



A3/S3 8L chassis (1996-2003) Installation manual for the AMSS enclosure

This manual covers the removal of stock tupperware sub woofer and fitting of AMSS enclosure, wiring & amplifier, providing a completely stealth installation for Bose & non Bose A3/S3 vehicles. Power cable fitting is detailed in a separate guide.

Tools you will need

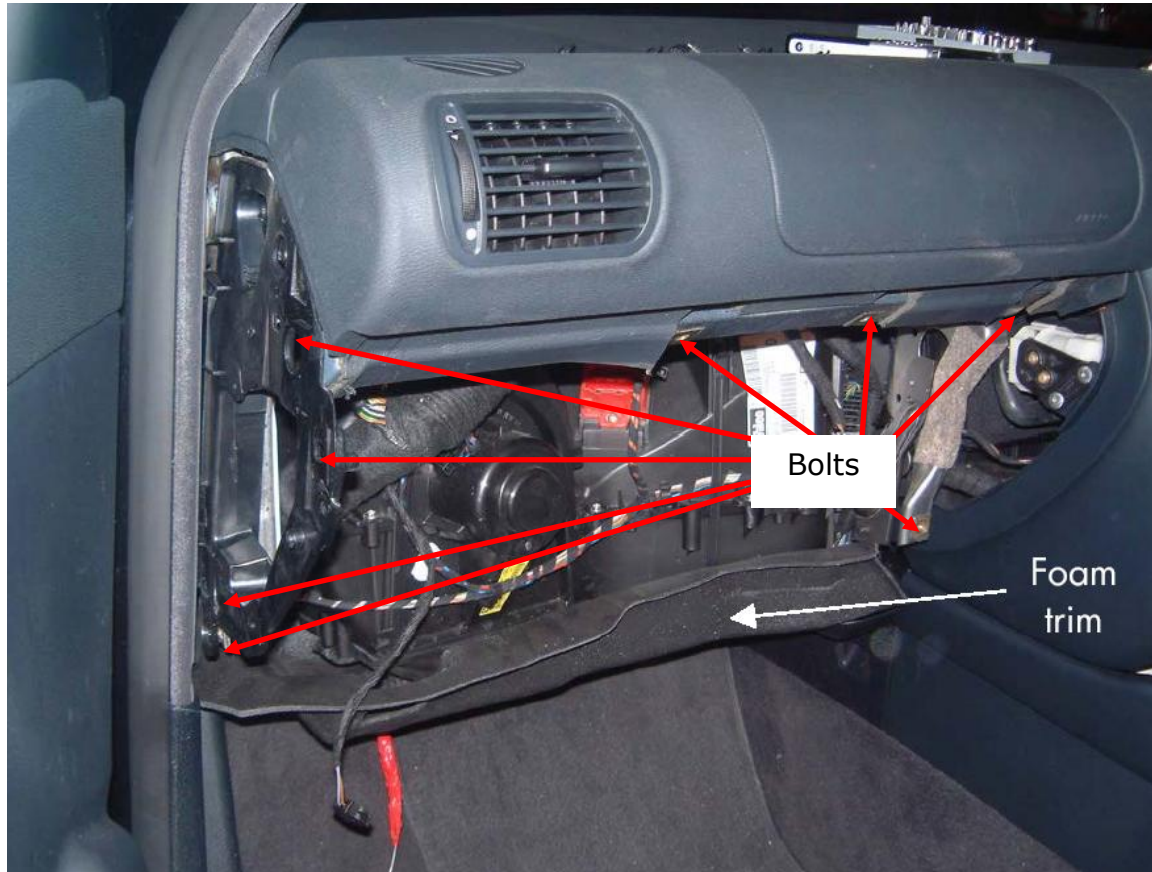
Wire coathanger (power cable fitting only)
T25 & T20 Torx bits
Junior Hacksaw and/or Dremel with metal cutting disc
7mm, 8mm & 10mm Socket and/or spanner
8mm Allen Key
Dynamat or similar
Duck tape and/or insulation tape
Zip Ties
Cordless screwdriver
Cordless Drill & 5mm metal drill bit
Patience



Power cable fitting

First remove the glovebox

With the glovebox open you can prise out the end cap (the bit on the end of the dash that's hidden when the door is shut), you actually use the ignition key to do this. Then it's just 7 or 8 x 8mm bolts. 3 behind the end cap, 3 along the top inside the glovebox and 2 underneath either side in the passenger footwell.



Underneath the glovebox remove the big plastic "screw" that secures the foam trim to the underside above the footwell, and peel it back left to right

Carefully lower the glovebox to the floor, and before disconnecting the airbag loom (if fitted), ensure the ignition is off and the keys out. Do NOT turn the ignition on with the airbag switch disconnected as this will disable the whole airbag system, light the airbag warning light and will need VAGCOM to reset it.



Now under the bonnet:

If you release the bulkhead rubber that holds down the wiper scuttle, then lift up the passenger side corner of the scuttle there's the perfect spare grommet under there, to the right of the pollen filter.



This drops down behind the glovebox. You will need to breach the grommet either using a 5mm hex drill with a right angled adapter or a sharp tool of some sort. Space is limited by the bonnet and other obstacles.

