



ASTRA 100RS

AUTOMATIC/MANUAL TRANSMISSION
REMOTE START SYSTEM

PRODUCT MANUAL

Limited Lifetime Warranty

This vehicle security system is warranted to the original purchaser, to be free from defects in material and workmanship. The manufacturer will repair or replace at its option, and free of charge for the first twelve (12) months, any part that proves defective in material or workmanship under normal installation, use, and service, provided the product is returned to the manufacturer freight prepaid. After the first 12 month warranty period there will be a maximum service charge of \$25.00 per calendar year (if required) for repair and/or replacement of any defective parts.

A copy of the original purchase and installation receipt must accompany any products returned for warranty service. Warranty is limited to defective parts and/or replacement parts only and excludes any incidental, and consequential damages connected therewith.

The manufacturer of this theft deterrent system makes no warranty against the theft of the vehicle or its contents. This warranty is not to be construed as an insurance policy against loss.

WARRANTY OF INSTALLATION LABOR, REMOVAL AND RE-INSTALLATION CHARGES ARE NOT THE RESPONSIBILITY OF THE MANUFACTURER.

Note: This Warranty is voided if the product was not installed by an Authorized ScyTek Dealer.

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About Your System

The **Astra 100RS** is a state-of-the-art remote starting system. With proper installation, this system will provide superior protection and performance for many years to come.

The **Astra 100RS** built-in remote start feature is designed to offer maximum convenience by remote starting your vehicle's engine, turning on the heater/air conditioner, and then running for a pre-determined time to provide a comfortable environment once you enter your vehicle.

ScyTek Electronics Inc. and its VENDORS shall not be liable for any accident resulting from the use of this equipment. This system is designed to be professionally installed into a car or vehicle in which all items, such as parking brake and all associated components, door switches, transmission shift linkage, throttle linkage, and all engine safety features, are in perfect working condition.

DO NOT install Astra 100RS remote starting system on MANUAL TRANSMISSION vehicles without verifying that the system is in Manual Transmission Mode. If accidentally left in gear the vehicle could become a self-propelled threat to life and property.

DO NOT remote start the vehicle in a closed garage. Make sure that the garage door is open or there is adequate ventilation. Failure to observe this rule could result in injury or death from poisonous Carbon Monoxide. To ensure the safety and security of the system while it is remote started, the Astra Starter employs several safeguards. In the event the brake pedal is pressed while the engine is remotely running, the remote start will immediately shutdown to prevent unauthorized users from attempting to drive the vehicle. The system is equipped with a hood pin input to prevent access to the engine compartment while the vehicle is remotely running. Finally, the Valet Mode prevents the remote start feature from operating in the event the vehicle is to be serviced.

System Contents:

- Main control unit w/wiring harnesses.
- Two Single-Button Random Coded Transmitters
- Status LED
- Emergency Override / Valet Switch
- Product manual

PLEASE NOTE:

Some of the features described in this manual may require additional parts and/or labor, and may not be included as part of the standard installation of this unit. Additionally, many features of this security system have selectable options that must be activated or programmed during the system's installation. These items will be identified in the following sections. Please discuss these features and any questions you may have regarding the installation of this product with Your Authorized Dealer.

Remote Transmitters

Remote Transmitter Description



The **Astra 100RS** is supplied with two Remote Transmitters used to control system operations.

Button - Activates the Remote Start feature.

Adding/Replacing Transmitters

To replace lost or stolen transmitters or to add additional transmitters into the system, have all desired transmitters ready and follow the steps below.

Note: Up to four 1-way transmitters can be programmed to operate the system. Any previously stored transmitter code will be erased if not programmed within the following sequence. Be sure to have all existing remotes for programming.

To program **1-way** transmitter(s):

1. Turn the ignition key On, Off, On, Off, and back On.
 - The parking lights will flash 3 times.
2. Press and hold the Override switch for 5 seconds.
 - The parking lights will flash 5 times.
 - The LED will illuminate.
3. Press Button on the first transmitter.
 - The parking lights will flash once.
4. Press Button on the first transmitter again.
 - The parking lights will flash twice to indicate it has learned the code.
5. Repeat steps 3 and 4 for each transmitter (up to 4).
6. Turn off the ignition key.
 - The parking lights will flash 3 times.

