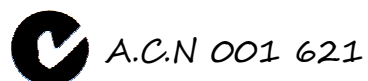
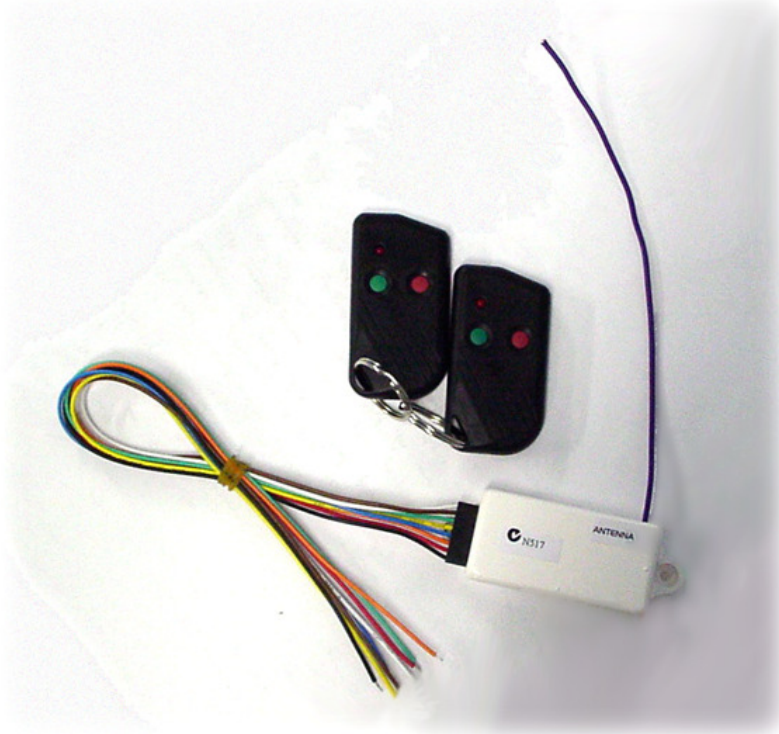




OPERATION & INSTALLATION INSTRUCTIONS FOR

# CLX & CLXI

Version 2



**CLX:** Remote controls existing central locking, flashes indicators, electric boot release output, two button remote controls.

**CLXI:** Remote controls existing central locking, flashes indicators, engine immobilisation circuit, flashing LED, electric boot release output, two button remote controls.

Features	CLX	CLXI
2 x Two Button Code Hopping Remotes (Anti Code Grabbing, Anti Scanning).	✓	✓
Flashes Indicators (Relay supplied) (1 Flash for Lock, 2 for Unlock)	✓	✓
Negative Pulse Central Locking Outputs (150mA)	✓	✓
Negative on Arm Output (150mA) (Can be connected to our Electric Window Lift Interface (GLU400) or to control a relay for Engine immobilisation)	✓	✓
Boot Release Output Via Left Button (150mA) (Changeover relay required – order 40ARELAY)	✓	✓
Engine Immobilisation Circuit (40 Amp Changeover Relay & Override Switch supplied)	✗	✓
High Intensity Flashing Red Dash L.E.D.	✗	✓

***Both models also feature:***

- Long Life Lithium Transmitter Batteries.
- Utilises Latest Surface Mount Technology.
- Microprocessor Controlled.
- High Performance Super-Heterodyne Receiver
- SSR™ Solid State Remote Controls - No Tuning Capacitor.
- Learning Code Receiver For Optional Transmitter Programming

## System Operation

### TO TURN THE SYSTEM ON:

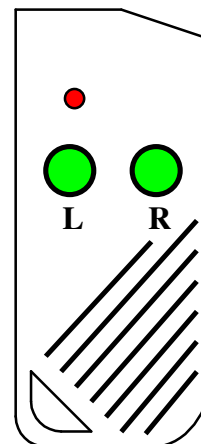
Press the right button on the remote control once. A ½ second negative pulse will lock the doors and the negative on arm output will be latched low to immobilise the vehicle (CLXI). The L.E.D. output will flash continuously (CLXI). The blinker output will flash once to indicate the armed state.