Once you have a hole then poke a wire coathanger through, but not too far as it will get stuck. Locate the other end up high in the passenger footwell and pull it through a bit more. Then using gaffa/duck tape tape the end of the power cable to the end of the coathanger in the engine bay and pull the cable through from the footwell side. Don't pull it through from the engine bay as you will pull the grommet out. The seal to the grommet should be pretty water tight but a dab of clear silicone wouldn't hurt just to be sure.

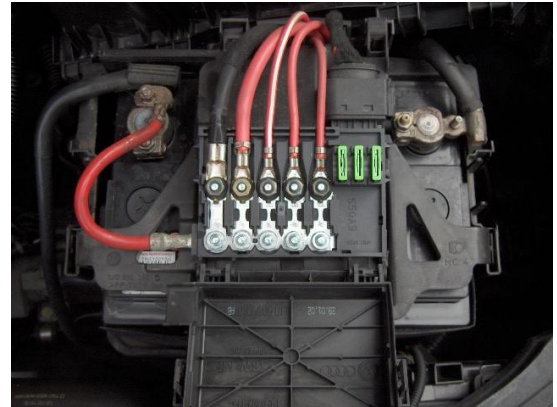
Then remove the footwell side trim (single crosshead and a metal clip at the bottom), then prise up the door sill trim, again just clips, check for clips that have come away from the trim. Pull them out with long nosed pliers & slide them back into the trim.





At the battery end you can run it through the trunking for a professional finish or just tie wrap it securely at suitable points. It is easier to route it through the trunking with the airbox removed. To remove the airbox assembly from the car (undo the jubilee clip from the MAF intake connection, then undo the two 10mm bolts that hold the box to the car, remove the MAF plug as well. Now you can run the cable inside the trunking that goes to the bulkhead, just remove the top off it (held on with clips on the side, and a possible cable tie).

You may be lucky enough to have a spare terminal on the battery to secure it to, or if not, double it up on an existing one. Some A3's even have a spare terminal already equipped with a 40amp fuse or at least a space for one (MIDI type fuse included if you bought my complete kit), so you can discard the additional fuseholder.



If not mount the inline fuse using trim tape and a single self tapper to the inner wing just to the right of the battery.

Make sure you take the inline fuse out before connecting the remainder of the cable it to the battery.

You will now be able to feed the power (and any RCA's if using an aftermarket HU) down the passenger side as there's quite a lot of room. Don't try using something ridiculous like 0 or 2 gauge cable as it just makes it impossible to route through the car and the benefits, if any, are minimal. Also as long as the RCA's are reasonable there's no reason to worry about running power and RCA's together, especially for a sub, I do it all the time and have never had any interference.

If you are using the stock Audi HU then you just need to run the power cable.

If you are mounting the amp behind the rear speaker panel then you can use the bolt on the chrome passenger seat belt runner for the ground/earth. With the speaker panel removed just unscrew the 8mm Allen bolt a little way, cut and splay the earth cable eyelet so it can slip in behind the bolt and then tighten back up.





Removing rear speaker panel

Remove base of back seat. Flip the base up and push the two retaining bars towards each other to free from the bodywork.

Fold the back of the back seat down flat.

Open the rear window and pull up the window rubber completely along the length of the speaker panel. Starting at the base of the door pillar, pull the panel free, working your way up to the top of the panel. The panel is held on 4 clips up the door pillar and 3 along the top.

The top ones are the trickiest and be careful not to rip the panel by pulling on it too hard.

The use of a pry bar does help with the middle clip. Don't lever it out by pulling on the panel as you'll rip it. To release the back clip work from the seat belt upwards.

Carefully lift the panel up & out, making sure you unplug the rear speaker first. It is common for some of the clip mountings to come away from the rear panel. These need to be hotglued back in place. Again check that each mounting has a metal clip still attached.

Remove boot lip panel

Unscrew the 4 Torx screws holding the lip panel in place, unscrew both rear cargo anchors.

Remove lip panel by flipping it upwards to release the rubber.

Remove boot panel.

Unscrew the black crosshead screw near the seatbelt, and the stupid plastic screw inside the cubbyhole, up near the rear of the tail lights, positions shown below:



Plastic screw up & under here

Located here, with the panel in place



Unscrew & remove last cargo anchor.

The panel should be a bit loose now, but there is one metal clip on the curve of the boot opening, pull the panel towards the drivers side of the car to release.

Pprise out the interior light and feed it back through the hole.

You should be able to wiggle the panel around now and get it free. It is lightly clipped to the light grey panel above.

You are now ready to remove the sub

If you have a CD changer or CD changer bracket, remove them both – fairly obvious how to do this.

The sub is held in place with three 8mm nuts, all clearly visible.

Remove the nuts and release the wiring loom that runs along the top. Wiggle the sub out. Unclip the red (non Bose) or black (Bose) connector block (usually quite tricky as it is a very tight fit). Try not to break the locking tabs as they are brittle.

Remove the sub from the car, while being impressed by the sheer weight of the enclosure, be careful that a gust of wind doesn't blow it away!

