

Chris8of9's Rear Screen Connectivity - Aftermarket Install Guide

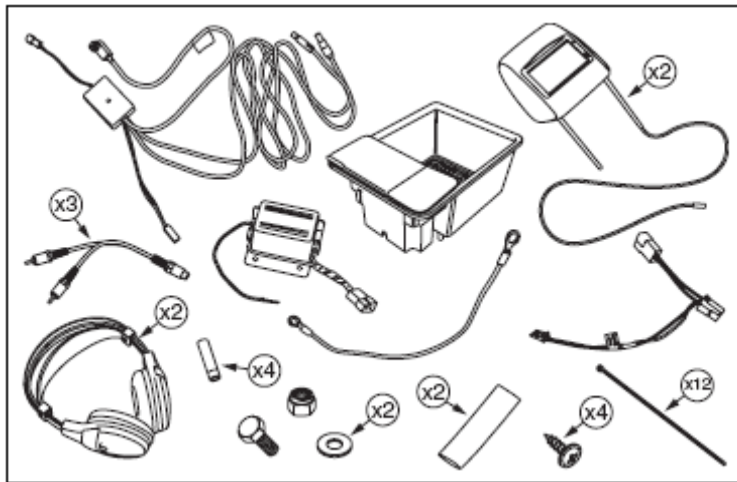
Freelander 2 (2007) SE

I have just finished fitting the rear screen connectivity system to my car. I was going to do a photo album of the install, unfortunately the camera died after the second photo. Instead I have used pics from the installation instructions and workshop manual to help illustrate.

Typical Land Rover, the instructions that came with the kit were pictorial only, and not as clear as they could have been (in my humble opinion). I hope this installation guide will be a lot easier to follow and hopefully you won't have the few problems I encountered.

I am not a mechanic or Land Rover Technician but I have maintained most of my own vehicles over the years and have also rebuilt two cars from a shell upwards. So carrying out an install like this was not daunting. On a difficulty scale of one to ten (1 being capable of changing a wheel and ten being capable of a full strip and rebuild of the interior), I would class this install as a four.

The Rear Screen Connectivity Kit



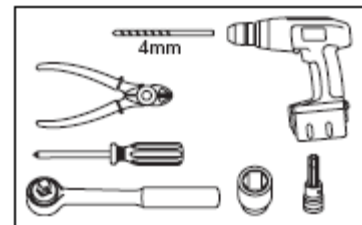
The kit I installed was as supplied by Land Rover, part number LR004184.

First thing to do is check that you have all the parts. I unfortunately found I was an earth cable missing.

I could of easily made a cable up but you will see during the install that I decided it wasn't necessary as I used an existing earth point.

The instructions include a pictorial of the tools required. I have listed below the tools I actually used.

- 6mm drill bit
- 8mm drill bit
- Torx drive screwdriver
- 8mm & 10mm socket with minimum 10" extension
- Snips (to cut the cable ties)
- Flat head screwdriver (small)
- Posi-drive Screwdriver (small)
- Cloth (for protection of surfaces)
- Insulation tape.



One point of note, the instructions that come with kit are for a left hand drive vehicle. This caused a bit of confusion in a few places, but take your time and look at what is in front of you before ploughing on ahead.

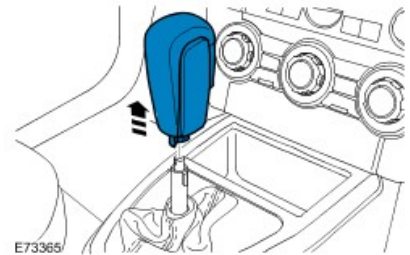
Please keep this in mind when looking at the illustrations in this guide as they are taken from the instructions and the workshop manual and relate to left hand drive vehicles.

All ready to start.

Remove the gear lever knob.



Firstly push down the gaiter just below the gear lever knob. The gear lever knob will then just pull off. The knob will pull off easily without much force.



