



KIA MOTORS

KIA SORENTO CRDI XE & XS



ALARM INSTALLATION INSTRUCTIONS

Alarm System Part Number 01959G316K
Installation Time 1.25hrs

**THE INSTALLING TECHNICIAN MUST BE FULLY AWARE OF THE
CONTENTS OF THIS INSTRUCTION BEFORE COMMENCING
THE INSTALLATION OF THE ALARM SYSTEM**

Alarm System Contents



Contents List

Siren	x 1
Siren Connector Cover	x 1
Siren Bracket	x 1
Tailored Wiring Harness	x 1
Ultrasonic Head	x 2
Bonnet Switch	x 1
LED & PIN Code Switch	x 1
Self Tapping Screw 10mm	x 4
Self Tapping Screw 10mm C/S	x 1
M6x10mm Sq Head Bolt	x 2
M6 Nyloc Nut	x 2
M6 Serrated Flanged Nut	x 2
Nylon Cable Ties	x 15
Customer User Instruction	x 1
Cobra Window Stickers	x 2
25 AMP Fuse	x 1
Fuse Holder	x 1
Kialink Note	x 1

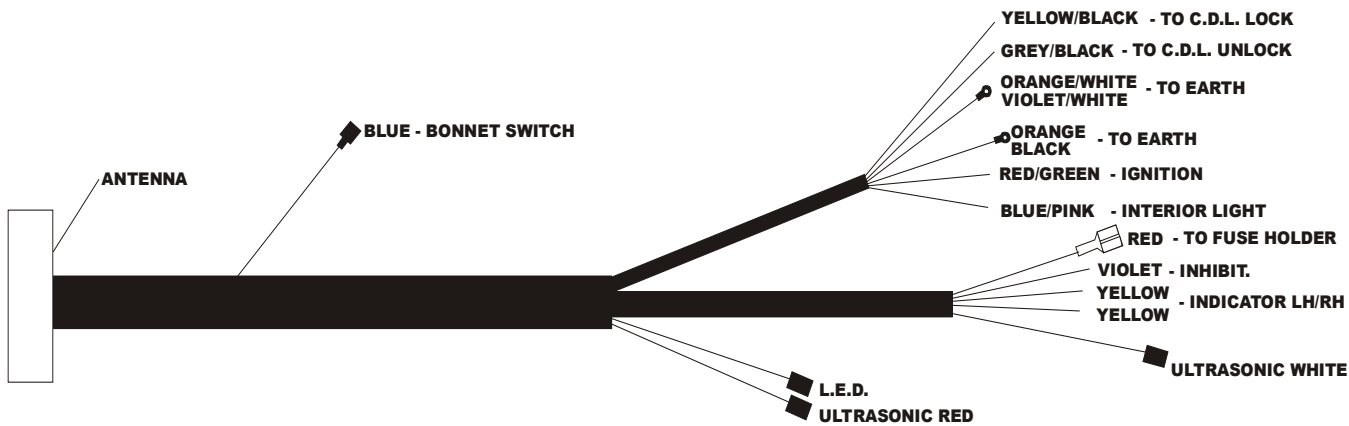
Tools Required

Trim Removal Tool
Soldering Iron
M10 Spanner
M10 Socket
Wire Cutter Pliers
Wire Stripper Pliers

Wiring Connections

Alarm Harness	Vehicle Harness	Connector	Pin Number	Function
Red (Fuse Holder)	White	Relay Pack	30	Perm Live 12V
Yellow	Orange	Relay Pack	87	R/H Indicator
Yellow	Red	Relay Pack	87B	L/H Indicator
Violet	Yellow	Relay Pack	85	Inhibit – Sw Neg
Grey/Black	White	X14	4	CDL Unlock
Yellow/Black	Red	X14	3	CDL Lock
Blue/Pink	Red/Black	X28	17	Interior Light
Green/Red	Blue	X10	12	Ignition Live
Blue wire covered with black sleeving		-	-	Bonnet Switch
2 x Ring Terminals	M6 Stud	-	-	Ground

When making the connections as detailed above, the Sorento RHD Wiring Diagram Manual (Pt No A3EE-EG 20A) must be available to confirm that the correct Connector, Pin Number and wire colour is identified before connection takes place.



