INSTALL GUIDE

640 Series Advanced Remote Vehicle Security System

REMOTE STARTERS

CAR ALARMS

ULTRA START

WWW.ULTRASTARTERS.COM

Technical Support- 866.698.5872

Note: Some features may not be available on certain models.

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Components

- Control Module
- Two 4 Button AM Transmitters
- Multi-Tone Siren
- 13 Pin Main Harness
- Installation and Owner Manuals
- 4 Pin Keyless Entry Harness With Driver's Door Priority Output

- Starter Disable Harness
- 4 pin Aux Sensor Harness
- AM 2way Antenna With Integrated
  LEDs and Program/Valet Switch
- Window Decal

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Wiring Diagram

Built-in Starter Disable Relay (Normally Connected 87a & 30)

Siren Output (+)	3amp	(+) Siren	Brown
Programmable	500ma	Channel 4	Pink
Programmable	500ma	Horn/ Channel 5	Wht/Blue
Constant Power	(+) Input	Main Power	Red
Chassis Ground	(-) Input	Ground	Black
(-) Trunk Release	500ma	(-) Trunk Release	Grey
Park Lights	15amp	(+) Park Lights	White
(-) While Armed	500ma	(-) When Armed	Orange
Dome Light Output	500ma	Dome Light	Blk/White
Positive Door Pin	(+) Input	(+) Door Input	Purple
Negative Door Pin	(-) Input	(-) Door Input	Green
Hood Pin Switch	(-) Input	Hood Input	Blue
Switched Ignition	(+) Input	Ignition Input	Yellow

ACTIVE RF ANTENNA**

Status Led's

Program Button

**The antenna MUST be connected for the system to operate

SIDE VIEW

Programmable Output	(-)500ma	Lock Output	Green
Voltage Inverter Output	(+)500ma	12vts Low Current	Red
Programmable Output	(-)500ma	Unlock Output	Blue
Programmable Output	(-)500ma	2nd Unlock	Pink

**500ma outputs are low current and are designed to activate relays.

REAR VIEW

Auxiliary Sensor Connector This connector can be used to add additional Alarm Sensors such as Radar, Glass Break or an additional shock sensor for coverage at the rear of the vehicle.

(-) trigger Input	(-)500ma Input	Sensor Full - Warn	Blue
(-) trigger Input	(-)500ma Input	Sensor Pre - Warn	Green
Ground Output	(-)500ma Output	Sensor Ground	Black
12volt Output	(+)500ma Output	Sensor Power	Red

Recommended Pre-Installation Procedures

BEFORE STARTING INSTALLATION:
- Discuss the optional system features with the customer.
- Take a few minutes to review the installation and owners manuals.
- Do a walk around the vehicle and check for any damage.
- If installing a LED discuss the placement with customer before installing.

Recommended Installation Procedures

Mounting the Module

Never mount the module in the engine compartment. Select a location under the dash to install the main module. Be certain that the module is securely attached and does not obstruct any serviceable areas. Mount the module so that it cannot be seen if looking under the dash as it could be easily unplugged by a thief. The module must be free from all moving parts such as brake, clutch and gas pedals linkages.

Installing The Antenna

The antenna should be mounted in the top center of the windshield with the antenna mast facing downwards. First ensure that the glass is clean and dry, remove the plastic from the adhesive tape then press against the glass.

Connecting The Starter Disable

This system contains a built-in Starter disable relay. The brown starter kill wire from the wire harness bag will connect to the module as normally connected. (87a & 30) Cut the brown wire in half, then locate the vehicles starter wire. This wire will switch to 12volts in the crank/start position only. Cut this wire in half and confirm that the vehicle will not start. Connect the brown wires, one to each side of the cut starter wire. Route the brown wires to the main module and connect.

Connecting The Dome Light Supervision

This output can be used to activate the interior lights upon disarming the alarm, connect this output to a relay to activate the interior light. The dome light output will stay active for 30 seconds upon disarm.

Mounting The Siren

Choose a location in the engine compartment that is away from high sources of heat and direct exposer to water. The siren should be mounted as well as grounded to solid metal. Run the wiring for the siren so that it can not be seen or reached from below the vehicle.

