



Kia Sorento

Smartnav Navigation System

Vehicle Specific Installation Instructions For Post '03' model year Sorento

General Information

This document covers the installation of the Kia Smartnav System for the following vehicle variant:

Kia Sorento model year 03 on

This vehicle specific sheet should be read in conjunction with the full 'Technical and Installation Manual', which will give a broader understanding of the Smartnav system and its requirements.

A minimum of 24 hours prior to installation it is essential that the Registration Procedure is carried out and that the SIM card has been activated. Whilst it is possible to install the system without a live SIM, it is advisable not to replace trim etc as access will be required to reset the system on SIM activation.

Tools and Consumables – (all models)

- Hand tools, Digital Multi-meter, Drill
- 3mm, 5mm and 7mm drills, 19mm round hole cutter or punch
- Soldering Iron and solder, Crimp Pliers
- Double sided tape and non setting mastic
- Insulation tape, crimp connectors
- Selection of fixing consumables

Trim Removal

* All trim should be removed and refitted in accordance with the appropriate Kia workshop manual.

The following items will require removal prior to installation:-

- Drivers Lower Panel
- Arm Rest Tray
- Console Rear Panel
- Two Console Trim Strips
- Console Insert
- O/S 'A' Pillar Trim

Component Locations

Position the components in accordance to these fitting instructions.

* All trim should be removed and refitted in accordance with the appropriate Kia workshop manual.

In Vehicle Unit (IVU)

After ensuring that the SIM card has been activated, open the front cover by releasing the two tabs on the rear of the unit and insert the SIM card into the holder.

Locate and remove the Arm Rest Tray, Centre Console Rear Panel, Two Console Trim Strips and the Console Insert*.

Position the main IVU as shown in Fig 1. The unit should be secured by using double sided tape or non-setting mastic.

It is very important that this component is secured and cannot interfere with the safe operation of the vehicle controls.

Do not permanently fix this component in place until the system has been powered up and tested as access will be required to the LED and connectors.



Fig 1

IVU Location
Pictured looking forward from the
rear of the console

Switch

The switch is mounted to the Console Insert as illustrated in Fig 2.

Ensure that there is adequate clearance behind the proposed position, then drill a pilot hole and open up to 19mm with a hole cutter/punch to accommodate the switch.

Important, Ensure that the loom is retained and cannot interfere with the safe operation of the vehicle or it's controls.



Fig 2

Switch Location

Speaker

Locate and remove the Drivers lower panel *.

Position the speaker to the bracing bar to the left of the steering column using an existing stud, as indicated below in Fig 3. It may be necessary to enlarge the slot in the speaker mounting bracket.



Fig 3

Speaker Location

Microphone

Remove the O/S 'A' pillar trim *.

Mount the microphone on the top of the 'A' pillar as shown in Fig 4 with the Velcro supplied.

Route the cable under the 'A' pillar trim towards the IVU in the centre console. Ensure that the cables cannot become entangled in the event of the air bag being deployed.



Fig 4

Microphone Location

GPS/GSM Puck Antenna

This application will use the combined GPS/GSM puck antenna, which is fitted to the windscreen using the supplied double-sided pad to the right hand side of the rear view mirror as illustrated in Fig 5 below.

Route the two cables from the antenna behind the 'a' pillar trim to the IVU in the centre console. Ensure that the cables cannot become entangled in the event of the air bag being deployed.



Fig 5

Puck Antenna Location

Loom Notes

It is good working practice to check that the suggested power pick ups, as listed under 'Electrical Connections', are still valid.

The Smartnav loom should be either taped or cable tied to existing looms to ensure a tidy installation and prevent interference with the safe operation of the vehicle and its controls.

The Smartnav loom has connectors on all cable ends to enable system components to plug straight in.

The only exceptions being the pick ups from the vehicles electrical system, i.e. Permanent, Switched, Ground and Mute.

Please refer to the appropriate Kia manual wiring diagram for further information on connecting the mute cable (purple) into the vehicles modular audio system.

Where a radio mute function is not available the loom should be taped back to a convenient point.

Please confirm that the customer requires the radio mute option, (if available).

