

INSTRUCTION MANUAL FOR

Rhino GTR

Remote Control Car Alarm with Impact Sensor,
Mini-Battery Backup Siren & Engine Immobiliser



 A.C.N 001 621 610

Build Date:

TO ARM/DISARM ALARM

The alarm is activated by pressing **BUTTON 1** on the remote control transmitter once. The blinkers will flash once, and the siren will beep once. The dash LED-light will stay on for 10 seconds then flash, **THE ALARM IS NOW ON.**

To deactivate the alarm, press the **BUTTON 1** again. The blinkers will flash twice and the siren will beep twice. **THE ALARM IS NOW OFF.**

If the siren is sounding, and you wish to disarm, the first press will cancel the siren - the system will then return to an armed state. A second press is required to fully turn the alarm off (you will hear 2 beeps & the blinkers will flash twice).



BOOT RELEASE - Available on cars fitted with electric boot release motors.

The alarm is fitted with remote boot release capability. This feature enables the user to unlock the boot by pressing **BUTTON 2** for **2 seconds**. The boot will unlock and the indicators will flash 14 times. For safety reasons, the remote boot release will not work when the ignition is on.

DOOR AJAR WARNING & BYPASS

When arming, if the alarm senses that a door has been left open, 4 seconds after the normal arming beep, the siren will beep a further 5 times. The door trigger input will be automatically bypassed to prevent false alarms.

ALARM TRIGGER & MEMORY

When the alarm is triggered the siren will sound for 30 seconds and then will automatically rearm. If the alarm has been triggered in your absence, the dash LED will be flashing twice as fast as normal when you return to your vehicle.

EMERGENCY PANIC BUTTON

The panic feature is activated by pressing & holding **BUTTON 1** on the remote control transmitter for 2 seconds. If disarmed, the alarm system will arm first (i.e. lock doors) then the siren will sound & the blinkers will flash for 30 seconds. If armed, the alarm system will stay armed (i.e. the doors will not unlock) & the siren will sound & blinkers flash for 30 seconds.

To cancel "panic", follow disarm procedure as described on page 1.

NOTE: Panic does not work when the ignition is on by requirement of Australian Law (EPA-Environmental Protection Authority).

PROGRAMMABLE FEATURES:

The features outlined below are the most popular that can be turned on or off to suit your requirements. Please refer to the section in this manual marked "Rhino Programmable Features" for full details.

PASSIVE ARMING: The alarm can automatically arm itself 30 seconds after you leave your vehicle provided that the ignition is turned off, and that at least one door has been opened and closed i.e. the owner has parked and has exited the vehicle. This feature **will not lock** the vehicle where central locking is connected.

AUTOMATIC RE-ARM : This feature prevents accidental disarming by the owner i.e. the owner turns the alarm off but is then distracted and forgets that they have deactivated the system. If a door is not opened, or the ignition is not turned on within 60 seconds from when the system is turned off by the remote, the system will **re-arm**, and if central locking is connected, it **will re-lock** the vehicle.

SILENT ARM/DISARM : This feature when turned on, stops the siren from beeping for arm & disarm confirmation i.e. only the blinkers will flash.

LEARNING NEW REMOTES (Up to 3 remotes can be used with this alarm system)

Before entering this mode, make sure you have all remotes present that you wish to utilise with this alarm system, as the alarm automatically erases all remotes when you enter this mode.

- A. Arm then Disarm the alarm system. While the system is disarmed, open and close your drivers door (get inside the vehicle), making sure the interior light is coming on as you open the door.
- B. Within 30 seconds, turn the car ignition key from the off position to the ignition on position 8 times.
- C. 10 seconds later, the blinkers will flash 8 times to confirm that you have entered the remote learning mode. Repeat steps A & B if you do not receive the flashes.
- D. Now press & hold Button 1 on the new remote you wish to learn in. The siren will beep once to confirm the code has been learnt. Repeat this step for up to 3 remotes. You can use this process to delete lost remote controls by learning in the same remotes in succession to replace each of the 3 memory locations so that the old remote code/s are erased.
- E. The system will automatically exit the learning mode 20 seconds after the last press of a remote.