All connections (ex earth) from the alarm harness must be spliced and soldered into the vehicle harness as shown below

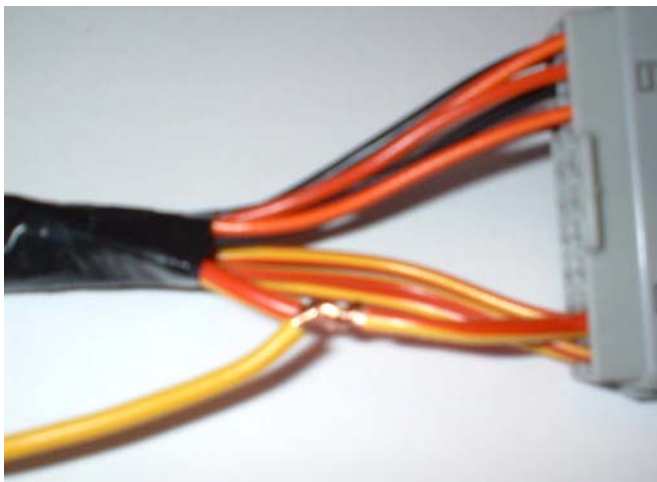


Tools to use are shown opposite and include: wire cutter & end stripper, wire stripper, soldering gun, self fluxing solder And amalgam tape.



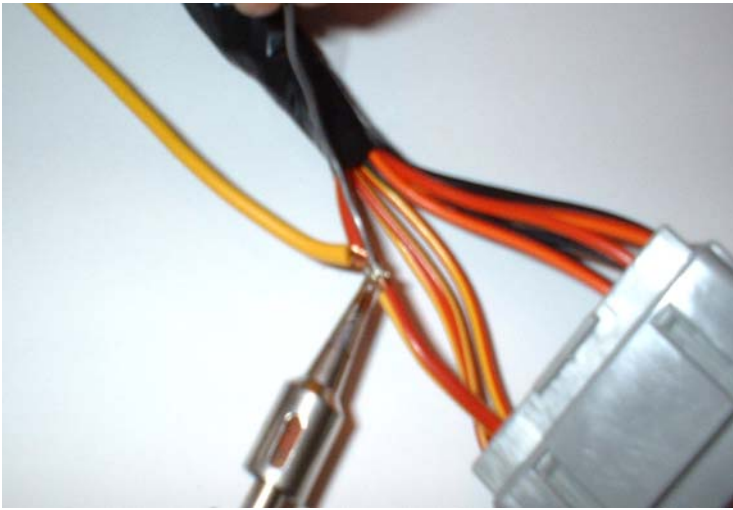
Identify the correct wire on the Vehicle loom to be spliced into and strip Back 8 to 10mm of insulation using the Wire strippers.

Identify the wire from the alarm harness that will be spliced into the vehicle harness and strip back the insulation 15mm using the wire cutter/end strippers.



Wind the end of the alarm harness wire around the un-insulated part of the vehicle wire 2 to 3 times until it is firmly fixed.

At this point give the alarm wire a slight pull to ensure that it will stay in position during the soldering operation.



An electric or gas fired soldering gun can be used for the soldering operation.

When the gun is up to the correct temperature, place the tip on the underside of the joint to be soldered.

Apply the solder on the OPPOSITE side Of the gun.

The solder will begin to melt and flow into the joint towards the other side.