Remove The Gear Selector Cover



Hold the cover near to where the arrow with the 'X5' is shown on the diagram and pull upwards. You don't need to much force, it will just pop out. I didn't remove the terrain response switch as it wasn't necessary.

When you lift the cover up look underneath and disconnect the green connector going to the terrain response switch.

Remove the exposed sound deadening material and set aside for refitting together with the cover.

Remove The Rear Coin Tray and Audio Connectors

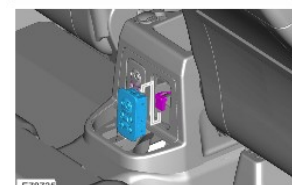


Use the small flathead screwdriver to prise up the coin tray in the location indicated by the arrow. Use a piece of cloth under the screwdriver to make sure you don't mark the console. Once prised up get a hold and using moderate pressure pull upwards and it will pop out.

With the coin tray removed it is easy to get you fingers behind the audio connectors and just pop them out. Disconnect the cable connector from each one as you remove it.

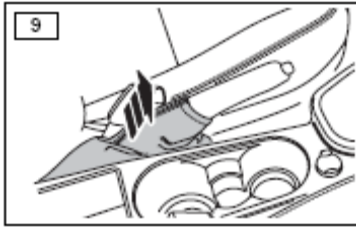
The surround that the audio connectors where fitted into can be pulled out by gripping the section between the two openings and using moderate pressure pull it out.

The audio connector cables are fastened to the right, inside of the console. Carefully release the cable tie in this location to free the cables



Disconnect the large gray coloured connector. One section is connected to the inside of the console and remains in place when you disconnect the connector.

Remove the Hand Brake Gaiter



Grip the gaiter and pull upwards. I found it easier to get hold of the gaiter between the handbrake and the drivers seat and pull it there.

When the clips release pull the gaiter over the handbrake and set aside for refitting later.

To ensure you don't mark the handbrake grip when removing the floor console it is advisable to wrap some cloth around the grip and fasten it with some tape.



Disconnect the Hand Brake Cable

This is not indicated in the supplied instructions as they show the removal of the front console around the radio. I found it easier to leave the front console in place and disconnect the hand brake cable.

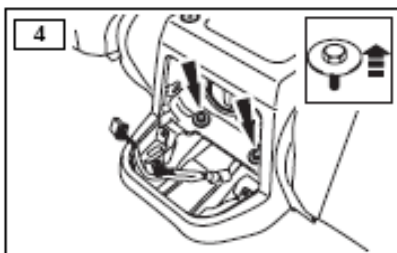
Under the removed rear coin tray you can clearly see the hand brake cable connection (indicated by arrow).

You will see a small spring clip behind the nut. Carefully remove this spring clip. I found that prising it off gently with a flat head screwdriver was easy enough. You can then remove the nut. With the handbrake released it was easy to remove this nut by hand. Set aside both nut and spring clip for refitting.

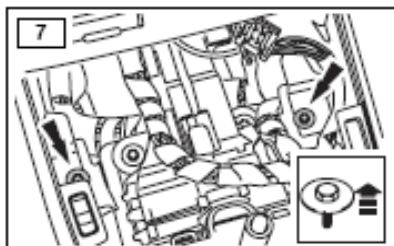
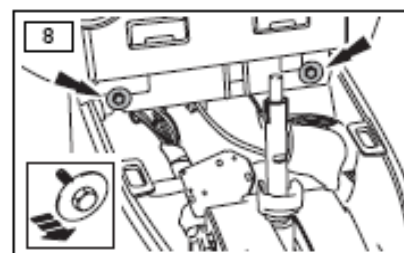


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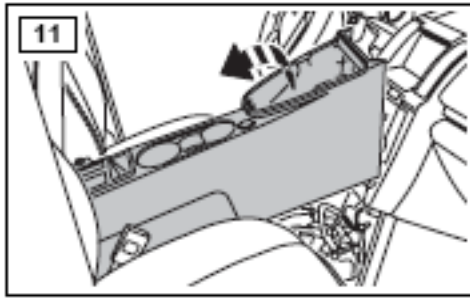
With the hand brake cable released pull the handbrake up to its maximum arc of movement.