RHINO GTR - Car Alarm & Immobiliser

STANDARD SYSTEM FEATURES

- ❖ 2 x Remote Controls
- ❖ Smart Code Learning Technology
- ❖ 1 Point Engine Immobilisation (Onboard Relay)
- ❖ Can Protect Doors, Boot, Bonnet
- ❖ Car Body Impact Sensor
- ❖ Mini Backup Battery Siren
- ❖ Flashes Indicators
- ❖ Flashing Red Dash Light
- ❖ Central Locking Control for Keyless Entry
- ❖ Arm/Disarm Beep
- ❖ Emergency Panic via Remote
- ❖ Car Finder Function
- ❖ Current (Voltage Drop) Sensing
- ❖ Automatic Siren Reset (30 seconds)
- ❖ Security Override Mode
- ❖ Boot Release via Remote (where fitted)
- ❖ Split System - Separate Siren & Brain



SELECTABLE SYSTEM FEATURES

- ❖ Passive Arming
- ❖ Auto Rearm & Relock
- ❖ Audible or Quiet Arm/Disarm
- ❖ Current Sensing (Voltage Drop) Circuit
- ❖ Central Locking Output Time Selectable - 0.8 or 5 Seconds

OPTIONAL ACCESSORIES:

Automatic Electric Window Lift

(Part No. GLU400 - Closes 2 Windows)

Paging System

(Part No. APAGER)

Ultrasonic Sensors

(Part No. UD6)

Microwave Sensor

(Part No. UD5)



PROGRAMMABLE FEATURES for Rhino GTR Car Alarm

Your Rhino Security system incorporates the latest in high security & convenience features. It is possible to customise your security system so that it suits your requirements perfectly. Detailed below is the full list of programmable features that can either be turned on or turned off.

We have set at the factory, the most common configuration chosen and these settings are listed in the REGISTER Settings listed below. Once the desired features have been selected, the selection is permanently retained in memory, even if power is removed.

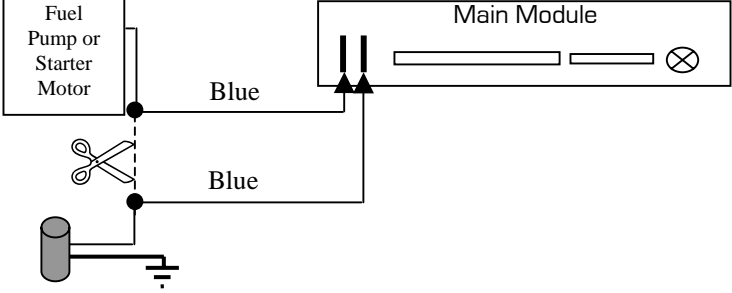
To turn on or turn off any feature use the following procedure: eg to enable silent arming.


1. Arm then disarm the alarm system.
2. Within 20 seconds of disarming, turn the ignition key to on.
3. Press button 1 on the remote control (immediately after turning the ignition on) an equal number of times to the selected feature's **code** no. (eg 10 times for Audible arm/disarm). Leave a 0.5 sec. gap between each press. The siren will chirp to confirm each press.
4. Immediately turn the ignition to off after the last press.
5. The system will now confirm whether the feature has been turned on or off via visual readout. One flash of the indicators means the feature is on. Two flashes means the feature has been turned off.

PROGRAMMABLE FEATURE	Press Remote This Many Times	Indication	INITIAL FACTORY SETTING	DESCRIPTION
Voltage Drop (Current) Sensing	6	1 Flash On 2 Flash Off	OFF	If deactivated, this feature will prevent the alarm triggering via sensing a drop in voltage in the vehicle's electrical system. This may be necessary where engine thermo fans cut in automatically or there are other accessories active even when the ignition is turned off eg fridges, car phones.
Passive Arming	7	1 Flash On 2 Flash Off	OFF	The alarm can automatically arm itself 30 seconds after you leave your vehicle provided that the ignition is turned off, and that at least one door has been opened and closed ie. the owner has parked and has exited the vehicle. This feature will not lock the vehicle where central locking is connected.
Auto Re-arm	8	1 Flash On 2 Flash Off	OFF	If system is disarmed and a door is not opened, or the ignition turned on within 60 seconds, the system will rearm & relock (where central locking is connected).
Central Closure	9	1 Flash 0.8 2 Flash 5 sec	0.8 sec	You can select the lock & unlock outputs to become a 5 second negative pulse instead of 0.8 seconds. This feature is for certain vehicles with vacuum central locking or those with a central closure wire (some BMW, Mercedes) ie doors lock, electric windows wind up, sunroof closes automatically.
Audible Arm/Disarm	10	1 Flash On 2 Flash Off	ON	This feature when turned off, stops the siren from beeping for arm & disarm confirmation i.e. only the blinkers will flash.
Arming Delay	12	1 Flash On	15 - 45	You can increase the arming delay period

Adjustment & Door Ajar Warning		2 Flash Off	Sec	<p>from the initial factory setting of 15 seconds up to 45 seconds.</p> <p>Door Ajar Warning: When the arming delay is set on 15 sec, if a car door is left open, when arming the siren will emit an error chirp after the normal arming beep. The alarm will also isolate the door trigger input to prevent trigger in case of faulty door pin switch.</p> <p>If arming delay is extended from 15 sec, this feature will not work. This may be necessary in vehicles that have an interior light delay.</p>
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WIRING INSTRUCTIONS FOR RHINO GTR ALARM

