



HA - 240 Lite

INSTALLATION MANUAL



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**THIS INSTRUCTION MANUAL IS IMPORTANT.
PLEASE READ IT BEFORE INSTALLING THE UNIT.**

Installation points to remember

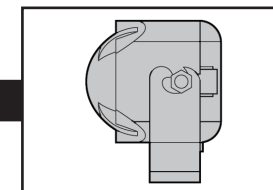
This product represents many years of research and development. It is very sophisticated and should be installed by experienced security installers only. Please do not attempt installation of this product without reading this guide. The system has been designed to provide the ultimate in security, coupled with limitless convenience and expansion options.

Do not disconnect the battery if the vehicle has an anti-theft coded radio. If equipped with an air bag, avoid disconnecting the battery if possible.

IMPORTANT! *Many airbag systems will display a diagnostic code through their warning light after they lose power. Disconnecting the battery requires this code to be erased, a procedure that can require a trip to the dealer.*

Deciding on component locations

Locations for the siren



Some things to remember about mounting the siren:

- Keep it away from heat sources, such as radiators, exhaust manifolds, turbochargers and heat shields.
- Mount it where a thief cannot easily disconnect it, whether the bonnet is open or shut. Both the siren and its wires should be difficult to find. This usually involves disguising the wire to look like a factory harness.
- When possible, place the siren on the same side of the vehicle as the control module, where its wires will reach the control module's wires without extending them. Always run the wires through the centre of a grommet, never through bare metal!
- Point the siren down so water does not collect in it.

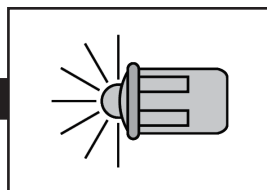
Locations for the control box



Some things to remember about where to mount the control module:

- Never put the control module in the engine compartment!
- The first step in hot wiring a vehicle is removing the driver's side under-dash panel to access the starter and ignition wires. If the control module is placed just behind the driver's side dash it can easily be disconnected.
- When mounting the control module, try to find a secure location that will not require you to extend the harness wires. Keep it away from the heater core (or any other heat sources) and any obvious leaks.
- The higher the control module is in the vehicle, the better the transmitter range will be. If you put the control module under a seat or inside a metal dashboard, range will suffer.
- Some good control module locations: above the glove box, inside the centre console, above the under-dash fuse box, above the radio etc.

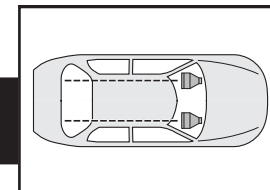
Locations for the status LED



Some things to remember when positioning the status LED:

- It should be visible from both sides and the rear of the vehicle, if possible.
- It needs at least 1/2 inch clearance to the rear.
- It is easiest to use a small removable panel, such as a switch blank or a dash bezel. Remove it before drilling your 1/2 inch hole.

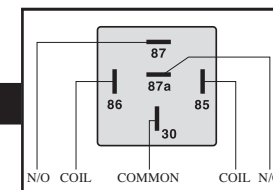
Locations for the Hawkguard ultra sonic sensors



Ultrasonic cells should be placed on the left and right side as high as possible so to obtain the best performance.

Inappropriate adjustment for the Ultrasonic sensor may let to a false alarm. To prevent the false alarm, make sure the sensibility of ultrasonic sensor is in an appropriate degree. An over adjustment is usually the main reason to cause false alarm.

Locations for the status Immobiliser



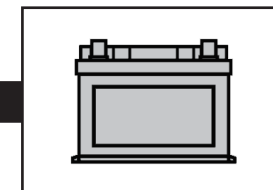
If Immobiliser relay or its connections are immediately visible upon removal of the underdash panel, they can easily be bypassed. Always make the relay and its connections difficult to discern from the factory wiring! Exposed yellow butt connectors do not look like factory parts, and will not fool anyone! For this reason, routing the immobiliser relay wires away from the steering column is recommended.

Finding the wires you need

Now that you have decided where each component will be located, you're going to find the wires in the car that the security system will be connected to:

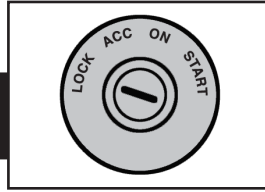
IMPORTANT! Do not use a 12v test light to find these wires! Use a digital multi-meter for all testing.

Obtaining constant 12 volts



We recommend two possible sources for 12v constant: the (+) terminal of the battery, or the constant supply to the ignition switch. Always install a fuse within 12 inches of this connection. If the fuse also will be powering other circuits, such as door locks, a power window module, headlight control system etc, fuse accordingly.

Finding the 12v switched ignition wire

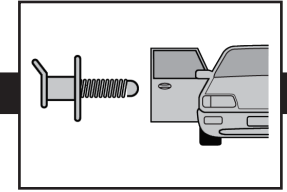


The ignition wire is powered when the key is in the run or start position. This is because the ignition wire powers the ignition system (spark plugs, coil) as well as the fuel delivery (fuel pump, fuel injection computer). Accessory wires lose power when the key is in the start position to make current available to the starter motor.