### TO TURN THE SYSTEM OFF:

Press the right button on the remote control once. A ½ second negative pulse will unlock the doors and the negative on arm output will be latched high to enable the vehicle to be started (CLXI). The L.E.D. output will cease to flash (CLXI). The blinker output will flash twice to indicate that the unit is now disarmed.

### BOOT RELEASE (if connected – relay required)

To activate the boot release press the left button on the remote control once. The output will pulse low for 0.5 second.



## Learning New Transmitters

Your CLX/CLXI incorporates a unique code learning system. This enables extra remotes to be added (or deleted) with ease if necessary. You can utilise a maximum of 15 remote controls if required. To learn in a new transmitter press and hold the red (right) button, of an existing (learnt in) remote control, for approximately 5 seconds or until the blinkers begin the flash again. Immediately after the blinkers begin flashing or after holding the red button of the existing remote control, release that button. Immediately after releasing the button of the existing remote control press the red (right) button of the new remote control 5 times for a duration of 1 second each time. The new remote control should now work with the CLX/CLXI. If this doesn't work re-try this procedure from the beginning.

## 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.
- The immobilisation override switch is an option at the customer's discretion. It will disable the immobilisation system. Its location should be known to the installer/owner only. When the switch is **open** the system will be **disabled**.

**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.**

## Wiring Instructions

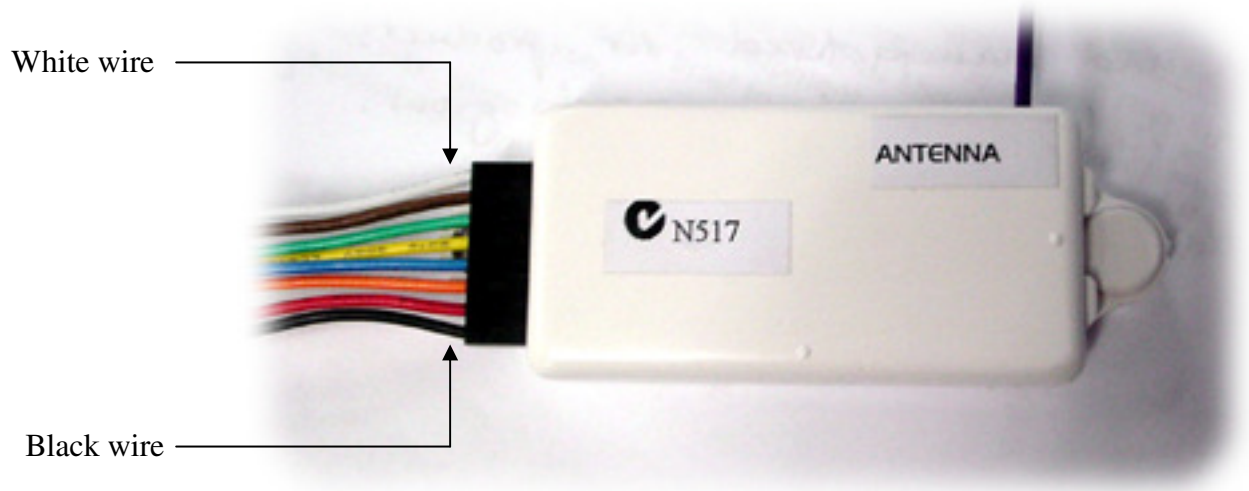
Please refer to wiring diagram, in use with the written information below.

