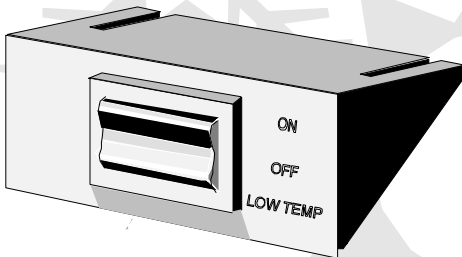



# REMOTE CONTROL ENGINE STARTER

# ASTRO *START*

## USER MANUAL

# MODEL STS-200



 For all manual transmission gas- and diesel-powered vehicles. (Carburetor models require an optional solenoid.)

**DO NOT INSTALL ON  
AUTOMATIC  
TRANSMISSION  
VEHICLES.**

Made in Canada by:

**ASTROFLEX Inc.**

PATENTS PENDING

PATENT NO. CAN. 1,130,426  
PATENT NO. U.S. 4,345,554

193-073-221-A0

## INTRODUCTION

Thank you for choosing the *ASTRO<sup>START</sup>* Remote Control Engine Starter. Your Remote Starter is the result of intensive research by a company specializing in the design of high-quality electronic automotive products. *ASTRO<sup>START</sup>* is designed to provide many years of reliable, trouble-free service. Its negative trigger input makes it compatible to a wide variety of remote controlled device. Please read the following instructions carefully so that you understand how your *ASTRO<sup>START</sup>*. Some of the functions described below may not be applicable to your vehicle.

## 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.
- Check safety features regularly; they prevent your Remote Starter from operating under certain conditions. (See "SAFETY CHECKS".)
- 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 to desired position. (When Remote Starter starts your engine, it will also turn on your climate control system.)

Make sure:

- windshield wipers are **"OFF"**.
- gearshift is in **NEUTRAL**;
- hand brake is **ON**;
- system has beeped once to confirm that it is ready to receive a command. ⚠

⚠ The system generates the beep to send a code every time key is not in ignition and brakes are applied, or every time key is turned from **"ON"** to **"OFF"**.

Code 1 System ready.

If system beeps more than once (i.e., sends a code other than Code 1), refer to following table to rectify situation.

Code 2 Gearshift is not in **NEUTRAL**.

Code 3 Hand brake is not **ON** properly.

Code 4 Sequence not recognized ⚠.

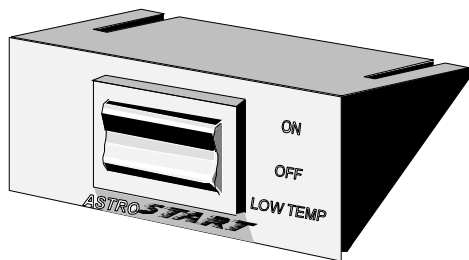
Code 5 Programming problem. Contact your service center.

Code 6 Internal communication problem. Consult your service center.

⚠ This sequence is part of your Remote Starter's safety system which constantly checks position of your gearshift. This sequence is reset every time gearshift is moved from any gear into neutral while hand brake is off.

## USING MAIN SWITCH

Main switch is usually installed under dashboard. It has 3 positions - **ON**, **OFF** and **LOW TEMP** - and is used to cancel start functions and activate Sentinel Mode.



## STARTING YOUR ENGINE

Your Remote Starter is controlled by an external remote control; consult relevant manual for commands or ask your installer what command is associated with your starter's "Start/Stop" function.

Parking lights flash once to confirm command has been received, then remain on all the time engine is running after being started by remote, i.e., for programmed runtime.

## CONTINUOUS MODE

Continuous Mode allows you to leave engine running even after removing ignition key. (This mode can only be activated when vehicle was started with ignition key). This practical feature also allows you to leave heating/air-conditioning system on when you leave vehicle for a short period of time.

Send "Start/Stop" command while engine is running.

Parking lights will come on and you can remove key. Engine will run for programmed runtime and stop automatically when runtime has elapsed if you have not returned. If engine is still running when you return to your vehicle (before runtime has elapsed), put key in ignition, turn it to "ON" position and apply brakes. All actions that normally stop engine when it is started by remote control (applying brakes, opening hood, etc.) have same effect in this mode.

## STOPPING YOUR ENGINE

Same command starts and stops your engine.

Engine will stop and parking lights will turn off.