2 X SPADE CONNECTORS, LEFT HAND SIDE OF MODULE	
LIGHT BLUE x 2 with Spade Terminals. (1 Pair)	<p>Immobilisation Circuit. (Starter Motor or Fuel Pump). The starter wire is usually located under the steering column of the vehicle. This wire must be +12 Volts only when the vehicle is being started. Cut this wire. The vehicle should not start. Solder the starter motor side to one of the blue wires. Solder the other end to the other blue wire. Under no circumstances should you cut the vehicle's main ignition system. Wire you cut should not carry current greater than 15 Amps.</p> 
LARGE CONNECTOR BLOCK - WIRES LEFT TO RIGHT	
BLACK	Earth. Connect to a suitable earth on the car body.
BLUE/YELLOW	Lock NO. Refer to diagrams contained later in this manual for central locking connection .
RED/GREEN	Lock COM. Refer to diagrams contained later in this manual for central locking connection .
BLACK/GREEN	Lock NC. Refer to diagrams contained later in this manual for central locking connection .
RED/BLUE	Unlock NO. Refer to diagrams contained later in this manual for central locking connection .
GREEN/YELLOW	Unlock COM. Refer to diagrams contained later in this manual for central locking connection .
BLACK/BLUE	Unlock NC. Refer to diagrams contained later in this manual for central locking connection .
GREEN	Indicator Flash Wire. Connect to the left hand indicator circuit of the vehicle.
RED with 15A Fuse	Power. Connect to constant +12 volts via the fuse box at the point where the interior light circuit is powered. Current (voltage) sensing will not work if this procedure is not followed. Make sure the fuse is firmly pushed into its holder.
GREEN	Indicator Flash Wire. Connect to the right hand indicator circuit of the vehicle.
SMALL CONNECTOR BLOCK - WIRES LEFT TO RIGHT	
RED	Positive LED Output - already connected to the LED supplied.
BROWN	Negative Boot Release Output (200mA Max). Please refer to the illustrated diagram for connection details. Additional 40A Changeover Relay Required.
WHITE	Negative Trigger Input. Connect to negative trigger output wire from optional ultrasonics or microwave sensor.
YELLOW	Positive Siren Trigger (1Amp max rating). This wires switches positive when the alarm is triggered. It also pulses positive to make the siren beep. Connect to the yellow positive trigger input wire on the SBB Multi-Tone Backup Battery Siren.
BLUE	Negative LED Output - already connected to the LED supplied.
PINK	Negative on Arm (500mA Max). Connect to the negative wire (usually black) on any accessory used ie. ultrasonic or microwave detectors. Also used to trigger electric window lift modules.

GREY	-	Ignition Input. Connect to a +12 volts ignition switched lead, which <i>does not fall to 0 volt when the engine is cranked</i>
ORANGE	-	Connect to existing door switches. Please note: only negative switching doors, if positive door switching - must use relays to reverse to negative - see diagram contained later in this manual]
ROUND YELLOW TRIM POT ON FAR RIGHT OF MODULE		
YELLOW "TRIM POT" 		Sensitivity Adjustment for Car Body Impact Sensor – using a small philips head screwdriver, turn gently clockwise to increase sensitivity, or anti-clockwise to decrease sensitivity. Do not force past stops, otherwise you will break . (This is not covered by warranty). Adjust trim pot & then arm alarm to test. Make small adjustments until sensitivity is set to an appropriate level.

CURRENT (VOLTAGE DROP) SENSING

The alarm is fitted standard with current sensing. This feature incorporated in Rhino systems has been proven to be very reliable. The alarm will detect any sudden drop in voltage in the vehicle's electrical system, for example if the interior light comes on, or if the electrical system shows a voltage drop through tampering. **PLEASE NOTE:** If removal of this feature is necessary i.e. if engine cooling fans run after the ignition key is turned off, please refer to the Programmable Features section of this manual. You are able to disable the current sensing feature so that a false alarm condition can not occur.

LOCATION GUIDE FOR SYSTEM COMPONENTS

THE SIREN: Mount the siren to the vehicle's firewall, close to the bonnet. **DO NOT** mount near the exhaust manifold or low down in the engine bay where it may be exposed to excessive moisture / road grime etc.

THE CONTROL (MAIN) UNIT: Mount under the dash between the steering column & the centre of the vehicle. Cable tie the unit to a large cable (20mm diameter or larger) or to a heavy strut.

SECURITY OVERRIDE MODE:

If a customer loses a remote control, or it fails to disarm the alarm system, the following procedure will disarm the alarm system.