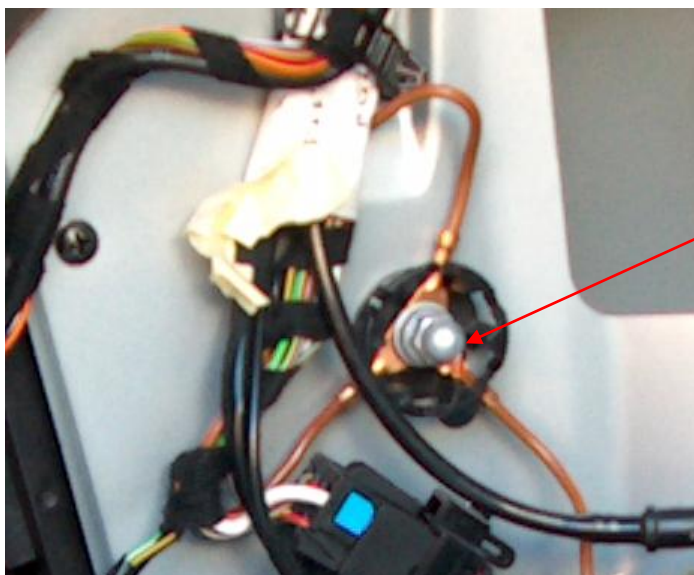


Fitting the AMSS

Before you install the AMSS, some small modifications are needed to your A3. You should have the following view:



The AMSS is slightly larger than the original so some of the obstacles in the rear wing need to be tidied up before the unit will fit properly. Firstly unclip the wiring loom running down the seam along the wheelarch. This needs to be pushed toward the back of the rear wing cavity. Using an 8mm spanner or socket, unscrew the nut holding the earth straps to the chassis.



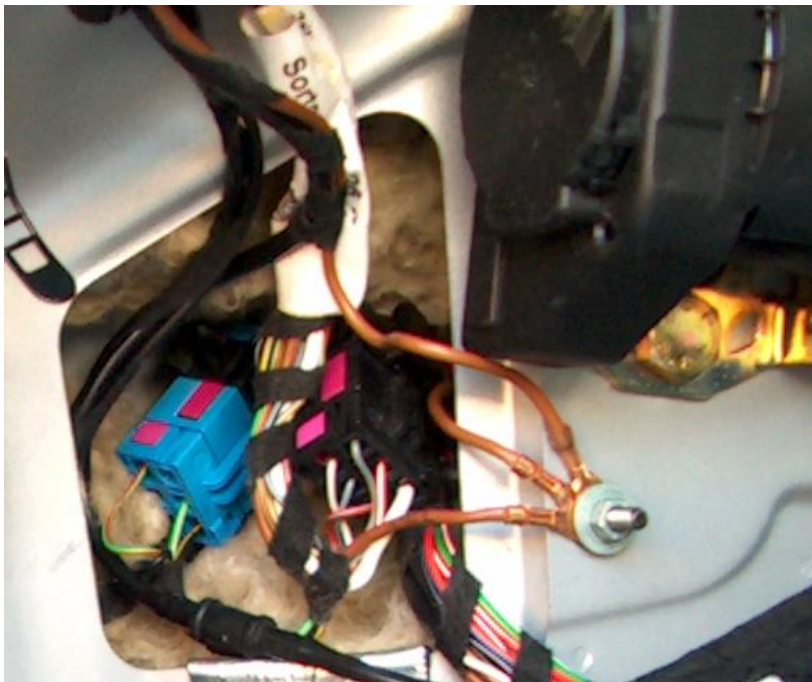
This one



Also undo the plastic ties holding the 2 connectors to the chassis.

With the connectors and loom now released, reposition the three earth straps onto the bolt under the seatbelt reel, originally used to secure the OEM sub.

IMPORTANT – scrape away any paint on this mounting bolt. If the relocated earth cables do not get a good earth, then you will get some really bizarre lighting behaviour (dash/main lights/brake lights/indicators etc seeming to have a mind of their own). Before installing the enclosure check all the lights are working properly and that the alarm is functioning.



Now tidy the connectors away into the void shown above

You may want to stuff some loft insulation or speaker wadding into the void to prevent the connectors from rattling around. Lastly unplug the red plug for the alarm, pull the loom off the bodywork, feed it through the hole shown above and behind the panel, and plug it back in to the alarm controller. You will need to unscrew the alarm controller, and turn it round to give you enough length, shown below:

Alarm
controller





With the loom and connectors now out of the way, you need to remove or cut off the original bolt the earth straps were bolted to. This is easier to do with a Dremel or junior hacksaw.



Now you need to cut off the unnecessary flanges on the rear wing seam using a hacksaw, shown below already removed. These are the tabs that stand proud of the seam and were used to secure the wiring loom, and will foul on the bottom of the AMSS.

Also remove the carpet underlay from the outside edge of the wheelarch where the main loom runs down. I always remove the underlay and replace with Dynamat or similar, likewise with the rubber backed stuff near the alarm controller.



