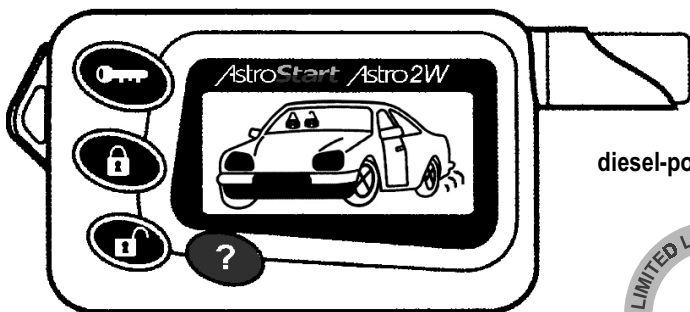


AstroStart

REMOTE
CONTROL
ENGINE
STARTER

USER MANUAL

Model 4104



For all
automatic
transmission
gas- and
diesel-powered vehicles.



(FRANÇAIS AU VERSO)



CONSULT SAFETY PRECAUTION SECTION
BEFORE USING THIS PRODUCT.

NEVER INSTALL THIS PRODUCT ON A
MANUAL TRANSMISSION VEHICLE.

SOME FEATURES MAY REQUIRE
ADDITIONAL MATERIAL (NOT INCLUDED).

PATENT NOS
CAN 1.130.426
USA 4.345.554 - 5.614.883
- 5.617.819 - 5.673.017

AND OTHER PATENTS PENDING

Manufactured in Canada by:

Astroflex

GOVERNMENT REGULATIONS



This device complies with the requirements of Industry Canada (IC) - Management of Radiofrequencies, as specified in document CNR-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.



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 interference that may cause undesired 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, uses 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 to 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.

Warning:

Changes or modifications not expressly approved by <manufacturer> could void the user's authority to operate the equipment.


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INTRODUCTION

Thank you for choosing the AstroStart Remote Starter. Your Remote Starter is the result of intensive research by a company specializing in the design of high-quality electronic automotive products.

It is designed to provide many years of reliable, trouble-free service. Its advanced microchip circuitry incorporates billions of possible access codes, which makes it virtually impossible to interfere with another remote control vehicle.

Your Remote Starter offers the ultimate in safety, is simple to use and has many features to make your life easier.

Please read the following instructions carefully so that you understand how your Remote Starter works and can take advantage of all the features. Some of the functions described below may not be applicable to your vehicle.

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SAFETY PRECAUTIONS

Before using this product, carefully read the following safety precautions.

- Immediately report any malfunction to the AstroStart dealer that performed installation.
- Under no circumstance can this product or its use be modified.
- Always turn off main switch when vehicle is parked in an enclosed, unventilated area or is in for servicing.
- Always turn off main switch when not using your Remote Starter for extended periods of time.
- Keep remote controls away from children.
- Have your engine tuned regularly to ensure optimum performance of your Remote Starter.
- Make sure your windshield wipers are turned off before leaving vehicle.
- Regularly check safety features that stop engine (see SAFETY CHECKS on page 11.)
- Make sure you comply with all local regulations which may prohibit leaving your engine running when vehicle is unattended in a public place.
- Always advise service personnel that your vehicle is equipped with a Remote Starter.
- We strongly recommend that you have your Remote Starter checked annually. Contact the dealer in your area.

BEFORE USING YOUR REMOTE STARTER

Before leaving your vehicle, set the various controls in order to use your Remote Starter.

- Set heating/air-conditioning controls to desired position. (When the remote starter starts your engine, it will also turn on your climate control system.)
- Turn your windshield wipers to the **OFF** position.
- Make sure gearshift is in **P**.

THE REMOTE CONTROL

Your remote control has been designed to fit the natural contours of your hand so that it is easier to use. It works off one regular AAA battery.

Up to three additional remote controls can be assigned to your vehicle. See your dealer for replacement batteries or additional remote controls.