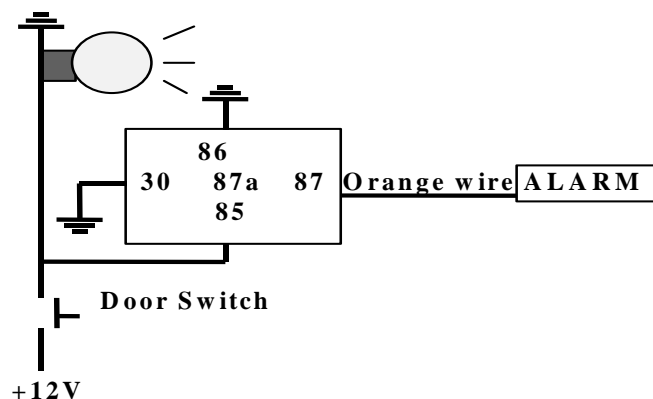
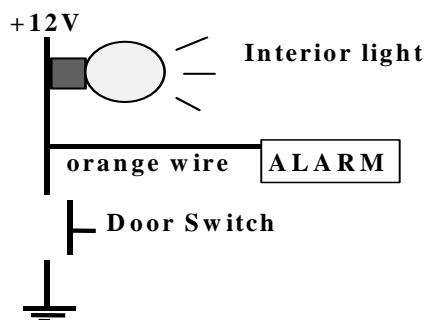
1. Open & close the drivers door - sit in the vehicle. (The siren will sound).
2. Within 20 seconds, turn the ignition from off to on 10 times. Wait for 5 seconds.
3. The system will then disarm.
4. Contact your Rhino Dealer for further assistance.

IMPORTANT NOTE FOR INSTALLERS: Vehicles fitted with negative or positive switching doors.

In order for the alarm system to function correctly, it is necessary for the doors to be hard wired to the system. Please follow the wiring diagrams below:

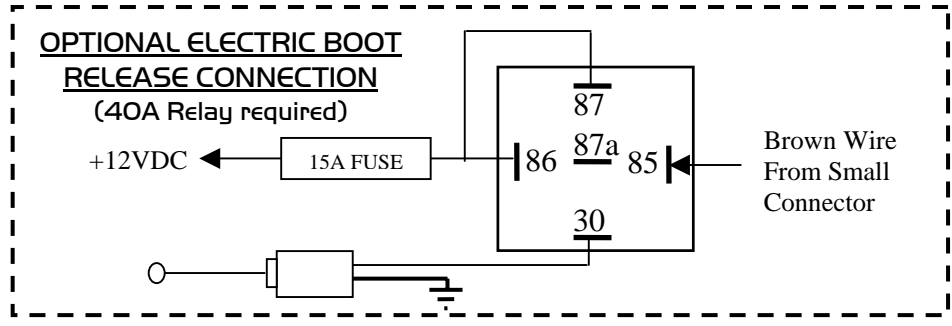
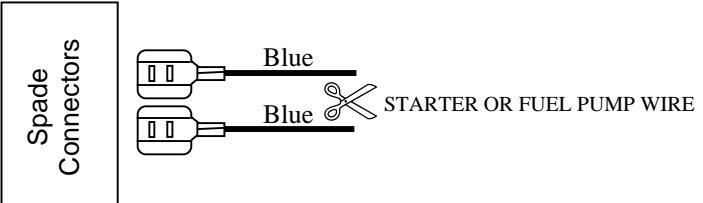
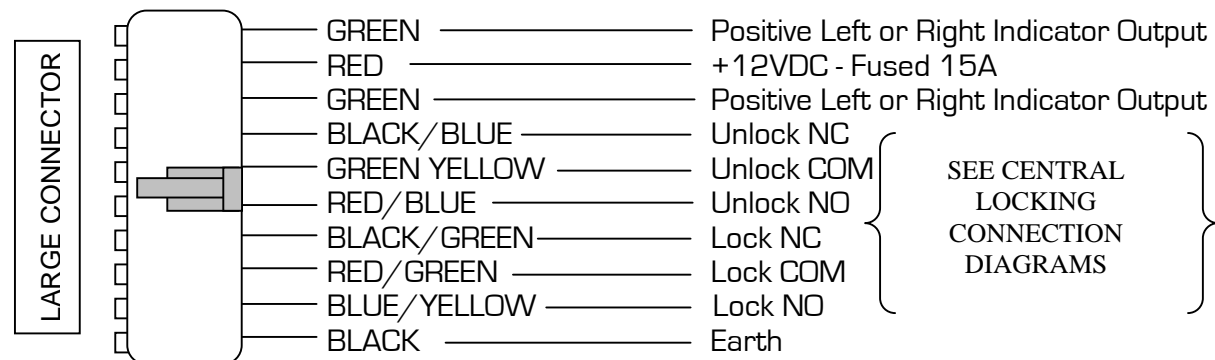
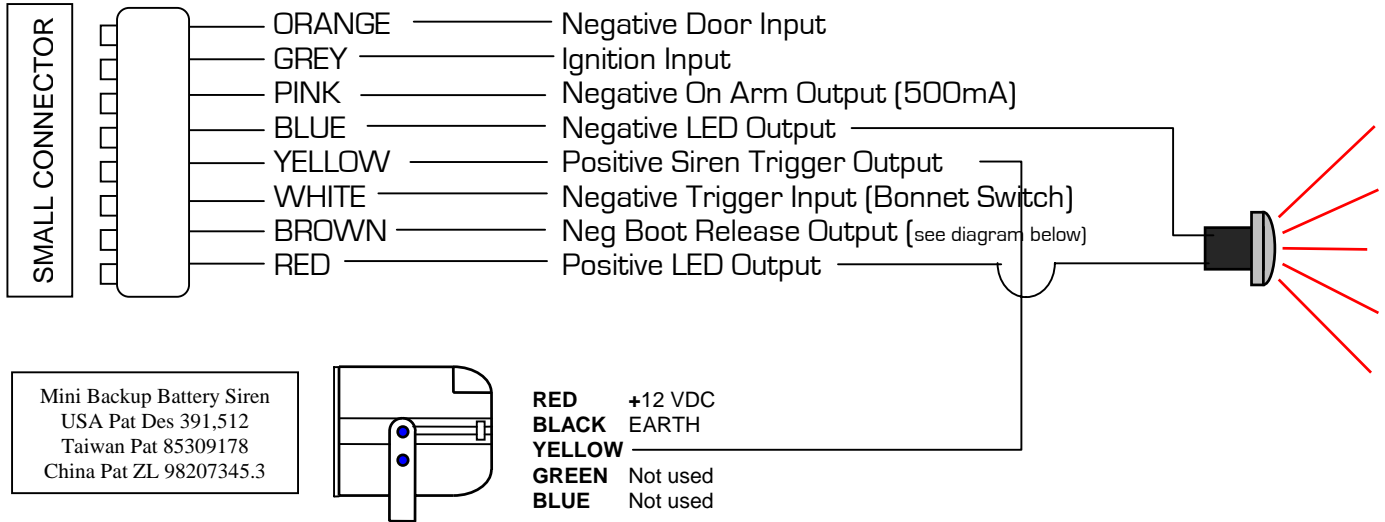
NEGATIVE SWITCHING DOORS:

