



INTEGRAL AUDIO

INSTALLATION GUIDE

MINI Cooper Hardtop 2007+ (R56) Model 1100S Subwoofer System



The MC1100S Subwoofer enclosure installs in the floor of the luggage compartment (boot). The amplifier installs behind the trim panel on the right side of the boot.

Vehicles equipped with the Digital Tuner option will need to install the amplifier under the front seat (contact us for more info).

INSTALLATION
DIFFICULTY

3 OUT OF 5

! IMPORTANT

- Read this Installation Guide Carefully and Completely before proceeding.
- Disconnect Negative Battery Terminal before beginning work.
- This is a guide – your vehicle may vary. ALWAYS check behind panels, etc. before drilling or screwing into any part of a vehicle.
- You are responsible for your own vehicle – use your brain and be careful!
- DO NOT DEVIATE FROM THESE INSTRUCTIONS

Contents

WHAT'S INCLUDED & WHAT YOU WILL NEED	2
INSTALLATION:	
A. PREP THE VEHICLE	3
B. RUN THE POWER & GROUND WIRES.....	3
C. SIGNAL WIRING (BASE STEREO).....	5
D. SIGNAL WIRING (HIFI).....	6
E. AMPLIFIER MOUNTING & CONNECTIONS.....	6
F. INSTALL ENCLOSURE MOUNTS.....	7
G. INSTALL ENCLOSURE	7
H. TESTING & RECOMMENDED SETTINGS	8
TIPS & TUNING	9
TROUBLESHOOTING	9

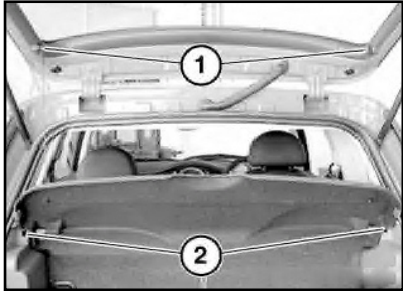
WHAT'S INCLUDED:

1. **Integral Audio Model 1100S Subwoofer Enclosure**
2. **Integral Audio IASW26-4 10" Subwoofer**
3. **ARC Audio KS125.2 MINI Amplifier**
4. **R56 False Floor Panel**
5. **Subwoofer Installation Kit**
 - Aluminum Mounting Bracket (2)
 - Threaded Insert (2)
 - Threaded Insert Installation Wrench
 - ¼" x 1" Hex Head Bolt
 - #10 x ¾" Pan Head Screw (8)
 - Knurled Knob (2)
 - Rubber Stand-off (9)
 - #10 x 1.5" Pan Head Screw (6)
 - #10 x 2.5" Pan Head Screw (3)
 - Cup Washer (6)
 - Terminal Cup w/ Gold Binding Posts
 - #6 x ¾" Black Pan Head Screw (4)
 - #10 x 1" Black Pan Head Screw (8)
 - ¼" Female Quick Disconnect (4)
6. **Amplifier Installation & Wiring Kit**
 - ¼" Male Quick Disconnect Terminal [Blue] (5)
 - 3M Wire Taps [Red] (5)
 - Roll of Electrical Tape
 - Heat Shrink Butt Connectors [Yellow] (5)
 - Banana Plugs – 1 pair [Red & Black]
 - Waterproof AGU Fuse Holder
 - 30 Amp AGU Fuse (2)
 - #6 x ½" Hex Washer Screw, Stainless (3)
 - ¼" Gold Ring Terminal – 1 pair [Red & Black]
 - 8 AWG Red Ultraflex Power Wire (15 feet)
 - 8 AWG Black Ultraflex Ground Wire (7 feet)
 - 18 AWG White Remote Turn-on Wire (15 feet)
 - 4-conductor Shielded Signal Cable (15 feet)
 - Heavy Duty 3M Self-Adhesive Velcro (18 inches)
 - 16 AWG Red/Black Speaker Wire (8 feet)
 - Self-Adhesive Padding (16 inches)
 - Extra Ring Terminal (Optional for Alternate Amp Grounding)

WHAT YOU WILL NEED:

