



INTEGRAL AUDIO

INSTALLATION GUIDE

SOUNDSTAGE + SUBWOOFER SYSTEM

FOR 2012-2015 BMW 3-SERIES (F30/F80) ver. 5/2017

SKILL LEVEL REQUIRED

DO-IT-YOURSELF

INSTALLATION DIFFICULTY

3 OUT OF 5

INSTALLATION TIME

4-6 HOURS

APPLIES TO

2012-2015 F30 SEDAN W/ HIFI
2012-2015 F80 M3 SEDAN W/ HIFI



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IMPORTANT

- Read this Guide completely BEFORE you begin.
- Disconnect the battery negative terminal while working on the vehicle.
- DO NOT PLACE THE KEY FOB in the vehicle with the battery connected and the seat airbag wiring disconnected. Doing so will set off the airbag light, and must be reset by your dealer.
- ALWAYS check behind panels and components before drilling, cutting, or screwing into any part of a vehicle.
- This guide covers several different vehicle models and options. Some steps only apply to certain installations. Steps images are labeled with a black bar across the top:
 - **[SUBWOOFER ONLY]** step applies only if you are installing the Integral Audio Subwoofer System
 - **[ASD ONLY]** step applies only if you the vehicle is equipped with Active Sound Design.
 - If there is no label, the step applies to ALL installations
 - Because each kit applies to more than one vehicle, your kit may include extra items.

- I. SOUNDSTAGE™ SPEAKER PACKAGE**
 1. IASS-T 1" Silk Dome Tweeter (Pair)
 2. IASS-4 4" Midrange (Pair)
 3. IASS-8S 8" Shallow Woofer(Pair)
- II. SOUNDSTAGE™ CROSSOVER NETWORKS WITH VEHICLE-SPECIFIC TUNING & EQUALIZATION**
 4. Midrange-Tweeter Network (Pair) [F30.XO.MT]
 5. Underseat Woofer Network (2ch) [F30.XO.USW]
- III. ARC AUDIO KS MINI AMPLIFIER** (2ch w/Soundstage, 4ch w/Soundstage+Subwoofer)
- IV. SIGNAL & SPEAKER WIRING HARNESSES**
 6. SMARTConnect™ Signal Wiring Harness [F30.WH.SIG]
 7. ASD Harness (optional)
 8. Midrange-Tweeter Connection Harness (Pair)
 9. Underseat Woofer Pigtail (Pair)
- V. SOUNDSTAGE HARDWARE**
 10. Midrange Mounting Adapter & Hardware (Pair)
 11. Underseat Woofer Mounting Adapter & Hardware (Pair)
 12. Midrange-Tweeter Crossover Mounting Hardware (Pair)
- VI. AMPLIFIER INSTALLATION & WIRING**
 13. Amplfier Power Wiring Harness [F30.WH.PWR]
 14. Amplifier Mounting Bracket & Hardware

15. Factory Amplifier Relocation Bracket & Hardware

VII. INTEGRAL AUDIO PHANTOM™ SUBWOOFER

16. Phantom™ Subwoofer Enclosure [F30.SUB10]
17. Integral Audio Soundstage Series 10" Subwoofer [IASW10T4]

VIII. SUBWOOFER HARDWARE

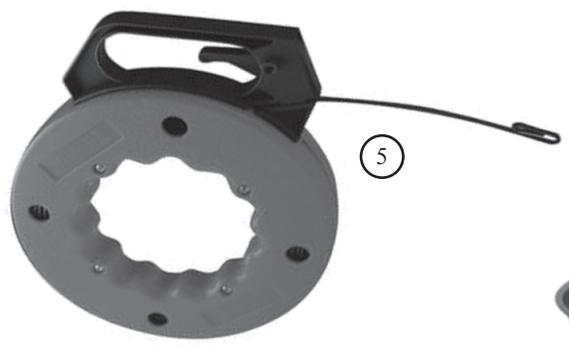
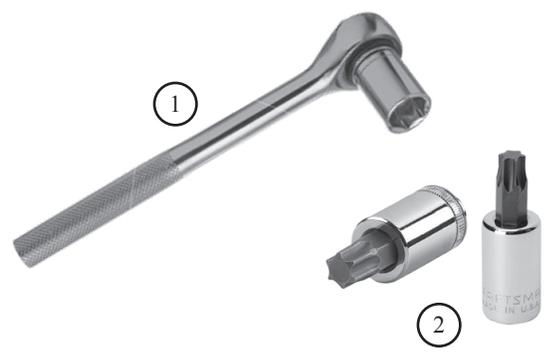
18. Subwoofer Mounting Bracket & Hardware
19. Subwoofer Support Bracket & Hardware
20. Neutrik Quick-connect Subwoofer Terminal & Wiring
21. Subwoofer Cover Grille

IX. SUBWOOFER REMOTE LEVEL CONTROL

22. Integral Audio Remote Level Control
23. 3M VHB Double-Sided Mounting Tape (3in)

I. TOOLS YOU WILL NEED:

1. Wrenches or Socket Driver & Sockets:
 - 8mm
 - 10mm deep socket
 - Nutdriver or Extension
2. Torx Bits:
 - T10
 - T20
 - T25
 - T40
 - T50
3. Screwdrivers:
 - Regular Slotted & Phillips
 - Small Slotted & Phillips
4. Plastic Panel Removal Tool(s)
5. Electrician's Wire Fish
6. Digital Voltmeter
7. 1/8" Allen (Hex) Wrench
8. Drill & 1/2" drill bit [SUBWOOFER ONLY]
9. Magnetic Parts Tray [Optional]





1. REMOVE BATTERY COVER

Remove battery cover by turning the locking knob and lifting out the cover.



2. DISCONNECT BATTERY NEGATIVE TERMINAL

Disconnect battery negative terminal with 10mm deep socket.



3. REMOVE TRUNK FLOOR PANEL

Remove the trunk floor panel.



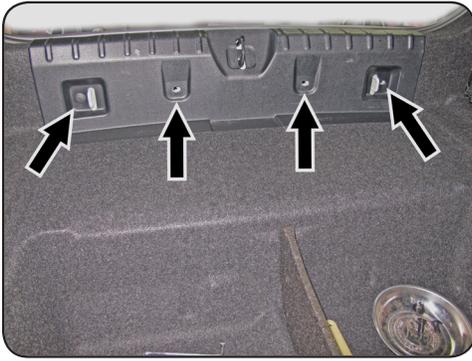
4. REMOVE TRUNK CENTER BIN (STEP 1)

Locate the center pin of the expansion clip at the forward passenger side corner of the liner.



5. REMOVE TRUNK CENTER BIN (STEP 2)

With a plastic panel removal tool, pry out center pin of the expansion clip. Pry out clip base. Remove bin liner.



6. REMOVE TRUNK REAR SILL

Remove the trunk rear sill by removing the (4) center pin expansion clips along the inner side. Lift the lower front edge of the sill forward to clear the D-rings, then give a firm lift up to release the friction clips holding the upper portion.



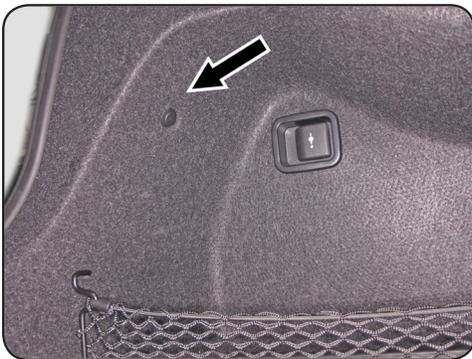
7. FOLD DOWN DRIVER SIDE REAR SEAT

Pull the rear seat release located in the trunk, fold down the driver-side rear seat.



8. REMOVE DRIVER-SIDE REAR QUARTER PANEL TRIM (STEP 1)

Locate the luggage D-ring tie down at the forward driver-side of the trunk. Pry off the black plastic cover. Remove the Torx T-40 screw. Lift out the D-ring assembly.



9. REMOVE DRIVER-SIDE REAR QUARTER PANEL TRIM (STEP 2)

There are (3) center-pin expansion clips that fasten the rear quarter panel trim to the car - locate & remove the one in the upper part of the rear cubby area.



10. REMOVE DRIVER-SIDE REAR QUARTER PANEL TRIM (STEP 3)

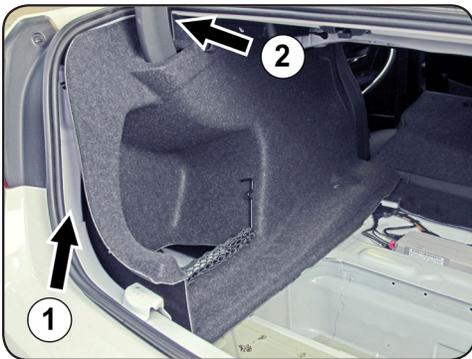
Then locate & remove the one on the side, under the parcel shelf area. This one is attached to a plastic bracket. Remove the expansion clip on the upper portion of the bracket, and leave the bracket attached to the quarter-panel trim.

