



AS-2300TW

User Guide

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FCC USER NOTICE (U.S.A.):

This device complies with Part 15 of the 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.

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

Important Information

The boxes below contain information concerning your transmitter and remote starter.

We entered the part number of your transmitter for you. Should you need to order a new transmitter, you will need to provide the transmitter part number which is printed below.

The second box contains the serial number of the remote starter. Please make sure that the installer has entered the serial number in that box.

Transmitter part number: **AS-5100TW HHU**

Car unit: **AS-5100TW IVU**

The installer must use the space below to write the serial number of the remote starter and the location of the valet switch (if installed):

Serial number of the remote starter:

Location of the valet switch (if installed):

Introduction

This is a state-of-the-art remote starter system. The system is packed with advanced features such as priority access to the driver's door (commodity features) and the Safe Start children safety feature.

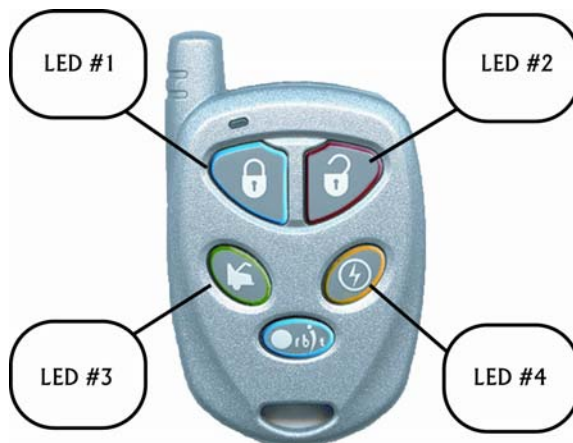
With many an advanced function, this product will satisfy any one your expectations from high-end commodity and security systems, without neglecting any standard feature commonly offered by entry-level starters.

Using the Remote Control

Your remote starter is equipped with a 5-button multi-channel remote control. It can operate two independent vehicles equipped with a remote starter (see **Multi-car operation** section on page 13). The functions of the transmitter are as follows:

	LOCK: Locks the Doors and arms the STARTER KILL.
	UNLOCK: Unlocks the Doors and disarms the STARTER KILL. Activates the AUX 2 output if Priority Door Access is configured.
	TRUNK: Opens the TRUNK or activates the AUX 3 output.
	START/STOP: Remote starts or shuts down the Engine. Cold-Weather Mode ON if the SHIFT button followed by the START/STOP button are pressed.
	SHIFT: This button serves as a second function button. In combination with the other four buttons, this button allows to assign different functions to those buttons.

Pressing the SHIFT button and then the LOCK button will activate the AUX 2 output.



Feature Confirmation Chart

Feature	LED #1	LED #2	LED #3	LED #4	Beep(s)
Lock	3 flashes	X	X	X	1
Unlock	X	3 flashes	X	X	2
Trunk	X	X	3 flashes	X	1
LED ON/OFF	3 flashes	3 flashes	X	X	1
Start	X	X	X	X	1
Running	X	X	X	3 flashes	3
Stop	X	X	X	3 flashes	2
Entering Cold Weather Mode	X	X	X	3 flashes	2
Exiting Cold Weather Mode	X	X	X	3 flashes	1
Home Valet	3 flashes	X	X	3 flashes	2
Valet Mode	3 flashes	X	X	3 flashes	1
Exit ValetMode	X	3 flashes	X	3 flashes	1

Vehicle Status Request

The status request feature allows the user to see the status of the vehicle (doors locked or unlocked, vehicle in cold weather mode, vehicle in home valet or vehicle in valet mode). The following chart indicates the confirmations that the user will receive on the transmitter.

To retrieve the vehicle status, press and release the **SHIFT** button then press and release the **TRUNK** button (there will be a beep). At this point, the transmitter will flash the corresponding sequence of LEDs depending on the vehicle's status. The status request feature is made up of a two-step transmission:

- The first sequence of LED flashes will let you know if the vehicle is locked or unlocked.
- The second sequence of LED flashes (if applicable) will let you know if the vehicle is in any of the following statuses:
 - a) Cold weather mode,
 - b) Home valet mode, or
 - c) Valet mode
- If there was no second sequence transmission, this means that the vehicle is not in any of the three (3) listed features (Cold weather mode, Home valet mode or Valet mode).

