate which zone was involved (see Table of Zones).

The security system will retain this information in its memory, and chirp four or five times each time it is disarmed, until the next time that the ignition is turned on.

Note concerning low battery alert: When the batteries in the remote are low the alarm will give an additional chirp when disarming to let you know its time to change the battery in the remote.

> System status chirps

The siren will chirp when arming/disarming the system. The pattern of chirps will audibly report the system's status as described below.

Action	Number of Chirps	Description		
Arm	1	System armed		
Arm	1 (3-second delay) + 1	System armed with bypass notification		
Disarm	2	System disarmed		

Disarm	3	disarmed with Low battery indicator
Disarm	4	System disarmed with Tamper Alert
Disarm	5	System disarmed with NPC active.

> Table of zones

A zone is represented by the number of LED flashes used by the system to identify a particular type of input. Standard input assignments are listed in the following table, along with spaces to write in any optional sensors or switches that have been installed.

Zone	Description	Dealer installed options
1	Trunk Pin	
2	Instant trigger: a heavier impact detected by the onboard shock sensor	
3	Door switch trigger	
4	Instant trigger: For optional sensors	
5	Ignition trigger	
6	Hood Pin	

> Interpreting zone diagnostics

Warn Away responses are not reported by arming or disarming diagnostics. If you receive a Bypass notification when arming or a Tamper Alert notification when disarming, look at the LED on the control center.

Active or triggered zones will be indicated by a pattern of blinks by the IFD.

For example: If zone 3 was active or triggered, the LED will blink three times with a two-second pause. Then it will blink three times again, and repeat until the ignition is turned on.

> Nuisance prevention® circuitry

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

For example: If the alarm triggers three times within a 60-minute period and each time the same sensor or switch triggers the alarm, NPC will interpret those 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) for 60 minutes.

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

The vehicle doors are protected by NPC differently. If your security system is triggered by an open door for three full cycles, the system will bypass the doors until the trigger ceases.

> Remote Start

This system can provide you with information to indicate what the problem is when using the remote start. When the remote start is activated and fails to engage, count the parking light flashes to determine the problem. The parking lights will flash between 5 - 8 times to indicate what caused the no start situation.

5 flashes: brake wire is active6 flashes: hood pin is active

- 7 flashes: manual transmission mode is enabled and not initialized
- 8 flashes: neutral safety wire has no ground or the remote start defeat toggle switch is off.

Keep a record of the number of flashes, to assist your installer when taking the vehicle in for service.

Owner recognition

Owner Recognition lets up to four users of the system have unique settings that meet their specific needs. It is almost like having four separate alarms in your vehicle, one for each user. This feature is only available to authorized dealers using the Bitwriter or Bitwriter 2 program tool.

Rapid resume logic

This Directed system will store its current state to non-volatile memory. If power is lost and then reconnected the system will recall the stored state from memory.

For example, if the unit is in Valet Mode and the battery is disconnected for any reason, such as servicing the car, when the battery is reconnected the unit will still be in Valet Mode. This applies to all states of the system including arm, disarm, and Valet Mode.

Power saver mode

> System

Your system will automatically enter Power Saver Mode while armed or in Valet Mode, after a period of time in which no operation has been performed. This lowers the current draw on the vehicle's battery. Power Saver Mode takes over under the following conditions:

Power Saver when the system is armed: After the system has been armed for 24 hours the LED will flash at half its normal rate, decreasing the system's current draw.

Power Saver in Valet Mode: When the system enters Valet Mode the Status LED on the Responder LE control center illuminates steadily. If the vehicle is not used (ignition is not turned on) for a one hour period while the system is in Valet Mode, the status LED will shut off. If the system remains in Valet Mode, the LED will come back on the next time the ignition is turned on and then back off.

➤ 2-way remote

Your Responder LC 2way remote control has a feature called remote power save mode. When programmed ON under remote options, the remote will conserve power by disabling the paging function if unused for more than 72 hours. Pressing any button on the remote will restore the paging function.

The default setting is ON. See Remote control programming section of this guide or ask your dealer for details on how to program.

Programming options

Your system has many custom programmable options. Some may require installation labor. Ask your authorized dealer for details.

The following is a list of the programmable options, with the factory settings in Bold.

- Active arming (remote only) passive arming with or without locking
 the doors (automatic arming without locking the doors 30 seconds
 after the last door has been closed), or Auto Re-arm with or without
 locking the doors (Automatically arms 60 seconds after disarm if
 no door is opened).
- Arming/disarming siren chirps ON with or without Warn-away chirps, Or OFF with or without Warn-away chirps.
- Ignition controlled door lock feature ON or OFF: When this feature is programmed on, the doors will lock three seconds after the ignition is turned on, and unlock when the ignition is turned off.

If your installer is programming the security system with the Directed Bitwriter®, ignition lock and unlock are independent features that can be programmed separately.

- Panic mode enabled/disabled when the ignition is turned on or completely turned OFF. (Some states have laws against sirens sounding in moving cars.)
- Full trigger response 30 or 60 seconds: This determines how long the full triggered sequence lasts. Some states have laws regulating

how long a security system can sound before it is considered a nuisance.

If your installer is programming the security system with the Directed Bitwriter®, the full triggered response can be programmed for any duration ranging from 1 to 180 seconds.

- 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 a dealer, resulting in a unique, easily identifiable siren sound. The arm/disarm chirps can be either full volume or 6 decibels quieter than the full alarm blast.
- Comfort closure is a programming option which closes the vehicle's windows after remote locking.