**11. REMOVE DRIVER-SIDE REAR QUARTER PANEL TRIM (STEP 4)**

Then locate & remove the one on the forward edge of the panel, by the rear seat back.

**12. REMOVE DRIVER-SIDE REAR QUARTER PANEL TRIM (STEP 5)**

Now remove the trim panel. Start at the forward edge. Lift clear/free the forward edge from behind the trim at the sides of the rear seat backs and pull the panel out 4-6 inches. DO NOT COMPLETELY REMOVE YET.

**13. REMOVE DRIVER-SIDE REAR QUARTER PANEL TRIM (STEP 6)**

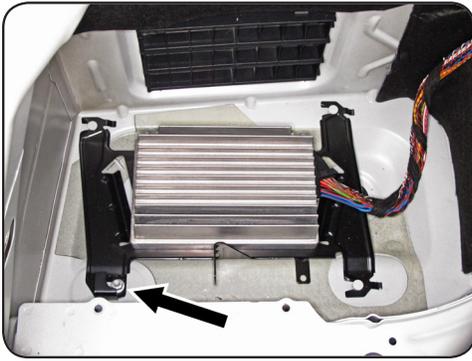
Free panel edge along area (1). Then carefully open the split in the panel at area (2) by pulling the split directly apart (i.e. not sideways) and free the panel from around the trunk support arm. DO NOT COMPLETELY REMOVE YET.

**14. REMOVE DRIVER-SIDE REAR QUARTER PANEL TRIM (STEP 7)**

Disconnect the plug on the back of the 12V power outlet, then remove the panel from the vehicle.

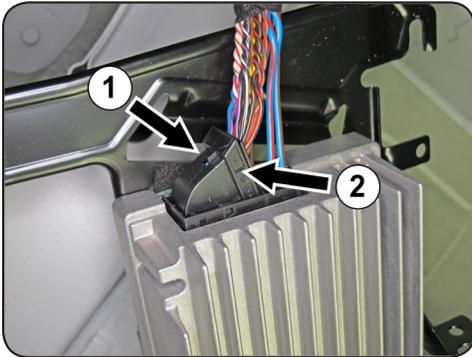
**15. REMOVE PLASTIC COVER**

Remove the nut fastening the plastic cover over the amp with a 10mm socket. Remove the cover.



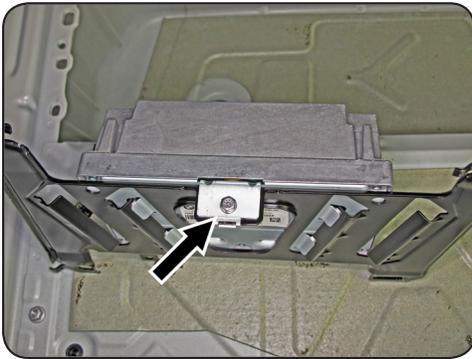
16. REMOVE THE FACTORY AMPLIFIER & BRACKET

Using a 10mm socket, remove the nut fastening the factory amplifier bracket to the vehicle. Slide the amplifier bracket forward to clear the mushroom studs and remove the amp and bracket.



17. DISCONNECT FACTORY AMPLIFIER HARNESS

Disconnect the factory wiring harness from the amplifier by pressing in the locking tab (1) and sliding the locking lever (2) to the left as viewed in the image.



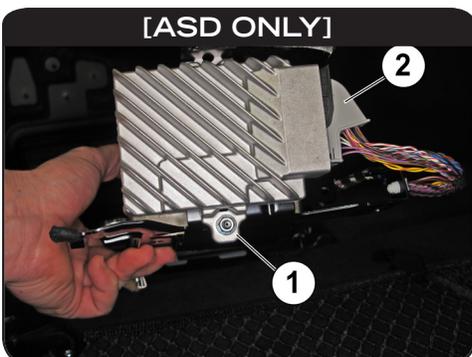
18. REMOVE THE FACTORY AMPLIFIER FROM THE BRACKET

Using an 8mm socket, remove the bolt that fastens the factory amplifier to the bracket. Slide the amplifier off the bracket (you may need to gently use a screwdriver to free the amp from the bracket).



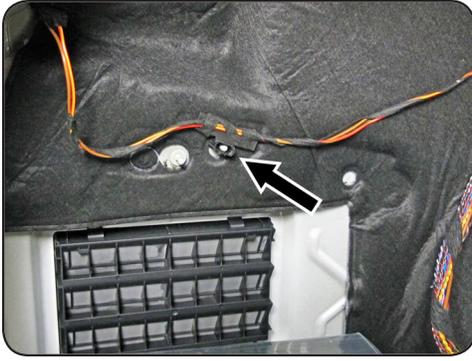
19. LOCATE THE ACTIVE SOUND DESIGN [ASD] MODULE

The Active Sound Design [ASD] Module, if present, will be mounted behind the factory amplifier.



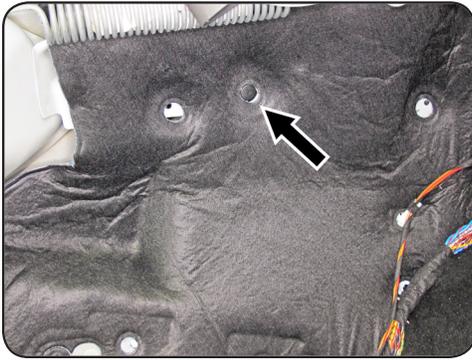
20. REMOVE THE ACTIVE SOUND DESIGN [ASD] MODULE

Using an 8mm socket, remove the nut (1) fastening the ASD module. Disconnect from the factory wiring harness (2) and remove.



21. RELOCATE FACTORY AMPLIFIER (STEP 1)

Loosen/free the 12V power outlet wire bundle by sliding the plastic retaining clip off the mounting stud.



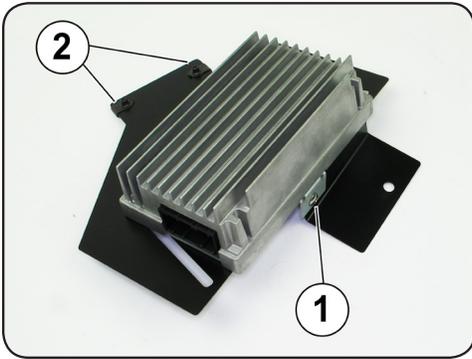
22. RELOCATE FACTORY AMPLIFIER (STEP 2)

Loosen/free the sound liner by removing the center pin expansion clip. Pull the sound liner down and forward to access the area behind it.



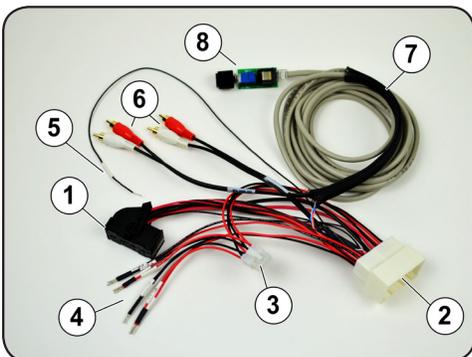
23. HARDWARE SELECTION

Locate the *OEM Amplifier Relocation Kit* [F30.AMP.RELO.KIT], which contains the *OEM Amp Relocation Bracket* [OEM_AMP_RELO_BRKT] and the hardware packet labeled *F30 OEM Amplifier Relocation Hardware* [F30.AMP.RELO.HW].



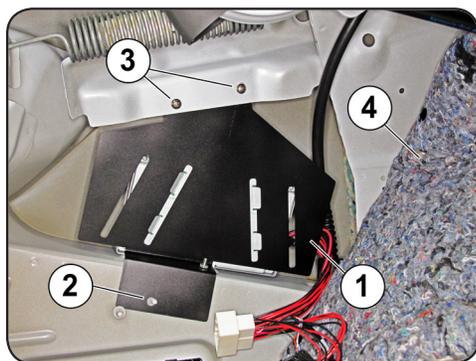
24. RELOCATE FACTORY AMPLIFIER (STEP 3)

Slide one of the included clip-on nuts over the hole indicated at area (1). The threads should be on the inside of the bracket. Slide the Factory amplifier onto the *OEM Amp Relocation Bracket*. Bend the tabs on the factory amp at area if needed for a tight fit. Secure the amp to the bracket with one of the *10-24 x 1/2" Machine Screws*. Slide the remaining two clip-on nuts over the holes at area (2). The tapped portion of the clip should be on the same side as the amp.