Vehicle Status Chart
(Available only when the vehicle is not running)

STATUS	SEQUENCE	LED #1	LED #2	LED #3	LED #4	Beep(s)
Lock		3 flashes	X	X	X	1
Unlock		X	3 flashes	X	X	1
Cold Weather	1 st sequence if locked	3 flashes	X	X	X	2
	1 st sequence if unlocked	X	3 flashes	X	X	2
	2 nd sequence	X	X	X	1 second	
Home Valet	1 st sequence if locked	3 flashes	X	X	X	2
	1 st sequence if unlocked	X	3 flashes	X	X	2
	2 nd sequence	1 second	X	X	1 second	
Valet Mode	1 st sequence if locked	3 flashes	X	X	X	1
	1 st sequence if unlocked	X	3 flashes	X	X	1
	2 nd sequence	1 second	X	X	1 second	

Run Time Status

When the vehicle's doors are locked:

RUN TIME	SEQUENCE	LED #1	LED #2	LED #3	LED #4	Beep(s)
If there is more than 3/4 of run time cycle	1 st sequence	3 flashes	X	X	X	3
	2 nd sequence	ON for 1-sec	ON for 1-sec	ON for 1-sec	ON for 1-sec	
If there is more than half of run time cycle	1 st sequence	3 flashes	X	X	X	3
	2 nd sequence	ON for 1-sec	ON for 1-sec	ON for 1-sec	X	
If there is more than 1/4 of run time cycle	1 st sequence	3 flashes	X	X	X	3
	2 nd sequence	ON for 1-sec	ON for 1-sec	X	X	
If there is less than 1/4 of run time cycle	1 st sequence	3 flashes	X	X	X	3
	2 nd sequence	ON for 1-sec	X	X	X	

When the vehicle's doors are unlocked:

RUN TIME	SEQUENCE	LED #1	LED #2	LED #3	LED #4	Beep(s)
If there is more than 3/4 of run time cycle	1 st sequence	X	3 flashes	X	X	3
	2 nd sequence	ON for 1-sec	ON for 1-sec	ON for 1-sec	ON for 1-sec	
If there is more than half of run time cycle	1 st sequence	X	3 flashes	X	X	3
	2 nd sequence	ON for 1-sec	ON for 1-sec	ON for 1-sec	X	
If there is more than 1/4 of run time cycle	1 st sequence	X	3 flashes	X	X	3
	2 nd sequence	ON for 1-sec	ON for 1-sec	X	X	
If there is less than 1/4 of run time cycle	1 st sequence	X	3 flashes	X	X	3
	2 nd sequence	ON for 1-sec	X	X	X	

Run Time Cycles

RUN TIME CYCLE	LED #1 will turn itself off when ...	LED #2 will turn itself off...	LED #3 will turn itself off ...	LED #4 will turn itself off...
4-minute run time cycle	... the cycle will have ended.	... 3 minutes into the cycle.	... 2 minutes into the cycle.	...1 minute into the cycle.
9-minute run time cycle	... the cycle will have ended.	... 7 minutes into the cycle.	... 5 minutes into the cycle.	... 3 minutes into the cycle.
15-minute run time cycle	... the cycle will have ended.	...11 minutes into the cycle.	... 7 minutes into the cycle.	... 3 minutes into the cycle.
20-minute run time cycle	... the cycle will have ended.	... 15 minutes into the cycle.	... 10 minutes into the cycle.	... 5 minutes into the cycle.
25-minute run time cycle	... the cycle will have ended.	... 19 minutes into the cycle.	... 13 minutes into the cycle.	... 7 minutes into the cycle.
30-minute run time cycle	... the cycle will have ended.	... 23 minutes into the cycle.	... 16 minutes into the cycle.	... 9 minutes into the cycle.

Example: The vehicle is programmed with a run time cycle of 15 minutes and the engine has been running (under a remote start) for 5 minutes (meaning there is 10 minutes left in the run time cycle).

If you were to request a run time status, you would see LEDs #1 #2 and #3 light up. LED #3 will only turn off when there will be 8 minutes or less left in the run time cycle.