Using a 10mm socket and extension remove the two black coloured bolts connecting the rear of the console, the two bolts connecting the front of the console to the dashboard console bottom.



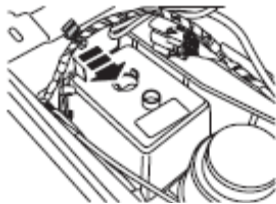
Look inside the floor console either side of the front of the gear lever mechanism and you will see two more black bolts, remove them also.



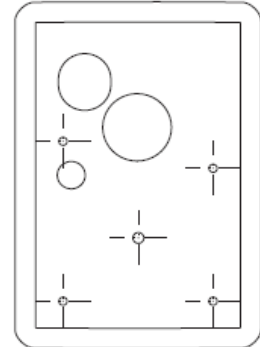
Move the seats fully back and to the fully reclined position. Take a hold of the front of the floor console and carefully lift upwards moving forwards as you do so. I found this a bit fiddly until I moved the seats back and down. The floor console is now free to remove from the vehicle.

If you have not disconnected the handbrake cable you won't be able to get the console out.

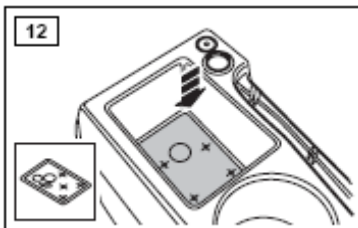
Fit The Electrical Controls and Connectors



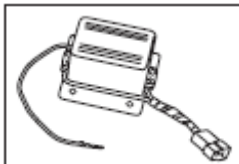
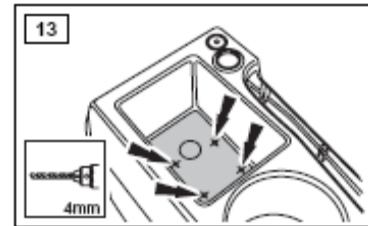
Flip the console upside down and using your finger press out the rubber base to the rear console cubby (location of hole indicated by arrow). Turn the console right way up.



At the back of the instructions is a template. Cut this out. It should fit into the rear cubby of the console. The template that came with my instructions was for a left hand drive vehicle, in this case the template needs mirroring. To do this just poke a pencil through the four outside holes marked with a cross. The inside hole marked with a cross is not required.

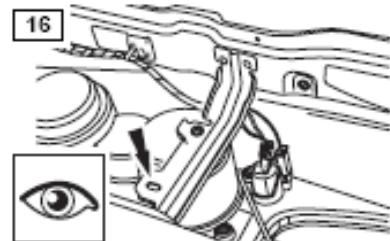


Fit the template into the bottom of the rear cubby and using a 4mm drill bit drill through the rear cubby in the four locations marked.

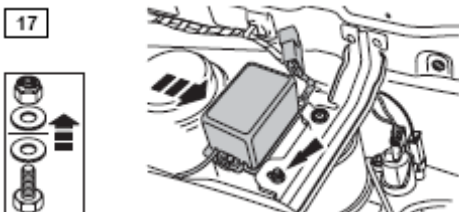


You are now ready to fit the first electrical module. This is the larger of the two modules and is fitted to a metal plate with two holes on the exposed flange.

With the console upside down you will see a metal cross member with one screw fixing to the front cup holder base and one hole alongside.