How to find (+) 12v ignition with your multi-meter:

1. Set to DCV or DC voltage (12v or 20v is fine).
2. Attach the (-) probe of the meter to chassis ground.
3. Probe the wire you suspect of being the ignition wire. The steering column harness or ignition switch harness is an excellent place to find this wire.
4. Turn the ignition key switch to the run position. if your meter reads (+)12v, go to the next step. If it doesn't, probe another wire.
5. Now turn the key to the start position. the meter display should stay steady, not dropping more than a few tenths of a volt. If it drops close to or all the way to zero, go back to Step 3. If it stays steady at (+) 12v, you have found an ignition wire.

Finding the door Pin Switch Circuit



The best places to find the door switch wire are:

- At the pin switch: when testing the pin switch, check wire to ensure that it 'sees' all the doors. Often, the passenger switch will cover all the doors even if the driver's switch will not.
- At the interior light: this may not be your best choice if the vehicle has delayed interior light supervision, but it will work in many Hondas, or any vehicle with completely diode-isolated pin switches.
- Once you have determined the wire colour, the easiest place to connect to the wire is often at the kick panel, at the windscreen pillar, or in the running board. When an easy location is not available, running a wire to the interior light itself is often the best solution.

How to find a door pin switch trigger wire with multi-meter:

1. Set to DCV or DC voltage (12v or 20v is fine).
2. In most Fords, fasten the (-) probe of the meter to chassis ground. In most other cars, fasten the (+) probe of your meter to (+) 12v constant.
3. Probe the wire you suspect of being the door trigger wire. If the meter reads (+) 12v when any door is opened, you have found a trigger wire.

Making your wiring connections

There are two acceptable ways of making a wire connection – solder connections and crimp connectors. When properly performed, either type of connection is reliable and trouble-free. Regardless of whether you solder your connections or you use mechanical-type crimp on connections are mechanically sound and that they are insulated.

Cheap electrical tape, especially when poorly applied, is not a reliable insulator. It often falls off in hot weather. Use good quality electrical tape or heat shrink.

- Never twist-and-tape the wires together without soldering.
- Never use 'fuse taps' as the can damage fuse box terminals.

Primary harness wire connection guide for 24 pin connector

This guide describes in detail the connection of each wire. Also included are possible applications of each wire. This system was designed with the ultimate in flexibility and security in mind. Please read the instructions carefully to ensure a thorough understanding and how it operates; also see wiring diagram of HA-240 Lite.

Pin 1 ORANGE WIRE: CDL

Pin 2 YELLOW WIRE:

Ignition Input (+). Connect to the main ignition wire that provides +12v when the ignition is on and while cranking the starter. Also, when ignition is off, this wire should not show any voltage (0v).

Pin 3 BLUE WIRE:

Negative Door Input (-). Connect to the Driver door pin switch circuit wire that shows ground (-) when the door is open.

Note: Nearly all cars have negative door input. Consult owner manual for polarity.

Pin 4 GREEN WIRE:

Positive Door Input (+). Connect to the driver door pin switch circuit wire that shows +12v when the door is open.

Note: Consult owner manual for polarity.

Pin 5 RED WIRE:

Negative Output (-). 250mA Window Closer. 30 second negative output.

NOTE: MUST USE window closer module HA-64U (optional extra).

Pin 6 : NOT USED

Pin 7 BLACK WIRE:

Ground Input (-). The black wire must connect to a solid chassis ground. Clean away any paint or dirt to ensure the best possible ground.

Pin 8 BLUE/WHITE WIRE:

Positive Input (+). Connect the blue/white wire that shows +12v when pressing the foot brake.

Pin 9 RED/BLACK WIRE:

Negative Output (-). 250mA Interior Light. Connect to the wire that activates the vehicle's interior light.

Pin10 BROWN WIRE:

Positive Hazard Light Output (+). Connect the brown wire to the circuit that shows +12v or only when the hazard lights are on. Left hazard light

Pin 11 WHITE WIRE: CDL

Pin 12 YELLOW WIRE: CDL

Pin 13 ORANGE / BLACK WIRE: CDL

Pin 14 WHITE / BLACK WIRE: CDL

Pin 15 YELLOW / BLACK WIRE: CDL

Pin 16 YELLOW WIRE:

Negative Output (-) 250mA Immobiliser. Connect to yellow wire to yellow wire to immobiliser relay.

Pin 17 RED WIRE:

Main Power Input (+). Connect to the battery or constant power wire at the ignition switch with a minimum 25 amp supply

Pin 18 WHITE WIRE:

Positive Siren Output (+). Connect the white wire to the siren of white wire.