Battery Replacement

Your Remote Transmitter uses two 3 volt batteries (type CR2016), which will require replacement in time. Depending on the amount of use, the battery may last up to six months or more before it needs replacement.

When the battery needs replacing, the system's operating range will decrease or the transmitter LED may not be as bright.

In order to change the battery, first remove the screw from the back of the transmitter and separate the top and bottom halves of the case.

While replacing the battery make sure that the positive and negative terminals are positioned correctly, then carefully reassemble the transmitter case.

System Operation

Valet Mode

The Valet Mode temporarily disables the remote start system so the vehicle may be serviced by a mechanic. To activate or deactivate the Valet Mode:

1. Turn on the ignition.
2. Press and hold the override switch for 5 seconds.
 - The parking lights will flash once to confirm the Valet Mode is on or twice to confirm Valet Mode is off.
3. Turn off the ignition.

Remote Start Features

Remote Starting Manual Transmission Mode

Normal Mode:

With engine running and Handbrake engaged put the vehicle transmission in neutral and remove the foot from the brake pedal, press remote start button on your transmitter, Parking lights will flash twice indicating Manual Start Mode is enabled, turn Off the Ignition switch, the engine will remain running. Open and close the door, the system will shut the engine Off.

Starter is now ready for remote start operation.

Starter Ready Mode is canceled any time the door is opened; hand brake is released or any other error condition.

To Remote Start the System:

1. Be sure the system is not in Valet Mode.
2. Press and hold the Transmitter Button for more than 1-second.
 - The parking lights will turn on.
 - The engine will start and run for the duration of its programmed Run Time.*
 - The heater or air conditioner will turn on (if turned on prior to exiting the vehicle).

***If the engine fails to start on the first attempt, it will repeat the starting procedure 2 more times. If the vehicle fails to start after a total of 3 times the parking lights will flash 4 times and the doors will lock (if installed).**

Turn on the ignition and press the brake pedal to disengage the remote start feature and drive the vehicle.

Remote Starting Automatic Transmission Mode

To Remote Start the System:

1. Be sure the system is not in Valet Mode.
2. Press and hold the Button for more than 1-second.
 - The parking lights will flash twice.
 - The engine will start and run for the duration of its programmed Run Time.
 - The heater or air conditioner will turn on (if turned on prior to exiting the vehicle).

***If the engine fails to start on the first attempt, it will repeat the starting procedure 2 more times. If the vehicle fails to start after a total of 3 times the parking lights will flash 4 times and the doors will lock (if installed).**

Unlock doors, turn on the ignition and press the brake pedal to disengage the remote start feature and drive the vehicle.

Shut Down

When the the Remote Start feature is active, any of the following actions will shutdown the engine:

1. Pressing the Button on the Transmitter.
2. Pressing the Brake Pedal.
3. Opening the Hood.
4. Remote Start Time-Out (completion of the timed run cycle).

Quick Stop (Automatic Transmission Only)

The Quick Stop Feature allows you to exit the vehicle while keeping the engine running for quick stops.

To leave the vehicle running:

1. Press the Button on the Transmitter while the engine is running with the key.
2. The parking lights will turn on. Now turn the ignition key Off and the vehicle will continue to run.
3. You may now exit the vehicle and lock the doors.

To resume control of the vehicle:

1. Unlock the doors
2. Turn on the ignition.
3. Press the Brake Pedal to disengage the remote start.

Extended Features

Turbo Timer Feature

The optional Turbo Timer feature allows vehicles with turbocharged engines to remain running after the ignition key is removed, for proper cool-down of the turbocharger. The Turbo Timer feature requires connection to the vehicle's parking brake wire and is compatible with most gasoline powered engines, and diesel engines where a glow plug connection is not required.

