

REMOTE CONTROL ENGINE STARTER

AstroStart

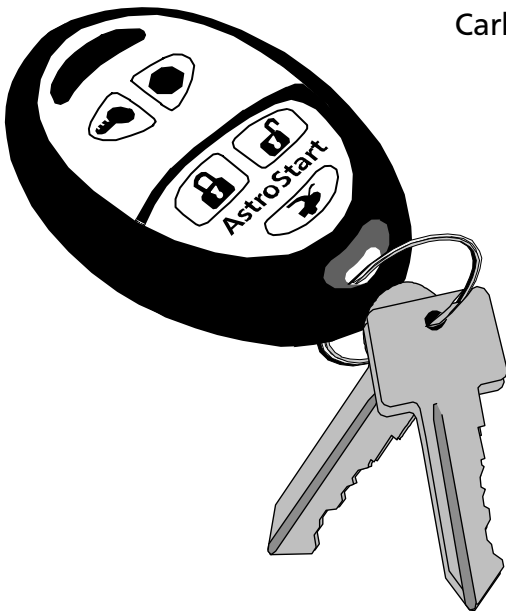
USER MANUAL

SERIES 120

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

Carburetor models require
an optional solenoid.

**WILL NOT WORK
ON MANUAL
TRANSMISSION
VEHICLES.**



Manufactured in Canada by:


Astroflex

CAN. PATENT NO. 1,130,426

U.S. PATENT NO. 4,345,554

AND OTHER PATENTS PENDING

193-126-221-A0

INTRODUCTION

Thank you for choosing the Astro*Start* 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

- 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 10.)
- 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 system to desired position. When RS-12X 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".

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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 3 small, long-life (up to 12 months) lithium batteries. It can control two vehicles separately. With an electronic code learning device, up to three additional remote controls can be assigned to each 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

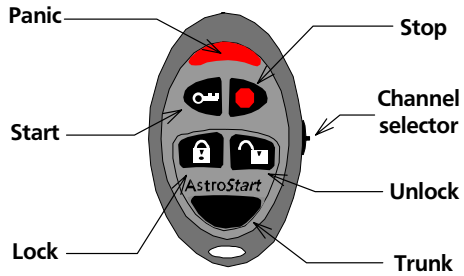
3- and 6-button remote (ergonomic)

To make sure that commands are transmitted properly, press desired button for 2 seconds. A command will not be transmitted if you do not press button long enough. Pressing button longer than 2 seconds will not send more than one command, with the exception of the "Panic" button which repeats command as long as button is pressed.

3-button remote has "Start", "Stop" and "Panic" buttons plus channel selector.

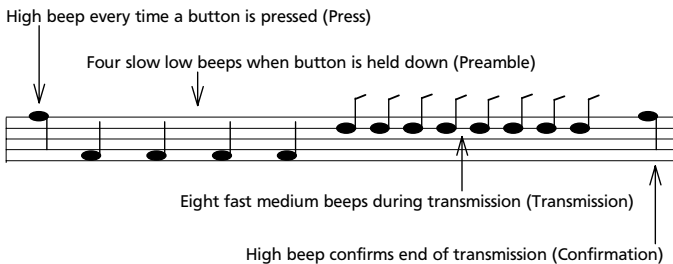
Your remote can transmit on two different channels which allows you to control two vehicles separately.

Use channel selector to select vehicle which will receive commands. Position of channel selector controls all commands, except "Panic" command, which is always transmitted on both channels.



CONFIRMATION

Remote can send an audible confirmation every time a command is sent. This confirmation indicates the different steps in transmitting a command. Diagram below explains the different steps in transmitting a command and the confirmation for each one.



- Press This confirmation indicates if a button has been pressed by mistake or confirms that button has been pressed properly.
- Preamble This confirmation indicates minimum time button has to be pressed for a command to be sent (duration: one second).
- Transmission This confirmation indicates when command is sent to Remote Starter (duration: one second).
- Confirmation This final confirmation indicates that command has been transmitted correctly.