Using the Transmitter to Access Features

Group 1:

SHIFT ➤ LOCK:aux 2
 SHIFT ➤ UNLOCK:aux 4
 SHIFT ➤ TRUNK:status request
 SHIFT ➤ START/STOPcold weather

Group 2:

A) Multi-car operation (default)

SHIFT ➤ SHIFT ➤ LOCK: 2nd car lock
 SHIFT ➤ SHIFT ➤ UNLOCK: 2nd car unlock
 SHIFT ➤ SHIFT ➤ START/STOP: 2nd car start/stop

B) Customized Features *(may not be applicable for certain vehicles)*

Your installer can add customized features such as turning on the radio, opening sliding doors, etc.

SHIFT ➤ SHIFT ➤ LOCK: customized feature 1
 SHIFT ➤ SHIFT ➤ UNLOCK: customized feature 2
 SHIFT ➤ SHIFT ➤ TRUNK: customized feature 3
 SHIFT ➤ SHIFT ➤ START/STOP: customized feature 4

Group 3:

Setting Transmitter Features

SHIFT ➤ SHIFT ➤ SHIFT:

LOCK+UNLOCK:.....	toggle features in group 2.....	(LED #1+ LED #2 flash)
	<i>(Will make the "Customized Features" the default feature instead of "multi-car operation", or vice versa).</i>	
LOCK:.....	full beep	(LED #1 flashes)
UNLOCK:.....	half beep	(LED #2 flashes)
START/STOP:.....	disable beep.....	(LED #4 flashes)
TRUNK:.....	save modifications	(LED #3 flashes)

Remote-Starting Your Vehicle

Remote-starting

Press the START/STOP button for approx. 1 second. The parking lights will come ON to inform you that the remote starter has received your signal. Approximately 5 seconds later, the engine will start. The parking lights will remain ON during the pre-programmed run time of the engine.

If the vehicle does not start at the first attempt, the system will shut down, wait a few seconds and try to start the engine again. There will be 3 start attempts before the system gives up.

Vehicle Presets

Heater & Heated Seat

When leaving the vehicle it is recommended to preset the accessory controls in preparation for the next remote start. Settings for the blower motor (fan), front and rear, as well as heated seats (if equipped) should not be left on HIGH. It is recommended to leave the settings on LOW or MEDIUM instead.

Windshield Wipers & Radio & Headlights

Certain vehicles require the radio and / or windshield wiper and / or headlight circuits to become energized while running under remote start. When leaving the vehicle you must ensure that the windshield wiper and headlight switches are OFF. Leaving the headlight switch ON on certain types of vehicles could cause them to remain ON even after remote starter shut down, resulting in a dead battery.

Driving Off

With the vehicle running under remote control, press the UNLOCK button to disarm and unlock the doors. Enter the vehicle and do the following:

Turn the ignition key to the IGNITION ON (RUN) position. (**Do not turn the key** to the CRANK position while the engine is running. This would cause the starter motor to re-engage.)

Press the brake pedal to disengage the remote starter unit.

You are now ready to drive off.

Using the Remote Starter

Arming the Starter Kill

The starter kill (if installed) can be configured by the installer so as to arm automatically (passive mode) or not to arm automatically (active mode). See section **passive or active arming** on p. 12 for more details on passive mode and active mode.

- To **disarm** the starter kill, press the UNLOCK button on the transmitter. The parking lights will flash twice. If remote door locks are installed, this will also unlock the doors.
- To **arm** the Starter Kill, press the LOCK button on the transmitter. The parking lights will flash once.

If remote door locks are installed, this will also lock the doors.

- In **passive mode**, the starter kill will automatically arm if the ignition key is not inserted into the ignition switch within 1 or 3 minutes after unlocking (the key sense feature must be installed).

Idle Mode

Convenience feature: Idle mode allows you to keep the engine running and the doors locked while you stop, for example, at a convenience store or for a short delivery.

This feature allows you to let the remote starter take over control of the vehicle (i.e. no key in the ignition switch) while the engine is running. For example, if you stop for a delivery or at a convenience store, lock your vehicle and leave it running for the length of a run cycle while you are away.

To leave the vehicle in idle mode:

1. With the engine running, press the **LOCK** or **UNLOCK** button (to unlock the doors) or the **START/STOP** button on the remote control until the parking lights come on.
2. Remove the key and exit the vehicle. The engine will go on running.
3. Lock the doors if needed.