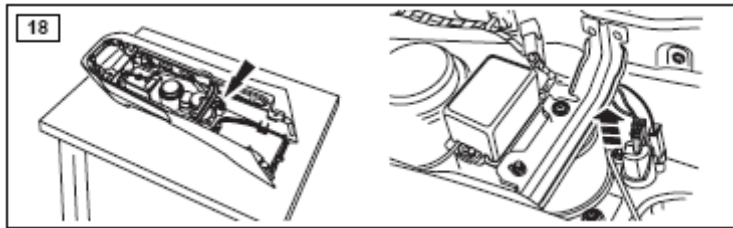


This module is to be fitted below this metal cross member. Unscrew the fixing that fastens to the bottom of the cup holder. You should be able to slide the metal base of the module between the bottom of the cross member and the cup holder base.



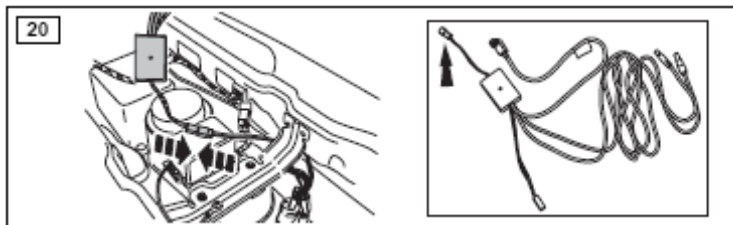
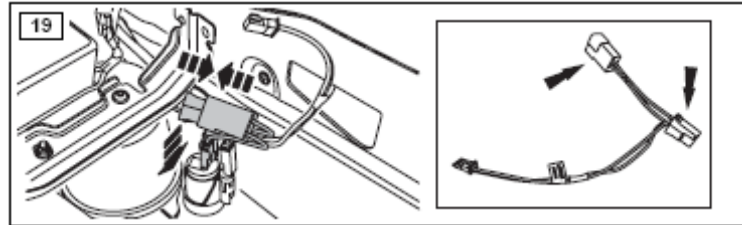
When I aligned the module bases holes with the cross members holes they did not align up correctly. I therefore aligned the module base under hole with the fixing to the cup holder and marked the plate through the other hole. I then drilled through the plate where marked using a 6mm drill bit.

With the holes from the cross member and bottom plate now aligned I reinserted the fixing for the cup holder base and using the nut, bolt and washers supplied with the kit I fixed the metal plate through the other hole.



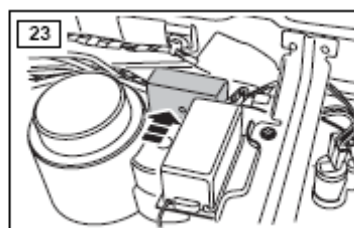
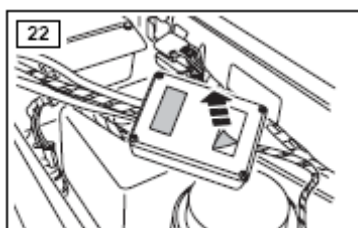
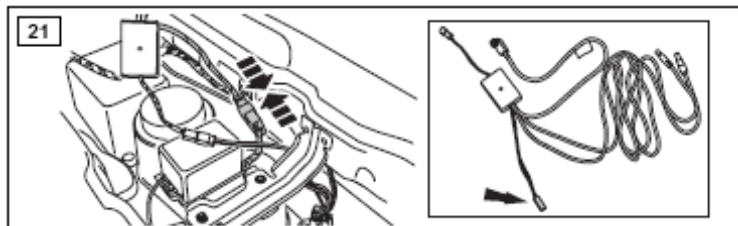
Under the metal cross member you will see the connector for the front cigar lighter / aux power supply. Disconnect the larger of the two cigar lighter connectors.

Using the power supply splitter supplied with kit plug one end into the removed cigar lighter connector and one end into the cigar lighter. The remaining small connector needs to be pushed under the metal cross member towards the back of the console.