2 Pin Connector (Brown wire with female connectors)

Starter Disable harness. See page 4 for installation instructions

14 Pin Connector

Brown	(+) Siren Output	Positive output for siren*
Pink	Channel 4 Output	*Programmable - See menu 2***
Wht/Blue	Channel 5 Output	*Programmable - See menu 2****
Red	Main Power Input	Constant 12 Volt input
Black	Ground Input	System ground input
Grey	(-) Trunk Release	Negative trunk release. 500ma****
White	(+) Park lights	Programmable - 10amp Maximum
Orange	(-) When Armed	Negative output when system is armed****
Blk/White	(-) Dome Light	Dome light supervision****
Purple	(+) Door Input	Positive door pin switch input
Green	(-) Door Input	Negative door pin switch input
Blue	(-) Hood Input	Negative input from hood pin switch
Yellow	Ignition Input	Input from vehicles ignition wire

4 Pin Connector Blue

This connector is for the RF antenna. The antenna also contains 2 LEDs and the Program Button.

4 Pin Connector Red

Green	Door Lock	*Programmable - menu 1, setting 3.*
Red	12 Volt Output	Output for voltage inverter only*****
Blue	Door Unlock	*Programmable - menu 1, setting 3.*
Pink	Second Unlock	*Programmable - menu 1, setting 3******

4 Pin Connector White

Blue	Sensor Full Warn	Input trigger for addition alarm sensor(s)
Green	Sensor Pre Warn	Input trigger for addition alarm sensor(s)
Black	Ground Output	Ground output for addition alarm sensor(s)
Red	12 Volt Output	12 volt output for additional alarm sensor(s)

* This output is designed to operate one siren. If more than one is being added, a relay must be installed to avoid damaging the module.
**Channel 4 is activated by holding the Star button on the transmitter.
*** Channel 5 must be programmed to activate on the # button. This channel works on the horn output, if the 5th channel is programmed the horn output will function as 5th Channel.
****500ma outputs are low current and are designed to activate relays.
*****This is a low current 12volt output designed for use with a voltage inverter.
******This output will activate on the second press of unlock within 3 seconds.

Quick Start Install

Step 1 - Connect All Of the Following Wires

13 Pin Power Connector

Black	**Ground Input**	System ground input.
Yellow	**Ignition Input**	Input from vehicles ignition wire.
Red	**Main Power Input**	Constant power input
White	**(+) Park lights**	Programmable - menu 2, setting 3.
Brown	**(+) Siren Output**	Positive output for siren.
Green*	**(-) Door Input**	Negative door pin switch input.
Purple*	**(+) Door Input**	Positive door pin switch input.

*Test for door pin type (Positive or Negative) then connect the appropriate wire (Green or Purple)

Step 2- Plug-In The Module

When all the connections are done, the control module can be plugged in. Before connecting the control module, make sure the ignition is in the **OFF** position. Plug in the 6 pin harness then the 14 pin followed by any other connectors that were used.

Step 3- Program, Test And Adjust The Shock Sensor

To program the Shock Sensor.
1. Press and hold the Lock and Unlock buttons for 5 seconds.
2. The system will chirp and the park lights will flash **three** times then stay **"ON"**.
3. Within 10 seconds impact vehicle in a safe place (i.e. - Window pillar) with amount of force wanted to activate alarm. The siren will chirp upon learning the impact.
4. The Shock Sensor is now programmed.
5. Press the **Unlock** button to exit the Program Mode.
To test the Shock Sensor.
1. Press the **Lock** button once to arm the system.
2. Wait five seconds then impact the vehicle. Lighter impacts to the vehicle should trigger the warn away (The siren will chirp three times). A harder impact to the vehicle will trigger the full alarm.(The siren will activate for 60 seconds then turn off).
3. To deactivate the alarm when triggered, press the **unlock button twice.**
To adjust the Shock Sensor.
1. Repeat the shock sensor learning.
- If the sensor was to sensitive, impact the vehicle with greater force.
- If the sensor was not sensitive enough, impact the vehicle with less force.
*For best results ensure that the Control Module is mounted securely to the vehicle.

Test The System

1. Open all the vehicles windows.
2. Press the Lock button to arm the system.
3. Wait five seconds (or until the dome light goes out) then reach in through a window and open the door.
    The alarm will then activate (repeat on all the doors).
4. Test the Shock Sensor again and adjust if necessary.
5. Insure that all additional features are working as intended.
6. If necessary proceed to Program Mode to adjust the programmable outputs.

Your Basic Install Is Complete!

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Programming Overview

Program mode allows you to adjust the settings and options of your system.
Your system has been intelligently designed by installers with years of experience. The system's
default settings do not require any program changes in most cases. However, this system does
incorporate a highly advanced programming system that includes 2 menus with numerous options
and settings that can be easily adjusted for custom installations and applications.