25. HARDWARE SELECTION

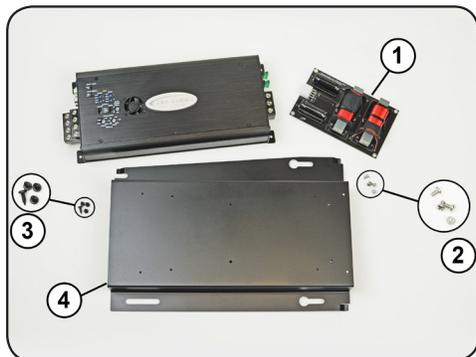
Locate the *Signal Wiring Harness* [F30.WH.SIG]. Identification for reference: connector 1) plugs into the Factory Amplifier; (2) plugs into the Factory Signal Harness; (3) plugs into the USW crossover board; (4) is the speaker output wiring, connects to ARC amplifier speaker output terminals; (5) the remote turn on lead connects to the ARC amplifier; (6) RCAs connect to ARC amplifier; and (7) and (8) are the remote volume control and wiring.



26. RELOCATE FACTORY AMPLIFIER (STEP 4)

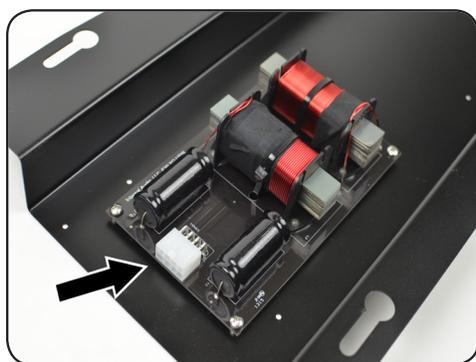
Pull out the foam sound liner (4). Connect the *Signal Wiring Harness* to the factory amplifier and lock the connector. Slide the bracket over the coarse-threaded stud (2). Use the remaining two #10-24 *Truss Head Machine Screws* from the hardware kit to secure the bracket (3). Secure the bottom of the bracket with the thin sheet metal *Flange Nut*.

NOTE: if you are installing the subwoofer, do not install the *Flange Nut* yet..



27. HARDWARE SELECTION

Locate the *Soundstage Crossovers & Tweeters [F30.SS.XO-T]* box and select the *Underseat Woofer Crossover [F30.XO.USW]* crossover (item 1). Locate the *F30 Amplifier Mounting Kit [F30.AMP.MNT.KIT]* containing the four #6-32 x 0.25" L *Machine Screws [USW.XO.MS]* (item 2), the four #6 x 3/8" *Black Sheet Metal Screws [AMP.MS.R]* (item 3), and the *Amplifier Mounting Bracket [F30.AMP.BRACKET]* (4). Locate the *ARC amplifier. [ASD only]*: Locate the *ASD-Defeat Wire Harness* and (2) pieces of the *VHB Tape*.



28. MOUNT USW CROSSOVER TO AMPLIFIER BRACKET

Mount the *USW Crossover* to the threaded standoffs on the underside of the *Amplifier Mounting Bracket* using the four #6-32 x 0.25" L *Machine Screws*. Make sure the connector on the crossover is oriented towards the near end of the amplifier bracket.



29. MOUNT ASD MODULE

Peel the backing layer from one side of the two sections of *VHB tape* and affix to the back of the *ASD module* (NOTE: different style/shape of *VHB* shown).



30. MOUNT ASD MODULE (STEP 2)

Peel the remaining backing layer from the *VHB tape* and attach the *ASD module* to the bottom of the *Amplifier Mounting Bracket* as shown. Place the *ASD module* close to the *USW Crossover*, leaving space for the connector housing (to be re-connected at a later step). Firmly press the *ASD module* onto the *Amplifier Mounting Bracket* for 30 seconds.



31. MOUNT ARC AMPLIFIER TO BRACKET

Attach the *ARC amplifier* to the *Amplifier Mounting Bracket* using the four #6 x 3/8" *Black Sheet Metal Screws*. Make sure the speaker and RCA terminals on the amplifier are facing the same end as the *USW Crossover*.

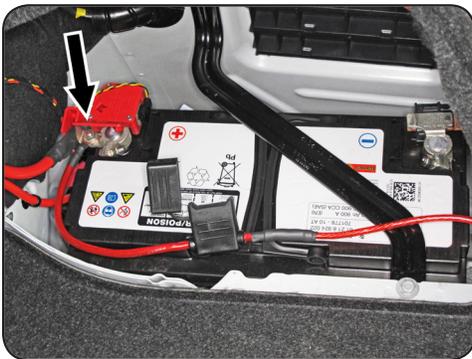
Place the completed assembly in the amplifier well but do not mount it to the vehicle yet.



32. HARDWARE SELECTION

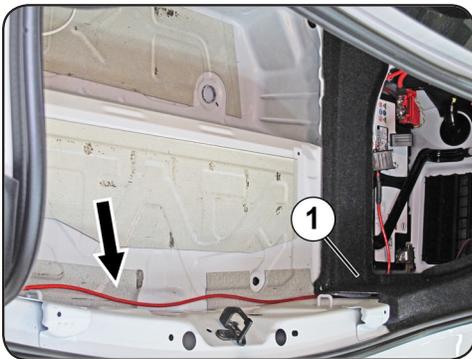
Locate the *Power Wiring Harness [F30.WH.PWR]*.

REMOVE THE FUSE FROM THE FUSE HOLDER, IF INSTALLED.



33. ATTACH POSITIVE TERMINAL TO BATTERY

Locate the terminal attachment point shown. Remove the nut with a 10mm socket and attach the positive wire terminal to the battery terminal. (You did remember to remove the fuse in the previous step, right?)



34. ROUTE POWER WIRE

Route the wire behind the trim panel (1), along the back edge of the trunk, and over to the amplifier location.



35. LOCATE COMMON GROUND TERMINAL

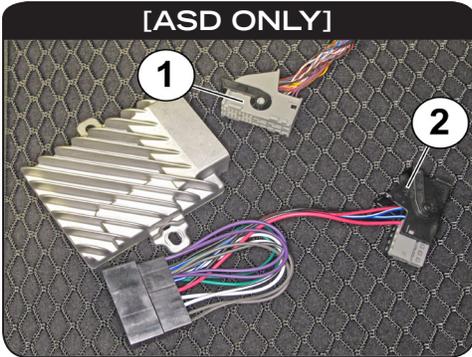
Locate the Common Ground point just forward of the amplifier mounting location, above the drivers-side rear wheel well.



36. ATTACH NEGATIVE TERMINAL TO COMMON GROUND

Use a 10mm socket to remove the nut and attach the ground wire terminal on top of the common ground terminal.

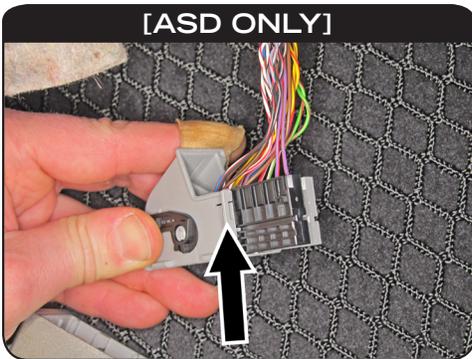
Route the wire to the back of the amplifier mounting area.



[ASD ONLY]

37. ASD WIRING HARNESS

The factory-installed gray connector housing (1) must be swapped with the black housing (2) that comes on the *ASD Harness*.



[ASD ONLY]

38. ASD WIRING HARNESS (STEP 2)

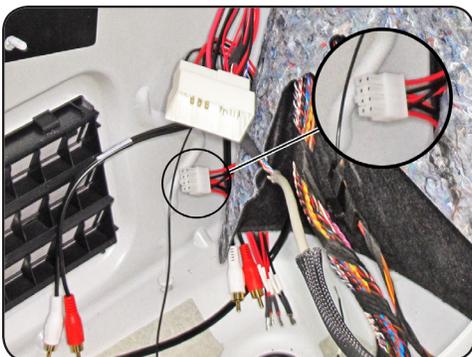
Remove the inner connectors from the gray housing by prying open the latch where indicated and sliding the inner connectors out. Repeat for the black housing on the *ASD Harness*.