To activate the Turbo Timer feature:

1. Leave the engine running after parking the vehicle.
2. Set the vehicle's parking brake.
 - The Turbo Timer will begin a two-minute run cycle to allow the turbocharger to cool down.
3. Turn OFF the ignition and exit the vehicle without pressing the brake.

To deactivate the Turbo Timer feature:

1. Turn On the ignition.
2. Press the brake pedal.
 - The Turbo Timer countdown will automatically stop and the engine will shutdown.

WARNING: the Turbo Timer feature is not intended for use inside garages or other non-ventilated areas. Make sure to deactivate the Turbo Timer feature when parking in such areas.

System Installation

1. Thoroughly read and become familiar with the installation instructions before beginning the installation.
2. Review system contents:
Main Unit
(2) One Button Remote Transmitters
Harnesses
 - 16-Pin main harness
 - 2-Pin LED harness • 2-Pin Override Switch harness
3. Verify vehicle is equipped with electronic fuel injection, and starts/idles normally before installation.
4. Determine if vehicle is equipped with a factory theft deterrent system and obtain proper bypass module if required.
5. Find a location to mount the hood pin switch that will not interfere with the opening of the hood, and is not in a position that can accumulate water. The hood pin is a safety device that must be installed to avoid remote starting during engine servicing.
6. Verify with the owner, mounting locations for all visible components, including the LED and Valet switch.
7. Verify with the owner, the optional features of the Astra Starter and the Functions that must be programmed during installation.
8. Inspect and perform a function test of all vehicle systems before and after the installation.
9. Always use a Volt / Ohm meter for testing vehicle circuits. Never use a test light.
10. Always look before drilling any holes or mounting self-tapping screws. Be sure fuel lines and exterior wiring looms are clear as they are often close to the chassis and difficult to see.
11. Protect all wires running from the engine compartment to the interior of the vehicle by covering with electrical tape and split loom tubing. Be sure to use a grommet when routing wires through the firewall.
12. Properly fuse any additional accessories such as window modules, door lock actuators, etc., making sure to power them separate from the alarm module. This will ensure the functionality of the security system in the event of an accessory failure.

Mounting the Control Unit

The control unit must only be mounted in the interior of the vehicle. Do not mount the main unit in the engine compartment. Choose a mounting location that will not be easily accessible to a thief, and will not interfere with the operation of any vehicle components such as foot pedals, steering column, air vents, seat rails, etc.

Do not mount the control unit until after setting the internal jumpers and performing a complete operation check of the system. After installation is complete and performance verified, the control unit can be easily mounted using wire ties through the mounting tabs on the bottom of the unit.

System Wiring

Starter Relay Module Harness

- Pin 1 **ORANGE WIRE:** Accessory Output for heater/air conditioner- Connect to the vehicles wire that shows +12v in the Run and On position but shows no voltage when cranked.
- Pin 2 **YELLOW WIRE:** Ignition 1 output- Connect to the Vehicle's wire that has +12v constant in the On position and when cranked.
- Pin 3 **VIOLET WIRE:** Starter Output - Connect to the vehicle's wire that shows +12v when cranked.
- pin 4 **BROWN WIRE:** Ignition 2 output- Connect to the Vehicle's wire that has +12v constant in the On position and when cranked.
- pin 5 **RED WIRE:** +12V Power Input- Connect to a (25A) +12v constant Battery source.