POSITIVE SWITCHING DOORS: Use relay.



RHINO GTR ALARM WIRING DIAGRAM

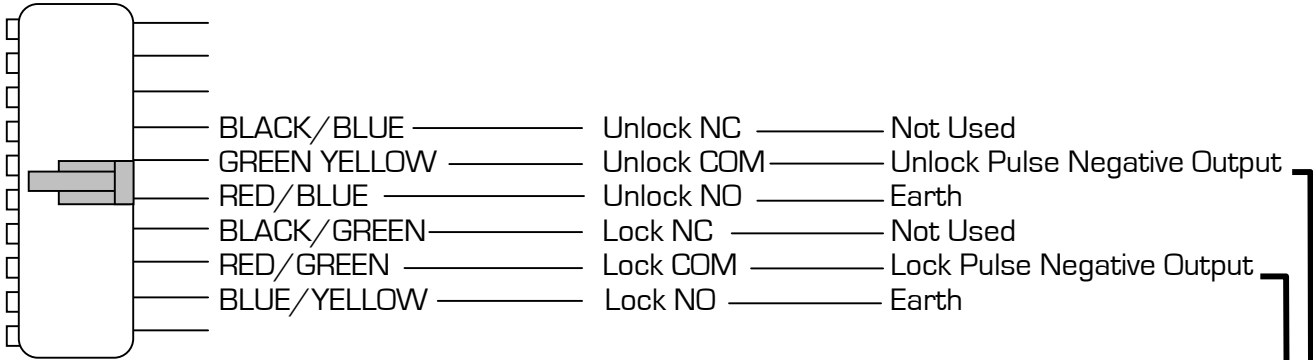
REFER TO WIRING INSTRUCTIONS ON PAGES 5 & 6 FOR FULL EXPLANATION



CENTRAL LOCKING CONNECTION DIAGRAMS FOR RHINO GTR CAR ALARM

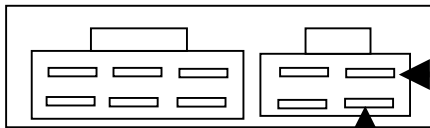
The Rhino GTR Alarm Features Onboard Central Locking Relays.