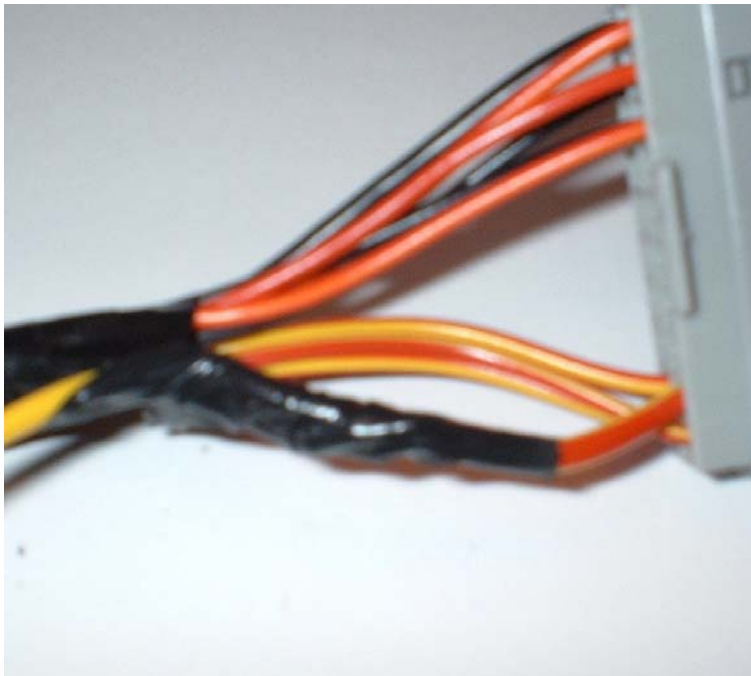
As the temperature increases, the solder will Completely melt and flow easily through the joint giving a shiny appearance.

At this point, remove the gun and allow the joint to cool.

Inspect all around the joint to ensure that the solder has flowed through the joint.

Firmly pull on the alarm wire to confirm the joint is fixed.

Insulate the joint using amalgam tape



If you are unsure of how to solder or out of practice, then please practice soldering techniques before you fit this alarm system.

Note: 95% of alarm failures are caused by poor installation, most of which are attributed to poor wiring connections.

Installation

Note: Prior to commencing the installation of the alarm system, ensure that the contents are complete and that you are fully conversant with the splicing and soldering technique shown on the previous pages.

If you require additional information or experience difficulty during the alarm installation, PIN CODE entry or set up procedures, then please contact the Cobra Vehicle Security Help Line.

Telephone 01932 732331

Fax 01932 732337

E Mail technical@vestatec.co.uk

Trim Removal

L/H (N/S) Kick Well Panel

L/H (N/S) Dashboard Side Panel

Steering Column Upper Housing

R/H (O/S) "A" Post Trim Panel

L/H (N/S) "A" Post Trim Panel



Siren



Note; This alarm system has a unique PIN code which must be correctly recorded.

Firstly, tear off the top part of the identification label which details the PIN Code and serial number.

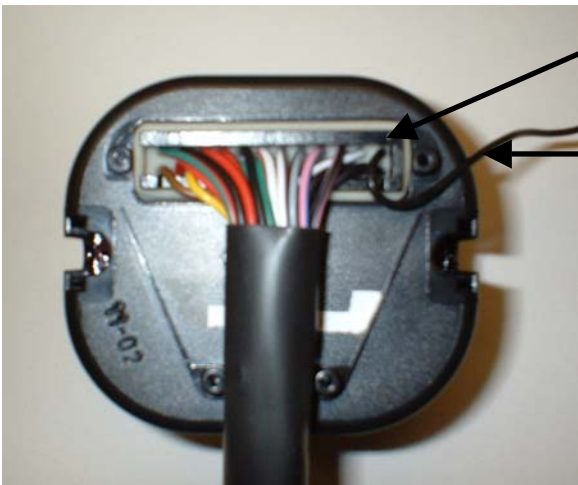


Secondly, stick the top part of the identification label over the bottom part as shown.