NOTE: The range of your remote control can be affected by a weak battery, interference from nearby metal structures, hydro poles, or crowded parking lots.

USING YOUR REMOTE CONTROL

To send a command, press for **two** seconds on the appropriate button.

Command may not be sent if the button is not pressed long enough.

Even if the button is pressed for more than two seconds, only one command is sent.

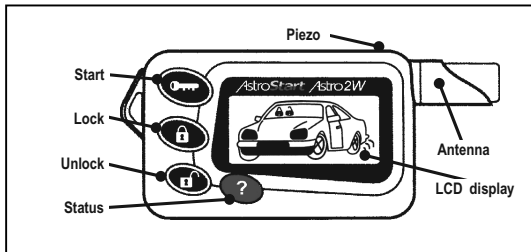
Remote control beeps once (low beep) at the beginning of the transmission then beeps again (high beep) at the end of the transmission, i.e. about 2 seconds after the button was pressed.

Immediately after a command is sent, remote control switches to receive mode for 5 seconds while waiting for a confirmation signal.

Remote control sends audible (piezo), visual (LCD display) and physical (vibration) confirmations which are described later in this guide. After issuing the confirmation signals, remote control switches to sleep mode to reduce battery consumption.

Note: Communication between the vehicle and remote control only takes place in one direction at a time, therefore it is better to wait for a command to be confirmed before sending another command, otherwise the vehicle and remote control could transmit at the same time which would block the command sent and the confirmation signal received.

Remote control shown could differ from that included in the kits.



REPLACING THE BATTERY

We strongly recommend keeping a replacement battery in your glove compartment.

Remote control needs one AAA battery.

To replace the battery, slide the latch sideways and remove battery cover on the back of the remote control case, remove old battery and replace it with a new one.

Make sure the battery is the right way round; see pictogram inside the cover.

TABLE OF COMMANDS

COMMANDS	BUTTONS	CONFIRMATIONS				
		VEHICLE		REMOTE CONTROL		
		HORN	LIGHTS	SOUND	DISPLAY	VIBRATION
START / CONTINUOUS MODE		1 ▲	1	MELODY 3 (HIGH)	AB -	2 2 *
STOP		-	1	-	A	2
LOCK		1 ♥	1	1	C	-
UNLOCK		-	2	2	D	-
TRUNK		-	3	1 (HIGH)	E	-
ACTIVATE / CANCEL LOW TEMPERATURE MODE		-	4/2/3 ♦	-	-	1
ACTIVATE / CANCEL UTILITY		-	1	-	-	1
RUNTIME		-	1 - 4	-	-	1
CAR FINDER		7	3	-	-	1
STATUS		-	-	-		2
OUT OF RANGE				1	ABCDE	-
<p>▲. THIS CONFIRMATION IS SENT ONLY IF START COMMAND IS REPEATED WHEN ENGINE IS ALREADY RUNNING.</p> <p>♦. 4 = ACTIVATE / 2 = CANCEL / 3 = SYSTEM NOT READY</p> <p>♥. THIS CONFIRMATION IS SENT ONLY IF LOCK COMMAND IS REPEATED (PROGRAMMED AS "ACTIVATED" DURING INSTALLATION).</p>				<p>↓↓↓</p>		
	SCREEN SHOWS A COMBINATION OF SEGMENTS RELATED TO ENGINE STATUS (RUNNING OR NOT) AND/OR LOCK STATUS. SEGMENT RELATED TO TRUNK RELEASE IS NEVER SHOWN WITH THIS COMMAND.					
*	IF MAIN SWITCH IS IN OFF POSITION, HOOD IS OPEN OR KEY IS IN IGNITION POSITION, START CYCLE IS INTERRUPTED AND CONFIRMATIONS ARE AS INDICATED IN SHADED AREA. NO CONFIRMATION IS SENT IF START FAILS AFTER START CYCLE OR IF ENGINE STALLS. START CONFIRMATION CAN TAKE UP TO 5 SECONDS BEFORE BEING SENT IF ENGINE IS ALREADY RUNNING.					