[ASD ONLY]

39. ASD WIRING HARNESS (STEP 3)

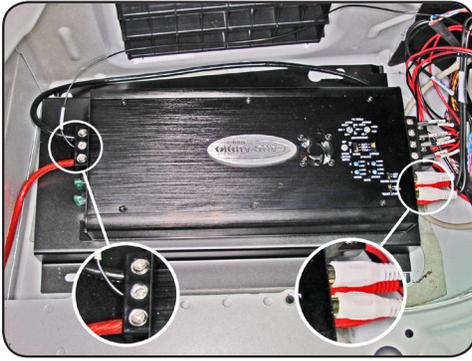
Swap the gray and black connector housings. The finished assembly should look like the picture at left: the original gray connector housing should be on the end of the *ASD Harness*, connecting to the ASD module, and the black housing should be connecting to the receptacle end of the *ASD Harness*.



40. AMPLIFIER CONNECTIONS (USW CROSSOVER)

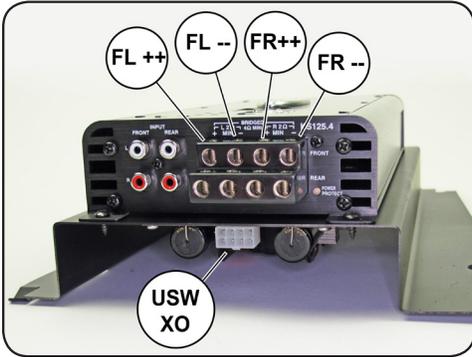
With the amplifier in place (but still not mounted) so that you can route the wires as needed, make the following wiring connections:

- Connect the 6-pole plug on the *Signal Wiring harness* (shown) to the *USW Crossover* mounted underneath the *ARC amplifier*



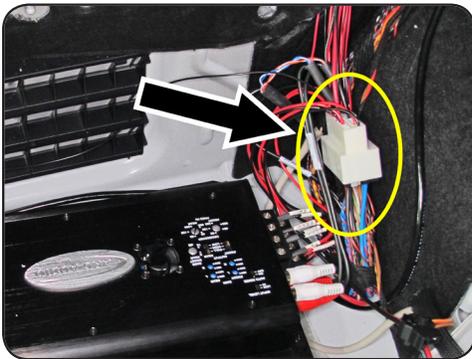
41. AMPLIFIER CONNECTIONS (POWER & RCA'S)

- Connect Remote Turn-on wire from the *Signal Wiring harness* to the *ARC amplifier* Remote On
- Connect Positive & Ground power wires to *ARC amplifier* power terminals
- Connect Front RCAs from *Signal Wiring harness* to *ARC amplifier* Front RCA inputs
- Connect Subwoofer RCAs from *Signal Wiring harness* to the *ARC Amplifier* Rear RCA inputs



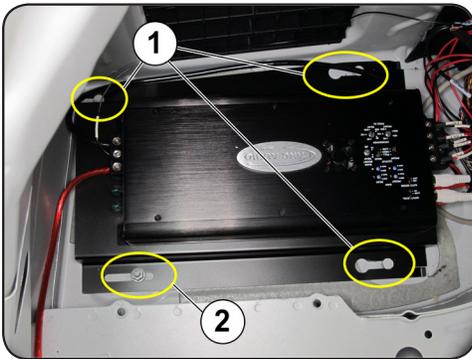
42. AMPLIFIER CONNECTIONS (SPEAKER OUTPUTS)

- Speaker Outputs from *Signal Wiring harness* to *ARC amplifier*. The wires are labeled, "FL++" is Front Left Positive, "FL--" is Front Left Negative, etc. There are two wires bundled together for EACH output connection. Make sure that BOTH wires are securely connected to the terminal.



43. AMPLIFIER CONNECTIONS (FACTORY PLUG)

Connect the plug that was originally disconnected from the factory amplifier to the mating connector on the *Signal Wiring harness*. Take care when connecting that the pins are aligned and do not get bent. Slide and lock the locking lever.



44. MOUNT AMPLIFIER

Slide the *Amplifier Mounting bracket* over the mushroom studs (1) and then rearwards to lock in place. Secure the amplifier to the vehicle with the nut removed earlier (2). NOTE: if you are also installing the subwoofer, wait to secure the amplifier until after you have connected the subwoofer output wire (in a later step)



45. REMOVE UNDER-SEAT WOOFER (STEP 1)

Slide the passenger-side front seat all the way back. Use a Torx T-50 to remove the two bolts holding the front of the seat brackets.



46. REMOVE UNDER-SEAT WOOFER (STEP 2)

Now slide the seat all the way forward. Remove the two bolts holding the rear of the seat.



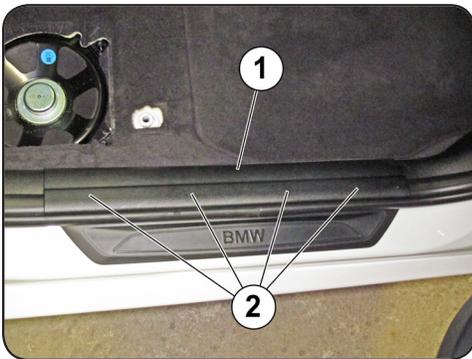
47. REMOVE UNDER-SEAT WOOFER (STEP 3)

Release the seat-back to the full forward position. You can now lean the seat all the way back and it will stay in that position, giving you access to the underseat area. You may have to move the seat a little forward or backward to get it to stay. You do not need to disconnect the airbag connector (we advise against it), but just be aware that it is there and take care with it.



48. REMOVE UNDER-SEAT WOOFER (STEP 4)

Remove the four Torx T-20 screws holding the USW cover and remove the cover.



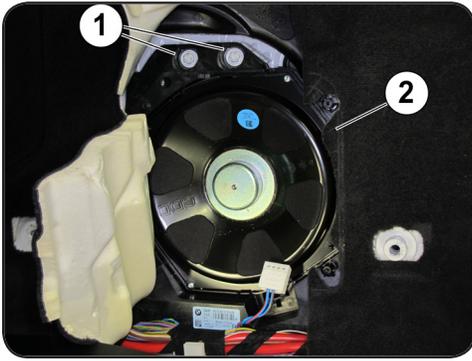
49. REMOVE UNDER-SEAT WOOFER (STEP 5)

Remove the Door Sill cover trim (1) by firmly pulling up to release the four clips located underneath (2).



50. REMOVE UNDER-SEAT WOOFER (STEP 6)

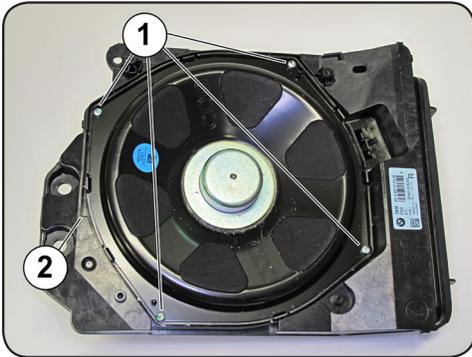
Some or all of the plastic clips (1) may still be stuck to the vehicle, remove them and put them back on the Door Sill cover trim. A panel removal pry tool (2) works well.



51. REMOVE UNDER-SEAT WOOFER (STEP 7)

Pull up the carpet to access the USW enclosure. Use a 10mm socket to remove the two nuts (1). Detach the wire bundle clip attached to the top corner of the USW enclosure (2).

Remove the enclosure by lifting up the inner edge first, then lifting up and towards the middle of the vehicle. Unplug the wiring/connector by depressing the locking tab in the connector. Remove the USW enclosure from the vehicle.



52. REMOVE UNDER-SEAT WOOFER (STEP 8)

Place the USW enclosure on a workbench or other solid work surface. Remove the four Torx T-10 screws (1). Starting at the strongest point (2) carefully pry the woofer from the enclosure.

REPEAT THE PREVIOUS 8 STEPS FOR THE DRIVER SIDE



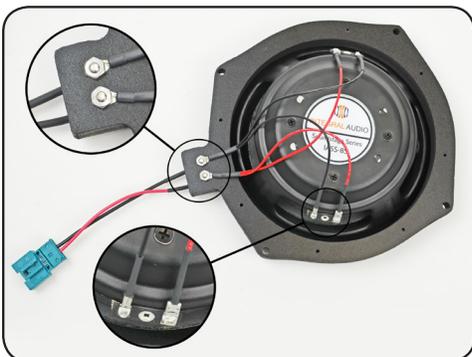
53. MOUNT IASS-8S TO ADAPTER PLATE

Locate the two *IASS-8S Shallow Woofers* and the *Underseat Woofer Hardware Kit [F30.USW.HW-KIT]*. Mount each woofer to one of the *USW Mounting Adapters* using eight of the *#10 x 3/4" Black Screws*.