Thirdly, enter the PIN Code in the box provided within the the Customer User Instructions.

Do this now as you will need the code when programming the system after installation.

Note; Failure to record the PIN Code correctly as described above, will prevent the user from accessing certain features of the system.



Fit the multi pin harness connector into the siren block and ensure it is fully home.

The antenna wire must be positioned as shown. This will ensure it is not trapped when the connector cover is fitted.

Siren



Fix the plastic connector cover onto the back of the siren using the four 10mm long self tapping screws provided.

Ensure that the antenna wire is not trapped and exits the cover in the correct position.



Remove the three M6 nuts securing the cooling system header tank. Lift the tank and position to one side as shown allowing access to the N/S bulk head area.



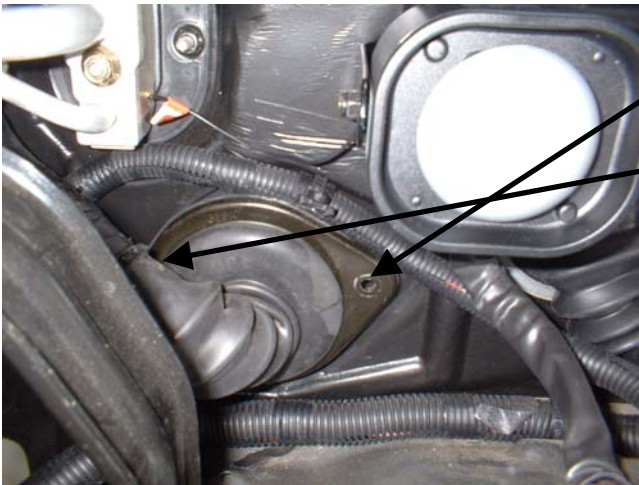
Locate the M6 stud located on the bulkhead and secure the siren bracket using the M6 flange headed nut provided.

Siren



Secure the siren in position onto the bracket using the two M6 sq headed bolts and M6 nyloc nuts.

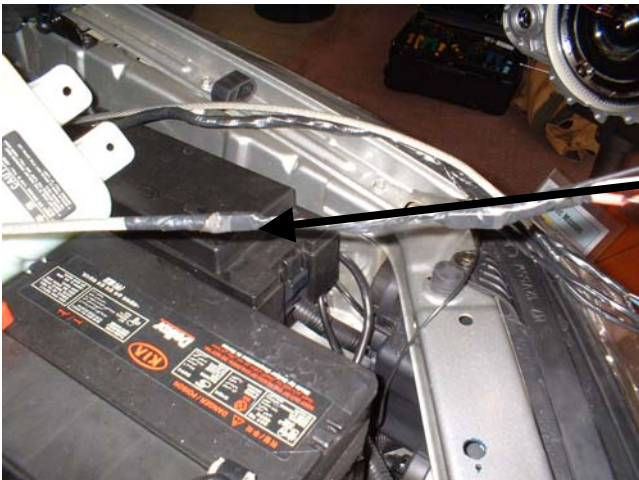
Harness



Remove the two M6 nuts securing the main grommet retaining shroud.

Remove the insulating tape from the rubber trunking and the main harness to allow access through the trunking into the grommet.

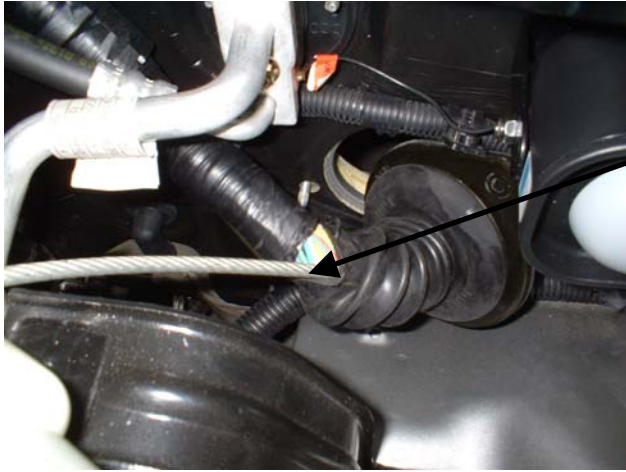
Note: Do NOT include the bonnet switch wire when feeding the alarm harness through the trunking



Feeding the alarm harness into the car via the main grommet will require great care as space is restricted.