## SENTINEL (LOW TEMPERATURE) MODE

In Sentinel Mode, system can start your engine automatically when temperature falls below -15°C (5°F). Engine will run for programmed time, after which Sentinel Mode will wait 2½ hours and then start engine again if temperature is still below -15°C (5°F). All actions that normally stop engine when it is started by remote control (applying brakes, opening hood, etc.) have same effect in this mode.

### ***TO ACTIVATE SENTINEL MODE***

Turn main switch to **LOW TEMP** position, then apply brakes.

After 2½ hours, if temperature is below -15°C (5°F), engine will start. If temperature is above -15°C (5°F), Sentinel waits until it goes below -15°C (5°F) before starting. If system cannot execute command (for example, hood is open), parking lights will flash three times and Sentinel Mode will not be activated.

### **SENTINEL MODE IS DEACTIVATED WHEN:**

- Key is turned to “**ON**” position.
- Main switch is no longer in “**LOW TEMP**” position.
- One of safety devices, with exception of applying brakes or sending a remote control command (see “What will stop your engine” below), detects an infringement of safety conditions.

### **UPON ENTERING YOUR VEHICLE ...**

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

<b>WARNING:</b>	<b>DO NOT TURN IGNITION KEY TO “START” POSITION.</b>
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- Drive as usual.

⚠ Remember that engine will also stop if hand brake is released or gearshift is moved before turning key to “**ON**” position.

### **WHAT WILL STOP YOUR 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 “**NEUTRAL**”.
- Hand brake is not **ON** properly.
- Engine exceeds 3000 rpm.
- Main switch is **OFF**.

### **ENGINE RUNTIME**

Your engine will stop automatically after a preset time. Parking lights will stay on as long as engine is running. Runtime is programmable during installation. Manufacturer preset time is 15 minutes but you can have it changed to suit your needs.

### **IF ENGINE FAILS TO START**

If your system cannot start your vehicle at first attempt, it will wait 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.

## SAFETY CHECKS

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

### **HOOD SWITCH**

- Start your vehicle with Remote Starter.
- Open hood.

Engine must stop as soon as the hoods' angle of inclination exceeds 30 °. If engine does not stop, **first** turn main switch to "**OFF**" position and leave it "**OFF**" until situation is rectified; contact your local service center.

### **DETECTING "NEUTRAL" GEARSHIFT POSITION**

Your starter is designed to check gearshift position at all times. Your vehicle will not start or will stop if gearshift is not in "**NEUTRAL**".

Check as follows:

- Start your vehicle with remote control as usual.
- Move gearshift slightly as if putting it in gear.
- Repeat above steps moving gearshift in all directions.
- If engine does not stop immediately when gearshift is moved in all directions, **first** turn main switch to "**OFF**" position and leave it "**OFF**" until situation is rectified; contact your local service center.

### **CHECKING HAND BRAKE**

Your starter is designed to check hand brake position at all times. Your vehicle will not start or will stop if hand brake is not in "**ON**" position.

Check as follows:

- Start your vehicle with remote control as usual.
- Release hand brake without applying brakes.
- Engine should stop as soon as you release hand brake.
- If engine does not stop, **first** 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 battery for any reason, first turn main switch "**OFF**" 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 INC.** warrants the manufactured product specified below against any defect in workmanship or material for the period specified below.
2. This Warranty excludes any other legal warranty, with the exception of 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 only to the control module of the following products: TS-100, STS-100, STS-200, RS-101, RS-102, RS-103, RS-113, RS-212, RS-213, RS-304, RS-414 and RS-504.
6. All other accessories (such as the transmitter, switch, antenna, module DL-3 or DL-4, etc.) are only warranted for a period of one year from the date of the purchase contract; the batteries are not covered by any warranty.
7. **ASTROFLEX INC** 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 INC** 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 **ASTROSTART** product shall return the product for warranty service, freight prepaid, to the address indicated on the back 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 INC** 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 INC**;
  - b) the product was damaged after installation;
  - c) the purchaser used the product 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 INC**;
  - e) the product was repaired with parts not authorized by **ASTROFLEX INC**.
12. **ASTROFLEX INC** is not responsible for removal or reinstallation charges.
13. This Warranty constitutes the only warranty from **ASTROFLEX INC** 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.

This device complies with the requirements of the Department of Communications (DOC), Canada, 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 the DOC. 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.

DOC approval no.: 1854 K 1066

## **ASTROFLEX Inc.**

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Customer Service

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