PROGRAMMING

You can select the remote confirmations you wish to hear and eliminate the others. When you open remote control case (to replace the batteries, for example) and close it again, you have 10 seconds to select the confirmation steps you wish to hear. During these 10 seconds, remote emits a series of beeps similar to Preamble. Simply press certain buttons on remote to select confirmation you wish to hear every time you send a command. Following table shows buttons and corresponding confirmations.

BUTTONS	PRESS	PREAMBLE	TRANSMISSION	CONFIRMATION
START THEN STOP	X	X	X	X
STOP	X		X	X
START	X	X		X
NO BUTTON				X
START AND STOP TOGETHER				

Another confirmation is sent by your remote when you activate "Panic" mode. This confirmation is repeated as long as you hold button down.

Beeps rising from low to high



Eight fast high beeps during transmission

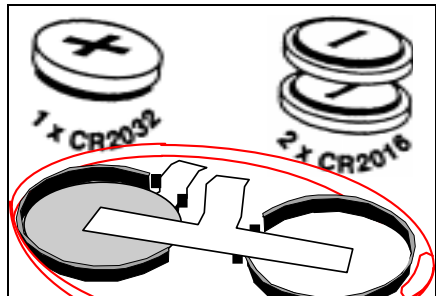
You cannot cancel the confirmation of this command.

BATTERY REPLACEMENT

We strongly recommend that you replace your batteries once a year and keep a replacement set in your glove compartment.

Your remote works off three 3-volt lithium batteries, i.e., two CR-2016 batteries and one CR-2032 battery or equivalent.

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.



The pictogram on bottom of case will also help you to install the batteries correctly.

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RS-123 AND RS-126 COMMANDS

COMMANDS	BUTTONS (PICTOGRAM)		CONFIRMATION		
			HORN	LIGHTS	SIREN
PANIC		X	30 / 60 SEC.	30 / 60 SEC.	30 / 60 SEC.
START / CONTINUOUS MODE		X	1 ¹	1	
STOP		X		1	
LOCK / ARM				1	1 ²
UNLOCK / DISARM				2	2 ²
TRUNK				3	
ACTIVATE / DEACTIVATE SENTINEL MODE		X		4/2/3 ³	
ACTIVATE / DEACTIVATE UTILITY # 1				1	
ACTIVATE / DEACTIVATE UTILITY # 2				1	
RUNTIME ADJUSTMENT				1-4	
PRESET TEMPERATURE ADJUSTMENT				1-4	
CAR FINDER			7	3	

1: CONFIRMATION IS SENT ONLY WHEN ENGINE IS ALREADY RUNNING UNDER REMOTE STARTER CONTROL.
 2: PROGRAMMABLE DURING INSTALLATION OF OPTIONAL VSS-100 ALARM INTERFACE ACCESSORY.
 3: 4 = ACTIVATED / 2 = DEACTIVATED / 3 = SYSTEM NOT READY.
 X: COMMANDS AVAILABLE ON 3-BUTTON REMOTE.

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.

Confirmations sent by Remote Starter are not programmable. Parking light confirmations are mandatory. Horn confirmations are optional and require an additional connection and equipment during installation. Siren confirmations can be added during installation if a VSS-100 Alarm Interface Accessory (optional) is connected to system.

Confirmations are explained in more detail under each command.

START COMMANDS

STARTING YOUR ENGINE

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

System automatically adjusts ignition contact time depending on your vehicle. Parking lights flash once for 4 seconds then stay on all the time engine is running.

If engine has already been started by Remote Starter, parking lights flash once to confirm command has been received and horn sounds once to let you know that engine is already running. Repeating this command gives you an audible confirmation that your vehicle has started when you cannot see it.

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 which it will shut down automatically and wait for new command.