Therefore, tape the end of the alarm harness, including connectors, to a suitable pilot feeder. A stiff coat hanger can be used but you **MUST** ensure the end to be fed into the grommet is bent over and tapped to prevent damage to the main harness when feeding through the main grommet.

Harness



Lubricate the pilot feeder and alarm harness with liquid hand soap.

Feed the Pilot Feeder with harness into the grommet trunking and through the bulkhead into the car.



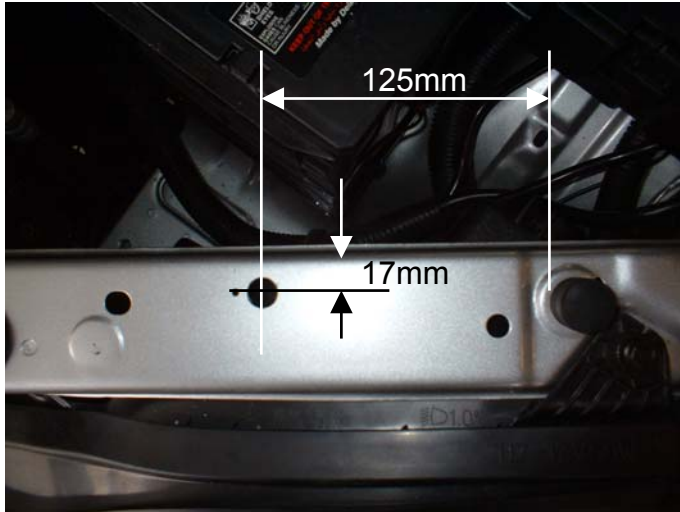
Pull the alarm harness through into the car leaving a little slack from the siren to the entry point at the trunking.



At this point, re-tape the grommet trunking to the main harness ensuring that the alarm harness is also taped securely at the entry point.

There must be enough slack to allow the alarm harness from the siren to be positioned as shown.

Bonnet Switch



Use a pilot drill and a Cone Cutter to drill a 17mm diameter hole in the N/S front panel at the position shown. 125mm from the bonnet stop and 17mm from the rear edge of the front panel.

Place the bonnet switch in the hole and mark the position of the fixing hole. Drill the fixing hole using a 2mm drill.

Note: All drilled holes MUST be protected with a corrosion preventive paint immediately after drilling.



Fix the bonnet switch in position using The M3x10mm long C/S self tapping screw provided.

Feed the bonnet wire from the alarm harness along the inner wing, under the front panel and connect to the bonnet switch. Secure the wire, using the cable ties provided, to the vehicle harness at 100mm intervals.

Note; It is very important that the bonnet switch has a good ground contact. Therefore it is advisable to check this contact with a test meter or a 12v tester with an inline 12v bulb.

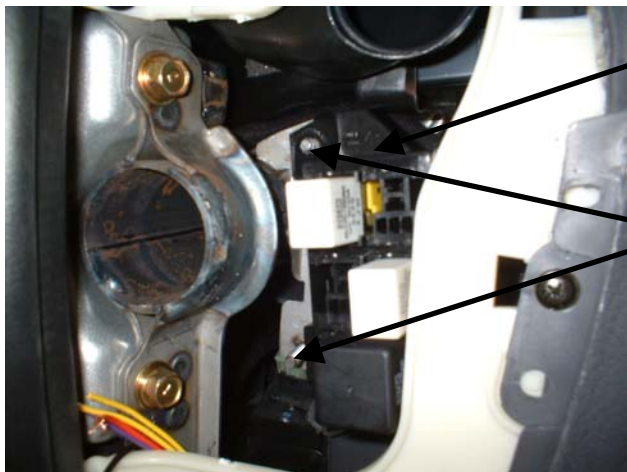
The bonnet switch wire must be connected to the lower of the two terminals.