Pin 19 PINK WIRE:

Negative Output (-). 250mA Boot Release. Connect to the boot release motor.

NOTE: MUST USE RELAY (not supplied).

Pin 20 BROWN WIRE:

Positive Hazard Light Output (+). Connect the brown wire to the circuit that shows +12v or only when the hazard lights are on. Right hazard light.

Immobiliser relay connection guide

Pin 86 of relay YELLOW WIRE:

Connect to yellow wire of alarm system connector (pin 16).

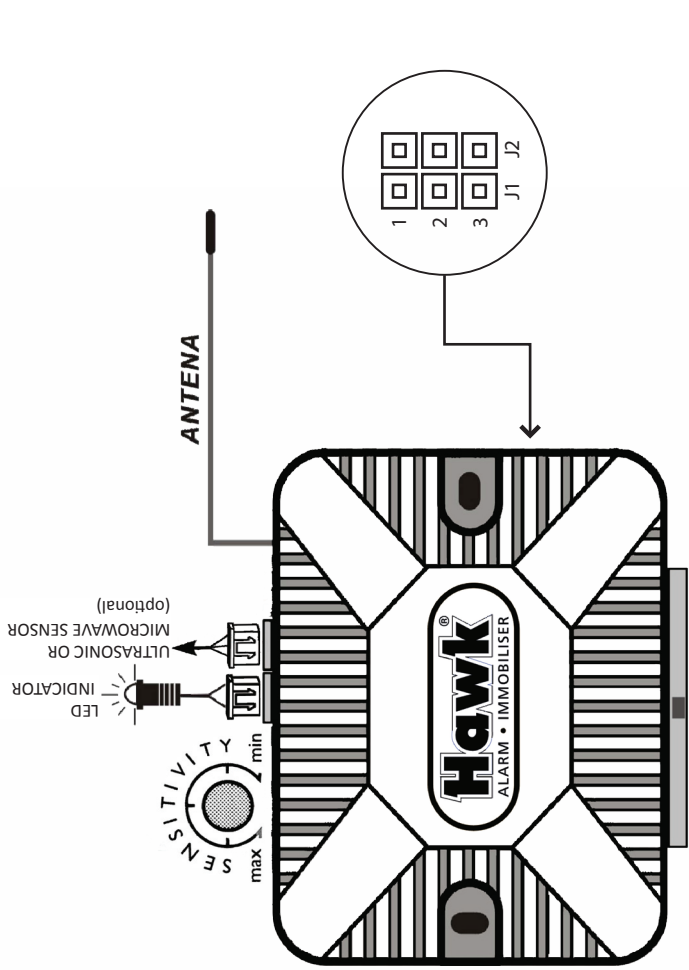
Pin 85 WHITE WIRE:

Connect to first accessory of ignition switch (+12v).

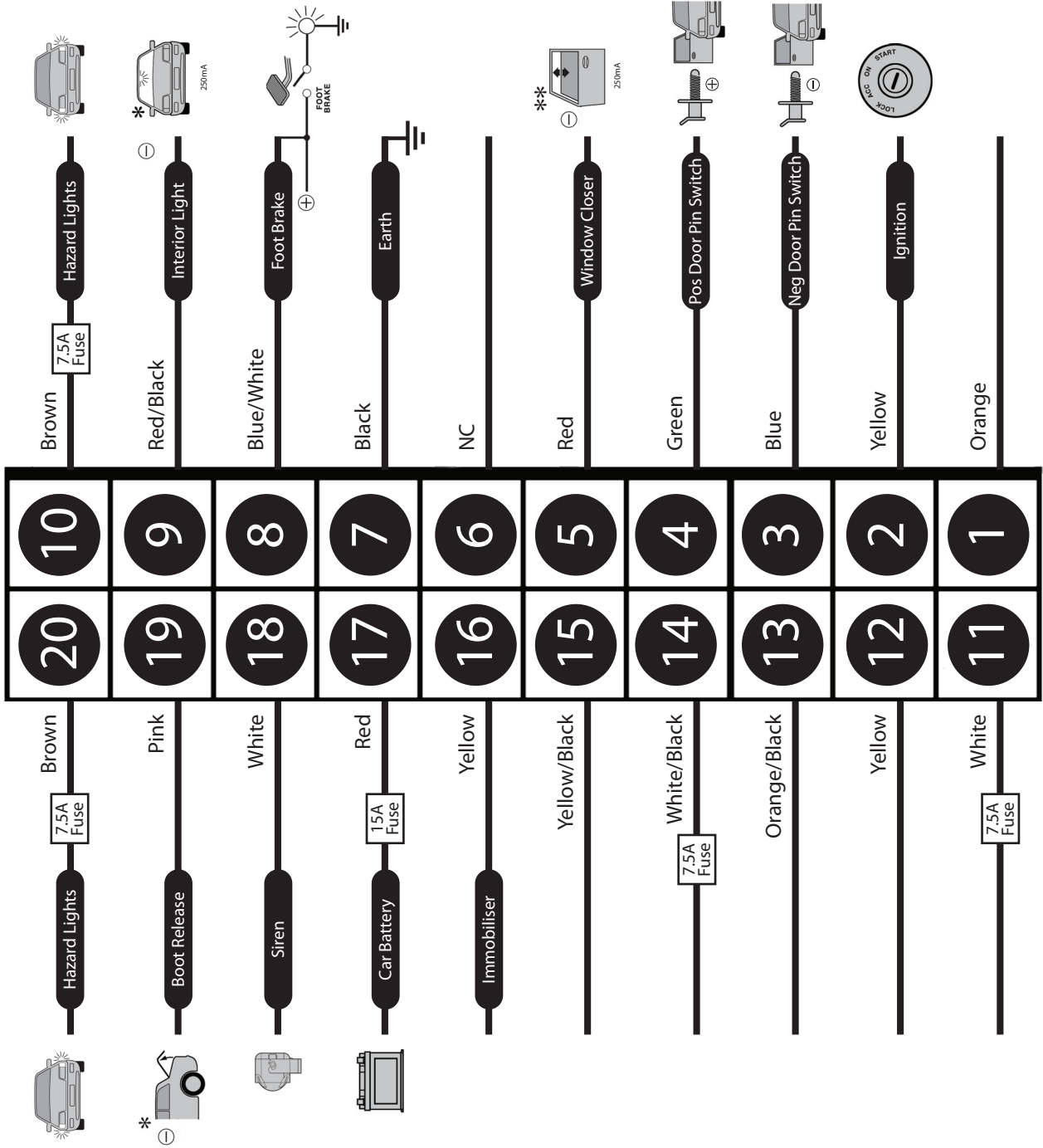
Pin 87a and 30 of relay 2 x GREEN WIRES:

Normally closed, can be connected to starter motor, positive side of coil, for diesel car fuel pump. See wiring diagram for guidance.

Wiring diagram for HA-240 LITE



20									11
10									1



Siren connection guide (Battery Backup - Optional)

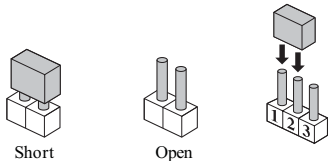
RED WIRE:
Connect to battery direct or constant 12v power supply.
Note: Use 7.5 amp fuse (not supplied).



BLACK WIRE:
Ground Input (-). The black wire must connect to a solid chassis ground. Clean away any paint or dirt to ensure the best possible ground.



Pin 3 WHITE WIRE:
Connect to red cable of alarm 24 connector (pin 3).

Jumpers setup

The illustration shows how the jumpers are set up. When the jumper cap is placed on the pins, the jumper is 'SHORT'. If no jumper cap is placed on the pins, the jumper is 'OPEN'. The illustration shows a 3-pin jumper whose pin 1 and pin 2 are 'SHORT' when jumper cap is placed on these 2 pins.

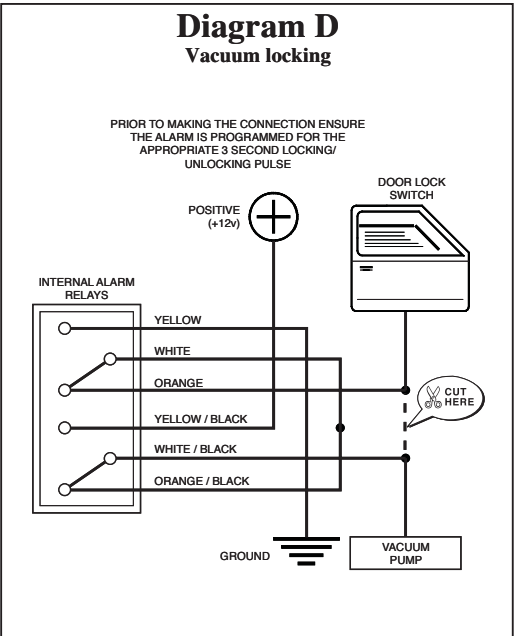
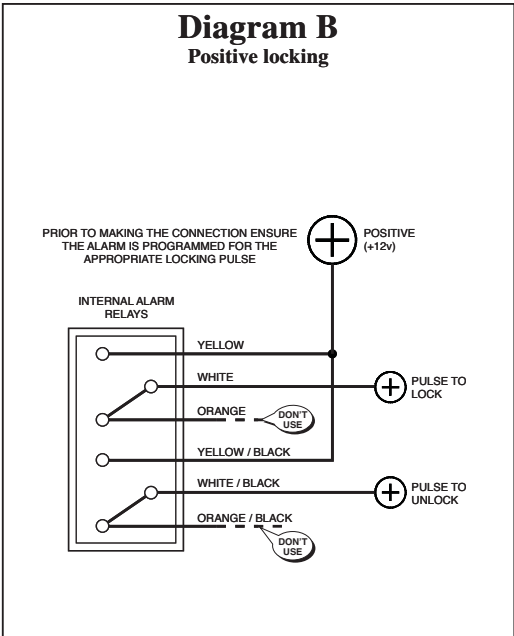
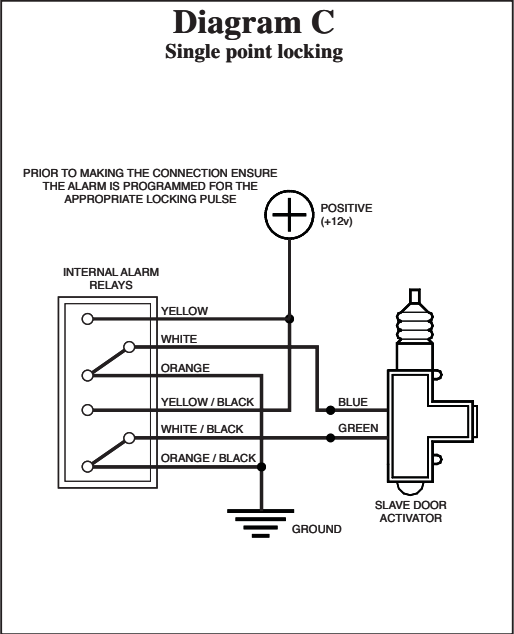
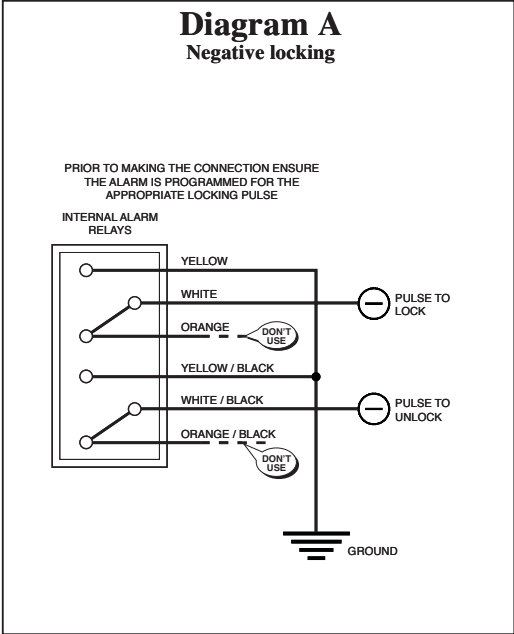


J1 Central Door Locking Time Selector:
Short pin 1, pin 2 to enable 0.8 seconds (factory default). 
Short pin 2, pin 3 to enable 3.5 seconds. 

J2 Dual Lock Output:
Short pin 1, pin 2 to No Dual Lock Output (factory default). 
Short pin 2, pin 3 to enable Dual Lock Output. 