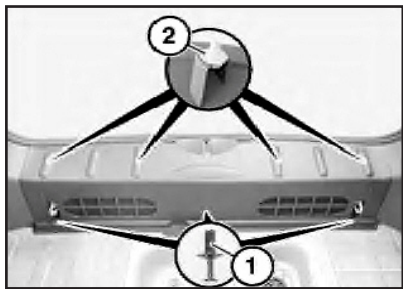
- Wire Stripper/Crimper
- Torx T50
- Flat Screwdriver
- Small Phillips Screwdriver
- Electric Drill
- Drill bits: 1/8", 7/16"
- Wrenches or Sockets: 7/16", 10mm
- 3mm Allen wrench
- Pliers
- Electrician's Wire Fish Tape
- Scissors
- Utility knife
- Lighter or Small Torch
- Pick Set or Set of Plastic Panel Removal tools
- Pencil or Fine-tip Black Marker
- Container to hold removed Screws, Clips, etc. (You'll thank us later!)

A. PREP THE VEHICLE



1. REMOVE REAR PARCEL SHELF

Detach straps (1) and slide the parcel shelf out of guides (2).



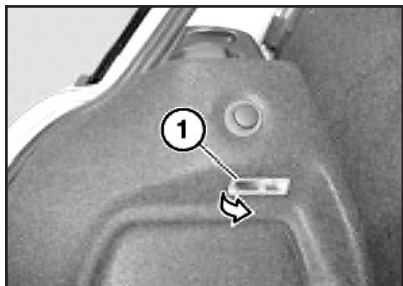
2. REMOVE REAR SILL (PART 1)

Remove the luggage compartment floor panel. Locate the three expansion rivets (1) at the lower edge of the sill. Hidden friction clips (2) shown for next step.



3. REMOVE REAR SILL (PART 2)

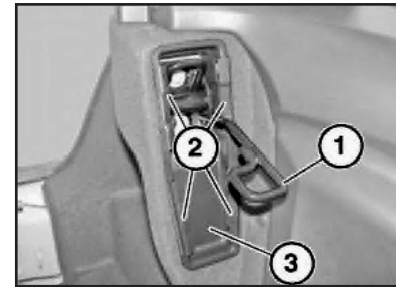
Remove the center-pin of each expansion rivet with a flat screwdriver or panel removal tool. Pry out the base of the expansion rivet. Pull the bottom of the rear sill toward the front of the vehicle to clear the luggage "D" rings, then pull the whole panel up, popping free the friction clips (2) shown above.



4. REMOVE LEFT WHEEL ARCH TRIM (PART 1)

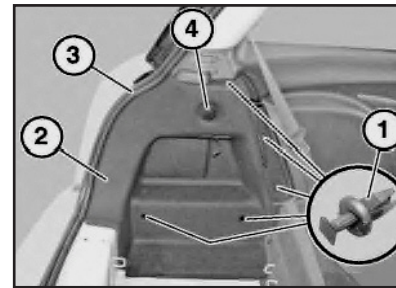
Remove the luggage compartment light (1) by prying the rear edge down and forward. Unplug the light.

CAUTION: the light may be hot!



5. REMOVE LEFT WHEEL ARCH TRIM (PART 2)

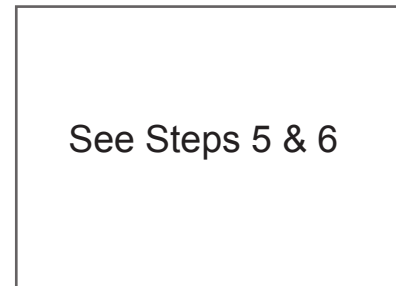
Lift the seat catch (1) up halfway. Using a 90 degree pick or an appropriate panel tool, pry the retaining clips (2) inward and forward to release them. Remove the trim piece (3).



6. REMOVE LEFT WHEEL ARCH TRIM (PART 3)

Remove the five expansion rivets (1). Feed out the Wheel Arch Trim panel (2). Disconnect the 12V plug (4).