The upper terminal is for an additional ground point if fixing to a non-conductive surface.

This additional ground point should also be considered if the ground test described above is below standard.



Connections - Interior



Remove the N/S dashboard end trim, the N/S kick well trim and locate the relay panel.

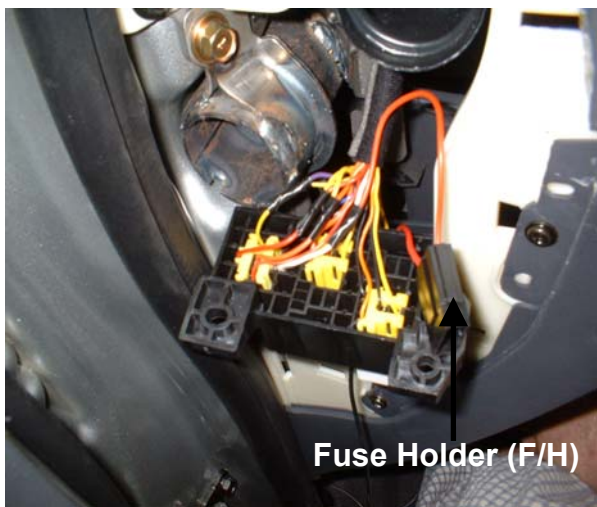
Remove the two M6 nuts securing the relay panel.



Remove the relay panel and turn upside down to expose the wiring as shown.

Note: Before making any connections you MUST ensure that you fully understand the connection table on page 3 and you have The Sorento Wiring Manual available for reference.

All connections MUST be spliced, soldered and taped as described on pages 4 & 5.



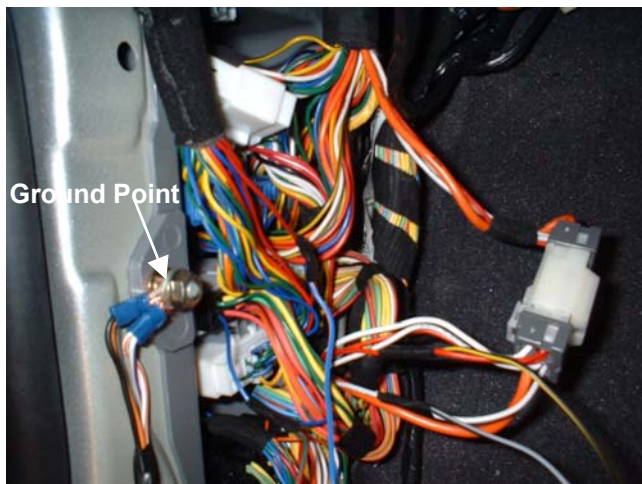
Feed the alarm harness spur up to the relay panel and make the following connections:

Alarm	Vehicle	Pin No
Red (F/H)	White	30
Yellow	Orange	87
Yellow	Red	87B
Violet	Yellow	85

Note; Connect the terminal on the alarm harness into the fuse holder and solder the red wire from the fuse holder onto the vehicle white wire as above.

Do NOT insert the 25 Amp fuse Into the fuse holder at this stage.

Connections - Interior



Locate connectors X-14, X-28 and X-10 in the lower N/S foot well area and make the following connections with the alarm harness.

Alarm	Vehicle	Connector & Pin No
Grey/Black	White	X-14 & 4
Yellow /Black	Red	X-14 & 3
Blue/Pink	Red/Black	X-28 & 17
Green/Red	Blue	X-10 & 12

The two ring terminals (4xwires) are ground points and are secured to the existing M6 stud using the M6 flanged nut provided as shown.