16-Pin Main Harness

- Pin 1 **BLUE WIRE** - 1 pulse remote start (-) input. Connect to auxiliary output from aftermarket alarm.
- Pin 2 **BLACK/GRAY WIRE:** Tach Input. **(required for all manual transmission installations)** Connect to the vehicle's tach wire or a fuel injector wire if the tachless mode does not provide satisfactory operation.
- Pin 3 **WHITE/RED WIRE:** Parking Brake Input (-). This wire must be connected to the parking brake wire. For vehicles with a negative parking brake wire, a relay must be used to invert the polarity.
- Pin 4 **GREEN WIRE:** Negative Door Input (-). Connect to the door switch circuit wire that shows ground when the door is open.
- Pin 5 **VIOLET WIRE:** Positive Door Input (+). Connect to the door switch circuit wire that shows +12V when the door is open. This type of door circuit is usually found on Ford vehicles.
- Pin 6 **YELLOW WIRE:** +12V Ignition Input. The Yellow wire must connect to a main ignition wire at the ignition harness. This wire must show +12V when the ignition is on and while cranking the starter. The voltage must not drop when the car is starting.
- Pin 7 **WHITE/BLACK WIRE:** Hood Pin Input (-). Connect the to the hood pin switch. The switch must provide a ground output when switch is opened.
- Pin 8 **BLACK WIRE:** Ground Input (-). The Black wire must connect to a solid chassis ground. Clean away any paint or dirt to insure the best possible ground.
- Pin 9 **VIOLET/WHITE WIRE:** Factory Rearm Output (-) 500 mA. The White/violet wire provides a ground output on remote start shutdown to rearm a factory security system. Connect to the wire that requires a ground pulse to rearm the factory security system.
- Pin 10 **WHITE/VIOLET WIRE:** Factory Disarm Output (-) 500 mA. The Violet/white wire provides a ground output on disarming and before remote starting to disarm a factory security system. Connect to the wire that requires a ground pulse to disarm the factory security system.
- Pin 11 **BLUE/ORANGE WIRE:** Ground When Running Output (-) 500 mA. Connect to an optional factory security bypass module if required.
- Pin 12 **ORANGE WIRE:** Anti-Grind Output (-) 500 mA (Optional). The Orange wire provides a ground output to activate a relay for anti-grind protection.
- Pin 13 **GRAY WIRE:** Reserved
- Pin 14 **GREEN/WHITE WIRE:** Brake Input (+). Connect to the wire that shows +12V when pressing the brake. The Green/white wire is a safety shutdown wire that must be connected.
- Pin 15 **WHITE WIRE:** Parking Light Output (+/-) relay. Connect the White wire to the circuit that shows

+12V or ground only when the parking lights are on and set the internal parking light relay jumper to the proper polarity. For parking light circuits exceeding 10 amps, a relay is required. For vehicle's with independent left and right parking light circuits, diodes must be installed to keep the circuits separate. NOTE: Do not connect the WHITE wire to the vehicle's headlight circuit.

Pin 16 **RED WIRE**: Module Power Input (+). Connect to a constant source of +12V.

2-Pin Blue Connector: Valet switch port. Mount switch where it is accessible from the driver's position.

2-Pin Red Connector: LED port. Mount LED where it may be easily seen from either side of the vehicle.

3-Pin White Connector: Not used.

5-Pin White Flat Connector: Antenna connector port.

Starter Diagnostics

Starter doesn't start and Parking Lights flash:

3 Times - Hood Trigger is active

4 Times - Brake Lights stay On

5 Times - Unit is in Valet (service) mode, and start is disabled.

6 Times - Handbrake Off (Manual Transmission Mode Only).

7 Times - Start sequence not initiated (Manual Transmission Mode Only).

Jumper Settings

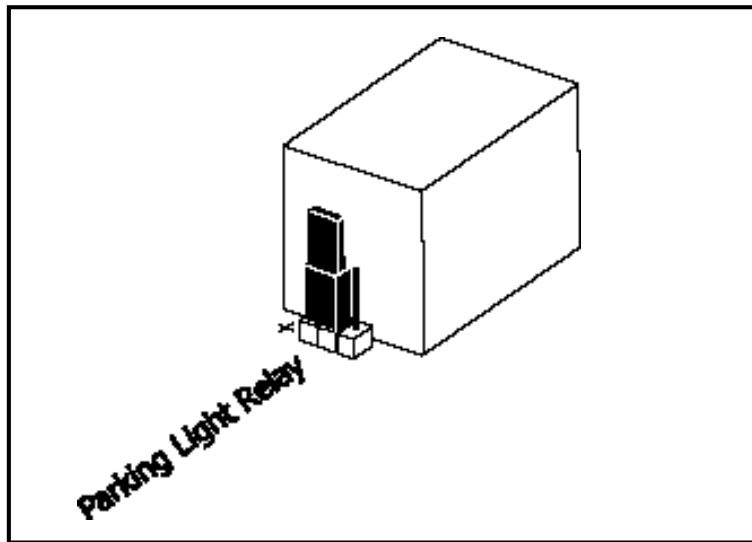
Jumper Selection

Carefully separate the top and bottom halves of the main unit case. Once the cover is removed, the parking light polarity jumper will be visible next to the parking light relay. Set the jumper for the correct polarity output as described below, then reassemble the main unit case.