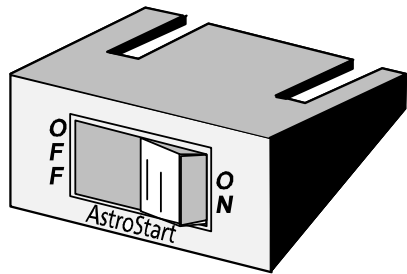
What stops the engine

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

- Remote control sends a stop message.
- Hood is open.
- Brakes are applied.
- Gearshift is not in "P" or "N".
- Engine is racing.
- 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.

***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). Two types of Antitheft system are available with Series 120.

"Remote - free" type Antitheft

This type of Antitheft system arms automatically when ignition key is turned from "ON" to "OFF" and remains "OFF" for 30 seconds.

To disarm Antitheft system, insert ignition key and turn it to "RUN" position. One second later, you have 20 seconds to turn one of your vehicle's accessories (predetermined during installation) to "ON" position and then to "OFF" position. Make sure this accessory is in "OFF" position before executing this sequence. Three seconds later, Antitheft system is disarmed and you can start engine. LED goes out to confirm that Antitheft system is disarmed.

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"Remote" 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 "Lock" command (unless ignition key is in "ON" position).

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 ANTITHEFT ACTIVE mode.

Upon entering your vehicle...

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

WARNING:	DO NOT TURN IGNITION KEY TO "START" POSITION.
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- Within 20 seconds, execute Antitheft disarm sequence (if applicable).
- 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. Manufacturer preset time is 15 minutes (30 minutes for diesel engine) but you can change it to suit your needs.

Runtime adjustment



To send command, press "Start" and "Lock" buttons simultaneously (lights: 1 - 4). Parking lights will flash from 1 to 4 times to indicate selected runtime (see table opposite).

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

Number of flashes	Runtime
1	2 minutes
2	8 minutes
3	15 minutes
4	20 minutes

Note: Runtime is doubled for a diesel engine.

Trigger input

Your Remote Starter is equipped with a negative trigger input. This input can be connected to another remote control device or a timer output. If this is the case, consult the manual for the particular device or ask your technician which command is associated with Start/Stop function. All Start/Stop functions controlled by this input behave in the same way as functions controlled by remote.

CONTINUOUS MODE



Continuous Mode consists of sending a "Start" command while engine is already running with key in ignition so that you can then remove ignition key. This mode allows you to leave engine running when you leave vehicle for a short period of time and also leaves heating/air-conditioning system on.

Enter "Start" command while engine is running. Parking lights, engine and preset accessories will stay on for programmed time. Remove key, exit vehicle and lock doors. Steering column will be locked and all safety devices will remain active.

STOP 


When engine is kept running by Remote Starter, you can stop it with this command (lights: 1). This command is also used to cancel "Panic" mode and alarm condition (when optional VSS-100 Alarm Interface is connected).

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 time, 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 "Start" and "Stop" 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).

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 

You can change preset temperature at which you want your Remote Starter to start engine. To do so, press "Stop" and "Unlock" 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.

Manufacturer preset start temperature is -15°C (5°F).

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)

DOOR 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 "Lock" button (lights: 1, siren: 1*). Doors are locked and parking lights flash once to confirm command has been received.

UNLOCK

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

TRUNK RELEASE

Press "Trunk" button (lights: 3). Trunk is released and parking lights flash three times to confirm command has been received. Trunk cannot be released if alarm is armed (if applicable) or if ignition key is in "ON" position. In both these cases, parking lights flash once to confirm that command has been received but trunk could not be released.

* Siren confirmation is only available with VSS-100 Alarm Interface.

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

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.

OTHER COMMANDS

PANIC 

Press "Panic" button. This command activates **parking lights, horn, siren and dome light** intermittently, depending on which is connected to system, for 30 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.

CAR FINDER  

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

Press "Lock" and "Unlock" 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.