The engine will go on running until the user re-enters the vehicle or until the expiration of the engine run time .

Caution!!! Do not leave children or pets unattended in a vehicle standing in Idle Mode.

Turbo Mode

If turbo mode is configured at installation, it will allow a turbocharger to idle down after the user leaves the vehicle: the unit will take over the vehicle and keep it running for 60 seconds (or until it is shut down by remote control), then shut down the engine.

Proceed as follows to set the system to Turbo Mode:

1. With the engine already running, press the **LOCK** button on the transmitter until the parking lights come **ON**.
2. Remove the ignition key from the ignition switch. The engine will go on running.
3. Exit the vehicle and close the door.
4. Press the **TRUNK** button to lock the doors; the engine will shut down after 60 seconds of Turbo Mode.

Valet Mode

Valet Mode Using the Valet Switch (if installed)

When your vehicle is in valet mode, the remote starter functionalities are disabled. If the vehicle needs to be serviced, or if you park it indoors, the valet mode will prevent the engine from being remote-started accidentally.

To put the system i n t o valet mode:

1. Turn the ignition key to the **IGNITION ON (RUN)** position.
2. Within 3 sec., press the valet button (the L.E.D. will come **ON** solid).
3. The parking lights will flash three times to indicate that the vehicle is now in valet mode. The L.E.D. will come **ON** solid.

To take the system o u t o f valet mode:

1. Turn the ignition key to the **IGNITION ON (RUN)** position.
2. Within 3 sec., press and release the valet button (the L.E.D. will come **OUT**).
3. The parking lights will flash twice to indicate that the vehicle is now in valet mode. The L.E.D. will go out.

Note: Once valet mode is activated, the remote starter and alarm functions will be disabled.

Ignition Valet

This feature will allow you to remotely put your system into valet mode by using the ignition key instead of the valet button as above. Ignition valet can be used without a valet button installed.

To put the system i n t o valet mode:

Insert the ignition key into the ignition switch. Within 10 sec., turn the key 5 times successively into the **IGNITION ON / RUN** and **OFF** positions.

The parking lights will flash three times to indicate that the vehicle is now in valet mode. The L.E.D. will come **ON** solid.

To take the system o u t o f valet mode:

Insert the ignition key into the ignition switch. Within 10 sec., turn the key 5 times successively into the **IGNITION ON / RUN** and **OFF** positions.

The parking lights will flash twice to indicate that the vehicle is now in valet mode. The L.E.D. will go out.

Note: With the remote valet activated, the remote starter and alarm functions will be disabled.

Remote Valet Mode

This feature will allow you to remotely put your system into valet mode by using the transmitter instead of the valet button as above.

Getting into valet mode

- Hold the **UNLOCK** and **START/STOP** buttons simultaneously for 3 second.
- **The parking lights will flash 3 times.**

The LED will remain on solid.

Getting out of valet mode

- Hold the **UNLOCK** and **START/STOP** buttons simultaneously for 3 second.
- **The parking lights will flash 2 times.**

The LED will turn off.

“Home Valet™” Mode

If configured at installation, this feature will remotely set the vehicle to a no-remote-start mode: if the vehicle is parked indoors there is no danger of it starting accidentally by remote control.

Note: Once the home valet mode is activated, the vehicle will not start by remote.

To take the system i n t o home valet mode:

- Press the **LOCK** or **UNLOCK** button.
- Within 3 seconds, press the **LOCK** and **START/STOP** buttons simultaneously until the parking lights go **out**

To take the system o u t o f home valet mode:

- Turn the ignition key to the **IGNITION ON (RUN)** position.

The system will warn you if someone attempts to start your vehicle while it stands in home valet mode. The parking lights will:

- 1- Turn **ON** then **OFF**; then
- 2- Flash **twice**, pause; then
- 3- Flash **twice** again.

Panic Mode

Note: Panic mode can only be activated if the horn has been adequately configured by your installer.

In an emergency situation, you can activate panic mode by pressing and holding the **SHIFT** button for 3 seconds. If the vehicle is under a remote start, you can shutdown the engine, stop the horn and lock your doors by pressing the **LOCK** button:

If the car is not running, you can stop the horn by pressing the **LOCK** or **UNLOCK** buttons but it will not lock or unlock the doors.