Feed the LED wire and the R/H (O/S) ultrasonic wire behind the passenger glove box and under the centre console into the driver's footwell area as shown.

Note: The R/H (O/S) ultrasonic wire has red sleeving and a red collar with the letter "T".



Remove the R/H (O/S) A post trim and position the ultrasonic head as shown.

Position the ultrasonic wire beside the vehicle harness and feed down behind the dashboard into the driver's footwell area.

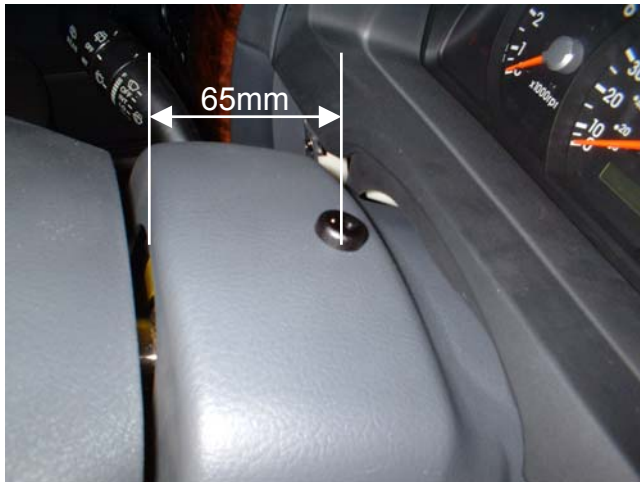
Connections - Interior



Replace the R/H A post trim and position the ultrasonic head as shown.

Repeat the procedure for the L/H ultrasonic and feed the wire into the passenger footwell area.

Note: The L/H (N/S) ultrasonic wire has a white sleeve and a collar with the letter "R"



Remove the steering column upper housing and drill a 10mm hole 65mm from the front edge and in a central position.

Locate the LED and PIN code switch, feed the wire through the 10mm hole into the driver's footwell area. Push the switch into position in the 10mm hole.

Note; Ensure that the wire is secured using cable ties to the vehicle harness and well away from the steering column



Connect the R/H (O/S) ultrasonic wire and the LED/PIN code wire into the alarm harness.

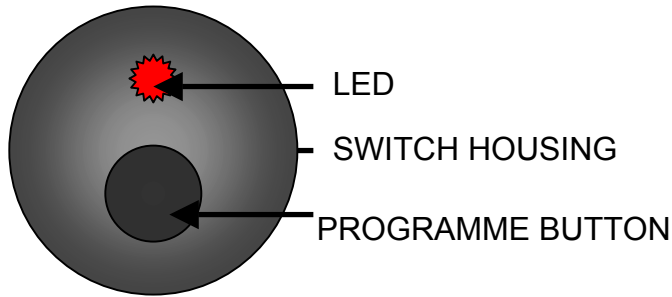
Note: The LED/PIN code alarm harness has two wires – Red & Black/White

Coil and tape up neatly any slack and position under the centre console.

Connect the L/H(N/S) ultrasonic wire to the alarm harness in the passenger footwell.

Also coil up and tape any alarm harness slack and cable tie to the vehicle harness.

PIN Code Entry & Programming Procedure



PIN Code (Example only)

3	2	5	8
1 st Digit	2 nd Digit	3 rd Digit	4 th Digit

PIN Code Entry

Note: The PIN code entry procedure reflects the high security level of the system and requires careful application.

The procedure must be carried out with the Driver's Door & Bonnet Open, Interior Light On & Fuse In Fuse Holder.