These bits,
shown
already
removed



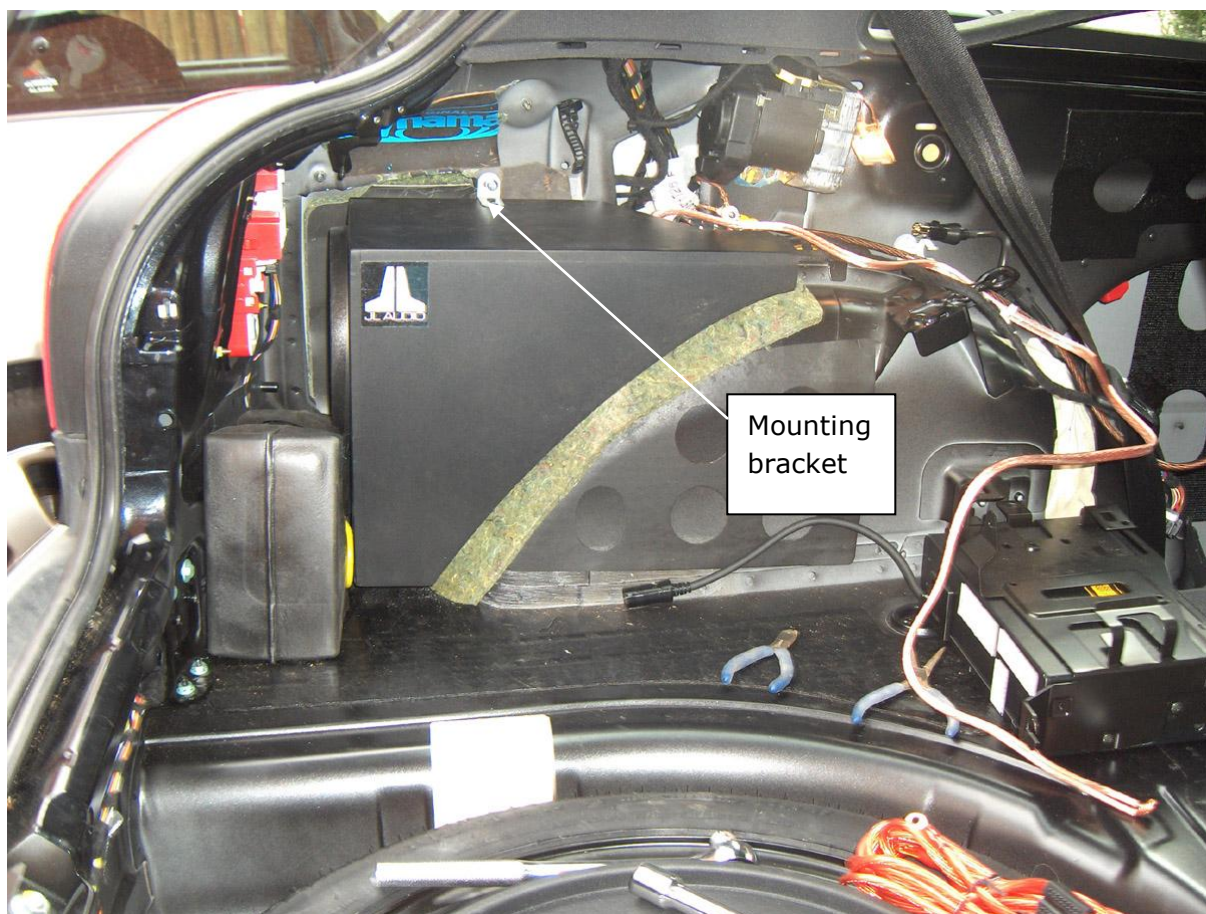
Fitting the AMSS

Before doing anything securely connect the cable for the sub to the gold terminal posts, as this is tricky to do with the sub in place.

You are now ready to install the AMSS. Make sure the main loom running down the wheel arch is pushed back as far as possible (as shown above). Strip away the carpet underlay to give you a channel for the loom. If possible Dynamat the panel that the alarm is bolted to, and the outer panel that has more rubber coated underlay on it. This will give you tighter bass, and less vibration from the bodywork. Ensure the hole above the alarm controller is clear of Dynamat.

You should now be able to mount the sub enclosure onto the wheelarch seam, guiding it over bracket at the bottom of the seam, with the bolt through it, and trying not to foul the foam cover on the central locking pump (the big rubbery thing tied to the bodywork with a big zip tie). You may want to cut the tiewrap and move the pump out of the way to ease installation (Quattro models only). Ensure the slot at the bottom of the sub sits over the bracket at the bottom of the seam and rests on the bolt going through it. Push the sub down and away from you. The back corner of the sub should fit fairly tightly against the car bodywork (where the bolt was cut off), and the sub should be level, and feel fairly secure.

With the sub correctly in place, you should be able to see the hole which the alarm loom was fixed to, about 5-10mm above the top of the sub. You will use this hole to secure the sub to the car with the supplied bracket.





Position the bracket so that the long part is sitting on the sub, and the short bit is against the bodywork, with the hole lined up with the mounting hole in the body panel. With a sharp pencil mark round the bracket, and mark the inside slot for the 2 screws supplied. Remove the sub and drill 2 pilot holes in the top of the sub to secure the bracket. Screw the bracket in place, and refit the sub as before.

With a bit of manoeuvring realign the bracket with the original hole.

Push the securing bolt supplied through the bracket and the hole.

Now for the tricky bit.