UTILITY COMMANDS



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

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 "Lock" and "Trunk" buttons simultaneously (lights: 1). The accessory associated with this command is then activated for one second, one minute or eight minutes, depending on programming. This duration can be cancelled by repeating command (lights: 1).

This command is reserved for _____ .

Command #2  

To activate this function, press "Unlock" and "Trunk" buttons simultaneously (lights: 1). The accessory associated with this command is then activated for one second, one minute or eight minutes, depending on programming. This duration can be cancelled by repeating command (lights: 1).

This command is reserved for _____ .

DOME LIGHT

Dome light will turn on for 35 seconds every time "Unlock" command is sent. This 35-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.

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SAFETY CHECKS

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

HOOD SWITCH

- Start your vehicle with Remote Starter.
- 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 local service center.

DETECTING "P" AND "N" GEARSHIFT POSITIONS

Your starter is designed to check gearshift position at all times.

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, however, gearshift can be put in gear without key being in ignition, proceed with this simple check.

- Put gearshift in gear.
- Be ready to apply brakes.
- Start your vehicle with Remote Starter.
- Repeat these steps with gearshift in "Drive" and "Reverse".

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 local service center.

REPLACING OR BOOSTING VEHICLE BATTERY

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

Reversing polarity during this operation could permanently damage your Remote Starter.

LIFETIME LIMITED WARRANTY

- 1) ASTROFLEX warrants the manufactured product against any defect in workmanship or material for the period specified below.
- 2) This Warranty excludes any other legal warranty, with the exception of the provisions pertaining to public order.
- 3) This Warranty only applies in favor of the original purchaser; it does not apply to subsequent purchasers.
- 4) This Warranty is valid for the life of the vehicle on which the product was originally installed, as long as it remains installed on the said vehicle, with the exception of those components covered by a shorter warranty.
- 5) If the conditions mentioned in paragraphs 3) and 4) are met, the Warranty applies solely to the control module of the remote starter.
- 6) All other accessories and tools (such as the transmitter, switch, antenna, DL-3 or DL-4 module, MultiTest tool, etc.) are warranted for a period of one year from the date of the purchase contract; the batteries are not covered by any warranty.
- 7) ASTROFLEX shall repair or replace any part of the product or the product itself, either (a) in accordance with the provisions in paragraph 5), free of charge during the first two years of the contract, or (b) in accordance with the provisions in paragraph 6), free of charge during the first year of the contract.
- 8) After two years from the date of the contract, ASTROFLEX shall repair any part of the product or the product itself in accordance with the provisions in paragraph 5), for a charge not exceeding \$30.00. This amount must accompany the product to be repaired. The product will be returned, freight collect, to the purchaser.
- 9) If the purchaser cannot provide proof of purchase, the Warranty is limited to two years from the manufacturing date as confirmed by the product's serial number. The purchaser of this ASTROFLEX product shall return the product for warranty service, freight prepaid, to the appropriate address indicated at the end of this document.
- 10) This Warranty only applies to the product itself and does not apply to any material damages other than to the product itself.
- 11) ASTROFLEX does not warranty either the product itself or any damages that may be caused by the product if any of the following conditions apply:
 - a) the installation was not done by the installer-distributor, and in accordance with the instructions from ASTROFLEX;
 - b) the product was damaged after installation;
 - c) the purchaser used the product in an abusive manner or for a purpose other than stipulated in the user's guide;
 - d) the purchaser repaired the product himself or had the product repaired by someone not authorized by ASTROFLEX;
 - e) the product was repaired with parts not authorized by ASTROFLEX.
- 12) ASTROFLEX is not responsible for removal or reinstallation charges.
- 13) This Warranty constitutes the only warranty from ASTROFLEX in regard to the original purchaser; any other warranty is specifically excluded, including legal warranties, with the exception of provisions pertaining to public order.

Note: Operation, specifications and design of our products are subject to change without notice.

NOTICE



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.

IC APPROVAL No.:



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

FCC APPROVAL No.



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