FOR NEGATIVE PULSE CENTRAL LOCKING SYSTEMS



FOR CONNECTION TO RHINO CENTRAL LOCKING KIT

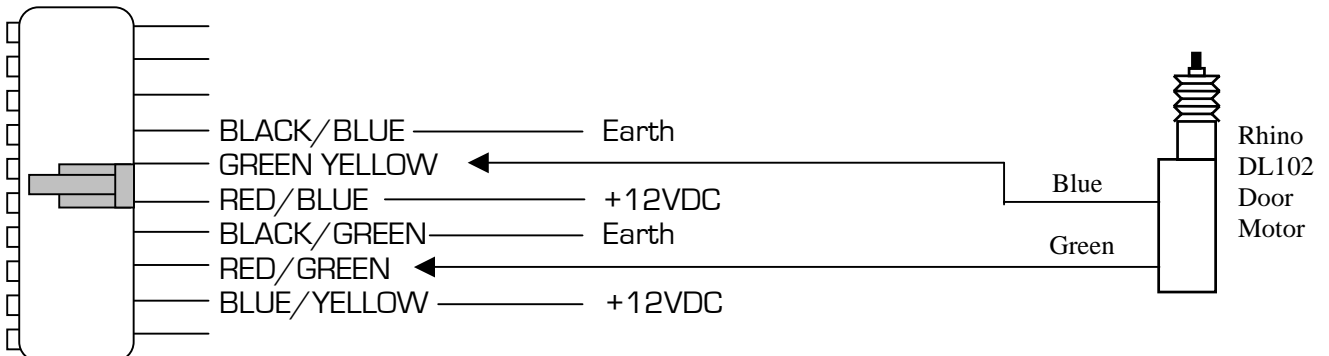
Configure wiring as above & refer to diagram below:



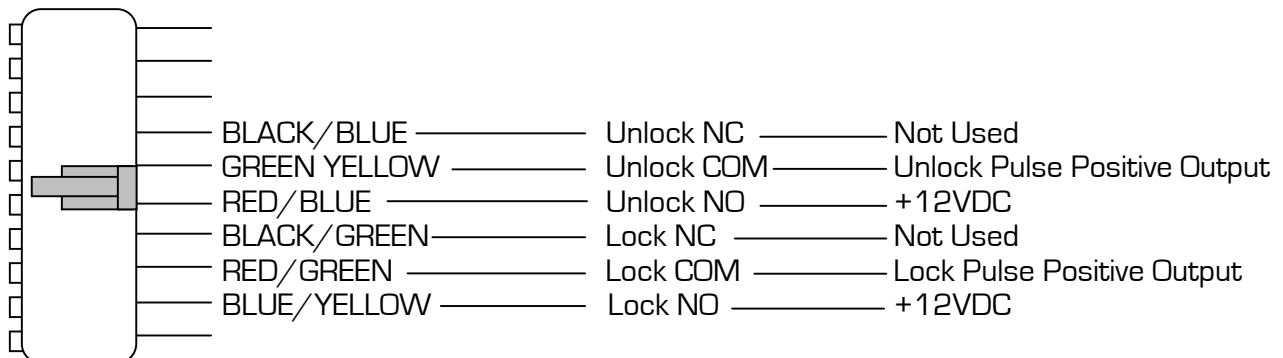
NOTE: Red/Blue & Blue/Yellow must be at earth for correct operation of central locking.

INSTALLING A NEW MOTOR:

Often required in vehicles that have factory locking but have no motor in the driver's door, or you would like "keyless entry" on driver's door.