Entering Program Mode

To Enter Program Mode
1) Make sure ignition is in the off position.
2) Within three seconds turn the key ON - OFF - ON - OFF - ON. **Leave Key ON.**
3) Press and release the Program Button one time.
4) Park lights will come and the siren will chirp to confirm entering Program Mode.
5) Select Desired Program Menu by the following:

Press Button #1	**Lock**	**User Options Page 8.**
Press Button #2	**Unlock**	**Alarm Settings Page 9.**

6) The selected mode will be confirmed by a siren chirp and one park light flash.
7) The Program Menu may be changed at any time by pressing the transmitter buttons as
 above, this allows the installer to change a setting from one menu, then quickly jump to
 another menu and change another setting without exiting Program Mode.
8) Program Mode will be exited if there is no activity for 30 second or if the key is turned to the
 "Off" position. This will be confirmed by one siren chirp and park light flash.
 Note: *If unit does not enter Program Mode, turn ignition off and repeat steps 1-4.*
** The ignition wire(Yellow) **MUST** be connected to the vehicle's ignition wire. If it is not
 connected it will not be possible to enter the Program Modes.

Changing the Programmable Settings

To Select and Change A Program Setting:
1) Enter **Program Mode**.
2) Select the desired **Program Menu.** *(See pages 8&9)*
3) Press & release the **Program Button** the correct number of times to select the desired
 Program Setting(*as listed on pages (8&9)*. The park lights will flash and the siren will chirp to
 indicate the current setting that is selected.
4) Press and hold the Program Button until the parking lights / siren confirm the selected setting.
 The park lights will flash and the siren will chirp to indicate the option selected within the setting.
5) Turn the ignition key "Off" to exit Program Mode.

SYSTEM RESET

STEP 1 - Within three seconds turn the key ON-OFF-ON-OFF-ON (Leave the Key ON).
STEP 2 - Press and release the Program Button.
STEP 3 - Park Lights will come ON
STEP 4 - Press the Program Button a second time and hold for 8 seconds until the park lights
 flash 3 times and siren chirps 3 times.
System is now re-set to factory defaults.
NOTE: Reset to defaults does not delete the transmitters from memory.

Menu 1 - User Settings

Setting 1- Ignition Auto Lock

1 Ignition Lock & Unlock Enabled	1 Light Flash	Doors Lock/Unlock when the key is turned On/Off
2 Ignition Lock Only	2 Light Flashes	Doors Lock when ignition key is turned ON only
*3 Ignition Auto Lock Disabled	**3 Light Flashes**	**Doors do not Lock or Unlock with Ignition key**

Press the Program Switch 1 time to select setting 1 (This will be confirmed by 1 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 2- Horn Honk Settings

1 Lock & Unlock chirps **Disabled**	1 Flash	A audible chirp for Panic Mode only
*2 Chirps Enabled	**3 Flashes**	**Chirp indication for all functions**

Press the Program Switch 2 times to select setting 2 (This will be confirmed by 2 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 3- Door Lock Options

1 Double Pulse Unlock	1 Flash	Single .75 second lock and double unlock pulse
2 3 Second Lock & Unlock	2 Flashes	3 second pulses for lock & unlock
*3 0.75 Second Pulses	**3 Flashes**	**0.75 second pulses for lock and unlock**

Press the Program Switch 3 times to select setting 3 (This will be confirmed by 3 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 4 -Sensor - Enable / Disable

1 Sensors Disabled	1 Flash	Shock sensor and Aux. Sensor disabled
* 2 Sensors Enabled	**2 Flashes**	**Shock Sensor and Aux. sensor enabled.**

 Press the Program Switch 4 times to select setting 4 (This will be confirmed by 4 LED flashes)
 Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
 Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 5 - Passive / Active Arming

1 Passive Arming	1 Flash	Auto Arms 30 seconds after last door is closed
2 Active Arming With Rearm	2 Flashes	Unlock is pressed and no door is within 30 sec.
* 3 Active Arming	**3 Flashes**	**Alarm arm by remote transmitter only.**

Press the Program Switch 5 times to select setting 5 (This will be confirmed by 5 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 6 - Active / Passive Locks

1 Active Locking	1 Flash	Doors do not auto-lock with passive arming
*2 Passive Locks	**2 Flashes**	**Doors Auto-Lock with passive arming.**

Press the Program Switch 6 times to select setting 6 (This will be confirmed by 6 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Menu 2- Alarm Settings