Use some super glue to glue one of the original nuts (when you removed the OEM sub) to the top of your little finger on your left hand. This will enable you to poke your little finger round the back of silver panel and position the nut onto the bolt without dropping it.

You can use a spanner to do this, but tape the nut to the spanner with gaffa/duck tape.

I found it easier to use my hand as you could feel what was going on.

Once you've caught the thread, tighten up the bolt, and use a spanner to get it nice and tight. When using the spanner, attach it to some tape or string, so you can't lose it down the back of the sub, (like I did the first time).



To get the best performance from the sub it is vital that it is secured well to the chassis of the car. It is advisable to install the 2nd bracket supplied at the rear of the sub. You can do this with the sub insitu, screw the bracket to the top of the sub and then bolt to the flange on the wheelarch as shown. This gives the sub rock hard stability which will allow it to perform at its best.



Amp Location

For a true stealth install the power amp can be located behind the nearside speaker panel. This will provide a completely hidden and secure install.

With the rear speaker panel removed, remove the big black polystyrene spacer and you will find you have quite a lot of room behind.

Before wiring anything up, offer up the amp (with the underside facing you) and with one of the available holes lined up, mark a second hole position. You may need to add a bracket to the bottom edge of the amp so that it reaches the door pillar.

Depending on the model it is preferable to mount the amp with the switches facing downwards, so any adjustment can be made later if necessary without having to completely remove the speaker panel & amp again.

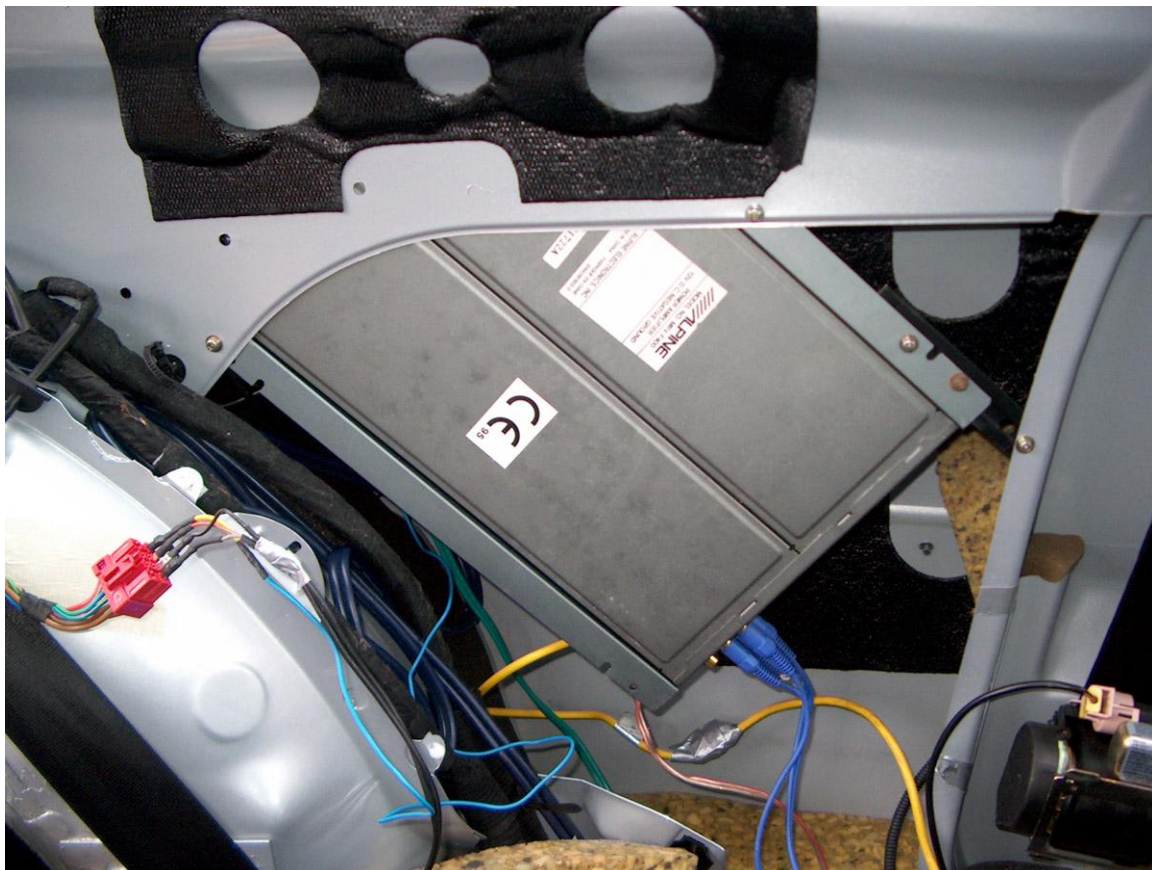
It is also advisable to stick a strip of Dynamat on the outer rear wing, up behind the inner panel to prevent scratching the outer wing while you position the amp, but not totally necessary if you're careful.

Drill the necessary holes with a 5mm drill bit, to give you a bit of room for error, remember to put a block of wood between the internal bodywork and the outer panel to prevent punching a hole/dent in the rear wing. **When drilling holes in the amp seal up the panel gaps with masking tape to prevent any swarf getting into the amp & shorting something out. Remember to remove this later.**

Offer up the amp again and ensure all three holes line up.