17CM LONG WIRE	-	This is the antenna wire. <b>Do not cut.</b>
RED WIRES (1 from module & 1 from indicator relay)	-	Connect to two <i>separate constant fused +12 Volts DC supplies.</i> (Min 15 Amps) i.e. Has +12V when the ignition is turned <b>off</b> , via fuse box. <b>WARNING: Do not connect power to the red wire until the green and yellow wires are fully insulated.</b> If the red power wire touches the green or yellow wire, damage will be caused to the central lock outputs. This is not covered under warranty.
BLACK WIRE	-	<b>Earth / Ground.</b> Connect this wire to a suitable point on the vehicle's body or directly to the negative terminal on the car's battery.
GREEN WIRE	-	<b>Negative pulse Unlock.</b> For use with central locking. (If fitted). Refer to diagrams.
YELLOW WIRE	-	<b>Negative pulse Lock.</b> For use with central locking. (If fitted). Refer to diagrams.
ORANGE	-	Connect to the matching wire from the indicator relay supplied.
BROWN	-	Connect to a relay (not supplied) to drive a boot release motor. (150mA maximum rating)
ORANGE X 2 (from indicator relay)		Connect one orange wire to the left and one orange wire to the right indicator circuits in the vehicle.
BLUE WIRE (CLX & CLXI)	-	This wire is a negative out when armed. (150mA maximum rating) Connect to a 40Amp Changeover Relay (not supplied with CLX) to isolate a circuit in the vehicle when the system is armed. Can also be used to trigger electric window lift interface (GLU400) if required. <b>IMPORTANT: Do not short this wire to 12v.</b> Solder this wire to number <b>85</b> on the relay.
WHITE WIRE (CLXI)	-	Connect to the GREY/BLACK wire from the LED. Connect the positive side of the LED (GREY) directly to the fused +12V supply.
DIODE (CLXI)	-	Solder the diode between the blue wire from the module and one side of the override switch (ref diagram), with <b>the band on the diode going to the module side.</b>
IGNITION WIRE FROM VEHICLE	-	The ignition wire is usually located under the steering column of the vehicle. <b>This wire must be +12V only when the vehicles keyswitch is at the ignition position, and must not fall to 0 volt when the engine is cranked.</b> Strip a section of this wire and solder a wire onto the bared section. Solder the other end of this wire to number <b>86</b> on the relay.
STARTER / FUEL PUMP WIRE FROM VEHICLE	-	The starter wire is usually located under the steering column of the vehicle. <b>This wire must be +12 Volts only when the vehicle is being started.</b> Cut this wire. The vehicle should not start. If the vehicle does start then you have cut the wrong wire. Solder the starter motor side to number <b>30</b> on the relay. Solder the other end to number <b>87a</b> on the relay. Disable only fuel pump <b>or</b> starter motor if vehicle is not EFI. <b>Under no circumstances should you cut the vehicle's main ignition system.</b>

Please ensure that the red wire from the module is connected to fused +12 Volts (min 15 Amps) and that the black wire is connected (earthed) to the vehicle's body, or directly to the negative terminal on the car's battery.

## Connecting the Wiring Harness to the Module

The harness must be plugged in as shown otherwise the unit will not operate.