Electrical Connections

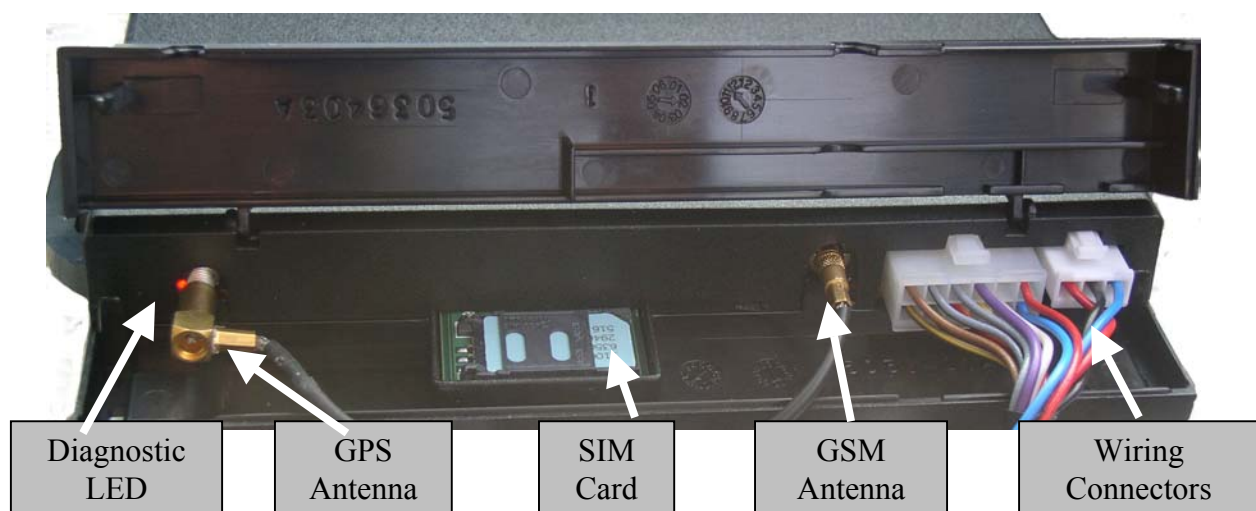
Smartnav Colour	Vehicle Connection Point	Vehicle Wire Colour	Function
Red	Rear of ignition switch multi-plug	Green	+ 12 volts
Blue	Rear of ignition switch multi-plug	Yellow	+ 12 volts Ignition switched feed
Black	Local earth point 0 v		Earth point

Powering up, Configuration and Testing

The configuration process is automatically carried out when calling into the Control Centre for the first time, providing that the system has valid GPS data.

Be aware that it can take up to 25 minutes whilst the GPS system communicates with the satellites to initialise its settings.

The amount of time spent can be reduced by moving the vehicle outside and out of the shadow of buildings so that the GPS antenna has a clear view of the sky.



Once power has been applied to the Smartnav system a LED will be visible through the hole adjacent to the GPS antenna connector, this is to aid configuration and system diagnostics.

After the initial logging on activity, take note of the flash pattern and check against the following table. If possible leave the vehicle running as the system may 'time out' before downloading the full GPS almanac.

Flash Pattern	Pattern	Description
** ** *	Double Flash	Unit Awake – without valid GPS or GSM
*** ** *	Triple Flash	Unit Awake – with valid GPS
* * * * *	Regular Flash	Unit Awake – with valid GPS and GSM

Once the regular flash pattern is seen from the LED, follow the procedure as listed under 'Testing'.

Testing

Pressing and holding the Smartnav switch for three seconds will result in a connection being made to the Smartnav Control Centre.

Check the quality of the two-way communications – GSM check.

Ensure that the Control Centre can identify your current location – GPS check.

Ask for a short local route to be downloaded to the vehicle.

The voice connection will automatically be cut immediately prior to the download.

When the route has been downloaded, the system will then request that you start driving when ready.

Ensure that the LED on the switch shows green.

Either with the customer, or with their permission, follow the downloaded route to at least the first directional instruction.

If a test drive is not possible, or to cancel the downloaded route, press the Smartnav button four times

Switch Operation

A single press of the Smartnav switch in excess of three seconds will result in a call being established to the Smartnav control centre.

A single press of less than two seconds will repeat the last instruction given, however please note that if there is no route in the system then you will receive the message 'Route guidance is not active'. If the system is in 'Quiet Mode' a short press will prompt the system to leave quiet mode.

Pressing the switch twice will result in the system entering 'Quiet Mode', this reduces the speaker volume by approximately 50%, a further single press will return the volume to the preset. The system will automatically leave quiet mode should either a traffic alert be received or as a result of leaving/rejoining the planned route.

Three presses of the Smartnav switch will result in the volume level cycling between 1 (lowest) and 8 (highest), a further single press will result in the volume being set and the unit will confirm the level selected.

Pressing the Smartnav switch four times will result in the system asking you to press the switch one more time to confirm the route cancellation.

Loom Schematic