Before final fitment, wire everything up and test to ensure the gains are correct and everything works (see notes on amp settings later on in this document).

Wire up the amp and bolt it in position, make sure it doesn't jiggle around and is firm & secure. The sub loom that you need to tap into can be fed back on itself so that it nearly reaches the amp (the red plug shown in the attached pic).





****Important - Amp Connections****

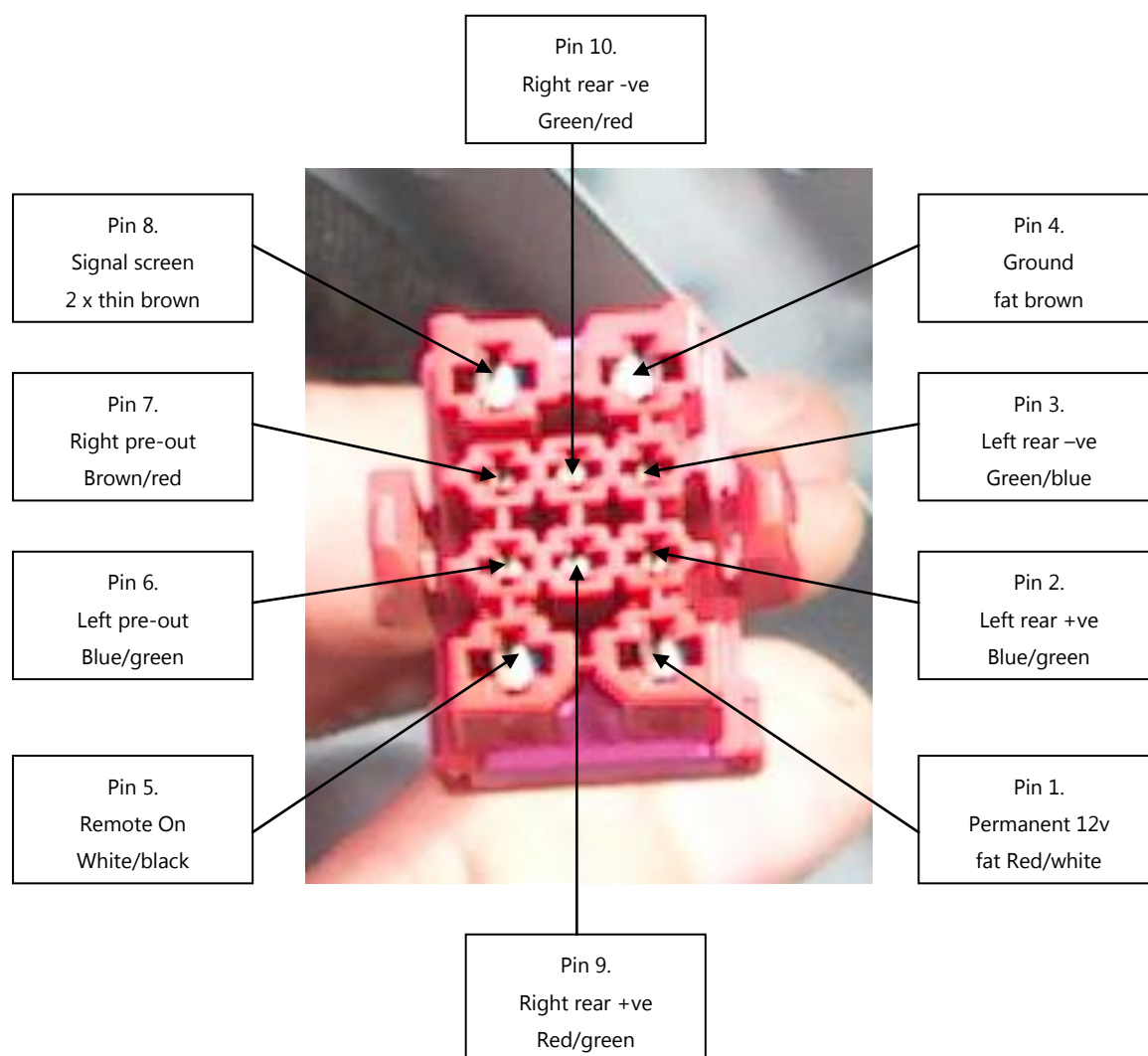
Connections to the amp can be made in 4 different ways depending on your setup:

Method 1. – Non Bose System using stock HU

Hook into the Audi loom

The red connector that the original sub was connected to has all the connections for your amp (apart from suitable permanent live & earth, see additional manual for running power to the battery). These include "remote on" and the rear line-out. If you didn't buy my ready made RCA adapter lead, you will need to take a short RCA cable and cut off one end to give you RCA's to a flying lead. Strip back the insulation, twist together the two screens and attach very small blade connectors to the right & left signal wires, one to the screen and one to the remote on lead. Plug the 4 wires into the corresponding sockets on the loom, as detailed below, there are only 4 you need to use for the sub and then 4 more to hook up the rear speakers.

Non Bose Sub loom pin out (socket side)



Once you have tested everything works then bend all the cables back on themselves and tape them securely to the connector block. This will prevent them coming loose.