*\* If you plug the harness in the wrong way it will not damage the module.*

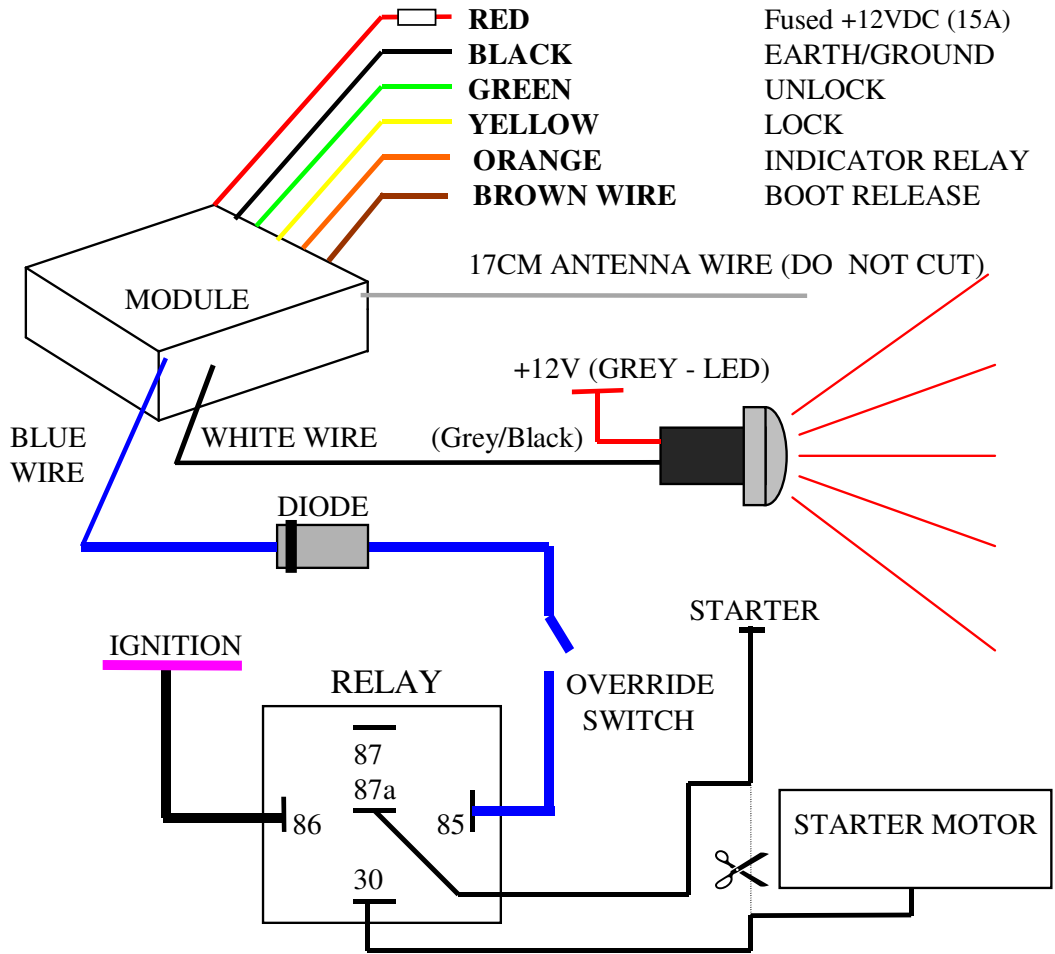
## ELECTRICAL CHARACTERISTICS

PARAMETER	MINIMUM	TYPICAL	MAXIMUM
Supply current @ Vcc = 12V	-	7mA	13mA
Supply voltage (Vcc)	10V	12V	14V
Operating Temperature (Degrees Celsius)	-20	+25	+85

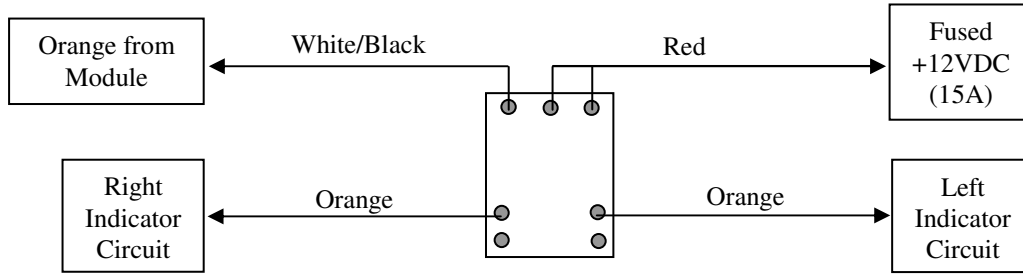
## ABSOLUTE MAXIMUM RATINGS

PARAMETER	MINIMUM	MAXIMUM
Storage Temperature	-55	+150
Supply Voltage, Vcc Max.	0V	+18V