54. HARDWARE SELECTION

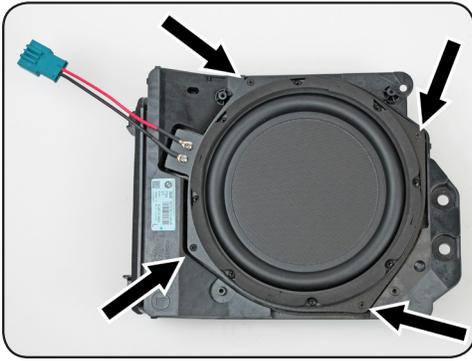
Locate the *Underseat Woofer Hardware Kit [F30.USW.HW.KIT]*. Select the two sets of *USW Wiring Pigtails [F30.WH.USW]*, the four *#8-32 x 1" Machine Screws*, the four *#8 Nuts*, and the eight *#8 Flat Washers*.



55. IASS-8S WIRING

Use the *#8-32 x 1" Machine Screws* to connect the inner and outer wiring pigtails. The washers should be underneath the ring terminals on both sides (washers should be touching the mounting adapter ring).

Connect the positive and negative wires to the speaker terminals as shown.



56. INSTALL THE IASS-8S WOOFERS IN THE USW ENCLOSURE

Use the four #6 x 1.25" *Pan Head Screws* to mount the woofer to the enclosure (these are the longer, thinner screws with a rounded head - don't confuse them with the cover screws which are a little thicker and shorter and have a flat head).



57. RE-INSTALL THE USW ENCLOSURE

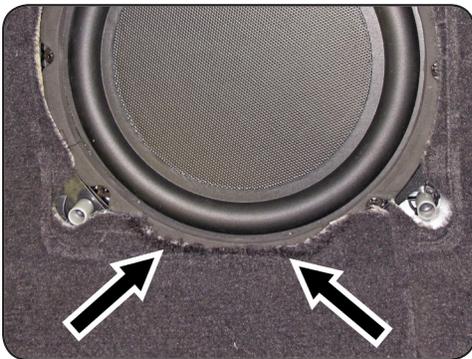
Re-install the enclosure in the vehicle. It may take a little wiggling to get the open end (the side towards the door sill) to slide into its slot. Make sure all wiring is run clear. Replace the two nuts removed previously and tighten with a 10mm socket.

Connect the USW plug to the factory connector. Replace the carpet.



58. TRIM CARPET EDGE (STEP 1)

The edge of the carpet nearest the door will overlap the new Underseat Woofer and must be trimmed clear. Identify the overlapping area shown at right and proceed to the next step.



59. TRIM CARPET EDGE (STEP 2)

Use heavy scissors or shears to trim the carpet so that it no longer covers the speaker, as shown. Be careful not to trim beyond the edge of the impression of the grille, which will be easy to see imprinted on the carpet.



60. HARDWARE SELECTION

Select the remaining items from the *Underseat Woofer Hardware Kit*: the eight *Nylon Spacers* and the eight #8 x 1" *Flat Head Screws*.

Make sure you are selecting the spacers from the correct kit - the *Midrange-Tweeter Crossover Kit* has similar spacers, but they are a different size!



61. INSTALL THE USW COVER GRILLE (STEP 1)

Place the spacers over the screw bosses as shown.

(enclosure shown removed for clarity)



62. INSTALL THE USW COVER GRILLE (STEP 2)

The raised “feet” on the cover grille fit over the spacers and should lock into place. Attach the cover with the four #8 x 1” flat head screws. Put the seat back in place, but do not re-bolt it yet!

(enclosure shown removed for clarity)

REPEAT THE PREVIOUS 8 STEPS FOR THE OTHER SIDE



63. REMOVE THE DRIVERS SIDE DOOR TRIM (STEP 1)

Remove the window control unit by prying up on the front edge with a plastic panel removal tool. Once the front edge is lifted, release the clip (see next step image) and lift out.



64. REMOVE THE DRIVERS SIDE DOOR TRIM (STEP 2)

Disconnect the wiring connector by releasing the locking lever. Remove the window control unit.



65. REMOVE THE DRIVERS SIDE DOOR TRIM (STEP 3)

Remove the door handle trim cover (1). Look for the small opening indicated by the arrow and start there. Work your way around the edge and remove the trim.



66. REMOVE THE DRIVERS SIDE DOOR TRIM (STEP 4)

Remove the two Torx T-25 screws shown at the arrows. You will likely need a nut driver or socket extension to reach them.



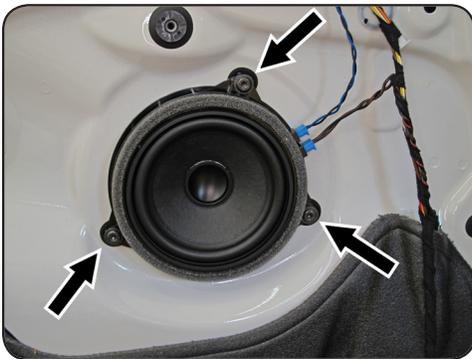
67. REMOVE THE DRIVERS SIDE DOOR TRIM (STEP 5)

Remove the Door Trim Panel. Start where the arrow is pointing. Insert your plastic panel removal tool between the door trim and the door sheet metal. Pry up until the clips release and you can get your fingers behind the panel. Pull firmly. Work your way around the bottom of the door first., then up to the top. Be careful of the door lock indicator - lift the trim panel up and over the lock indicator.



68. REMOVE THE DRIVERS SIDE DOOR TRIM (STEP 6)

You do not need to remove the door panel trim completely, but you can if you want. You can leave it attached and prop up the bottom, or you can disconnect the door handle release and the remaining wiring and remove the panel completely.



69. REMOVE THE FACTORY MIDRANGE DRIVER

Remove the three Torx T-20 screws indicated. Unplug and remove the midrange driver.

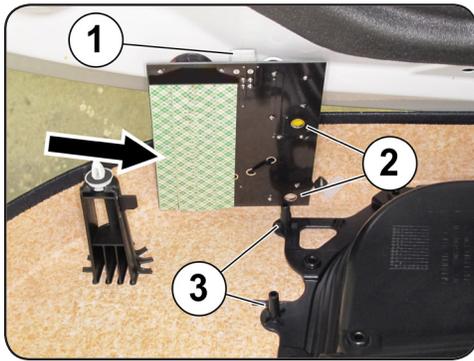
Retain the Torx T-20 screws, you will use them to mount the new midrange.



70. HARDWARE SELECTION

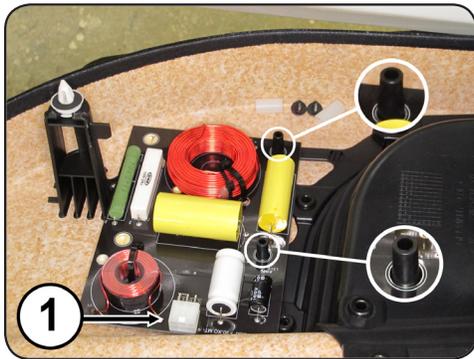
Select the two *Midrange/Tweeter Crossovers* [F30.XO.MT] from the *Soundstage Crossovers & Tweeters* [F30.SS.XO-T] box.

Select the four *Nylon Spacers* and the four *#8 x 1/2" Truss Head Screws* and the *4.5" x 2" Double-sided Foam Tape* from the *Mid-range, Tweeter, & Crossover Hardware Kit* [F30.XO-MT.MNT.KIT].



71. MOUNT MIDRANGE/TWEETER CROSSOVERS (STEP 1)

Orient the *Midrange/Tweeter Crossover* in the lower rear portion of the door trim so that the white electrical connector (1) is facing up and the holes on the forward side of the crossover board (2) align with the screw bosses on the door (3). Peel the backing off one side of the 4.5" x 2" *Double-sided Foam Tape* and affix as shown - do not cover the holes in the crossover board (2)!



72. MOUNT MIDRANGE/TWEETER CROSSOVERS (STEP 2)

Peel the remaining backing off the 4.5" x 2" *Double-sided Foam Tape* and place the *Midrange/Tweeter Crossover* over the screw bosses as shown. PRESS & HOLD firmly for 45 seconds.



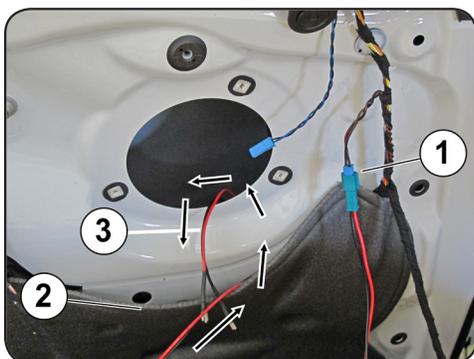
73. MOUNT MIDRANGE/TWEETER CROSSOVERS (STEP 3)

Slide a *Nylon Spacer* over each screw boss and secure with a #8 x 1/2" *Large Head Screws*. Carefully tighten the screws - do not overtighten!