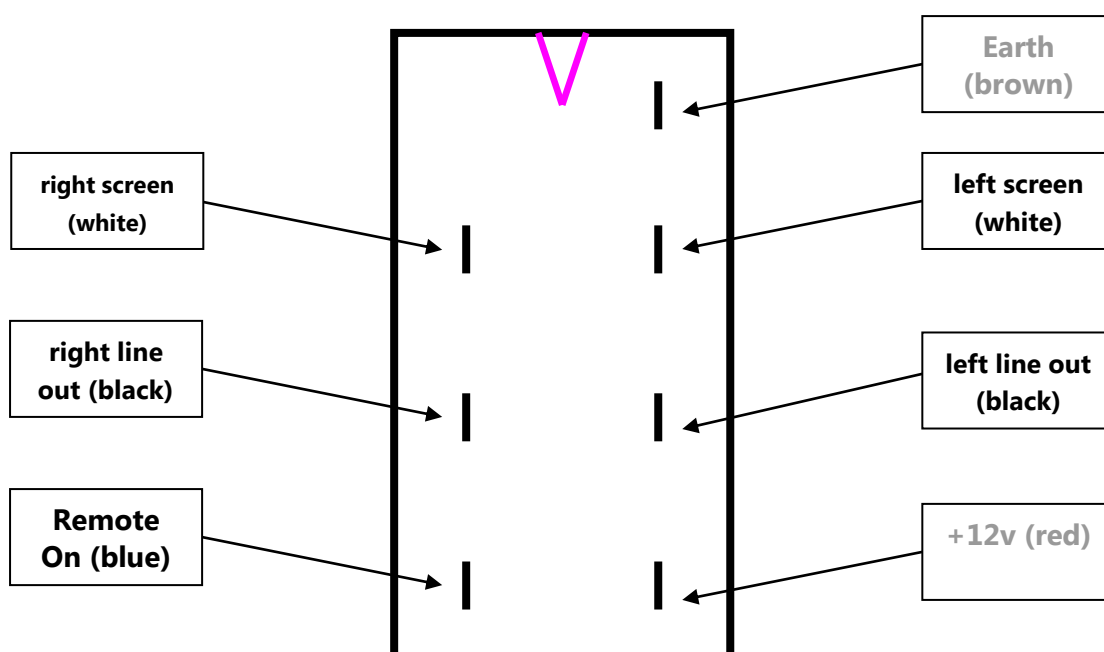
Method 2. – Bose System using stock HU

Hook into the Audi/Bose loom

The black connector that the original sub was connected to, has all the connections for your amp, (apart from suitable permanent live & earth, see additional manual for running power to the battery). These include "remote on" and the left & right line-outs. If you didn't buy my ready made RCA adapter lead, you will need to take a short RCA cable and cut off one end to give you RCA's to a flying lead. Strip back the insulation, so that you have left & right signal wires and two screens and solder very small blade connectors to the right & left signal wires, one each to the screens and one to the remote on lead. Use heatshrink tubing or insulation tape to isolate each blade just leaving the tip exposed.

Plug the 5 blades into the corresponding sockets on the loom, as detailed below:

Bose Sub loom pin out (socket side)



Once you have tested everything works then bend all the cables back on themselves and tape them securely to the connector block. This will prevent them coming loose.

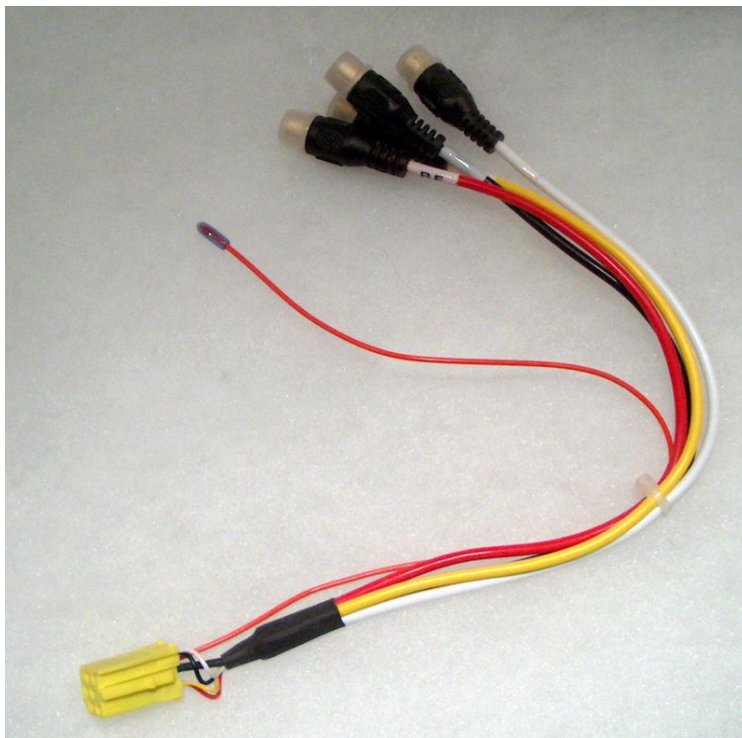


Method 3. – non-Bose System using stock HU & BLAU adapter

You only need to use this method if you are going to amp the front speakers otherwise use method 1.