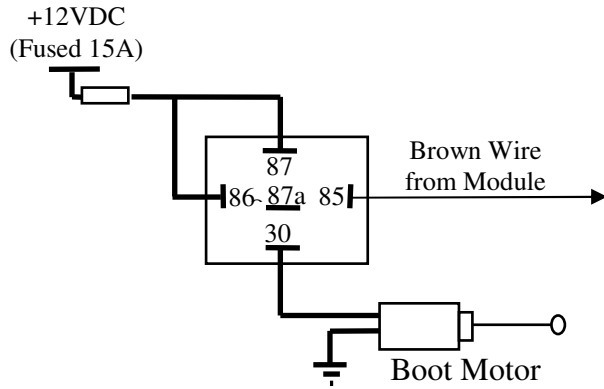
# WIRING DIAGRAM



## **Indicator Flash Diagram**



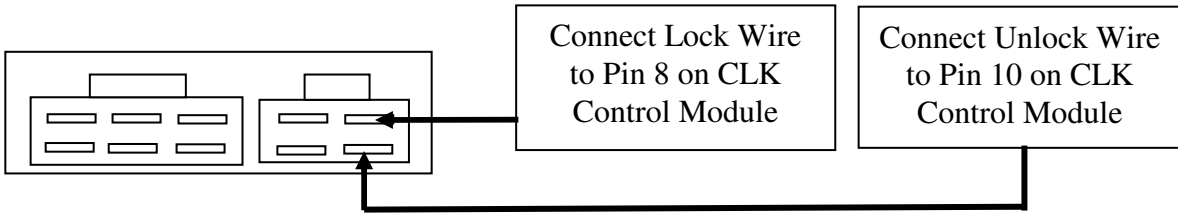
## **Boot Release Connection Diagram (40A Changeover Relay Required)**



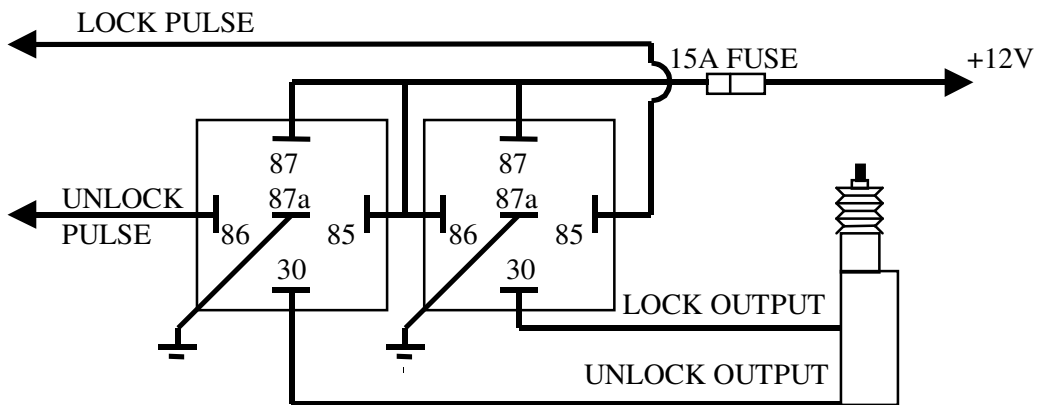
## **CENTRAL LOCKING CONNECTION DIAGRAMS**

All relays depicted are changeover type.