CONFIRMATIONS

Sent by vehicle

Confirmations sent by the vehicle are generated as soon as command is received by starter module. Your remote starter will always confirm that the command has been received, either by sounding the horn or by flashing the parking lights.

Parking light confirmation is mandatory while horn confirmation is optional (programmable) and requires an additional connection and equipment during installation.

Sent by remote control


Display flashes three times then stays on for 15 seconds, after which remote control switches to sleep mode.

The signals that generate these confirmations come from the vehicle and are sent only once after remote control has sent a command.

Confirmations sent by the remote control may be neutralized by radio or electromagnetic interference from nearby electronic devices. If you do not receive any confirmation in a given place, move away from electronic devices then press Status command; starter module will indicate lock status and if engine is running.

START COMMANDS

STARTING THE ENGINE

To start engine, press  button.

The system automatically adjusts ignition duration for your type of vehicle; parking lights flash once (duration: four seconds) then stay on all the time engine is running.

If more than one command is sent, each successive start command resets runtime to the beginning, parking lights flash once to confirm command has been received and horn sounds once to let you know engine is already running.

Confirmation	Lights	1	Horn	-	Sound	Melody	Display	AB	Vibration	2
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In this case, remote control confirmations indicate that command has been received but not if the start sequence was successful or not. To check if engine has started, see Status command on next page.

If main switch is in OFF position, key is in Ignition position or hood is open, the start will be interrupted and confirmations will be different.

Confirmation	Lights	1	Horn	-	Sound	3 (high)	Display	-	Vibration	2
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IF ENGINE DOES NOT START

If your system cannot start engine at first attempt, it will wait a few seconds then try again; it could try again twice depending on reason for failure to start.

After three attempts, it will shut down automatically and wait for a new command. In this case, confirmations sent by the vehicle are the same, but remote control does not send any confirmations.

UPON ENTERING YOUR VEHICLE...

- Do not apply brakes; this will stop engine immediately.
- Insert ignition key and turn it to **ON** position.






DO NOT TURN IGNITION KEY TO START POSITION.

- Drive as usual.

STATUS

When this command is sent, command module checks engine status (running or not) and lock status, then retransmits this information to remote control which indicates the results on the LCD display with a combination of pictograms.

Pictograms  and  indicate lock status and pictogram , if it appears on the display, indicates that engine is running.

Pictograms representing the parking lights indicate that command has been received.

When remote control receives a confirmation, it flashes the relevant pictograms and vibrates twice.

If vehicle is out of range, display flashes **all pictograms** and remote control beeps to indicate that command could not be received by either the control module or the remote transmitter.

ENGINE RUNTIME

Your engine will stop automatically after a preset time (see SETTING RUNTIME on page 8). Parking lights will stay on as long as engine is running.

TRIGGER INPUT

Your remote starter is equipped with a negative trigger (pulse) input.



This input can be connected to another remote control device or to an AstroStart timer output (optional).

If this input is connected, consult this device's manual or ask your technician which command controls Start/Stop function.

Start/Stop commands received on this input are ignored while engine is running on a remote start.

Confirmation	Lights	1	Horn	-	Sound	-	Display	-	Vibration	-
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CONTINUOUS MODE

Continuous Mode function lets you remove key from ignition while leaving engine running. This convenient feature allows you to leave vehicle for short periods of time while climate controls remain on.

To access Continuous Mode, send Start command while engine is idling (see STARTING THE ENGINE on page 5).

Parking lights, engine and preset accessories will remain on for the duration of the programmed runtime (see SETTING RUNTIME on page 8).

Remove key, exit vehicle and lock doors. All safety devices will remain active.

If you return to your vehicle before runtime has elapsed, just turn key to **ON** position and depress brake pedal.

Confirmation	Lights	1	Horn	-	Sound	Melody	Display	AB	Vibration	2
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WHAT STOPS THE ENGINE

For your safety, engine will not start or will stop if:

- Remote control sends a Stop message.
- Hood is open.
- Brakes are applied.
- Engine is over-revving.
- Main switch is **OFF**.



