

# AstroStart

REMOTE  
CONTROL  
ENGINE  
STARTER

USER MANUAL

## Series 1100 and 2100



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 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.

### **Warning:**

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

  
**Astroflex Inc.**  
1164, Route 220  
St-Élie d'Orford (Québec) Canada  
JOB 250

  
**Astroflex**  
ELECTRONIC CORP.  
516A Elm Street  
Manchester, NH 03101  
USA

[www.astroflex.com](http://www.astroflex.com)

# 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.

## Table of contents

<b>GOVERNMENT REGULATIONS</b>	2
<b>SAFETY PRECAUTIONS</b>	2
<b>BEFORE USING YOUR REMOTE STARTER</b>	2
<b>THE REMOTE CONTROL</b>	3
<b>USING YOUR REMOTE CONTROL</b>	3
<b>CONFIRMATION</b>	3
<b>BATTERY REPLACEMENT</b>	4
<b>TABLE OF COMMANDS</b>	5
<b>START COMMANDS</b>	6
<b>LOCK/UNLOCK COMMANDS</b>	9
<b>OTHER COMMANDS</b>	10
<b>SAFETY CHECKS</b>	13
<b>HOOD SWITCH</b>	13
<b>GEARSHIFT CHECK</b>	13
<b>REPLACING OR BOOSTING VEHICLE BATTERY</b>	13

**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 13.)
- 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 hands so that it is easier to use. It works off three long-life lithium batteries.

It can control two vehicles separately. Up to three additional remote controls can be assigned to your vehicle. See your dealer for replacement batteries or additional remote controls.

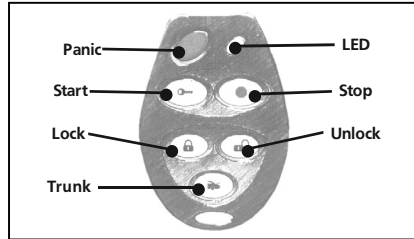
**NOTE:** The range of your remote control can be affected by a weak battery, interference from nearby metal structures, hydro poles, or crowded parking lots.

### USING YOUR REMOTE CONTROL

Your remote control can transmit on two different channels, allowing control of two separate vehicles.

Only the "Panic" command is transmitted on both channels simultaneously (6-button remote only).

Audible (piezo) and visual (LED) confirmations are emitted with the 6-button remote while the 5-button remote allows only visual confirmations.



#### CHANNEL 1 :

To transmit a command on channel 1, press desired button for two seconds.

#### CHANNEL 2 :

To transmit a command on channel 2, press desired button, then as soon as a tone is heard or that the LED flashes once, release the button for a moment then press it again and hold down for two seconds.

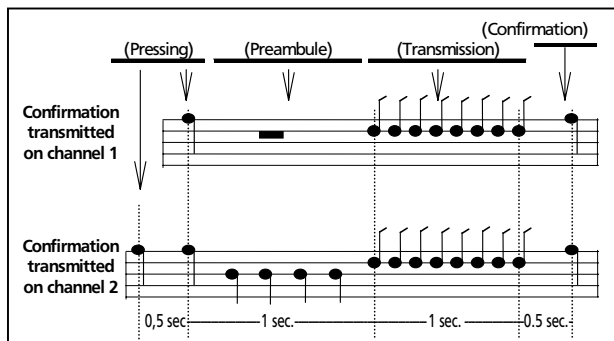
A command will not be executed if you do not press button long enough.

Only one command will be transmitted even if a button is pressed for more than two seconds.

### CONFIRMATION

Each command being transmitted is confirmed by both an audible (6-button remote only) and a visual signal (LED indicator), indicating the successive steps in the transmission of the command.

The successive steps in the transmission and confirmation of a command are described in the opposite table.

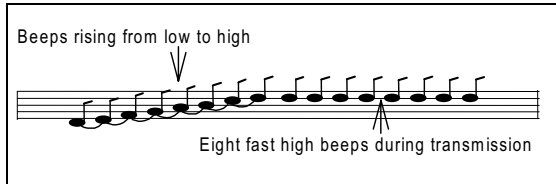


**Legend :**

<b>Pressing</b>	This confirmation indicates whether a button was pressed by mistake and also confirms button was pressed correctly. To transmit on channel 2, you must press button again within half a second for command to be transmitted properly.
<b>Preamble</b>	This confirmation indicates how long a button must be held down for a command to be transmitted properly (one second duration). This confirmation is silent when transmitting on channel 1.
<b>Transmission</b>	This confirmation indicates when a command is being sent to the remote starter (one second duration).
<b>Confirmation</b>	This last confirmation indicates that transmission of command was successfully executed.