ATTENTION: Commercial Electronics always suggests installation be performed by a certified and trained installation technician, professional installation is a requirement to obtain full warranty. This wiring information is being provided free of charge and on an 'as is' basis, without any representation or warranty to the products being installed. It is your responsibility to insure proper installation. Commercial Electronics assumes no responsibility with regards to the accuracy or currency of this information. Proper installation in every case is and remains the responsibility of the installer. Commercial Electronics assumes no responsibility resulting from an improper installation, even in reliance upon this information. Any harm or injury to the installer is in no way the responsibility of Commercial Electronics. Any damage to the vehicle during installation or after installation is not the responsibility of Commercial Electronics.

Central locking technical diagrams



Central locking technical diagrams

Diagram E

Actuator interrupt (negative at rest)

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING PULSE

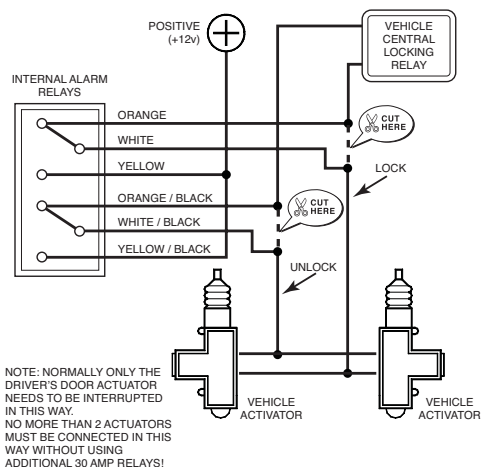


Diagram G

Positive locking with comfort closing
VW Golf vehicles only

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING AND COMFORT CLOSING PULSE