### **CONNECTING TO RHINO CENTRAL LOCKING KIT (CLK)**

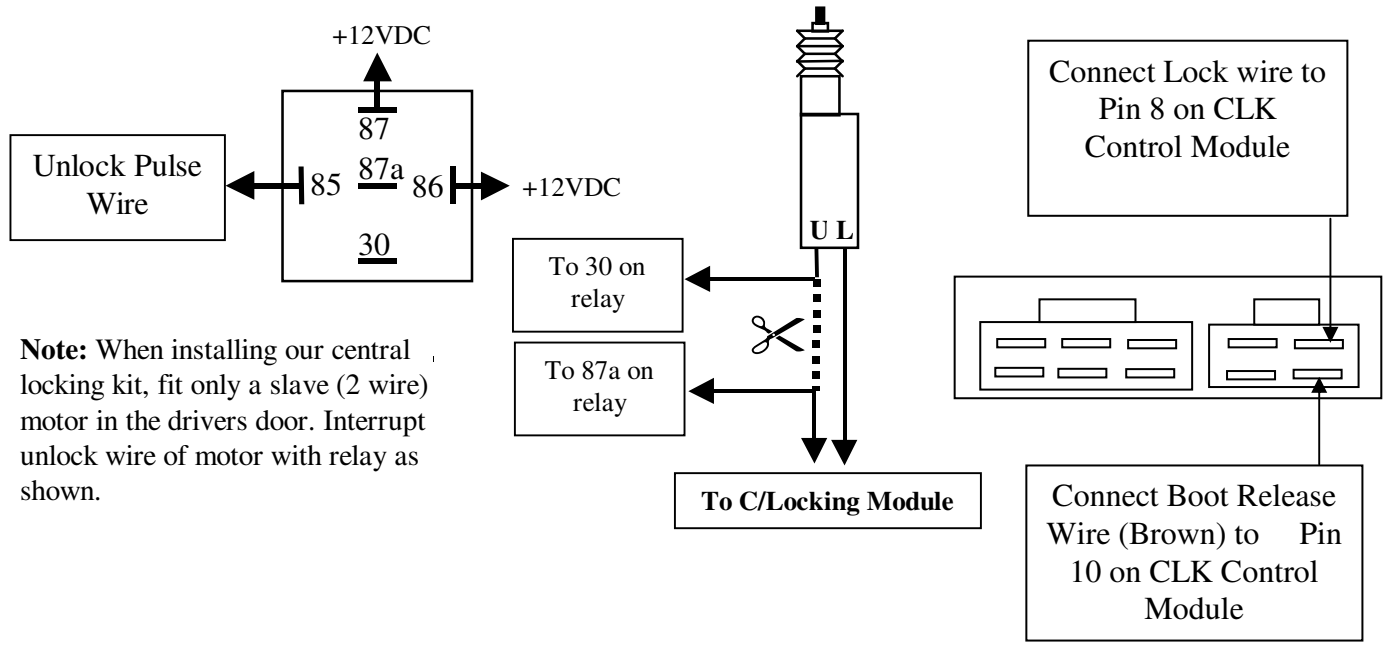


### **INSTALLING A NEW MOTOR - often required in vehicles that have factory locking but have no motor in the driver's door, or you would like "keyless entry" on driver's door.**