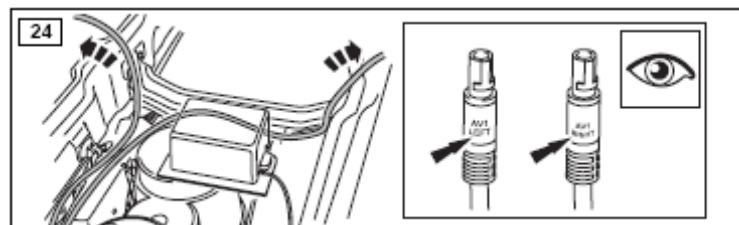
Taking the second module connect the shorter cable to the small connector from the power splitter you have just pushed under the metal cross member towards the back of the console.

Connect the large two pin connector from the smaller module to the larger two pin connector from the first module.

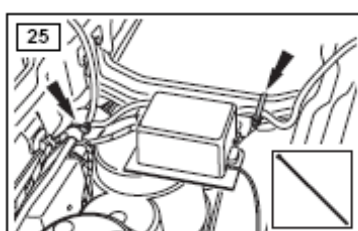


Remove the protective paper from the two sticky pads at the rear of the second module and fit the second module to the side of the console. I found it best to fit this to the plastic of the console below the horizontal metal stiffener.

Make sure the plastic is clean and apply pressure for a few seconds to bond the module to the plastic.



Take the two AV leads from the second module and route them as shown on the diagram. The cables are identified as right and left. Remember you have the console upside down so left and right will be reversed.



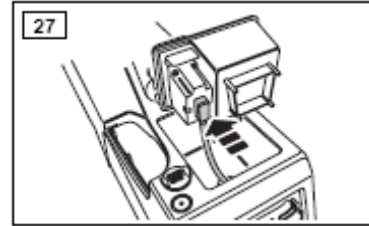
Using two of the supplied cable ties secure the AV cables to the metal cross member.

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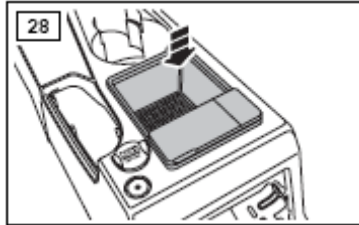


Take the multi pin connector from the second module and route through the large hole in the rear cubby. Connect this cable to the bottom of the AV breakout box supplied with the kit.

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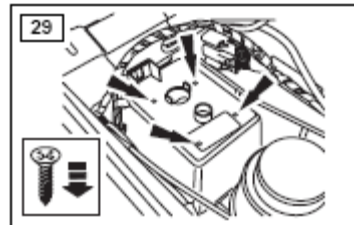


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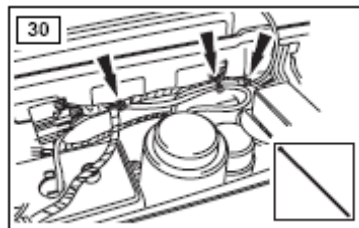


Fit the AV breakout box into the rear cubby hole and using the four screws supplied with the kit fix the breakout box through the four holes you previously drilled in the cubby hole base.

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Using the supplied cable ties, secure the newly fitted cables to ensure they are tidy and not lying loose.

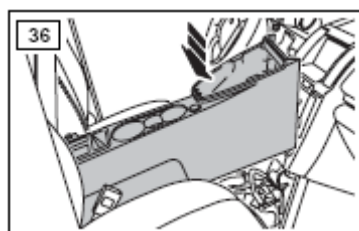
I found it easier to fasten the new cables to existing cables in locations slightly different to that shown on the instructions. Use common sense and keep everything tidy without kinking any cables.

The only new cable that is not connected at the moment is an earth cable from the first module. The instructions show a new link earth cable needs fitting linking from one of the gear mechanism fixing points to a fixing point towards the handbrake location. As this cable did not come with my kit I thought I might have to make a cable. Fortunately it wasn't necessary and when I refitted the console the earth cable from the first module could be fitted directly to the fixing point on the gear lever mechanism.