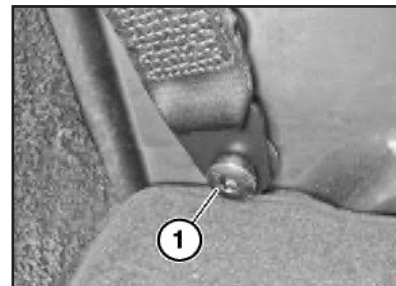
NOTE: When re-installing the panel, make sure to feed the seal (3) over the top of the edge of the trim panel (2). Remember to reconnect the 12v outlet.



7. REMOVE THE RIGHT WHEEL ARCH TRIM

Repeat Steps 5 & 6 for the right side (except for the 12v plug).

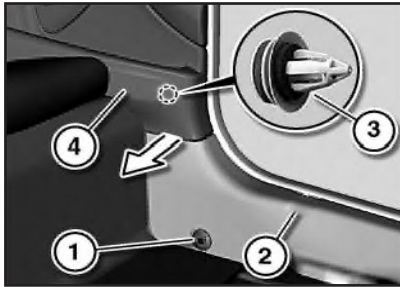
B. RUN THE POWER & GROUND WIRES



8. REMOVE RIGHT DOOR SILL TRIM (PART 1)

Using a Torx T-50 bit, remove the seat belt screw (1) where it passes through the rear of the door sill trim.

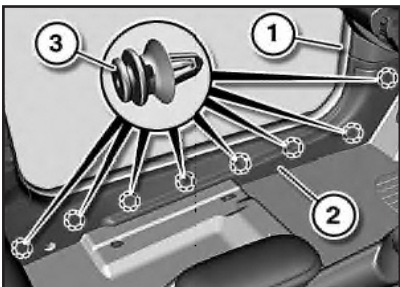
NOTE: Left (Driver's) side shown, but the procedure is the same for left & right sides.



9. REMOVE RIGHT DOOR SILL TRIM (PART 2)

Remove metal seat belt bushing (1) if not removed in the previous step. Pull Rear Side Trim Panel (4) in, releasing clip (3) and freeing tab of Door Sill (2) located behind Side Panel (4).

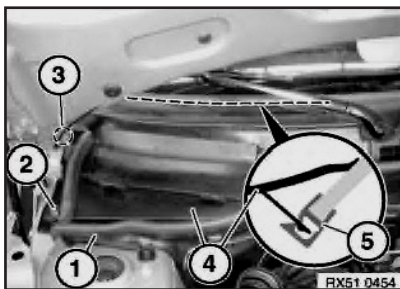
NOTE: Left (Driver's) side shown, but the procedure is the same for left & right sides.



10. REMOVE RIGHT DOOR SILL TRIM (PART 2)

[Seat shown removed for clarity] Pull Door Sill Panel (2) directly in, releasing clips (3). This requires firm pressure. Remove small trim piece (1) by pulling toward the rear of the vehicle, releasing a spring clip. It helps to remove the door seal, allowing better access to the panel.

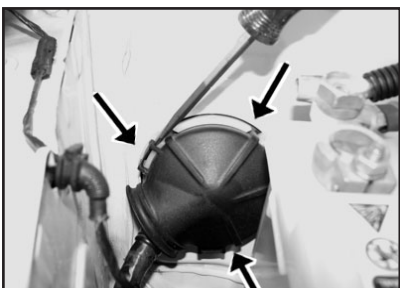
NOTE: Left (Driver's) side shown, but the procedure is the same for left & right sides.



11. REMOVE RIGHT COWL PANEL

Open the Bonnet (hood). Remove the black plastic Cowl (4) covering the battery by releasing nuts (2) and (3) with an 10mm socket. Feed the Cowl out.

NOTE: When replacing the cowl, be sure the seal (1) is seated properly and that the panel is properly seated against the windshield (5).



12. REMOVE THRU-WALL COVER

Using a flat screwdriver, release the indicated retaining tabs then remove the plastic thru-wall cover to expose the thru-wall opening.



13. CUT SPARE NIPPLE

Cut the end off the spare wiring nipple.

NOTE: Before re-installing the Thru-wall cover, seal the nipple and power wire with the included electrical tape.