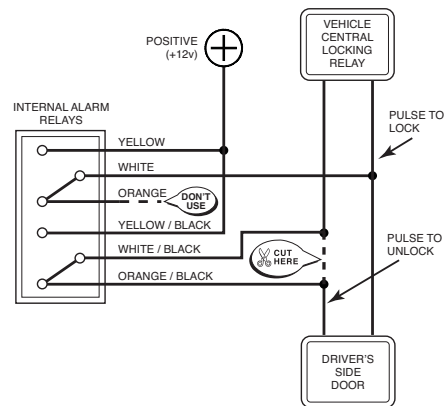


Diagram F

Negative locking with comfort closing
Vauxhall vehicles only

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING AND COMFORT CLOSING PULSES

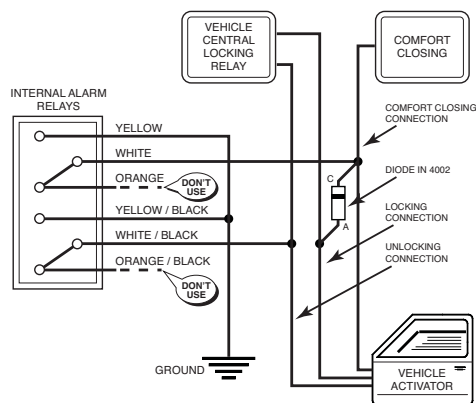


Diagram H

Single wire - negative to unlock, interrupted to lock

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING PULSE

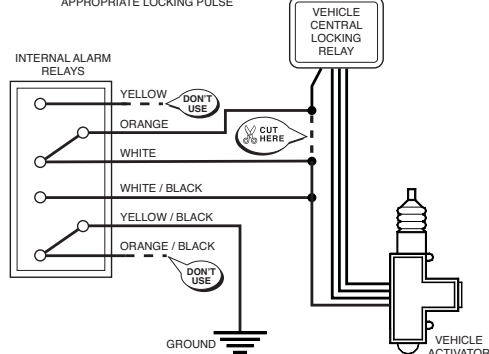


Diagram I

Single wire - negative to lock, interrupted to unlock

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING PULSE

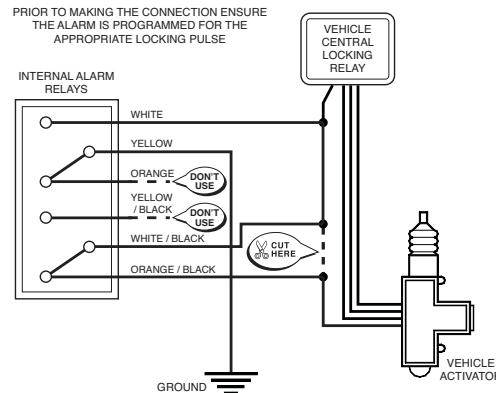


Diagram L

Central locking control resistive negative
(type CHRYSLER VOYAGER)

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING PULSE

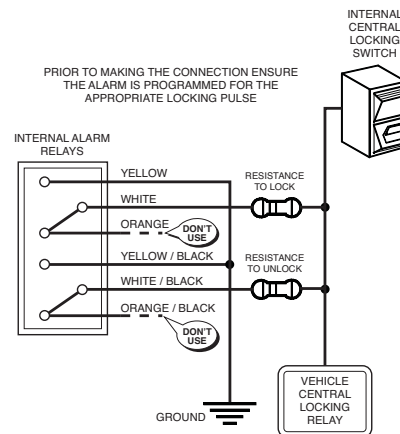


Diagram M

Central locking control resistive positive
(type CHRYSLER STRATUS)

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING PULSE

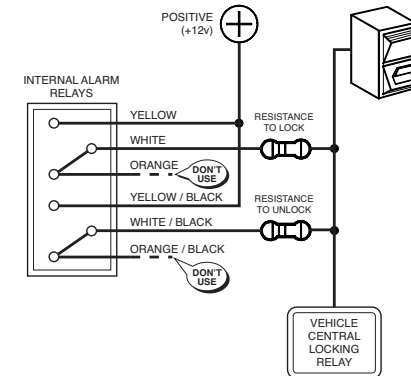
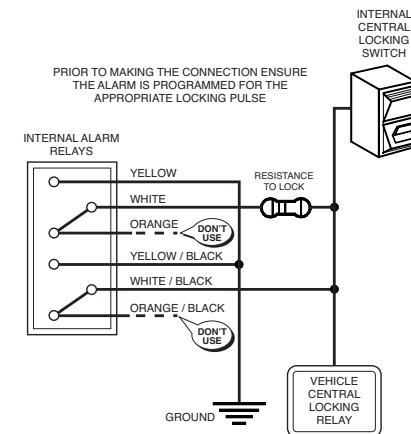


Diagram N

Central locking control resistive negative lock only
(type MERCEDES)