Refit The Console.

Before refitting the console its worth taking the opportunity to give it a clean, especially in those hard to reach places you can't get to easily when its fitted.

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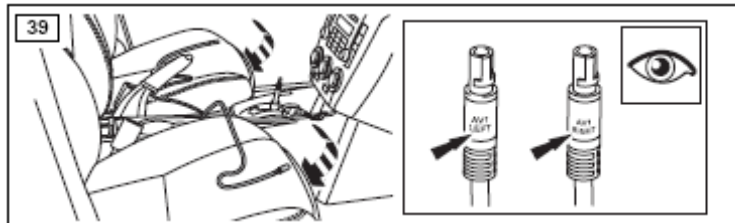


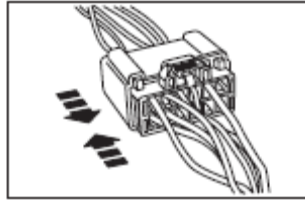
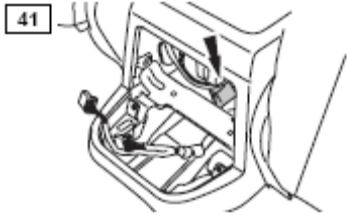
Refitting the console is the reverse of removal. Take your time and make sure not to damage any other surfaces as the console has a few sharp edges.

Remember to have the handbrake lever fully up and the seats fully back and reclined to make it easier.

When the console is loosely in place router the AV cables under each seat. Each cable has right or left on it and these relate to the right and left indicated on the AV break out box.

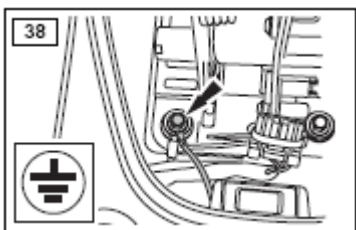
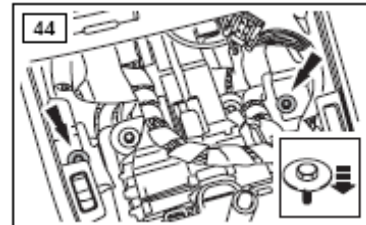
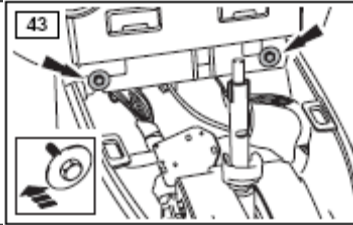
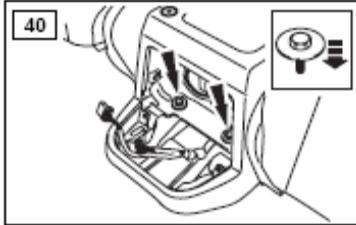
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Reconnect the large connector accessed through the rear of the console. This is a bit fiddly but take your time and it goes in OK.

Refit the six black bolts that fix the console. Two to the rear and four to the front.



Take the earth lead from the first module and route to the gear lever mechanism. Release the one of the rear bolts to the gear lever mechanism and fit the earth lead. Tighten up the bolt (10Nm).

Reconnect The Hand Brake Cable

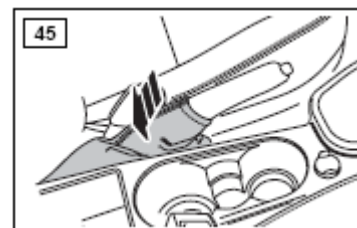
Release the handbrake lever and using the previously removed nut refasten the cable to the hand brake. I tightened the nut finger tight ensuring that when the lever was fully down it was not putting pressure on the hand brake cable. Refit the spring clip (make sure it is the right way round) pushing it up to the bolt. When fitted the spring clip should stop the bolt unfastening. Try the handbrake. The manual says the lever should be between three and nine clicks when fully applied. When tested my lever was three clicks.