14. FISH POWER WIRE FROM AMP TO BATTERY

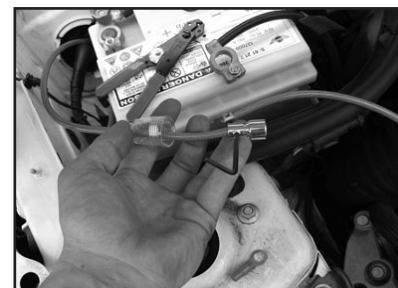
Feed the 8AWG Red Power Wire through the spare wiring nipple at the battery into the cabin and along the Door Sill. Use your fish tape to pull the end of the wire from the door sill area to the passenger's side of the luggage compartment, running the wire behind the right Rear Side Panel.

NOTE: Leave enough slack at the battery end of the wire to be able to reinstall the Thru-wall cover.



15. MOUNT FUSE HOLDER & ATTACH BATTERY LEAD

Mount the fuse holder as shown using two of the #6 x 1/2" Stainless Steel Hex Washer Head screws. Pre-drill the mounting screw holes with a 1/8" bit. Cut approx 18" from the Power Wire to run from the fuse holder to the battery. Strip the jacket from the ends of the 8AWG Red Power Wire & 18" length. Crimp the red 1/4" Gold Ring Terminal to one end of the 18" length.



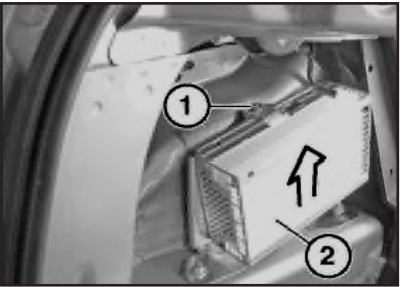
16. INSTALL FUSE HOLDER

Remove the nut on the battery post with a 10mm socket and attach the 18" length of Power Wire by placing the Ring Terminal over the post. Remove one end cap of the fuse holder and insert the wire, then secure the gold terminal end onto the wire with a 3mm Allen wrench. Repeat above for the other side of the fuse holder for the other end of the wire.



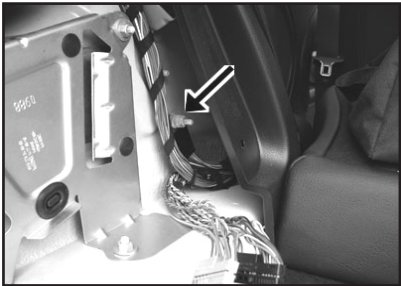
17. GROUND WIRE (PART 1)

Release the 2 expansion rivets at each side of the carpet trim covering the raised cross-member at the front of the luggage compartment. Run the 8AWG Black Ground Wire from the passenger-side of the luggage compartment to the driver's side, routing the wire underneath the carpet.



18. REMOVE THE AMPLIFIER [HIFI ONLY]

On HiFi-equipped vehicles, it is helpful to temporarily remove the HiFi amplifier to ease access to the wiring. Release the 10mm nut (1) at the top of the amplifier (2). Remove the amplifier by sliding it up and out. Disconnect the plug by releasing and sliding forward the locking lever.



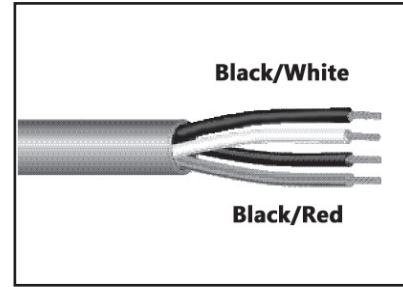
19. GROUND WIRE (PART 2)

Locate the Common Ground point on the left side of the vehicle. Remove the nut with a 10mm socket. Strip the end of the Ground wire, crimp the black 1/4" Gold Ring Terminal to the end, and attach to the Common Ground point.



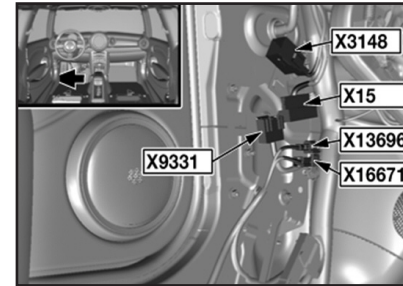
21. RUN SIGNAL WIRE

Beginning in the left (driver's) side footwell, run the 4-Conductor Shielded Signal Wire along the door sill, behind the Left Rear Side Panel (using the fishtape), under the carpet trim covering the cross member (see Step 17), ending at the right side of the luggage compartment. (see previous images)



22. PREP SIGNAL WIRE

At each end of the Signal Wire, remove 4-6 inches of the outer jacket and shielding, exposing the 2 twisted pairs of signal wire. Strip both ends of the 4 signal wires. At the footwell end, carefully crimp a 1/4" Insulated Male Disconnect (these are blue, with a flat blade shaped connector inside) on each wire, 4 total. You may solder the connections if desired.