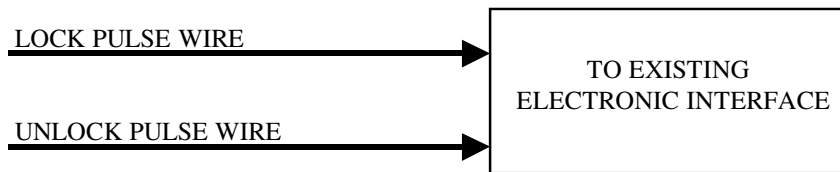


**SECURE UNLOCKING – DRIVERS DOOR ONLY**  
**WITH RHINO CENTRAL LOCKING KIT (CLK):**

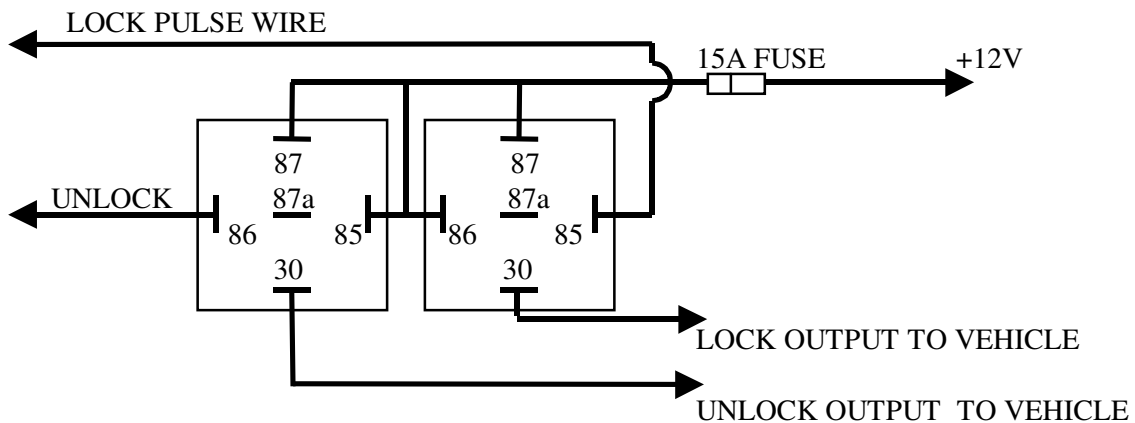
Pressing **right button** unlocks driver's door only. Pressing **left button** unlocks all doors.  
 Pressing right button again locks all doors. (Like VT Commodore operation).



**"NEGATIVE TRIGGER" ORIGINAL CENTRAL LOCKING SYSTEM (LOW CURRENT)**

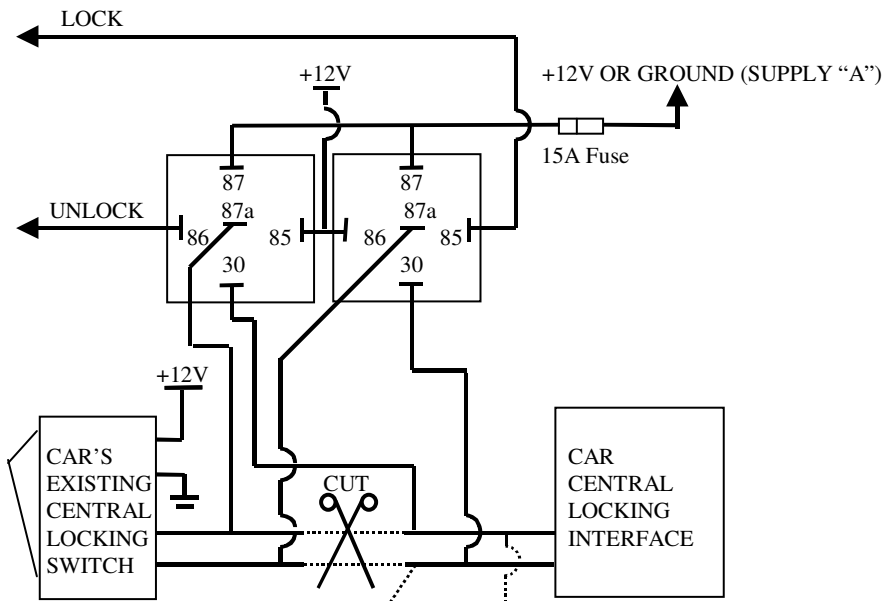


**FOR INTEFACING TO "POSITIVE PULSE" CENTRAL LOCKING SYSTEMS**





**FOR POSITIVE AT REST THEN GOING NEGATIVE "OR" NEGATIVE AT REST THEN GOING POSITIVE PUT 87'S TO 12V & CONNECT RELAYS AS SHOWN**



**FOR FLOATING SWITCHES - NEITHER +12V OR GROUND AT REST**

Hook up the following extra relays & connect Supply "A" to +12V. Both pairs of lock / unlock wires must be connected.