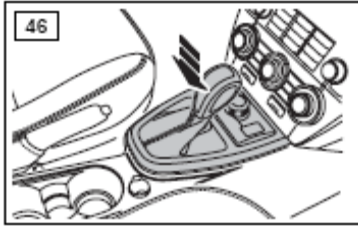


Refit the rear audio connector surround. This requires positioning then pushing into place. It secures by a spring clip and should sit flush with the console when correctly fitted. Refit each of the rear audio connectors remembering to reconnect the cables. Each connector just pushes into place with ease.

Remove the tape and cloth protection from the hand brake lever grip. Refit the hand brake gaiter.

I found this to be fiddly. By positioning the gaiter closer to the seat first the rest clicked into position. Be gentle, you don't need much pressure. If it doesn't go in easy just take your time and you will get it.

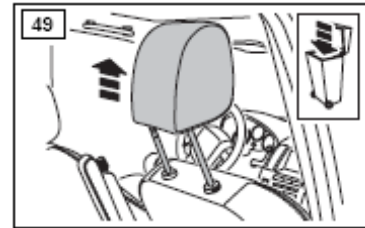




Refit the sound insulation around the gear lever mechanism. Position the gear lever surround, reconnecting the cable to the terrain response control before you clip the surround into position. Again this doesn't need much force. It should just clip back in, if it doesn't stop and try again, don't force it. Refit the gear lever knob by pushing it fully down then pulling the top of the gaiter until it secures fully to the gear lever knob base, in turn securing the gear lever knob.

Fit The Rear Screens

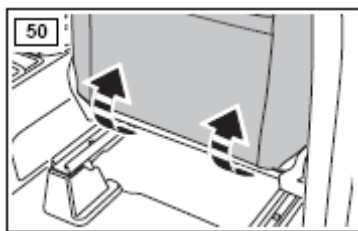
Recline the front seats and remove the headrests. There are two clips to depress in the plastic covers at the top of the seat where the headrest supports go through.



Take care as when I removed my headrests the metal support rods were greased. You don't want to get the grease on your leather or your new headrests. Keep your hands clean.

The instructions says to dispose of the headrests. Much better to put them on FREEL2.COM for sale as I am sure someone somewhere may want them.

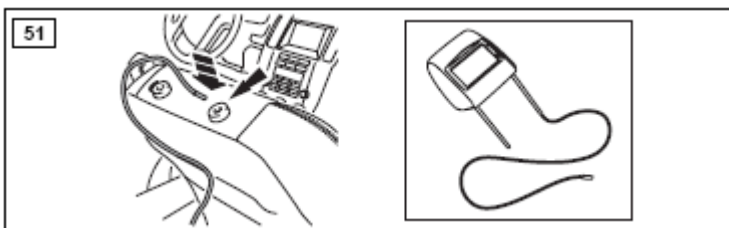
This next operation is best if you have a friend at hand to help.



Tilt the back of the seat forward and look at the bottom of the seat back. You will see two interlocking plastic strips. They are similar to the strips you use to bind pages of paper together.

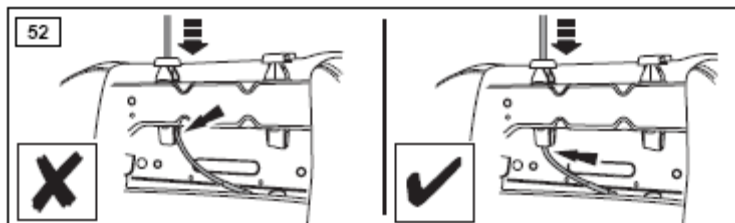
Working from one end prise the two sections apart until they unclip. Once unclipped just run your finger along and it will unclip the rest.

This should give you enough room to be able to get your arm up the back of the inside of the seat. Don't just force your arm up, feel your way up, past a few horizontal bars and fastenings.