MAIN SWITCH

Main switch is usually mounted under dashboard. It is a toggle **ON/OFF** switch that is used to cancel start functions.

It does not disable other commands which remain active.



STOP



When engine is running on a remote start, you can turn it off by pressing  and  buttons simultaneously.

Confirmation	Lights	-	Horn	-	Sound	-	Display	A	Vibration	2
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LOW TEMPERATURE MODE

In Low Temperature (Sentinel) mode, system starts your engine automatically when temperature falls below a preset level.

Engine will run for programmed runtime, after which system will wait 2½ hours and then start engine again if temperature is still below preset level.

To activate/cancel Low Temperature mode, press  and  buttons simultaneously.

When mode is activated:

Parking lights will flash 4 times, then, if temperature is below preset level, engine will start.



If temperature is above preset level, system waits until it goes below preset level before starting engine. If system cannot execute command (for example, hood is open), confirmation will be different (lights: 3).

When mode is cancelled:

Parking lights will flash twice to confirm that mode is cancelled. Applying brakes also cancels Low Temperature mode.

Confirmation	See TABLE OF COMMANDS on page 4.
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SETTING RUNTIME

Press  and  buttons simultaneously (parking lights: 1 - 4). Parking lights flash one to four times to indicate selected runtime (see table opposite).

If you send this command while ignition circuits are activated (by remote or key), runtime does not change but confirmation is sent to indicate last selection.

If Low Temperature (Sentinel) mode is already activated when this command is sent, command sets or indicates **Low Temperature mode runtime**.

Number of flashes	Runtime
1	2 minutes ¹
2	4 minutes
3	8 minutes
4	18 minutes

Note: Runtime is doubled for a diesel engine.


LOCK/UNLOCK COMMANDS

If your vehicle is equipped with electric door locks, several functions can be operated by remote control. These features are optional and may require purchasing additional equipment. Consult your dealer for advice.

Following systems can be controlled:


- Door locks
- Trunk or hatchback release
- Interior lights

LOCK

Press  button (lights: 1). Doors are locked and parking lights flash once to confirm command has been received. If command is repeated, horn sounds to confirm that system has received the command.

Confirmation	Lights	1	Horn	-	Sound	1	Display	C	Vibration	-
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UNLOCK

Press  button (lights: 2). Doors are unlocked and parking lights flash twice to confirm command has been received.

Unlock function can be programmed and connected so that the first Unlock command only unlocks the driver's door, while a following Unlock command unlocks the other door(s).

Dome light will come on for 30 seconds every time Unlock command is sent.



This 30-second duration is cancelled when Lock command is sent, brakes are applied or key is inserted in ignition and turned to ON position.

This function is optional and requires an additional connection and equipment during installation.

Confirmation	Lights	2	Horn	-	Sound	2	Display	D	Vibration	-
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¹ A runtime of 2 minutes (4 minutes for a diesel engine) is not recommended for most vehicles unless you intend to drive off immediately after the remote start. This selection is not available in Low Temperature mode.

TRUNK RELEASE

Press  and  buttons simultaneously. Trunk releases and parking lights flash three times to confirm command has been received.

Trunk cannot be released if key is in **ON** position. In this case, lights flash once to confirm command has been received and that trunk could not be released.

If you are not sure you received a confirmation, repeat command. The system will repeat the confirmation as often as you wish.

If your vehicle is equipped with a security system, do not forget to rearm it after closing trunk (Lock command).

Confirmation	Lights	3	Horn	-	Sound	1 (high)	Display	E	Vibration	-
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AUTOMATIC LOCK/UNLOCK

Programmable as **Active** or **Inactive** during installation.

This function locks doors when ignition key is in **ON** position, engine is running and brakes are applied. Doors are unlocked when key is turned from **ON** to **OFF** or when Continuous Mode is activated.