74. HARDWARE SELECTION

Select the *Midrange-Tweeter Wiring Harness* [F30.WH.MT-XO] from the *Midrange, Tweeter, & Crossover Hardware Kit* [F30.MT-XO.HW.KIT].



75. CONNECT & ROUTE MID-TWEET HARNESS

Connect the 6-pole plug of the *Midrange-Tweeter Wiring Harness* to the mating plug on the crossover.

Connect the plug on the harness (1) to the mating plug on the vehicle (not the tweeter!). Carefully pull open a section of the foam door liner (2) and route the midrange branch of the harness into the door and out the midrange speaker cutout.



76. MOUNT IASS-4 TO ADAPTER

Locate the two *Midrange Mounting Adapter [F30.MID.ADAPTER]* and twelve #6 x 3/8" *Pan Head Screws [IASS-4-MS]* screws in the *Midrange, Tweeter, & Crossover Hardware Kit*. Mount the *IASS-4 Midrange* to the *Adapter* using the #6 x 3/8" *Pan Head Screws*.



[SUBWOOFER ONLY]

77. MOUNT IASS-4 TO DOOR

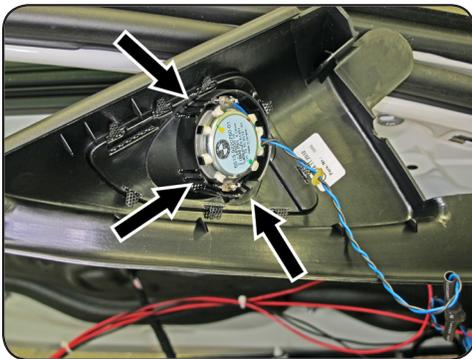
Connect the wiring to the midrange terminals. Using the three Torx T-20 screws removed earlier, mount the midrange to the door.

Pull the slack from the midrange wires (just until snug), then press/re-seal the foam door liner.



78. LOOSEN UPPER DOOR TRIM

Loosen the "mirror sail" portion of the upper door trim. Pull out on the trim at the bottom of the mirror sail to release the forward edge, then out and around to release the rear edge (by the window). You do not need to remove the trim completely, just loosen it enough to gain access to the tweeter behind.



79. REMOVE FACTORY TWEETER

Remove the foam insert. Remove the factory tweeter by releasing the three plastic catches indicated by the arrows.



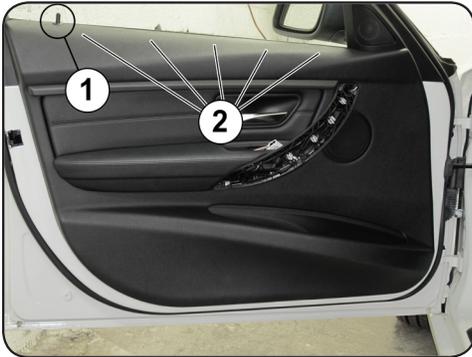
80. INSTALL IASS-T1C TWEETER

Connect the wiring terminals to the tweeter tabs. Be careful not to bend the tabs - work them side to side and slide them on until they are fully connected/locked, with no tweeter tab remaining exposed. Gently bend the attached wire-terminal inward at an angle. Be sure the clear vinyl terminal boot is isolating the tab/terminal from the metal housing of the tweeter.



81. REPLACE UPPER DOOR TRIM

Replace the foam insert behind the tweeter and re-attach the upper door trim. The wiring harness should be run as shown, and clear of the midrange driver as well as any pinch points or clips. Use two of the 4" Black Zipties from the *Midrange, Tweeter, and Crossover Hardware Kit* to secure the wire bundle.



82. REPLACE DOOR PANEL

Insert door lock indicator (1) thru hole. Then align the five clips along the top of the panel (2). Wiggle the panel slightly to be sure all clips are aligned. Give a firm strike over each clip to lock in place. Repeat for the remaining door clips. TIP: a bit of masking tape on the panel in the location of the clips can help locate them. Do not finish re-installing the panel until after testing!

REPEAT THE PREVIOUS 21 STEPS FOR THE OTHER SIDE



83. LOOSEN THE DRIVER SIDE REAR SEAT BOTTOM

NOTE: The next steps cover the Subwoofer Remote Volume Control installation. If you are not installing the subwoofer now, but plan to install it later, we recommend installing the Remote Volume Control now. Otherwise, skip to [Step 93 "Remove Plastic Cover Panel"](#).

Raise the drivers-side rear seat back up. Pull up firmly on the front edge of the rear seat bottom (1) to release. Prop the seat bottom up 6-8".



84. REMOVE REAR DOOR SILL TRIM (STEP 1)

Remove the center pin expansion clip (1). Remove the Door Sill Trim panel (2) by pulling up firmly to release the four clips below (3).

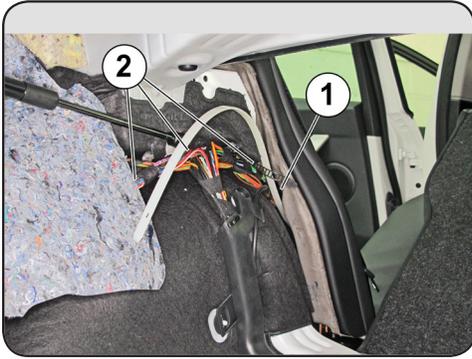
Release the rear seat back again and lean it down on the propped up seat bottom.



85. SUBWOOFER REMOTE VOLUME CONTROL WIRE (STEP 1)

Remove any clips (1) that are still attached to the vehicle and re-attach them to the Door Sill Trim.

Insert an electricians or automotive wire fish tape into the opening at (2).

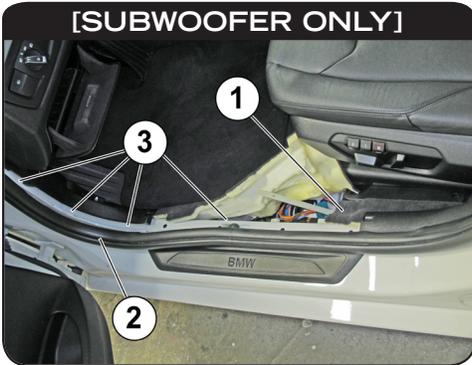


86. SUBWOOFER REMOTE VOLUME CONTROL WIRE (STEP 2)

Exit the fish tape at the top of the trim panel (1).

Locate the Remote Volume Control wire (the long ethernet-style cable) in the *Signal Wiring Harness*. Route this wire from the rear trunk area along the existing factory wiring bundle (2) and up to the fish tape. Secure with two of the remaining 4" *Cable Zip Ties*.

Tape the Remote Volume Control wire to the fish tape and pull through to the rear door sill area.



[SUBWOOFER ONLY]

87. SUBWOOFER REMOTE VOLUME CONTROL WIRE (STEP 3)

Fish the Remote Volume Control wire forward and under the base of the B-pillar (the column between the front and rear door) trim, exiting at the forward section of the B-pillar trim (1).

Pull up on the door seal (2) to release. Route the Remote Volume Control Wire under the carpet and along the gap by the door frame (3).



[SUBWOOFER ONLY]

88. REMOVE DASH END TRIM COVER PANEL

Remove the Dash End Trim Cover panel (2) by inserting your plastic panel removal tool along the edge and prying the cover panel off.

Our preferred location for the Subwoofer Remote Volume Control is in the Oddments Box below the headlamp switch (1), but you can install it anywhere you like. It can be mounted with or without the housing. To mount w/o the housing, drill a hole for the shaft an mount with the included nut & washer.



[SUBWOOFER ONLY]

89. HARDWARE SELECTION - SUB REMOTE VOLUME CONTROL

Locate the *Remote Volume Kit*.

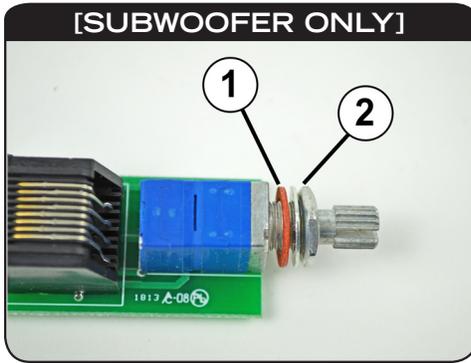
The next steps cover installing the Subwoofer Remote Volume Control in the Oddments Box (shown above). Read over the following steps before proceeding, if you are installing in a different location, some steps may not apply.