Parking Light Output. Selects the polarity (+/-) for the output of the on-board Parking Light relay.

Left Pin + Center Pin = positive

Right Pin + Center Pin = negative



default setting shown

System Programming

Entering System Programming

To enter System Programming:

1. Turn on ignition.
2. Within 5 seconds, press the valet switch 5 times.
 - The parking lights will flash three (3) times indicating you have entered Programming.
3. Press the valet switch the number of times equal to the System Parameter you want to change.
 - The parking lights will flash each time the valet switch is pressed.
4. Within 5 seconds, press the Brake Pedal the number of times corresponding to the desired operating mode for that System Parameter, within two seconds, parking lights will flash to indicate the setting.
 - 1 flash
 - 2 flashes
 - 3 flashes
5. When you are finished, turn off the ignition to save the changes.

Default Reset

Following this procedure will set all System Programming Parameters to factory default settings.

1. Enter System Programming.
2. Press the Brake Pedal three times.
 - The parking lights will flash 6 times indicating that the reset signal was received.
 - All System Programming parameters are now set to factory default settings.
 - The Valet Mode is off.
3. Turn off ignition.

Programmable System Options

The following is a description of the programming options of the system. Some of the program branches control more than one option, and may require accessing a particular branch number twice in order to program all desired features.

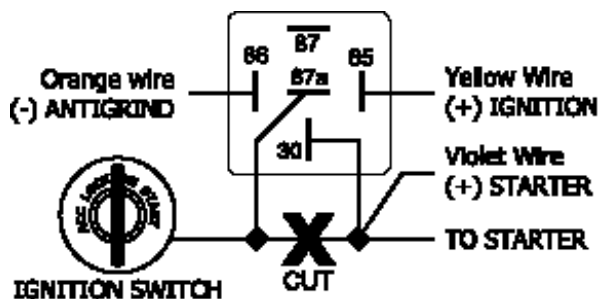
1. **Reserved.**
2. **Reserved.**
3. **Reserved.**
4. **Reserved.**
5. **Reserved.**
6. **Reserved.**
7. **Start in Valet Mode.** Selects if vehicle should start when in Valet.
8. **Reserved.**
9. **Reserved.**
10. **Engine Run Time.** Selects between 15 or 25 minutes for the remote start run cycle.
11. **Reserved.**