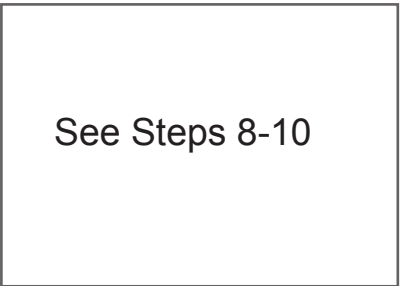


23. ACCESS X9331 CONNECTOR

Locate the X9331 connector in the left footwell. The X9331 is behind and attached to the larger X15. Remove both by twisting counter-clockwise 1/4 turn and pulling out. Separate the X9331 from the X15.



C. SIGNAL WIRING (BASE STEREO ONLY)



20. REMOVE DRIVER'S SIDE DOOR SILL

Repeat Steps 8-10 for the left side of the vehicle.



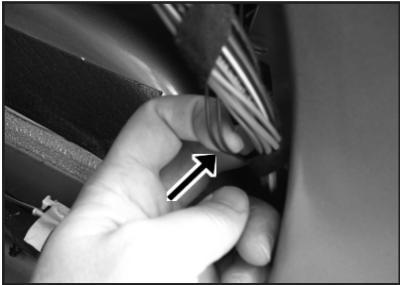
24. MAKE SIGNAL CONNECTIONS

Cut the wrapping and unbundle about 8" of the wiring. Install the 3M T-taps to each of the wires indicated in the chart below. Use pliers to make it easier to lock the tap onto the wire. Double-check that you are selecting the correct wires by verifying the Pin location. Attach the correct Signal Wire to each T-tap.

NOTE: Do NOT tap into the rear channel - you must use the front channel due to DSP limiting of the rear channels.

Footwell Connector (X9331) - R56 Base Stereo

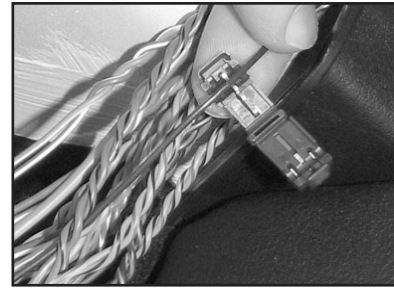
Signal :	Wire Color:	Pin:	Connect To Signal Wire:
Front Left ++	Black w/ Red Stripe	5	Red
Front Left --	Black w/ Violet Stripe	6	Black/Red
Front Right ++	Yellow w/ Brown Stripe	3	White
Front Right --	Yellow w/ Black Stripe	4	Black/White



25. REMOTE TURN-ON WIRE

Locate the two small gauge solid black wires in the wiring bundle running up the right edge of the rear hatch opening. Install a 3M T-tap on either of these (both carry the same signal). Cut the 18AWG White Turn-on Lead wire to length, strip both ends, crimp a ¼" Insulated Male Disconnect on one end, and attach to the T-tap. Proceed to Step 29.

28. SIGNAL CONNECTIONS



Cut the wrapping and unbundle about 8" of the HiFi amplifier wiring. Install a 3M T-tap on each of the wires indicated below. Use pliers to lock the tap onto the wire. Confirm that you are selecting the correct wires by verifying the Pin location - there are duplicates of the color pairs. Attach the correct Signal Wire to each T-tap. NOTE: After making the signal connections, replace the HiFi amplifier removed in Step 18.