[SUBWOOFER ONLY]

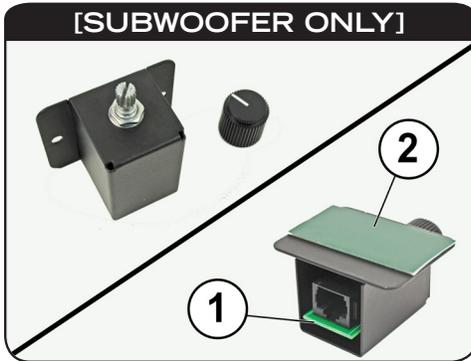
90. SUBWOOFER REMOTE VOLUME CONTROL WIRE (STEP 4)

Drill a 1/2" hole in the top corner of the Oddments Box, exactly where the arrow points (1). Route the Remote Volume Control wire through the opening at (2), behind the end of the dash panel (3), and through the hole drilled at (1).



91. REMOTE VOLUME CONTROL ASSEMBLY (STEP 1)

The red washer (1) goes on the inside of the housing. The metal washer and the nut (2) go on the outside of the housing.



92. REMOTE VOLUME CONTROL ASSEMBLY (STEP 2)

Insert the control into the housing. Use the washer and nut to secure the control. Make sure the printed circuit board is facing the bottom of the housing.

Peel one layer of backing from the pre-cut section of *VHB tape* (2) and affix to the top of the housing.



93. MOUNT REMOTE VOLUME CONTROL

Test fit the Remote Volume Control in the Oddments Box to confirm location (make sure you mount it far enough in to be able to close the cover!).

Plug in the connector of the Remote Volume Control wire. Peel the remaining layer of backing off the VHB tape and affix the Control.

If you are not installing the rest of the subwoofer, proceed to Step 93 "Remove Plastic Cover Panel".



94. SUBWOOFER INSTALLATION

Locate the *IASW10T4 Subwoofer, Subwoofer Enclosure, Subwoofer Hardware Kit, and Speaker Grille*.



95. MOUNT THE SUBWOOFER IN THE ENCLOSURE

Connect the *Subwoofer Internal Wiring Harness [F30.WH.SUB-INT]* to the *Neutrik terminal* in the enclosure. Note polarity markings on the *Neutrik terminal*! Connect the other end to the subwoofer.

Mount the subwoofer to the enclosure using the eight #10-24 x 1" Button Head Cap Screws and tighten with a 1/8" Allen wrench. Insert the speaker grille over and around the subwoofer gasket.



96. SUBWOOFER WIRING (NEUTRIK PLUG)

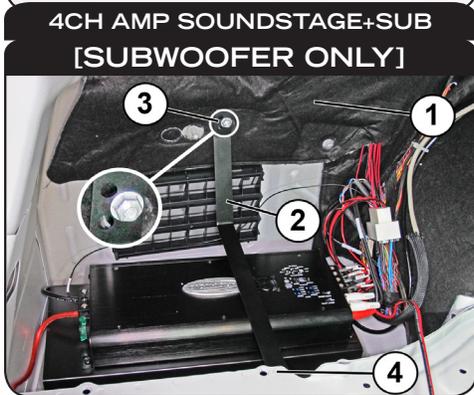
Select the 3ft long *Subwoofer Wiring Pigtail* from the *Subwoofer Hardware Kit*. Connect the *Neutrik Speak-on Plug* to one end of the subwoofer wire. Slide the blue chuck (1) over the wire, followed by the strain-relief bushing (2). Make the positive & negative connections to the plug as shown, tighten the terminals with a small Phillips screwdriver. Slide the bushing (2) forward and tighten the chuck (3) onto the plug (3).



97. AMPLIFIER CONNECTIONS (SUBWOOFER OUTPUT)

Connect the other end of the subwoofer wire to the *ARC amplifier*. The subwoofer output is connected in the “bridged” configuration on the amp. Connect the subwoofer output wire to the terminals shown.

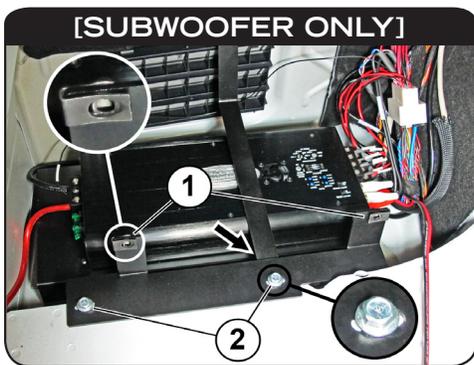
You already connected the USW XO connector earlier, right? Fasten the amp bracket with the nut removed earlier, tighten with a 10mm socket.



98. SUBWOOFER SUPPORT BRACKET

Make sure the sound liner (1) is back in place. Install the *Subwoofer Support Bracket [F30.SUB.HNG.BRKT]* (2). The upper end (3) mounts on the same course-threaded stud as the lower end of the *OEM Amp Relo Bracket*. The bracket has three holes for fit adjustment, start with the center hole. Fasten with the *Flange Nut* from the *Hardware Kit*.

The lower end of the *Subwoofer Support Bracket* will be secured underneath the hole shown at (4) in the next step.



99. SUBWOOFER MOUNTING BRACKET

Slide the two *Clip On Nuts* (1) over the holes in the uprights in the *Subwoofer Mounting Bracket*. Slide the clips on over the outer edge. The holes in the clips should align with the holes in the bracket. Use the *1/4” Serrated Flange Bolts* and *Nuts* to fasten the bracket through the holes (2). Be sure to fasten the *Subwoofer Support Bracket* underneath the hole on the right.

The lower mounting bracket holes are slotted to allow for side-to-side adjustment if needed. Start with them centered.



100. REMOVE 12V PLUG & PLASTIC COVER PANEL

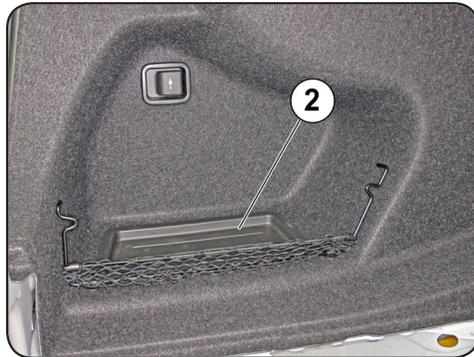
Remove the 12V plug from the trunk trim panel removed earlier. Slide/press to one side to release the locking tabs and remove.

Remove the plastic cover panel (2).



101. REMOVE NETTING & BRACKET

Remove the cubby cargo netting & bracket. Use a small screwdriver to pry open the teeth on the locking push-nuts (1) on both sides. Remove the bracket. Remove the plastic base clips (2) by unscrewing the top from the base.



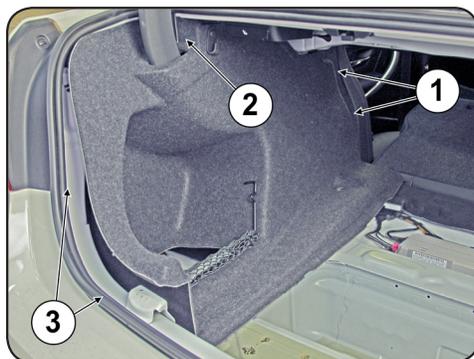
102. REMOVE PLASTIC COVER PANEL

Remove the plastic cover panel (2) by freeing the plastic locking tabs underneath.



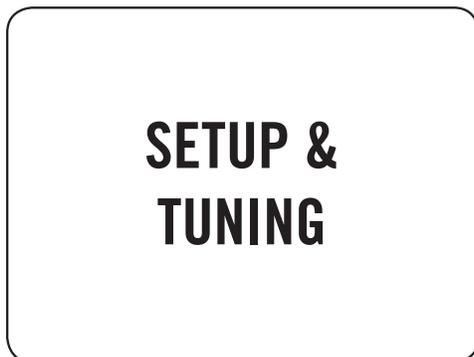
103. SUBWOOFER WIRING (NEUTRIK PLUG)

Place the rear quarter panel trim back in the vehicle. Insert the subwoofer wiring through the opening where the 12V plug was removed.



104. REPLACE TRUNK TRIM PANEL

Replace the rear quarter panel trim. Start by inserting the forward edge behind the trim at the side of the rear seat backs (1). Carefully open the slit in the panel (2) and place around the trunk lid support. Replace the rubber seal (3) over the edge of the panel.



105. SETUP & TUNING

YOU MUST DO EACH STEP EXACTLY AS DESCRIBED. IF POSSIBLE, HAVE SOMEONE ELSE READ THE INSTRUCTIONS TO YOU WHILE YOU PERFORM THE STEPS.



106. INITIAL AMP SETTINGS (SOUNDSTAGE ONLY, 2-CH AMP)

Input Level: LOW/RCA IN. (via selector button on amp end)

BX2: OFF

Gain (aka input sensitivity): minimum on all both channels.