12. **Tachless Sense Crank Time.** Selecting engine crank time automatically selects the tachless mode and one of three crank times.
- If the normal engine crank time is too short increase the time by selecting one of the two additional extended crank time options.
- Normal - 0.8Sec.
Extended - 1.0Sec.
Super Extended - 1.4Sec.
- Tachless Mode. Determines the engine status using an advanced software routine, without requiring connection to the vehicle's tachometer. Tachless operation may not be compatible with some vehicles or in severe temperatures, in which case the tach wire must be connected.
13. **Remote Start Program.** This dual program branch sets the engine mode for Gas or Diesel, and learns the vehicle's RPM threshold. Learning the RPM threshold automatically selects the RPM monitor mode. For installation into a diesel equipped vehicle, first set the engine type to diesel before learning RPM.
- Tach Monitor Mode. Monitors the vehicle's tach wire (or a fuel injection wire) in real-time to determine engine status and adjust starter crank time automatically. If programmed for Tach Monitor, the vehicle's tach signal will have to be learned before initial operation (see below).
- RPM Learn. Start the engine, enter Branch 13, the LED should be flashing to indicate tach signal is present. Press the Brake pedal 1 time to learn the vehicle's tach signal. The LED will stop flashing to confirm learning of the tach signal. The LED will flash four times if the tach signal was not learned, engine sense mode will not be changed.
- Gas Engine. Sets the engine type for Gasoline.
- Diesel Engine. Sets the engine type for Diesel and monitors the glow plug input to make sure the glow plugs are warm before cranking the starter. If the glow plug wire is not connected, the built-in timer waits 15 seconds before automatically cranking the starter.
14. **Ignition 2 Relay Program.** Selects one of three operating modes for the Ignition 2 relay output: Ignition 2, Accessory 2, or Starter 2.
15. **Turbo/Manual Transmission Start.** **Turbo Mode** - When enabled allows you to leave the vehicle while the engine is still running (2 Minutes) in order to cool down the turbo. A connection to the parking brake is required for this feature. **Manual Transmission Alternate Start Mode** - When enabled starts the remote start activation process automatically when the emergency brake is engaged.
16. **Reserved.**
17. **Rearm/Horn Output Mode.** Pin 9 VIOLET/WHITE wire is selected to act as a Factory Rearm output or Horn Output Horn output with chirps enabled or Horn output with chirps Disabled
18. **Smart Start Run Monitor.** When enabled smart mode monitors engine run condition during remote start.

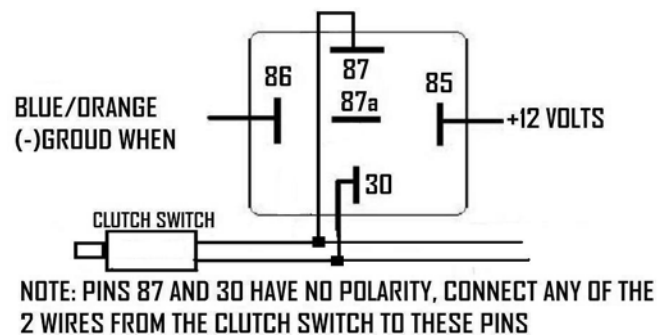
Branch	Feature	Code 1 (default)	Code 2	Code 3
1.	Reserved	N.A.	N.A.	N.A.
2.	Reserved	N.A.	N.A.	N.A.
3.	Reserved	N.A.	N.A.	N.A.
4.	Reserved	N.A.	N.A.	N.A.
5.	Reserved	N.A.	N.A.	N.A.
6.	Reserved	N.A.	N.A.	N.A.
7.	Start in Valet Mode	Disabled	Enabled	
8.	Reserved	N.A.	N.A.	N.A.
9.	Reserved	N.A.	N.A.	N.A.
10.	Engine Run Time	15 minutes	25 minutes	
11.	Reserved	N.A.	N.A.	N.A.
12.	Tachless Sense Crank Time	Normal	Extended	Super Extended
13.	Engine Type	RPM Mode/RPM Learn	Gas Engine	Diesel Engine
14.	Ignition 2 Output Program	Ignition 2 Output	Accessory 2 Output	Starter 2 Output
15.	Turbo/Manual Transmission Start	All Disabled	Turbo Mode Enabled	Alternate Start Enabled
16.	Reserved	N.A.	N.A.	
17.	Rearm/Horn Output Mode	Rearm	Horn	Horn Chirp disabled
18.	Smart Start Run Monitor	Enabled	Disabled	