PRIOR TO MAKING THE CONNECTION ENSURE THE ALARM IS PROGRAMMED FOR THE APPROPRIATE LOCKING PULSE



Central locking technical diagrams

Diagram O

Central locking control resistive negative unlock only

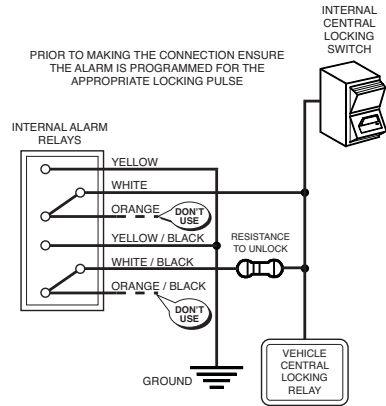


Diagram Q

Central locking control actuator switch interrupt (negative at rest) (type Honda)

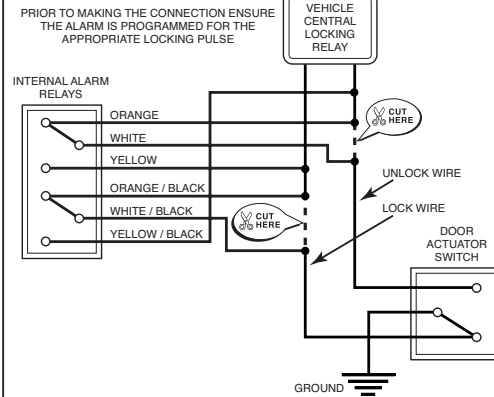
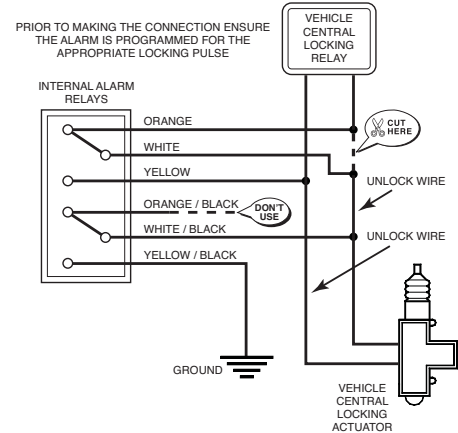


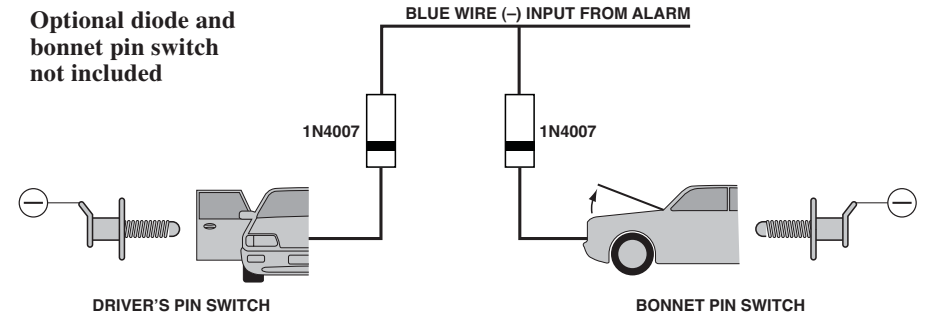
Diagram R

Central locking control negative unlock - input switched interrupt to lock



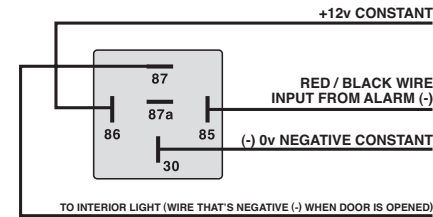
Bonnet and door protection

Optional diode and bonnet pin switch not included

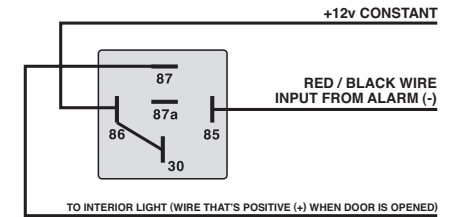


Interior light supervision relays

For negative interior light

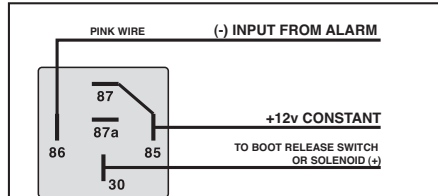


For positive interior light

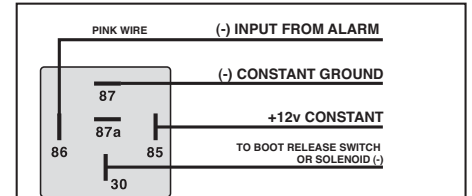


Boot release configurations

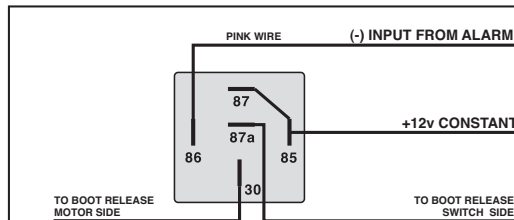
Optional extra



This configuration is used when the vehicle's boot release switch operates with a 12 volt signal to the boot solenoid. Always fuse the 12 volt supply to the relay.