Setting 1 - Car Finder/ 5th Channel

1 Car Finder OFF	1 Light Flash	Car Finder Mode Disabled
*2 Car Finder ON	**2 Light Flashes**	**Car Finder Mode activated when # button is held.**

**To operate the 5th channel on button #4, setting 7 must be programmed for 5th channel output.

Press the Program Switch 1 time to select setting 1 (This will be confirmed by 1 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 2 - Secure Program Mode

1 Secure Program Active	1 Flash	Ignition "ON" and Program switch held for 15 seconds
2* Normal Program Active	**2 Flashes**	**Ignition "ON" and Program switch held for 5 seconds**

Press the Program Switch 2 times to select setting 2 (This will be confirmed by 2 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 3 - Park Light Output

1 Parking Lights on Disarm	1 Flash	Park Lights on for 30 seconds on disarm
2 Negative Park Light	2 Flashes	Switches Park Light and the Trunk Release outputs
3* Normal Parking Lights	**3 Flashes**	**2 Park Light Flashes on disarm**

Press the Program Switch 3 times to select setting 3 (This will be confirmed by 3 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 4 - Horn Honk Timing

1 5ms Pulsed Output	1 Flash	Short (Quiet) Pulses
2 20ms Pulsed Output	2 Flashes	Long (Loud) Pulses
*3 10ms Pulsed Output	**3 Flashes**	**Normal (Medium) Pulses**

Press the Program Switch 4 times to select setting 4 (This will be confirmed by 4 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 5 - 4th Channel Settings

1 Pulsed Output	1 Flash	Pulsed for 0.75 seconds upon 4th Channel Activation
2 Latched Output	2 Flashes	Latched until repeated or ignition "ON"
*3 Active Output	**3 Flashes**	**Active for as long as the button is held on Transmitter.**

Press the Star buttons to activate the 4th Channel output.
The Shock Sensor and ignition will be bypassed upon 4th channel activation.
Press the Program Switch 5 times to select setting 5 (This will be confirmed by 5 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 6 - Car Jack Mode

1 Type 1	1 Flash	Press button #4 or open the door while the Ignition is "ON"
2 Type 2	2 Flashes	Press button #4 or by turning the Ignition "On"
*3 Car Jack OFF	**3 Flashes**	**No Car Jack Functions**

Press the Program Switch 6 times to select setting 6 (This will be confirmed by 6 LED flashes)
Press and hold the Program Switch until you receive the appropriate # of park light flashes and/or siren chirps.
Release the Program Switch. Press the Program momentarily to move to next program step or repeat to change selection.

Setting 7 - Horn/ 5th Channel

1 5th Channel	1 Flash	Active for as long as the # button is held on Transmitter.
2 LED Output	2 Flashes	Pulsed output for addition LED activation
*3 Horn Honk	**3 Flashes**	**Horn Honk with Arm & Disarm Chirps**

First Car Operation

First Car

🔒 Press Once to Lock the doors and arm the alarm. Hold for Panic Mode.
Press a second time and hold for Constant Lock Output.

🔓 Press once to unlock the doors and disarm the alarm
Press and hold for the Trunk / Aux Output

❄ Press this button to activate the 4th channel output.
This output can be used to activate additional alarm features.

⊞ Press once and hold for Car Finder
Press and release then hold to activate/deactivate Service Mode.

Second Car Operation (Optional)

2nd Car

⊞ **&** 🔒 **=** Press Once to Lock and arm the alarm. Hold for Panic Mode.
Press a second time and hold for Constant Lock Output.

⊞ **&** 🔓 **=** Press once to unlock the doors and disarm the alarm
Press and hold for the Trunk / Aux Output

⊞ **&** ❄ **=** Press this button to activate the 4th channel output.
This output can be used to activate additional alarm features.

⊞ *then* ⊞ *then* ⊞ **=** Press once and hold for Car Finder
Press and release then hold to activate/deactivate Service Mode.

Transmitter Programming

Step 1 - Within three seconds turn the ignition ON-OFF-ON-OFF-ON - **Leaving ON.**

Step 2 - Press and hold the Program Switch - Parking Lights will come ON **if park lights do not come on at this point, turn key off for 5 seconds, then repeat step 1.

Step 3 - Continue to hold the Program Switch, the park lights will turn off. (Continue holding the switch)

Step 4 - Press the **LOCK** button on each of **1st car** remote's and press the **#** button on Each of the **2nd car** remote's of the transmitters to be programmed pause for about 2-3 seconds between each remote. The park lights will Flash once and the siren will chirp once each time a new code is learned.