Relay Diagrams

Starter Anti-Grind

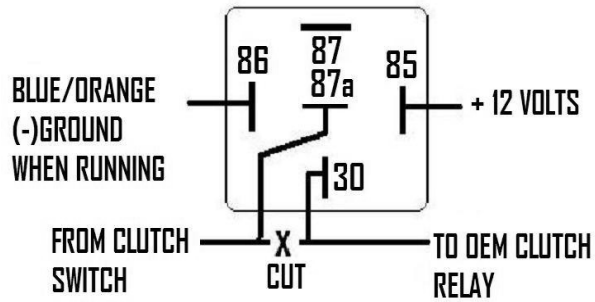


OPEN CIRCUIT CLUTCH SWITCH

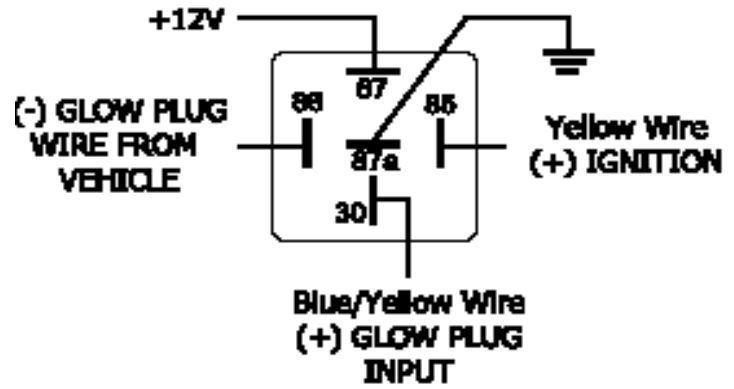


Relay Diagrams Cont.

CLOSED CIRCUIT CLUTCH SWITCH



Negative Glow Plug



Technical Information

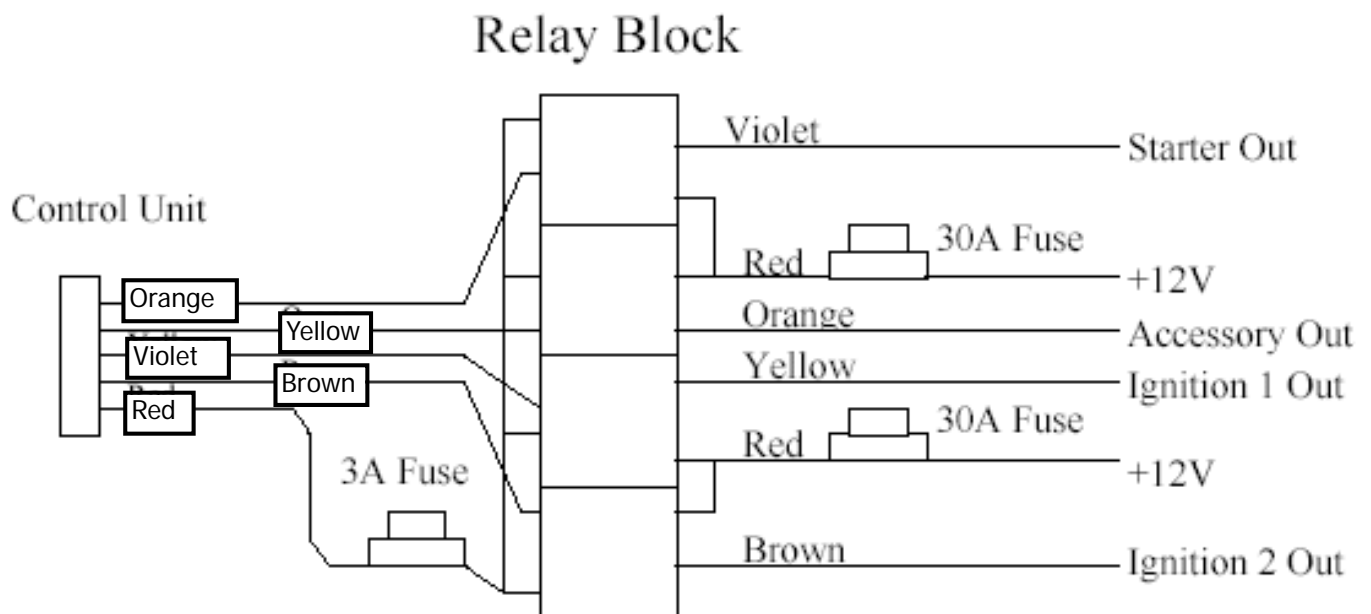
FCC ID: OARRXAM2000

This device complies with Part 15 of FCC Rules.