HiFi Amplifier Connector (X10266) - R56 HiFi

Signal :	Wire Color:	Pin:	Connect To Signal Wire:
Rear Left ++	Blue w/ Brown Stripe	37	Red
Rear Left --	Blue w/ Black Stripe	29	Black/Red
Rear Right ++	Brown w/ Orange Stripe	8	White
Rear Right --	Yellow w/ Red Stripe	16	Black/White
Remote Turn-on	Solid Black	10	Amp Remote On Lead (White)

D. SIGNAL WIRING (HIFI OR H/K [2010+] ONLY)

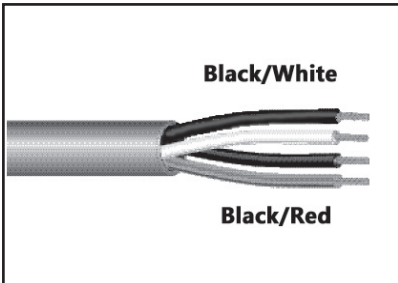
See Step 17

26. RUN SIGNAL WIRE

Run the 4-Conductor Shielded Signal Wire and the 18AWG White Remote Turn-on Lead from the right side to the left side of the luggage compartment, routing the wires under the carpet trim covering the cross member (see Step 17). Cut the wires to length, leaving about 18" excess on each end. (see Step 17 Image)

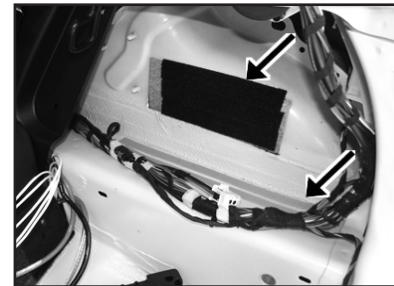
27. PREP SIGNAL WIRE

At each end of the Signal Wire, remove 4-6 inches of the outer jacket and shielding, exposing the 2 twisted pairs of signal wire. Strip both ends of the 4 signal wires and the remote wire. At the end near the factory amplifier, carefully crimp a ¼" Insulated Male Quick Disconnect on each wire, 5 total. Solder the connections if desired.



E. AMPLIFIER MOUNTING & CONNECTIONS

29. MOUNT AMPLIFIER



The amplifier mounts against the side of the right rear wheel well. Cut the Self-Adhesive Foam Padding to length, remove the backing, and affix to the top of the horizontal section of sheet metal (the side of the amplifier will rest on top of this padding). Cut the Velcro into 3 equal length pieces and affix to the vertical section of sheet metal. Attach the other half of the Velcro to the back of the amplifier. Make sure both sides align.

30. SPEAKER WIRE & BANANA PLUGS

Cut the 2 feet from the length of 16AWG Speaker Cable. Split and strip the ends of the remaining 6 feet of Speaker Wire. Connect one end to the amplifier (bridged). Attach the Banana Plugs to the other end. (no image)

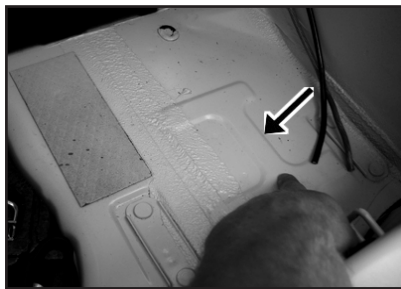


Signal Wire to ARC MINI Connections	
Signal Wire:	Connect to Pigtail:
Red	White
Black/Red	White w/Black
White	Gray
Black/White	Gray w/Black

31. AMPLIFIER CONNECTIONS

Connect the Power, Ground, and Remote Turn-on Lead wires. Using the Heat-Shrink Butt connectors, connect the Signal Wire to the ARC Audio Amplifier Pigtail Connector as noted at left. The black wire on the pigtail side does not get connected. After crimping, gently heat the butt connectors with a lighter or torch to shrink and seal. Do not burn the wire! If not already connected, connect the Remote Turn-on Wire to the amplifier.

F. INSTALL ENCLOSURE MOUNTS



32. MARK FOR BRACKET PLACEMENT

Temporarily replace the Wheel Arch Trim Panels and Rear Sill. Place the subwoofer enclosure in the boot and center it. Place one Mounting Bracket on either side with the single large hole centered over the indicated raised area of the boot floor. Mark the center of all five holes of the bracket. Do not place the holes within 0.375" of the edge of the raised area.