You will need to pull the HU using the Euro removal keys and check you have the multicoloured multipart mini ISO connector (top one on the back of the HU). If you have the solid black connector and want to retain the DIS radio feed and/or have a CD changer, you will need to buy a pass through adapter or make serious modifications to the connector with a hacksaw.

The Blaupunkt mini-ISO to RCA adapter, available from Autoleads (shown below) allows you to connect standard RCA's to your Audi HU for both front & rear pre-outs. You can then run RCA's direct from the head unit, connect the flying lead from the adapter to the Remote On connector on the amp.





Amp Settings

Depending on the amp you are using the gain will have to be set quite high at about 90%, as the Sub enclosure is so small it is very inefficient.

I use Alpine V12's as they are reliable and interference free. With some lesser brands you may find you have alternator whine from the rear speakers as the Audi wiring is pretty poor. If you get interference then it is worthwhile re-earthing the HU chassis directly to the chassis of the car. Also check the earth to the amp is making a good connection.

I use the chrome seatbelt runner at the bottom of the front passenger seatbelt. You will need an 8mm allen key to unscrew the bolt.

Suitable Amps

Non Bose

Alpine MRV-F400, 400s, 405

4 channel, with 1+2 channels bridged (channels 3+4 driving the rear speakers) 180wrms bridged into 4 ohms. Sub channel at 90% gain, rear channels at 50%

Bose or aftermarket HU with rears rewired to HU

Alpine MRV-T500 or T505

2 channel bridged 300wrms into 4 ohms @ 14.4v

You may want to leave the amp out for a while while you get this level sorted. This level is quite critical especially if you don't have a non fading sub pre-out. If you are using the original Concert or Symphony head units you need to make sure you get the gain is right before installing the amp permanently.

On a Concert/Symphony HU, you want the right amount of bass with the bass on the HU set to -2 (yes that's minus 2). This allows you to drive the cabin speakers harder without distortion, as they are no longer handling any significant bass, and gives you some head room if you get a CD that has very little bass on it.

You're only control of the level of bass coming from the sub is to use the bass control on the head unit, you can also fade the rears but this will obviously fade the rear speakers as well as the sub, so ideally you want to leave this setting on zero.

I found the best gain settings were achieved by using a very bassy CD, setting the head unit to minus 4 bass, and turning the volume up to fairly loud. Then set the gain on the sub so that the sub is on the limit before distorting. Usually this requires the gain to be near max setting because the pre-out signal from the OEM head unit is very weak and the AMSS enclosure is inefficiently small.

If you are using a 4 channel amp, don't be tempted to jack up the gain to the rears as well, as this will be too loud when balanced with the front speakers.

I find setting the gain for the rears on the mid setting is about right, with the gain for the sub near max.

****Remember you have more than enough power to blow the JL sub, so if you hear it popping then back off the Bass, the louder the volume the less bass needed.****



Autochanger

To refit the autochanger you'll need some double sided trim tape or foam sticky pads and layer them to create a thick cushion of double sided stickiness.

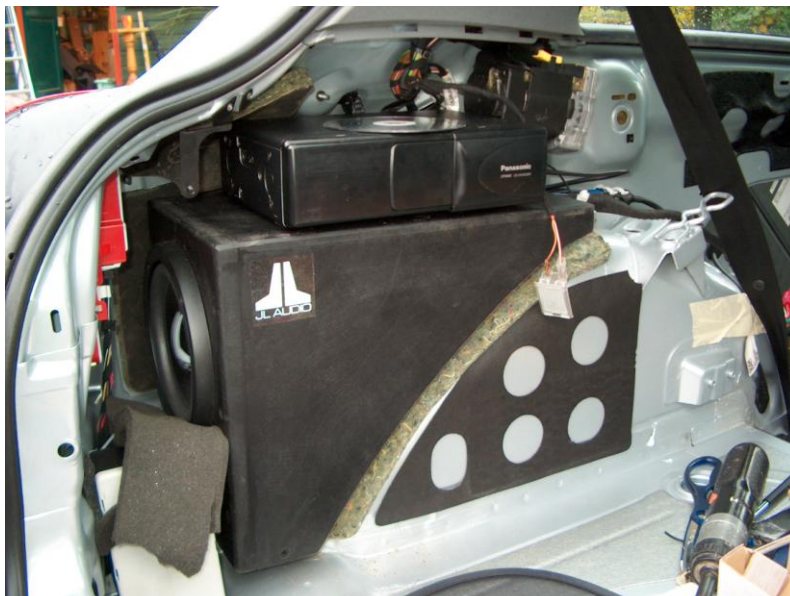
If you have experienced CD's jumping when going over potholes, mounting the changer this way should get rid of the problem as the foam provides additional cushioning & damping, rather than being hard bolted to the cars chassis.

Unlike the OEM sub, the AMSS enclosure does not vibrate.

The changer needs to be mounted as far back as you can get it, without touching the bodywork, and as close to the seatbelt reel as you can get it without touching the reel.

Check the cubby hole cover will fit back on without fouling on the changer.

OEM & aftermarket changers fitted, shown below



Any Problems give me a call on 07748-391357
Cheers, Andy Mac