Note: Comfort closure can only be used on cars that have the capability of closing the windows (and on some cars the sunroof as well) with the key cylinder in the door.

Security & convenience expansions

Listed below are some of the many expansion options available. Please consult your dealer for a complete explanation of all the options available to you.

Audio Sensor: Metal on glass, glass cracking, and breaking glass produce distinctive acoustic signatures. The 506T audio sensor uses a microphone to pick up sounds, then analyzes them with proprietary acoustic software to determine if the glass has been struck.

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

Digital Tilt Sensor: The 507M tilt sensor can be added to your system to protect your car when its parked. It can protect your vehicle from being lifted and provide protection for your expensive rims.

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

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

Power Trunk Release: The accessory 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, Directed®'s 522T trunk release solenoid can often be added.

Power Window Control: Automatic power window control is provided with the 529T and 530T systems. These can operate power windows, and can roll them up automatically when the system is armed, roll them down, or both up and down.

Ultrasonic Cabin Sensor: Using the 509U Ultrasonic cabin sensor provides a field of protection inside the car to protect your belongings.

Glossary of terms

2-Way Remote: A hand-held, remote control which operates the various functions of your system and receives feedback and pages from the alarm system.

Control Center: The control center contains the system's radio-frequency antenna, the valet and override switch, and the Status LED. For maximum remote-control range, the Control Center is usually located at the top of the windshield, centered near the rear-view mirror.

Control Module: 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 (if equipped): 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: Any physical connection to the security system. An input can be provided through a sensor, pin-switch or by existing systems in the vehicle, such as ignition or courtesy lights.

In-vehicle status LED: A light used to indicate the status of your system. It is located on your systems control center.

Shock Sensor: This system has a dual zone shock sensor. This sensor is mounted in the vehicle and designed to pick up impacts

to the vehicle or glass.

Trigger or Triggered Sequence: This is what happens when the alarm "goes off" or "trips." The triggered sequence of your system consists of the siren sounding and parking lights flashing for the programmed duration.

Valet Button: A small push button switch located on your systems control center. It is used to override the starter interrupt when the remote is lost or damaged, or to enter or exit Valet Mode.

Warn Away® Response: Light impacts to the vehicle generate the Warn Away® Response, which consists of several seconds of horn honks and flashing parking lights.

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.

LCD layout



				å	
2		Locked	10		Battery Status
3		disarmed	11	×	Hood (Trigger)
4		Unlocked	12	2	Hood (Zone bypass)
5	((▶	Alarm	13		Trunk (Trigger)
6	ာ	Remote Start	14	X	Trunk (Zone bypass)
7	④	Timer Mode	15		Pager On
8	1	Manual Transmission Enabled	16		Pager Off

Armed

Thermometer/Smart start

17	} }	Vibration On	27		Car Door
18	((Pager Tone On	28	1	Home (Garage - Open) *
19		Siren	29		Home (Garage Close) *
20		Silent Mode 2	30		Car 1
21		Transmit	31		Car 2
22	\rightarrow	Receive	32	ALL	All Zones
23	×	Out of Range	33		Defroster
24	9	Sensor	34	((Sound Wave
25	3	Sensor Bypassed	35	>	Large Siren
26		Car Door (Zone bypass)			

^{*} This feature is not available.



Arming

To arm, press 🛕. The system arms with 1 beep and siren tone.

Silent Arm

Press f one time and then press \triangle .



Disarming

To disarm, press 🍣 and you will hear 2 beeps and two siren tones.

Silent Disarm

Press f one time and then press \mathcal{L} .



Disarming without a remote

While the alarm is triggering. Turn on the ignition. Press and release the Valet button within 15 seconds. The system should now disarm. If it does not, you may have waited too long or pressed the button incorrect number of times.

Number of Valet button pulses for disarming

Remote Start

Press 🕥, the vehicles parking lights flash and the vehicle remote starts

To disable the remote start system:

Move the shutdown toggle switch to the OFF position.



Press $m{f}$ four times, and then press $m{\circlearrowleft}$ (only after remote start is ON.)

Valet Mode

Press f two times and then \mathcal{S} , remote beeps one time. When valet Mode is turned OFF, the remote beeps two-times.

Valet take over

Before turning off the engine, press and release 🐧. Then wait a few seconds.

Turn the ignition key to the OFF position.

The engine will remain running until the programmed time elapses or a shut-down input is received.

Limited lifetime consumer warranty

Directed Electronics. ("Directed") promises to the original purchaser to repair or replace (at Directed's election) with a comparable reconditioned model any Directed 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 purchased from an authorized Directed dealer, the unit was professionally installed and serviced by an authorized Directed dealer; the unit will be professionally reinstalled in the vehicle in which it was originally installed by an authorized Directed dealer; and the unit is returned to Directed, 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. ALL PRODUCTS RECEIVED BY DIRECTED FOR WARRANTY REPAIR . WITHOUT PROOF OF PURCHASE WILL BE DENIED. 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 from 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. Directed, in its sole discretion, will determine what constitutes excessive damage and may refuse the return of any unit with excessive damage.

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This warranty is only valid for sale of product(s) within the United States of America. Product(s) sold outside of the United States of America are sold "AS-IS" and shall have NO WARRANTY, express or implied. This product may be covered by a Guaranteed Protection Plan ("GPP"). See your authorized Directed dealer for details of the plan or call Directed Customer Service at 1-800-876-0800.

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

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

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

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The company behind this system is Directed Electronics

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

Directed is ISO 9001 registered.

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

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

Designed and Engineered in the USA



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