Note: Pause for no more than 2 seconds between transmitters **All the transmitters** to be used must be programmed at the same time. **All transmitters not programmed at this time will be erased from memory for security. The system holds a maximum of 3 transmitter codes including 2nd car remote codes.** You can program the same remote as a 1st car remote in one vehicle and as a 2nd car remote in a second vehicle.

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System Service Mode

ACTIVATING SERVICE MODE
1. While the ignition is "ON" press and hold the Program Button for five seconds. The
park lights will flash and the siren will chirp five times to confirm that the system is in Service Mode.
2. While in Service Mode the remote start functions will be disabled and LEDs will be "ON" steady.
Door locks and trunk release are still operational.

DEACTIVATING SERVICE MODE
1. While the ignition is "ON" press and hold the Program Button for five seconds. The park lights will
flash and the siren will chirp two times to confirm that the system has exited Service Mode.
2. All Alarm Functions are reactivated.

Service Mode- By Remote

SERVICE MODE ACTIVATED
1 - Press and release button 4 then hold Button 4 again for 6 seconds or until the status
LEDs comes on solid.
NOTE: The siren will chirp 5 times as confirmation.

SERVICE MODE DEACTIVATED
1 - Press and release button 4 then hold Button 4 again for 6 seconds or until status
LEDs turns of.
NOTE: The siren will chirp 2 times as confirmation.

Anti Car Jacking Mode

**Only program this feature if it specifically requested by the customer. Ensure that user is
fully trained on the operation of this feature. When car jack mode is activated the system
will no longer respond to the remote transmitters. If the starter disable feature was installed
the vehicle will not start.**

When the Car Jack Mode is activated the system will start flashing the LED rapidly for five seconds.
The park lights and siren will then activate once every second for 10 seconds in Countdown Mode.
After 10 seconds the alarm will trigger into Full Alarm, the system will no longer respond to the
transmitters and the starter disable output will activate to disable the vehicle from starting.

ACTIVATING CAR JACK MODE

Program Menu 2, Setting 5

- **Type 1-** Car Jack Mode will activate if the door is opened while the ignition key is in the "On" position.
Car Jack Mode may also be activated by pressing the # button on the remote transmitter
while the ignition key is in the "On" position.

- **Type 2-** Car Jack Mode will activate if the ignition key is turned to the "On" position. Car Jack Mode
may also be activated by pressing the # button on the remote transmitter while the ignition
key is in the "On" position.

DEACTIVATING CAR JACK MODE

1.**During the Countdown Mode** - Turn the ignition key "**ON**" then press and release the Program
Button one time.
2. **After Full Alarm** - Turn the ignition key **"Off" then "ON"** then press and hold the Program
Button until the alarm turns off. (About Eight seconds)

Note: If Car Jack Mode goes into full alarm mode, the system will ignore the remote transmitters and
this may result in the transmitter needing to be reprogrammed.

Diagnostics

Alarm Diagnostics

If the alarm system is triggered while armed, the system will retain in memory the cause of the trigger. The diagnostics can then be used to determine what the cause of the trigger was. When disarming the alarm, the siren/horn will chirp 3 times instead of the usual 2 times to indicate the alarm had been triggered. The system's LED will also flash in pulses to indicate which input triggered the alarm.

NOTE: LED status will be cleared when ignition is turned ON. For proper memory clearing, insure to connect the ignition input to the **ignition** on the vehicle.

Diagnostics Chart

Siren Chirps on Disarm	LED Flashes	Diagnostic
Three Chirps	Two Flashes	Shock Sensor Was Activated
Three Chirps	Three Flashes	Door/Hood Pin Input Triggered
Three Chirps	Four Flashes	Ignition Input Triggered
None	Off	System Disarmed
None	On Solid	System in Valet/ Service Mode
None	Single Flashes	Alarm System is Armed
None	Rapid Flashes	Passive Arming Countdown
On/Off	Rapid Flashes	Car Jack Mode Countdown

Additional LED Flashes

While the system is disarmed and the ignition is in the off position, the LEDs will activate from the following triggers.

1) If the door is opened the LEDs will stay on until the door is closed.
2) If the hood is opened the LEDs will stay on until the hood is closed.
3) If the shock sensor detects vibration the LEDs will turn on momentarily.
4) If the auxiliary sensor input is activated the LEDs will activate momentary.