If Unlock function is set to unlock only driver's door on the first command, Automatic Unlock function will unlock driver's door only. If dome light is connected to system, it comes on when an Automatic Unlock occurs.

This function is: Active Inactive

OTHER COMMANDS

ANTITHEFT (CIRCUIT DISABLER)

Programmable as **Active** or **Inactive** during installation.

Your Remote Starter is equipped with an Antitheft system. This system consists of an output that controls a relay that cuts all circuits required to operate your vehicle (optional connection).

There are two types of Antitheft system.

"Passive Arming" type Antitheft

This type of Antitheft system arms automatically when ignition key is turned from **ON** to **OFF** and remains **OFF** for one minute. It can also be armed manually by sending a Lock command (unless ignition key is in **ON** position).

DISARMING

Antitheft system is disarmed for one minute when you send an Unlock command.

If ignition key is not turned to **ON** position within one minute, system automatically rearms, thus preventing an intruder from starting your vehicle, even with ignition key.

It can be connected so that horn sounds if an intruder tries to start your vehicle when Antitheft is armed.

"Active" type Antitheft

This type of Antitheft system is armed by sending a Lock command (unless ignition key is in **ON** position) and is disarmed by sending an Unlock command.

VALET MODE

Valet mode allows you to disarm Antitheft system whenever your vehicle is left with someone else, for servicing for example.



TO ACTIVATE VALET MODE, turn key to ON position then press Valet switch until antitheft status indicator stops flashing (approximately 3 seconds).

TO DEACTIVATE VALET MODE, turn key to ON position then press and hold Valet switch for at least 3 seconds. To confirm Valet deactivation, send Lock command and check that antitheft status indicator starts flashing.

Note that Valet mode is automatically deactivated when ignition circuit is energized for the tenth time after being activated.

UTILITY COMMAND

An additional command allows you to control most of the vehicle accessories depending on what was connected during installation (headlights, defroster, etc.). For more information, check with your technician.



To activate this function, press  and  buttons simultaneously.

The accessory associated with this command (_____) is activated for: 1 sec. , 1 min. or 8 min. , depending on the programming.

You can terminate this runtime by repeating the command.

Confirmation	Lights	1	Horn	-	Sound	-	Display	-	Vibration	1
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CAR FINDER

Press  and  buttons simultaneously.

This function sounds the **horn** (short melody) and flashes the **parking lights** so you can locate your vehicle in a large parking lot.

Confirmation	Lights	3	Horn	7	Sound	-	Display	-	Vibration	1
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SAFETY CHECKS

In order to maintain a high safety standard, proceed with the following checks every month.

HOOD SWITCH

- Remote start your vehicle.
- Open hood.

Engine should stop as soon as hood is opened.

If engine does not stop immediately, turn main switch to **OFF** position **and leave it off until situation is rectified**. Contact your service center.

GEARSHIFT CHECK

If key must be in ignition for gearshift to be moved out of **P**, your vehicle is safe as long as keys are kept away from children.

If, on the other hand, gearshift can be put in gear without key being in ignition, proceed with this simple check.

- Put gearshift in gear.
- Remain in the vehicle and be ready to apply brakes.
- Start vehicle with remote starter.
- Repeat these steps with gearshift in every position other than **Park** and **Neutral**.

If starter reacts within 90 seconds (which would be abnormal), turn main switch to OFF position **and leave it off until situation is rectified**. Contact your service center.

- With gearshift in **P**, start vehicle with remote starter.
- Remain in vehicle and **be ready to apply brakes**.
- **Without applying brakes**, move gearshift out of **P**.

If, without applying brakes, engine does not stop immediately (which would be abnormal), turn main switch to **OFF** position **and leave it off until situation is rectified**. Contact your service center.

REPLACING OR BOOSTING VEHICLE BATTERY

If you have to replace or boost your battery for any reason, turn main switch to **OFF** position **and leave it OFF until battery is replaced or fully charged**.

Reversing polarity when boosting your battery could permanently damage your remote starter.