Another confirmation is sent by your remote when you activate "Panic" mode (6-button remote only).

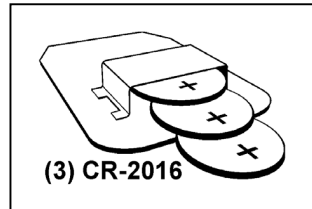
This confirmation is repeated for as long as button is held down.

**BATTERY REPLACEMENT**














Your remote works off three 3-volt lithium CR-2016 batteries or equivalent.

We strongly recommend that you keep a replacement set in your glove compartment.

To replace the batteries, remove screw on back of remote case, remove old batteries and replace with new ones. Make sure that batteries point the right way; see illustration opposite.



## TABLE OF COMMANDS

COMMANDS	BUTTONS (PICTOGRAM)	CONFIRMATION	
		HORN	LIGHTS
PANIC (6-BUTTON REMOTE ONLY)		30 / 60 SEC.	30 / 60 SEC.
START / CONTINUOUS MODE		1 ▲	1
STOP ♣			1
LOCK		1 ♥	1
UNLOCK			2
TRUNK			3
ACTIVATE / DEACTIVATE SENTINEL MODE			4/2/3 ♦
ACTIVATE / DEACTIVATE UTILITY # 1			1
ACTIVATE / DEACTIVATE UTILITY # 2			1
RUNTIME ADJUSTMENT			1 - 4
PRESET TEMPERATURE ADJUSTMENT			1 - 4
CAR FINDER		7	3
DISPLAY REMOTE START FAIL CODES			1 - 15

▲ . THIS CONFIRMATION IS ONLY SENT WHEN COMMAND IS REPEATED WHILE ENGINE IS ALREADY RUNNING.

♦ . 4 = ACTIVATED / 2 = DEACTIVATED / 3 = SYSTEM NOT READY.

♣ . THIS COMMAND ENDS : RUNTIME AND PANIC MODE

♥ . THIS CONFIRMATION IS ONLY SENT WHEN LOCK COMMAND IS REPEATED  
(PROGRAMABLE DURING INSTALLATION).

### CONFIRMATION

In all cases, your Remote Starter will confirm that command has been received properly. This will be done by either sounding horn or flashing parking lights. In this manual, confirmation signals are written in an abbreviated form; for example:

(horn 1, lights: 2)      Means that horn will sound once and parking lights will flash twice.

Parking light confirmations are mandatory. Horn confirmations are optional (programmable) and require an additional connection and equipment during installation.

Confirmations are explained in more detail under each command.

**START COMMANDS****STARTING THE ENGINE **

To start the engine, press " " button (horn: 0, lights: 1).

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 emitted, 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.

Repeating this command will produce an audible confirmation that engine has started, which can be useful if vehicle is not in sight.

**IF ENGINE FAILS TO START**

If your system cannot start your engine at first attempt, it will wait for a few seconds and 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 new command (see "Start fail Codes" on page 12).

**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.

**ENGINE RUNTIME**

Your engine will stop automatically after a preset time. Parking lights will stay on as long as engine is running. Engine runtime is programmable.

**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 the start/stop function.

The start/stop commands received on this input are ignored while the engine is running on a remote start.

All Start/Stop functions controlled by this input behave in the same way as functions controlled by remote.





## CONTINUOUS MODE

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

To access the "Continuous Mode", carry out the "Start" command while the engine is idling. See "STARTING THE ENGINE" on page 6.

Parking lights, engine and preset accessories will remain on for the duration of the programmed runtime (see "Setting the 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 the key to the "ON" position and depress brake pedal.

## 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 kept running by Remote Starter, you can stop it with this command (lights: 1).

The stop command also ends panic mode.

## 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/deactivate 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. If system cannot execute command (for example, hood is open), confirmation will be different (lights: 3)(see “Start Fail Codes” on page 12).

### When mode is deactivated:

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

## START TEMPERATURE ADJUSTMENT



To change preset temperature at which you want your Remote Starter to start engine, press “” and “” buttons simultaneously (lights: 1 - 4).

Parking lights will flash from 1 to 4 times to indicate selected start temperature (see table opposite).

If you send command when ignition has been turned on (by Remote Starter or key), preset start temperature does not change. However, confirmation is still sent to indicate last selection.