- 1 Turn the ignition on
- 2 Press the programme button to correspond with the 1st digit of the PIN code (i.e. 3 times) *The LED will flash once with each press followed by a longer flash to confirm acceptance of the digit.*
- 3 Carry out the same process for the 2nd, 3rd and 4th digits ensuring that each digit entry is confirmed by the LED.
- 4 The vehicle indicators will flash once when the 4th digit has been entered.
The alarm system is now in Programming Mode

Note: If the PIN code fails to be accepted or something happens as Not described above, then please consult the Pin Code Entry Fault Diagnosis notes on page 16

PIN Code Entry Fault Diagnosis Notes

1. After Entering The 4th Digit, The Indicators Come On For 3 Seconds

The ground connection on the bonnet switch is not sufficient for PIN Code Entry Mode.

Exit the car and close the door.

Check the bonnet switch connection as described on page 11.

2. The Alarm Arms After Entering The 2nd Digit

The LED will illuminate and 3 beeps will be heard.

Start at the beginning and enter all 4 digits to dis-arm the alarm.

Check the ignition feed which is the green/red wire on the alarm harness.

3. Nothing Happens After Entering The 4th Digit

The perimeter protection circuit is not working.

Check the interior light connection which is the blue/pink wire on the alarm harness

PIN Code Entry & Programming Procedure

Programming Procedure

The Programming Procedure must be carried out with the driver's Door Open, Bonnet Open & Interior Light On.

- 1 Turn the ignition off
- 2 Turn the ignition on
The vehicle indicators will flash twice
- 3 Press and hold down the Programme Button and sequentially
Turn the ignition off,
Remove the ignition key,
Close the driver's door & allow the interior light to extinguish
- 4 Release the Programme Button
- 5 Wait for the LED to start flashing rapidly
- 6 Press the "Lock" button on the Vehicle's remote control handset
The LED will stop flashing rapidly and begin flashing slowly
- 7 Press the "Unlock" button on the vehicle's remote control handset
The LED will stop flashing completely and the vehicle indicators will illuminate for three seconds.
- 8 Exit the vehicle and close the driver's door and bonnet

The alarm system is now programmed and you must now carry out the "Function Test" as described on page 18.

Note: If the system fails to programme, return to the first step and work through the procedure carefully.

If you have difficulty in entering the PIN Code or completing the Programming Procedure then contact the Cobra Technical Helplines as shown on page 6

Function Test Procedure

Ultrasonic Test – Interior Protection

- 1 Open the driver's window, close all doors and the bonnet
- 2 Arm the alarm by pressing the "Lock" button on the vehicle's remote control handset
The LED will illuminate for 45 seconds and then begin to flash
- 3 When the LED begins to flash, put your hand into the vehicle through the open window
The siren will sound confirming that the system has detected an interior intrusion
- 4 Dis-arm the alarm by pressing the "Unlock Button" on the handset

Door Test - Perimeter Protection

- 1 Close all windows, doors and the bonnet
- 2 Arm the alarm by pressing the "Lock Button" on the handset
The LED will illuminate for 45 seconds and then begin to flash
- 3 When the LED begins to flash open any door or tailgate with the vehicle key
The siren will sound confirming that the system has detected a perimeter intrusion
- 4 Dis-arm the alarm by pressing the "Unlock Button" on the handset

Alarm Memory

If the alarm has been triggered, the vehicle indicators will flash four times when the alarm is next dis-armed. The alarm status history is stored in the memory and is displayed via the LED. The LED will continue to display this history until the ignition is next switched on.

LED Signal

- 1 Flash
- 2 Flashes
- 3 Flashes
- 4 Flashes
- 6 Flashes

Alarm Activation

- Doors, Boot Or Tailgate Entry
- Interior Sensor
- Bonnet Entry
- Ignition Hot Wire Attempt
- System Tamper

If you are satisfied that the alarm system is operating correctly, then ensure that all wiring is secured and replace all trim panels. Place the Cobra Vehicle Security window stickers on both rear side windows so that they are clearly visible.

Use the "Customer User Instructions" to explain operation of the alarm system to the customer during the "Customer Handover Procedure"