33. ATTACH THE MOUNTING BRACKETS

Remove the enclosure. Using the #10 x 3/4" Pan Head Screws, attach the mounting brackets in the spots marked in Step 32. Replace the enclosure and confirm hole locations are correctly marked. Remove the enclosure.



34. INSTALL THREADED INSERTS (PART 1)

Using a 7/16" bit, drill holes for the Self-Sealing Threaded Inserts in the 2 positions marked on the boot floor. Do not let the drill bit penetrate more than 1/4" through the sheet metal. You may find it helpful to use a cut-to-length wood block with a hole in the center as a stop for the drill.

NOTE: There is no need to be concerned about these holes. There are 6 similar existing factory holes (plugged with simple rubber bushings).



35. INSTALL THREADED INSERTS (PART 2)

Clean up all metal shavings from the previous step. Using a utility knife, trim the PVC jacket out of the center of the Self-Sealing Threaded Inserts as shown. Insert the Self-Sealing Threaded Inserts into the holes drilled in the previous step.



36. INSTALL THREADED INSERTS (PART 3)

Insert the 1" Hex Bolt through the Threaded Insert Installation Tool and thread the bolt into the Threaded Insert. Keep the insert flush against the boot floor and carefully tighten the bolt by hand (do NOT use an electric drill) until the insert is secure, but do not over-tighten.

G. INSTALL THE ENCLOSURE



37. WIRING & TERMINAL CUP

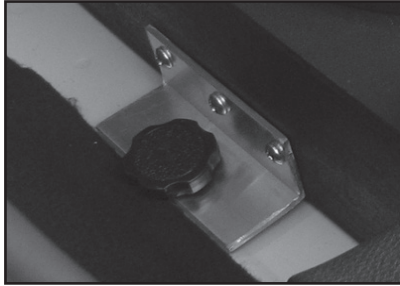
Remove the bolt and repeat for the other side. Split and strip the ends of the remaining 2 feet of 16AWG Speaker Cable. Crimp (and solder if desired) the 4 female 1/4" Quick Disconnects to the wire and connect to the Terminal Cup. Mount the Terminal Cup using the #6 x 3/4" Black Pan Head Screws.



38. MOUNT THE SPEAKER

Connect the speaker wiring, observing correct polarity. Mount the speaker with the #10 x 1" Black Pan Head Screws. The speaker is a snug fit! Tighten the screws in a "star" pattern, go slowly and take care not to strip them. Make sure the speaker is mounted flush - the gasket on the back of the speaker flange should seal.

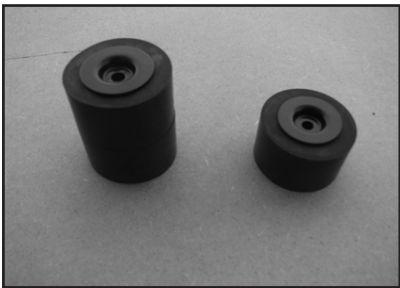
H. TESTING & RECOMMENDED SETTINGS



39. INSTALL ENCLOSURE

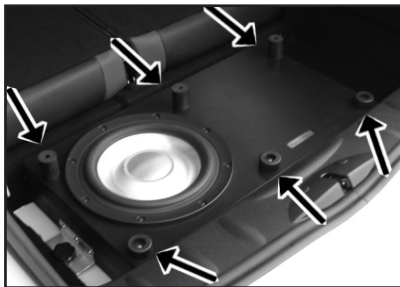
Replace the enclosure in the boot. Connect Banana Plugs to Terminal Cup. Secure the enclosure with the Knurled Knobs.

WARNING: Do not allow the Banana Plug connectors to short (touch each other) when unplugged and the ignition is on.



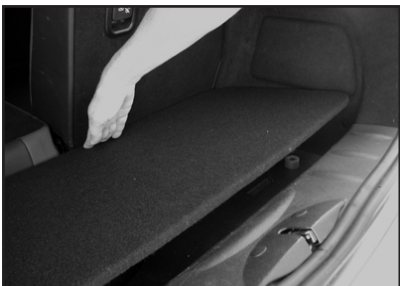
40. MOUNT THE FLOOR SUPPORTS (PART 1)

Each of the 3 front supports are assembled with one Rubber Stand-off, one Cup Washer, and one #10 x 1.5" Pan Head Screw. The rear supports are twice as high and are assembled with two Stand-offs (stacked), one Cup Washer, and one 2.5" Pan Head Screw.