Furthermore, the panic mode can be stop by activating one of the following three (3) features:

- a) Remote valet (pressing **UNLOCK** and **START/STOP** for 3 seconds)
- b) Ignition valet (turning the key inside the ignition switch from OFF to ON 5 times in a row)
- c) By pressing the valet switch (if included).

Panic Mode will automatically shut down after 30 sec.

Quick Lockout™

(Also called **secure panic**.) For fast protection in emergency situations, the system will **LOCK** all doors when you **press the brake pedal while you hear the sound signal**. (**Quick lockout** is only available when **panic mode** has been set off.)

Cold Weather Mode

When cold weather mode is active, the engine starts every 2 hours and runs for 4 minutes (or for 9 or 20 minutes with diesel engines). Cold weather mode automatically ends after 24 hours.

To enter Cold Weather Mode:

- Press the **SHIFT** button and then the **START/STOP**.
- There will be two (2) beeps and the parking lights will flash three (3) times.

To exit Cold Weather Mode, do any one of the following actions:

- Open the hood.
- Start the engine by remote.
- Turn the ignition key to the **IGNITION ON (RUN)** position.
- Press the **SHIFT** button and then the **START/STOP** button for three seconds.
- There will be one (1) beep and the parking lights will flash once.

To verify whether the system is in cold weather mode:

Press and release the brake pedal:

If the vehicle is in cold weather mode, the parking lights will stay on while the pedal is pressed.

Advanced Features: Installation-programmable Options

The remote starter was designed with flexibility and OEM integration in mind. With its programmable options, this unit can single-handedly control nearly any electrical system in your vehicle.

Caution: The programming of your system should be left to a professional. Changing any one of the settings may affect the operation of your remote starter.

The installation-programmable options are as follows:

Remote Door Locks	Ignition Re-lock
Priority Door Access	Secure Lock
Passive or Active Arming	Turbo Mode
Starter Kill / Anti-grind feature	Remote Trunk Release
Horn Chirp Timing	Engine Run Time
Safe Start	Extended run time
Home Valet™	Multi-car Operation
Ignition-controlled Door Locks	

Remote Door Locks

If your remote starter was installed with the remote door locks option, you will have the convenience of remote keyless entry. See section **Arming and Disarming the Remote Starter**, on page 8, for further instructions on remote door locking and unlocking.

Priority Door Access

If the remote door locks option is installed on your vehicle, this safety feature allows you unlock solely the driver's door with a single press of the **UNLOCK** button on the transmitter; upon a second press of the **UNLOCK** button, all the other doors will unlock.

Active or Passive Arming

The starter kill can be configured either to passive mode (so as to arm automatically) or active mode (so as to require user intervention for arming). By default, your remote starter is configured to **passive mode**. In passive mode, the starter kill will automatically arm **60 seconds** after the last door is closed. The remote starter will not arm if a door is left open, or if you re-open a door within the 60-second delay.

Important note: When the remote starter re-arms automatically, you can disarm the When the remote starter by simply pressing the **UNLOCK** button.

The Starter Kill and the Anti-grind Feature

With this added security feature, the system will prevent your vehicle from starting with the ignition key when the starter kill is armed. If your remote starter was installed with the starter kill option, one will not be able to start your vehicle with the key unless the system has been unlocked and disarmed first, or put into valet mode.

Note: If the starter kill is installed, your vehicle will benefit from a protection against starter motor damage that could occur after remote-starting the engine should the user, by force of habit, turn the ignition key to the **CRANK** position.

Flashing LED

The user may decide to turn on or off LED flashing at any moment. To do so, simultaneously press and hold the **LOCK** and **UNLOCK** buttons on the transmitter. There will be an initial beep. Keep holding the buttons pressed until you hear another beep. At that point release the buttons. The LED will toggle to its next state –i.e.: ON/OFF:

There are three programmable options regarding the flashing LED:

- i. The LED flashes once the starter kill is activated (passive or active arming) and will turn itself off once the user turns the key to the **IGNITION ON** position.
- ii. The LED is totally disabled and will not flash –it will turn on solid, however, when in valet mode.
- iii. The LED will flash once the starter kill is activated but requires pressing the **UNLOCK** button to turn itself off. Failure to press the **UNLOCK** button will make the LED flash even if the key is in the **IGNITION ON** position.