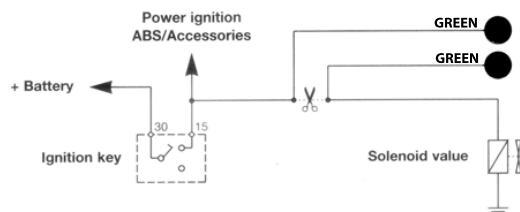


This configuration is used when the vehicle's boot release switch operates with a high current ground output. The ground output from your unit may not be sufficient to trigger the switch and a relay must be added and wired in this manner. Always fuse the 12 volt supply to the relay.

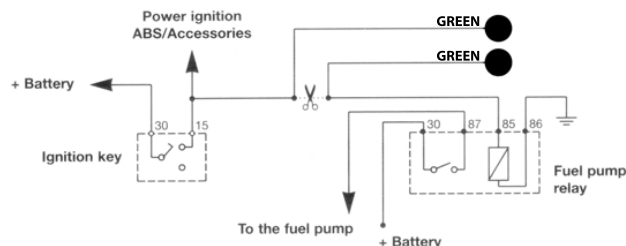


This configuration is used when the output from the vehicle's boot release switch rests at ground and a 12 volt pulse cannot be applied directly to the wire. Always fuse the 12 volt supply to the relay.

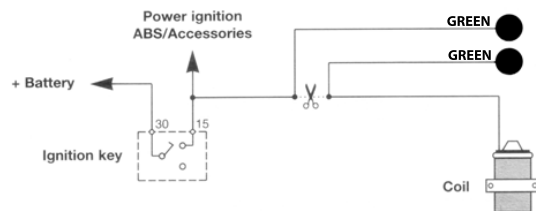
IMMOBILISER



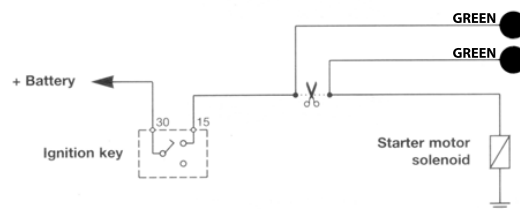
Ignition cut-out for diesel vehicles



Ignition cut-out for injection vehicles



Ignition cut-out for vehicles with carburettor



Starter motor solenoid (30A)

Commercial Electronics promises to the original purchaser that the GPS automotive tracking unit (the Product), excluding accessories, purchased and installed from a Commercial Electronics authorised dealer is free from defects in materials or workmanship under normal use and conditions for a period of one year.

Should the Product be determined defective during the applicable warranty period, the Product will be repaired or replaced with a new or comparable reconditioned part(s), at option. To obtain warranty service, the Product must be returned to a Commercial Electronics authorised dealer along with proof of purchase and installation, evidenced by the original Product purchase receipt.

Note: This warranty does not cover labour costs for the removal and reinstallation of the Product. This warranty does not cover subscriber agreements or failure of services provided under the terms of the subscriber agreement, or failure of GPS satellite transmission or cellular network function. Purchaser is required to enter separate subscriber contracts in order to receive these services. **IN ORDER FOR THIS WARRANTY TO BE VALID, YOUR PRODUCT MUST BE DELIVERED WITH PROOF OF PURCHASE AND PROOF OF INSTALLATION BY AN AUTHORISED COMMERCIAL ELECTRONICS DEALER. ALL PRODUCTS RECEIVED BY COMMERCIAL ELECTRONICS FOR WARRANTY REPAIR WITHOUT PROOF OF COMMERCIAL ELECTRONICS DEALER INSTALLATION WILL BE DENIED.**

This warranty is non-transferable and does not apply to any Product that has been modified or used in a manner contrary to its intended purpose, and does not cover damage to the Product caused by installation or removal of the Product. This warranty is VOID if the product has been damaged by improper maintenance, accident or unreasonable use, negligence, acts of God, neglect, improper service or other causes not arising out of defect in materials or construction. This warranty does not cover the elimination of externally generated static or noise, or the correction of antenna problems or weak GPS reception, damage to software, accessories or vehicle electrical systems, cosmetic damage or damage due to negligence, misuse, abuse, failure to follow operating instructions, accidental spills or customer applied cleaners, damage due to environmental causes such as floods, airborne fallout, chemicals, salt, hail, windstorms, moisture, lightning or extreme temperatures, damage due to accidents, road hazards, fire, theft, loss or vandalism, damage due to improper connection to equipment of another manufacturer, modification of existing equipment, faulty installation or use of a Product which has been opened or tampered with for any reason or which has been damaged due to alteration or service performed by anyone other than Commercial Electronics.

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