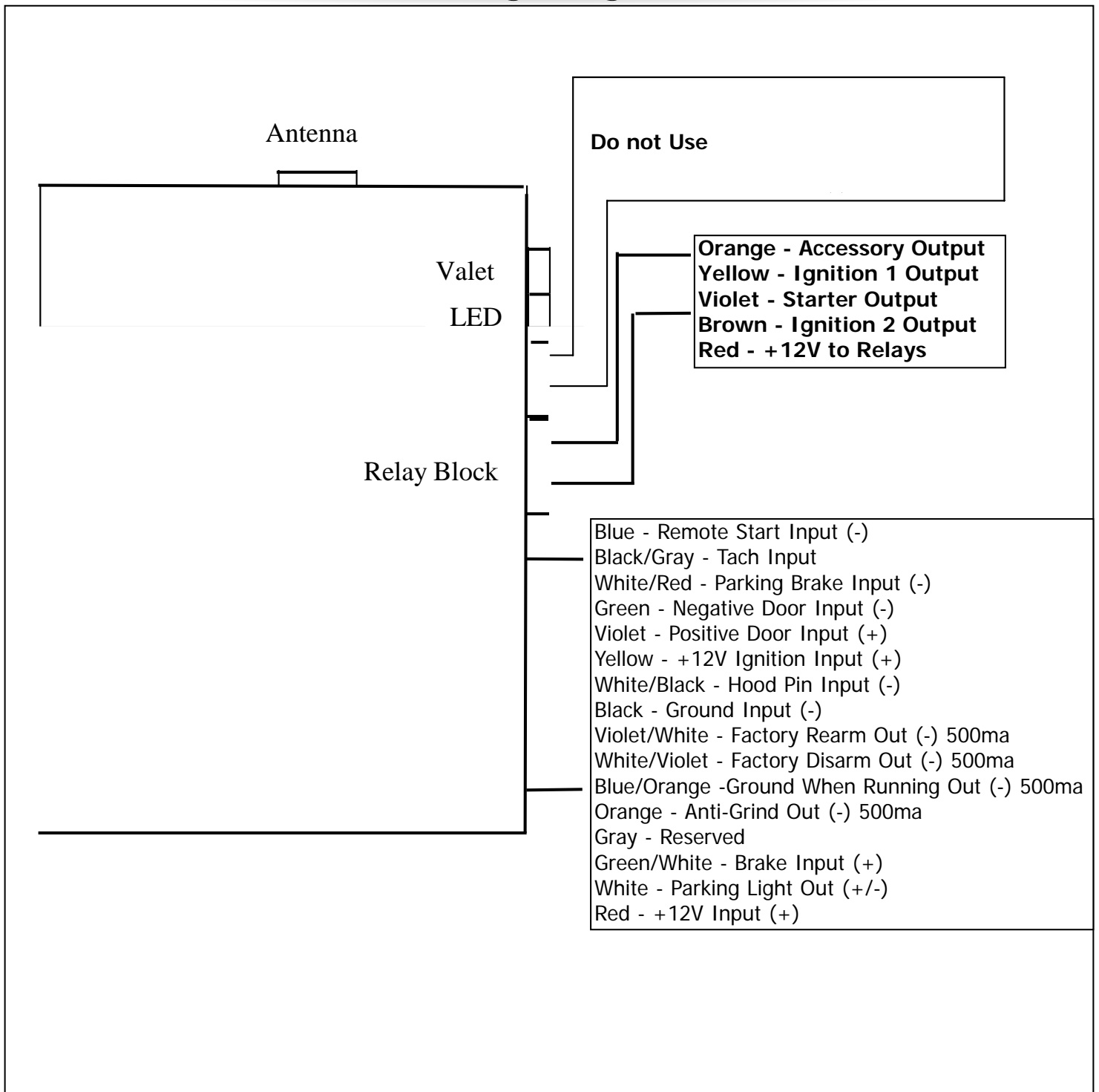
Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation

Wiring Diagram



Wiring Diagram



ScyTek Electronics

11627 Cantara Street
North Hollywood, CA 91605
www.scytek.net