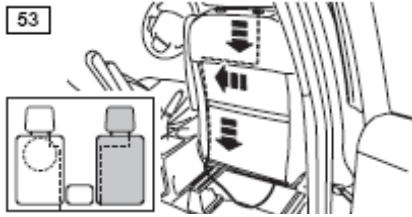


Get your friend to feed the cable from your new headrest down the hole in the top of the seat. Make sure you keep the cable straight.

Be gentle, you will feel some resistance as you move the cable down, but don't force it as you need to make sure the cable goes directly through the bottom of the headrest support hole and not through the side.

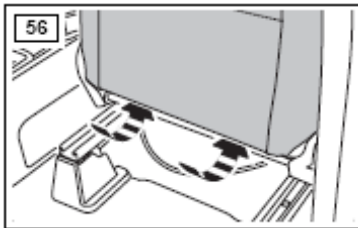
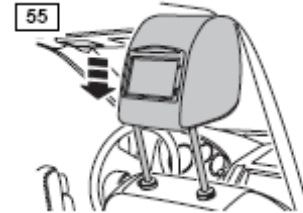


You should be able to feel the cable come through the bottom of the support hole. I am lucky that I have long arms, I was able to check the cable had come through correctly by feel.



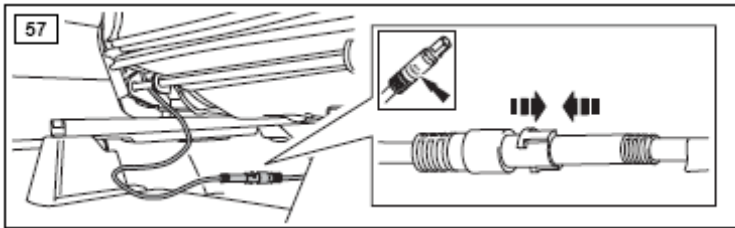
Take a hold of the cable end and pull it down the chair, routing it as shown on the diagram.

When most of the loose cable was pulled through the chair and before the headrest was fitted I reclined the seats and then fitted the new headrests.



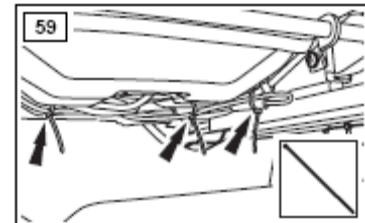
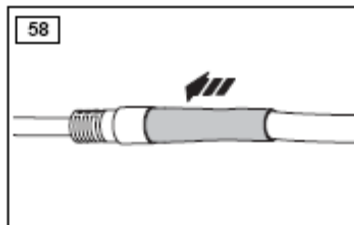
With the seats leaned towards the front again reconnect the two plastic interlocking trims at the base of the seat.

This was fiddly. Again take your time. I found it easier to start at one end and clip the two trims together, then slowly work along until the trims are fully interlocked.



Slide one of the sheaths supplied with the kit over the end of the cable from the headrest. Then connect the cable under the seat to the relevant AV cables from module 2. Once connected slide the sheath over the connection.

Take up the slack by looping the cable and using the cable ties supplied secure the cable to the underside of the seat. Make sure you leave enough slack between the cable where it comes out of the console and fastens to the underside of the seat. This will allow the seat to travel fully without putting strain on the cable or the connectors.



Fit the second headrest in the same manner as the first.

Installation is now complete.

To test the installation connect an AV source to the AV break out box in the console. Switch on the ignition, switch on the rear screens and turn on your AV source. Using the wireless headphones supplied with the kit, sit in the back seat and hay presto – you can now hear and see your movie.

The headphones come with pouches for protection. Putting the headphones in the pouches you can store them, when not in use, in the void below the passenger seat.

Control and operation of the wireless headphones and screens is covered in the supplied user manual. Once understood put the user manual in your service and information folder.