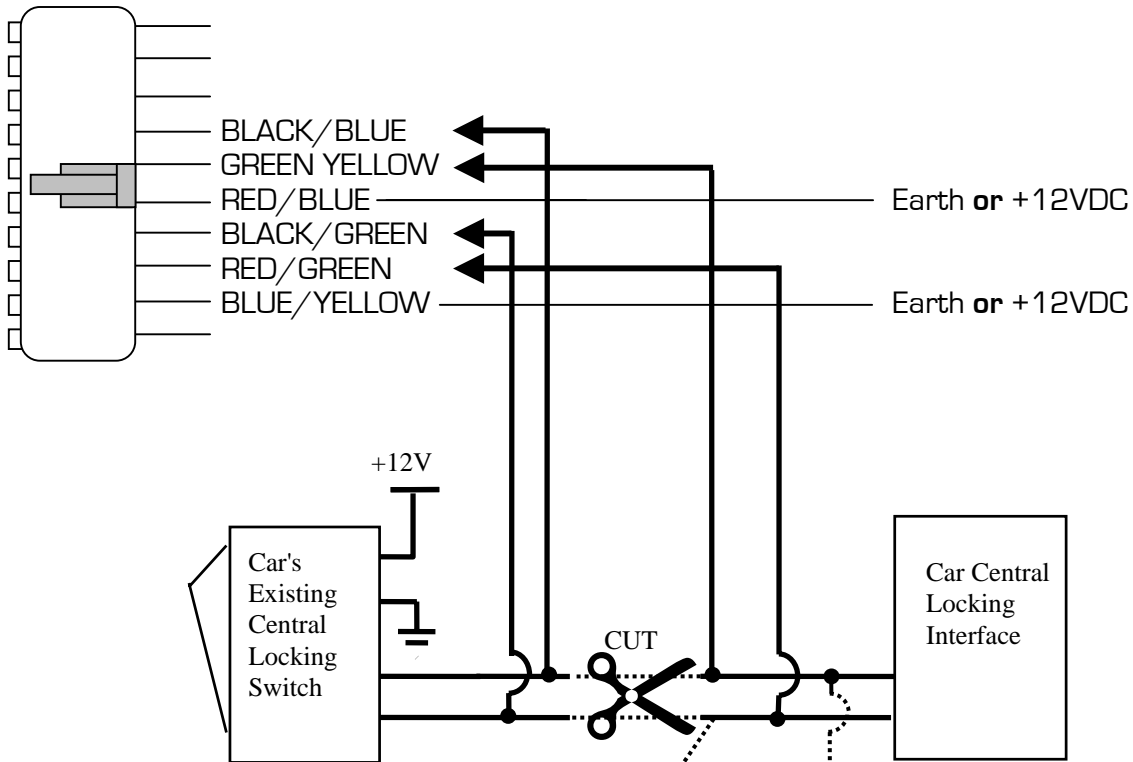


FOR POSITIVE PULSE CENTRAL LOCKING SYSTEMS



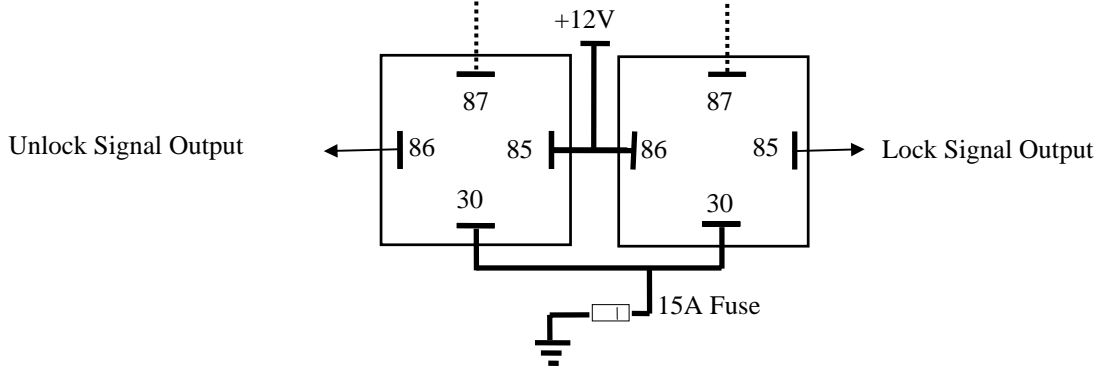
FOR POSITIVE AT REST THEN GOING NEGATIVE
FOR NEGATIVE AT REST THEN GOING POSITIVE

Connect Red/Blue & Blue/Yellow to Earth
 Connect Red/Blue & Blue/Yellow to +12VDC



For Floating Switches: Neither +12V or Earth at Rest

Connect 2 additional relays as shown below & connect Red/Blue & Black Green to +12VDC



TROUBLE SHOOTING GUIDE FOR RHINO GTR CAR ALARM.

Golden Rule: Check Power & Earth Connections First.

SYMPTOM	POSSIBLE CAUSE	REMEDY
SYSTEM BELIEVED TO BE "FALSE ALARMING"	<p>Power supply problem.</p> <p>Door or Bonnet Switches may be faulty.</p> <p>Impact Sensor sensitivity is set too high.</p>	<p>Check +12V & ground (earth) at the system module with a test lamp or multi-meter.</p> <p>Check that switches operate correctly i.e. check interior light switches on every door & that the bonnet switch is making & breaking contact correctly.</p> <p>Follow appropriate procedures as outlined on page 6 to adjust sensitivity.</p>
SYSTEM NOT WORKING AT ALL "OR" REMOTE CONTROLS ARE NOT ARMING OR DISARMING THE SYSTEM	<p>Power supply problem.</p> <p>Grey wire from the system is connected to constant +12V.</p>	<p>Check +12V & ground (earth) at the system module with a test lamp or multi-meter.</p> <p>The Grey wire must be connected to the vehicle's ignition wire (not constant +12V).</p>
VEHICLE WILL NOT START "OR" VEHICLE ENGINE WILL NOT RUN	<p>System is armed.</p> <p>Grey wire from the system is connected to constant +12V.</p> <p>Immobilisation wiring is incorrect.</p>	<p>Press the remote until the blinkers flash twice, or two disarm beeps are heard.</p> <p>This wire must be connected to a +12V ignition switched lead, which does not drop to 0 Volts when the engine is being cranked.</p> <p>Check the wiring on all points of immobilisation i.e. where starter and/or fuel circuits have been cut.</p>
SYSTEM ARMS WHILE THE ENGINE IS RUNNING	<p>The Grey wire is not connected to the ignition circuit.</p> <p>Bad earth.</p>	<p>This wire must be connected to a +12V ignition switched lead, which does not drop to 0 Volts when the engine is being cranked. This wire must also be constant +12V when the engine is running.</p> <p>Check that the black wire is soldered to a good earth - a non-insulated metal part of the car body.</p>
ENGINE IMMOBILISATION DOES NOT OPERATE	<p>The Grey wire is not connected to the correct point.</p> <p>Grey wire drops below +12V when the engine is being cranked.</p> <p>Power supply problem.</p>	<p>Check that this wire is wired to the ignition circuit, not to the accessory circuit.</p> <p>This wire must be connected to a +12V ignition switched lead, which does not drop to 0 Volts when the engine is being cranked.</p> <p>Test for good +12V & earth at the system module.</p>