Output: FULL

Crossover: N/A (with output set to FULL, the crossover dial has no effect).



107. INITIAL AMP SETTINGS (SOUNDSTAGE+SUB, 4-CH AMP)

Input Level: LOW

Auto Sense: OFF. (4ch amp only)

Gain (aka input sensitivity): minimum on all 4 channels.

Output: Front -> HIGH; Rear -> LOW

Crossover: Front -> 50Hz; Rear -> 65Hz (note: turn dial fully counter-clockwise to minimum, then turn up to setting).



108. SET BASS & TREBLE TO FLAT

From the music control section in the headunit, select TONE -> BASS. Set the bass level to flat (centered dial). Repeat for TREBLE.

These are crucial! Center the BALANCE and FADER

Select TONE -> VOLUME SETTINGS -> GONG. Set the gong volume to the lowest level. You can adjust this back up to preference later.



109. SET AUX INPUT LEVELS

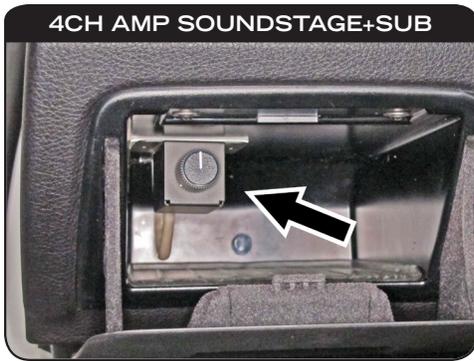
If you use any device (mp3 player, sat radio receiver, etc) that uses a headphone out jack as input to the AUX IN, set the volume on that device to approx. 80-90% of full volume. Adjust the AUX IN level setting in the headunit to around 60-80% of full volume.

From the music control section in the headunit, select TONE -> VOLUME SETTINGS -> AUX INPUT LEVEL and set the level.



110. SET FRONT CHANNELS GAIN

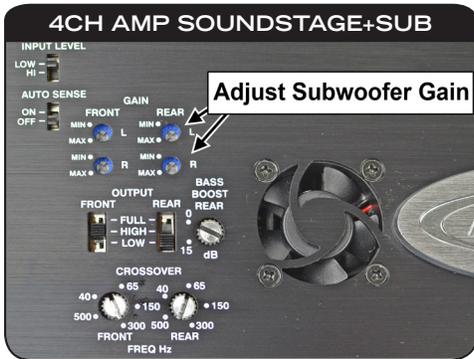
Insert the test tone CD. Play a 500Hz tone on repeat. Set your voltmeter to read AC voltage. Measure the voltage across the Front Right positive & negative speaker terminals on the amp. Turn the headunit volume up until you see 2.65V output (again, adjust the headunit volume - do not change the gain on the amp). With the test tone still playing, check the output voltage on the Front Left channel. If necessary, adjust the Front Left Input Sensi-



111. CENTER SUBWOOFER REMOTE VOLUME CONTROL

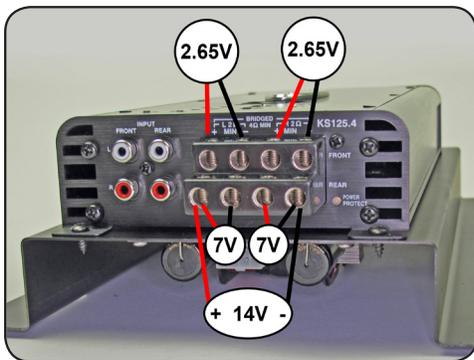
Leave the headunit volume unchanged. Play a 31.5Hz tone on repeat.

Turn *Subwoofer Remote Volume Control* to the center position (i.e. 50% volume).



112. SET SUBWOOFER GAIN (REAR AMPLIFIER CHANNELS)

Measure the output voltage on the Rear Right channel output. Adjust the *Amplifier GAIN* for the Right Rear channel up until you read 7V output. Repeat for the Left Rear channel. Measure the bridged output voltage (measure across the outer terminals where the subwoofer output wires are connected). You should see 14V.



113. SET SUBWOOFER GAIN (REAR AMP CHANNELS)

Double-check your readings. It is CRITICAL that you maintain the headunit volume throughout the process. If the headunit turns off, you **MUST** go back to the 500Hz tone and re-confirm that you have 2.65V output on the front channels before proceeding with the subwoofer settings. You will not get 2.65V on the Front channels with the 31.5Hz tone! (the electronic crossover in the amplifier blocks the low frequencies on the front channels).



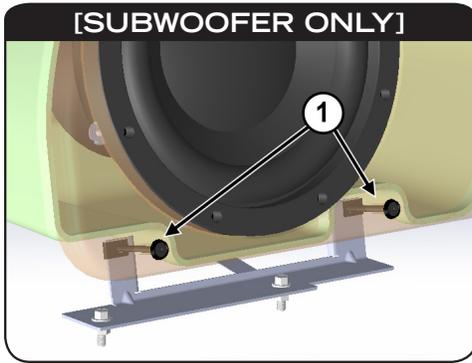
114. CONNECT SUBWOOFER

Connect the Neutrik plug to the subwoofer. Slide the subwoofer into the compartment. Do not attach the mounting screws yet.

Verify that each speaker is playing correctly.

115. CONFIRM SPEAKER CONNECTIONS & SETTINGS

In the headunit, turn the Balance control to fade full Left. Starting with a 20Hz tone, play each higher frequency up to about 4kHz. You should hear only the subwoofer first, then at ~50Hz you'll transition to the underseat woofer, at ~150Hz to the mid-range, and the tweeter at ~2.5kHz. You should hear each speaker on the left, in the correct order. You may get some sound from the right, but it should be low level. Fade Balance full Right and



116. FASTEN SUBWOOFER

Once you've completed settings and confirmed everything is operating correctly, fasten the subwoofer. The CAD image at left has some transparency so you can see how the bolts attach (1). Use the two #10-24 x 2.5" *Socket Head Cap Bolts* and *Black Flat Washers*. Make sure the enclosure is fully seated into the compartment. Press the bolts through the carpet and into the hole until they make contact with the bracket. Start the threads by hand! You only need to snug the bolts down, DO NOT OVERTIGHTEN!



117. SUBWOOFER LOGO BADGE

Affix the *Rectangular Domed Logo Badge* to the subwoofer grille (3) as shown.



118. TWEETER BADGES

Affix the *Oval Domed Logo Badges* in the forward corner of the tweeter cover grille. The adhesive can be repositioned several times in the first 10-15 minutes and takes 48 hours to fully set.



119. ROCK. AND ROLL.

Reinstall trim panels, seats, etc, in the reverse order they were removed.

That's it! You should be ready to rock and roll. If you aren't seriously impressed by the sound, something is wrong. Trust us on this. It should be clean, clear, and balanced. If it isn't, revisit the steps above or reach out to us for support at 646-926-0011 or email us at support@integralaudio.com.

- **AMPLIFIER TURN-ON:** You will notice that the amplifier turns on before the head unit, and remains on after the head unit is off. This is normal. The sound output system needs to be energized to play your door chimes, parking distance control sounds, bluetooth, etc. The amp will turn on from the moment the doors are unlocked or opened, and remain on from between 30 seconds and as much as 20 minutes after the car is locked. Again, this is perfectly normal. The idle current on the ARC amp is virtually zero and will not cause any issues with battery drain.
- **SIGNAL SOURCE QUALITY:** A poor quality signal will always sound poor no matter how good an audio system is. If you are using MP3s or home-burned CDs it is critical that you understand the limitations and impacts of digital compression methods. MP3s at less than 256kbps will have noticeable loss of quality. Satellite radio is also compressed and will have similar quality issues. Non-commercially obtained music (especially downloaded via P2P file-sharing) recordings are often re-mixed by third parties and will have been compressed in an unknown and uncontrolled manner. If you want good quality sound, use only commercially obtained CDs or MP3s compressed at 256kbps or 320kbps.
- **FACTORY RADIO SETTINGS:** Please note that the settings (Bass, Treble, Fade, Balance, AUX input level, etc.) are stored to each Key FOB & are specific to the Source (Radio, CD, AUX) for many vehicles. You will need to edit and save the settings for each source and each FOB to have consistent sound.
- **PLEASE LISTEN RESPONSIBLY:** Your new Integral Audio system is capable of delivering Sound Pressure Levels that can damage your hearing. It also delivers very clean, low-distortion sound reproduction. Because distortion sounds bad to your ears, and low-distortion sounds good, you are much more likely to listen at high levels with your new system. Please exercise caution - we want you to enjoy a lifetime of great sound!

Having Trouble? The best thing to do is contact us at support@integralaudio.com or via the phone number listed on the receipt that was emailed to you. We'll get you fixed up ASAP!