Number of Flashes	Preset start temperature
1	-5°C (23°F)
2	-15°C (5°F)
3	-20°C (-7°F)
4	-30°C (-22°F)

## SETTING THE RUNTIME

Press buttons “” and “” 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 the 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, the command sets or indicates Low Temperature mode runtime.

**Note:** Runtime is doubled for a diesel engine.

Number of flashes	Runtime
1	2 minutes <sup>1</sup>
2	4 minutes
3	8 minutes
4	18 minutes

<sup>1</sup> A runtime of 2 minutes (4 min. 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.


## 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. Horn confirmation is sent when command is repeated which allows to assure that system has received the command.

### UNLOCK

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


The “Unlock” function can be programmed and connected in such a way that the first unlock command only unlocks the driver’s door, while a following unlock command unlocks the other door(s).

Dome light will turn 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.

### TRUNK RELEASE

Press “” button (lights: 3). Trunk is released and parking lights flash three times to confirm command has been received.

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

If you are not sure you have received confirmation, repeat command. System will repeat confirmation as often as you wish.

If your vehicle is equipped with a security system, remember to rearm it after trunk is closed (“Lock” command).

### 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, the “Automatic Unlock” function will unlock driver’s door only. If dome light is connected to system, it is activated 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).

**“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 “Unlock” command.

If ignition key is not turned to “**ON**” position within one minute, system automatically rearms, thus preventing any 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 it is in the active state.

**“Active” type Antitheft  **

This type of Antitheft system arms by sending the “Lock” command (unless ignition key is in “**ON**” position) and disarms by sending the “Unlock” command.

**VALET MODE**

(Series 2100 only).

The Valet mode allows you to cancel the antitheft system whenever your vehicle is left to someone.



**TO ACCESS VALET MODE**, turn key to the “**ON**” position then press valet switch until antitheft status indicator stops flashing (approximately 3 seconds).

**TO TURN VALET MODE OFF**, turn key to the “**ON**” position then press and hold valet switch for a minimum of three seconds. To confirm valet deactivation, send lock command and check that antitheft status indicator starts flashing.

Note that valet automatically disables when ignition key is placed to the “**ON**” position for the tenth time after it was enabled.


**CAR FINDER  **

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

Press “” and “” buttons simultaneously (lights: 3, horn: 7). This function sounds **horn** (short tune) and flashes **parking lights** to help you locate your vehicle in a large parking lot.

**PANIC** 

(6-button remote only)

Press "" button. This command activates **parking lights**, **horn**, and **dome light** intermittently, depending on which is connected to system, for 30 seconds  or 60 seconds  depending on programming during installation.

Panic mode is used to attract attention if you are in difficulties.

This command will not be executed if engine is kept running by ignition key. In this case, parking lights will flash once to confirm that command has been received.

Use the stop command to abort panic mode or depress brake pedal.

**UTILITY COMMANDS**


Two additional commands control most of your vehicle's accessories, depending on which were connected during installation (headlight, defroster, etc.). For details, consult your technician.



**COMMAND #1** 

To activate this function, press "" and "" buttons simultaneously (lights: 1).

The accessory associated with this command ( \_\_\_\_\_ ) is then activated for 1 second , 1 minute  or 8 minutes , depending on programming.

This duration can be cancelled by repeating command (lights: 1).

**COMMAND #2** 

To activate this function, press "" and "" buttons simultaneously (lights: 1).

The accessory associated with this command ( \_\_\_\_\_ ) is then activated for 1 second , 1 minute  or 8 minutes , depending on programming.

## START FAIL CODES

When a remote start attempt fails, it is possible to determine what caused the failure to start.

Press the "" and "" buttons simultaneously.

The number of times the parking lights flash corresponds to the start fail code.

The table below lists the various start fail codes.

Code	Failure to start details
1	Module has received a Stop command (remote or timer).
2	Brakes have been depressed during or after start sequence, or module overload
4	Engine does not crank when starting sequence is initiated.
5	Start command ignored because hood is open.
7	Start command ignored because key is in ignition (in "Run" position).
8	Remote starter's main switch is "OFF" , or output overload
9	Run time has elapsed.
10	Remote starter attempted to start engine three times unsuccessfully.
11	Remote starter sensed engine was already running.
12	Engine is over-revving.
13	Engine not cranking fast enough during start sequence.

If any of these start fail codes persist, consult your dealer.

## 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.**