41. MOUNT THE FLOOR SUPPORTS (PART 2)

Place the Floor Supports as shown. Mark and drill a 1/8" Pilot hole. Attach the Supports with the screws, making sure to tighten them securely. The Washer should be recessed below the top of the Stand-off, providing a soft surface for the False Floor.
NOTE: The Rubber Stand-offs may have warped slightly in transit. To get them to stack cleanly, wrap a few turns of electrical tape around them at the seam. Remove the tape after they are screwed down.



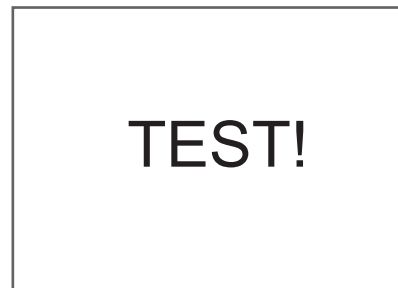
42. HOW TO REMOVE FALSE FLOOR

The False Floor Panel slides through the hatch opening and rests on the floor supports. To remove, simply push down on the edge near the rear seat backs, lift, and remove - Clean, Simple, Easy!



43. RECONNECT THE BATTERY & INSTALL FUSE

Reconnect the Battery Negative Terminal and Install one of the 30 amp AGU fuses in the fuse block. A spare fuse is included.



44. TEST OPERATION

Test for correct operation. Once you have confirmed that everything is operating correctly, reinstall all panels and trim removed during the installation. Use the provided electrical tape to wrap and secure all wiring bundles and harnesses, especially the signal connections at the 3M T-taps.

ARC KS125.2 Settings - HIFI

- Gain: 60% (see ARC manual)
- Output: LOW (low-pass crossover)
- Crossover: 80 Hz
- Bass Boost: 0
- Input: Speaker Level In (button IN)
- Factory Radio Bass Level: -1
- Factory Radio Fade: Front +5

45. AMPLIFIER SETTINGS (HIFI ONLY)

For HiFi-equipped vehicles, recommended amplifier settings are listed. Your preferences may vary. Contact us if you are having difficulty or something doesn't sound right.

ARC KS125.2 Settings - Base

- Gain: 40% (see ARC manual)
- Output: LOW (low-pass crossover)
- Crossover: 90 Hz
- Bass Boost: 0
- Input: Speaker Level In (button IN)
- Factory Radio Bass Level: -1
- Factory Radio Fade: Front +3

46. AMPLIFIER SETTINGS (BASE STEREO ONLY)

For Base Stereo-equipped vehicles, recommended amplifier settings are listed. Your preferences may vary. Contact us if you are having difficulty or something doesn't sound right.

TIPS & TUNING

- **BASS LEVEL CONTROL:** HiFi-equipped vehicles can adjust the bass level on-the-fly by fading to the front (decrease bass level) or to the rear (increase bass level). Base Stereo-equipped vehicles can adjust the bass on-the-fly if they perform the front-to-rear channel swap (contact us for more info). Otherwise, Base Stereo-equipped vehicles adjust the bass level with the Amplifier Gain.
- **SIGNAL SOURCE QUALITY:** No matter how good the stereo system, a poor quality signal will always sound poor. If you are using MP3s or home-burned CDs it is critical that you understand the limitations and impacts of whatever digital compression method you are using. MP3s at less than 256kbps WILL have noticeable loss of quality. 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 commercial CDs or MP3s that you have ripped yourself at 256kbps or 320kbps.
- **FACTORY RADIO SETTINGS:** Remember that settings (Bass, Treble, Fade, Balance, AUX input level, etc.) are stored on the Key FOB & are specific to the Source (Radio, CD, AUX). You will need to edit and save the settings for each source and each FOB to have consistent sound.

TROUBLESHOOTING

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!



www.integralaudio.com

All specifications are subject to change without notice. Integral Audio® and the Integral Audio logo, are registered trademarks of Integral Audio. For more detailed information please visit us online at www.integralaudio.com.