Safe Start

If this feature is enabled, the user must press the **START/STOP** button 2 times within 3 seconds to remote-start the vehicle. This will eliminate accidental remote starts, e.g. when children are playing with the transmitter.

If **swap start mode** is selected, to remote-start your vehicle, press the **SHIFT** button and then the **LOCK** button. The **AUX 2** output can be activated by pressing the **START/STOP** button.

Home Valet™

If this feature is installed, the user will have the possibility to remotely set the vehicle to a no-remote-start mode. See home valet section, on page 10, for full instructions.

Ignition-Controlled Door Locks

This is an added security feature. If your remote starter was installed with the ignition-controlled door locks option, the doors will automatically be locked as soon as the ignition key is turned to the **IGNITION ON (RUN)** position while the brakes are pressed. When the key is turned to the **OFF** position, the doors will automatically be unlocked.

Ignition Re-lock

On remote starters of this series, when ignition-controlled door locks are enabled and the ignition key is in the **IGNITION ON (RUN)** position, should any door be unlocked and opened, all doors will be relocked next time the brake pedal is pressed.

Secure Lock

Before it can remote-start your vehicle, the remote starter must first disarm the factory security system. The secure lock feature may be required on certain vehicle models with factory security systems that automatically unlock the doors when the security system is disarmed.

To keep your vehicle protected when the factory security system is disarmed for a remote start, secure lock will relock your doors as soon as the vehicle has started. Once the engine run cycle ends, secure lock will rearm your factory security system.

Turbo Mode

When left in turbo mode, the remote starter will keep the engine running for 60 seconds before shutting it down. This is to allow a turbocharger to idle down after the user leaves the vehicle. See **Turbo Mode** section on page 9.

Remote Trunk Release

If your system was installed with the remote trunk release option, you can open your trunk by pressing the **TRUNK** button. There will be one beep and LED #4 will flash 3 times.

Engine Run Time

If you have a gas engine, your remote starter can be programmed to run the engine for 4, 15, or 25 minutes (15 minutes by default). If you have a diesel engine, the remote starter can be programmed to run the engine for 9, 20, or 30 minutes (20 minutes default).

Extended Run Time

While the vehicle is running under a remote start, **pressing and holding the START/STOP button for more than 3 seconds** will reset the run time counter to zero and restart the run time cycle from the beginning. There will be one beep—a pause—three more beeps; the parking lights will flash three times and the horn (if configured) will honk once. **The extended run time procedure can only be carried out once per remote start.**

To stop the vehicle, at any moment, simply press the **START/STOP** button.

Example: If your remote car starter is programmed for a run time of 4 minutes and your vehicle has been running for 3 minutes already, pressing the **START/STOP** button will reset the counter to zero and allow the engine to run for another cycle (in this case, 4 minutes).

Multi-car Operation

This option allows the owner of two vehicles, both equipped with the same remote starter model, to control both systems with a single remote control. To control the second vehicle, simultaneously press the **TRUNK** button and the button of the function you wish to use.

Note: Your remote control must be configured for second car operation by the installer.

Press SHIFT > SHIFT > + LOCK button simultaneously:.....	LOCK
Press SHIFT > SHIFT > + UNLOCK:.....	UNLOCK
Press SHIFT > SHIFT > + START/STOP:.....	START
Press SHIFT > SHIFT > + START/STOP:.....	STOP

Troubleshooting Poor Transmitting Range

Many factors may affect the operating range of the transmitter. Some of these are:

The condition of the battery in the transmitter.

The operating environment (for example: downtown radio-frequency noise, airports, cellular phone towers...)

Metal: any type of metal will affect operating range. This includes the metal in the car.

The shape of the vehicle can affect range as well; vans in general have an especially poor range.

The shape of the roof and A-pillars brings about considerable radio-frequency deflection (in this case the signal from the remote control). As a result, the direction in which the vehicle is facing in relation to the remote control can affect the range. Straight on – standing in front of the vehicle – generally gives you the greatest range; the second best performance is from the back. Using the remote control from either side of the vehicle will usually give the lowest range.

The range will be significantly lower in a crowded parking lot than in open space.

Always hold the transmitter high, approximately at shoulder height. Holding the transmitter against your chin will also increase your range: your head acts as an antenna.

The operating range will be somewhat lower on vehicles equipped with an aftermarket or factory alarm.