SYMPTOM	POSSIBLE CAUSE	REMEDY
LOW VOLUME FROM SIREN	<p>Power supply problem.</p> <p>Alarm main fuse has blown and the system is utilising the backup battery (only where a backup battery system is provided).</p>	<p>Test for good +12V & earth at the alarm module.</p> <p>Test for good +12V & earth at the alarm module. Check main power fuse.</p>
NO SOUND FROM SIREN	<p>Power supply problem.</p> <p>The siren speaker is damaged.</p>	<p>Test for good +12V & earth at the alarm module.</p> <p>Confirm that the alarm system is arming/disarming via flashing LED. Trigger alarm. Confirm other functions on alarm e.g. flashing indicators. If there is no sound from the siren, it most likely has a damaged speaker. Contact your Rhino Dealer.</p>
STRANGE NOISE FROM SIREN	<p>Bad earth.</p> <p>If the siren makes unusual noise, especially if the car is stopped and alarm is deactivated, it is likely that the unit has suffered from water damage.</p> <p>If the siren makes a whining noise while the motor is running, it is likely that the unit is mounted too close to the vehicles ignition leads.</p>	<p>Check that the black wire is soldered to a good earth - a non-insulated metal part of the car body.</p> <p>Turn the alarm system completely off i.e. at keyswitch (where used). Contact your Rhino Dealer.</p> <p>Check that all connections to the siren are properly soldered. If this does not rectify the problem, move the siren to a different location.</p>
VOLTAGE (CURRENT) SENSING DOES NOT OPERATE	<p>The main power wire (red) has been connected directly to the battery.</p> <p>Interior light is not operating correctly.</p>	<p>The red wire must be connected to constant +12V via the fuse box at the point where the interior light circuit is powered. Voltage sensing will not work if this procedure is not followed.</p> <p>The interior light must be set to come on when the vehicle's doors are opened. Check the function of the interior light and switch.</p>
VOLTAGE DROP SENSING FALSE ALARMS	<p>Car battery is faulty i.e. does not hold a proper charge.</p> <p>Other appliances in the vehicle are drawing power after the alarm system has armed.i.e. engine cooling fans, car phone, car fridge etc.</p>	<p>Change the car battery.</p> <p>Turn Voltage Drop Sensing off in Programmable Features (page 4).</p>
AUXILIARY SENSOR FALSE ALARMS	<p>Auxiliary detectors are not adjusted correctly.</p>	<p>Adjust (reduce) the sensitivity of any Ultrasonic or Microwave sensor fitted with the alarm and test.</p>

SYMPTOM	POSSIBLE CAUSE	REMEDY
CENTRAL LOCKING MOVES UP & DOWN WHILE DRIVING	<p>Central locking motors are not adjusted correctly.</p> <p>Bad earth to the alarm module .</p> <p>Bad power connection to the central door locking motors. Usually a bad earth connection.</p> <p>Bad fuse.</p>	<p>Adjust the central locking motors so that they can travel their full displacement without excessive force.</p> <p>Check that the black wire is soldered to a good earth - a non-insulated metal part of the car body.</p> <p>Check for +12V & earth with a test light across the central locking power wires (normally black and red wires).</p> <p>Check fuses and replace if necessary.</p>

NOTES FOR INSTALLATION:

- * Check the vehicles electrical system thoroughly **before** commencing installation.
- * The installation should be as well hidden as possible - to maximise the system security.
- * **Solder** all connections, and then **insulate** with insulation tape.
- * Use a **multi - meter** to verify any wires nature.

IMPORTANT: If the installer does not have a concise knowledge of the vehicle's electrical system, it is strongly advised not to aimlessly probe to find the necessary wires. Doing so may damage your vehicles electrical system. Consult with your vehicle's manufacturer, or a qualified Auto Electrician. Rhino Alarms accepts no responsibility if an installer wires the product incorrectly or damages the vehicle during installation.



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