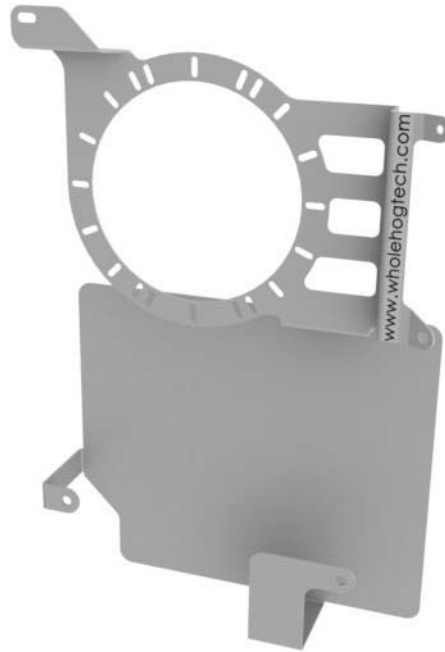


Whole Hog Technologies FJ80MONO Mount

Installation Instructions



Introduction

Most FJ-80 owners tell a similar stereo story... you installed an aftermarket stereo and tried to keep the factory speakers to spread out upgrade costs. Not long into that first long drive, the new stereo pushed the OEM speakers past their working limit and now you are faced with a sudden need to make additional audio upgrades.

Door speakers, while slightly more difficult to find because of their shallow mounting requirements, are relatively easy to replace. Replacing the stock 80-series sub woofer (about a 5 inch diameter from the factory) is more of a challenge however, with little options for mounting a standard sized woofer in the stock location with the factory mounting bracket.

Whole Hog Technologies addressed this sub woofer problem with the following requirements for mounting the sub woofer and amplifier were:

- The sub woofer must mount centered in the factory location to keep ALL cargo storage room.
- Sub woofer and amplifier must be hidden from the prying eyes of a would-be thief.
- Mount must be quick and easy to install.
- No vehicle modifications are required so that if sold, the audio system can be taken back to stock by either yourself or the new owner.
- The new mounting bracket must be designed and manufactured in the same high quality that the OEM mounting bracket was made.

Here is a step-by-step installation for mounting an 8" sub woofer in the factory location (with an accessory audio amplifier) on a 1997 FJ80 LandCruiser wagon. This install required NO modifications to the factory body trim panel or sheet metal... just bolt on the accessories of your choosing and enjoy!

NOTE: Model numbers and dimensions for 8 inch sub woofers and audio amplifiers are posted on the Whole Hog site at www.wholehogtech.com - feel free to use our site as a reference. Whole Hog Tech will update the available models and prices every quarter.

Step 1: Removing the Factory Panel

We started by removing the factory trim panel on the passenger rear corner as shown below in Figure 1. This panel is held in place by 14 clips on the backside of the panel.

Be careful with the bottom tab that mounts under the trim plate at the tailgate. Once the clips are snapped out of position, simply rotate the panel away to remove as shown in Figure 2.



Figure 1. Starting to remove the factory cargo panel. The opening near the rear seat belt is an easy place to get a hold of the plastic. This is easiest to do on a day when the sun has heated up the plastic a little bit.



Figure 2. Detail of the body panel tab that mounts under the tailgate trim plate. Once the clips are snapped out of the body, simply rotate the panel towards you to remove it.

Step 2: Removing the Factory Sub Woofer

The factory sub woofer and amplifier are mounted as shown below in Figure 3. Take the factory mounting bracket off after disconnecting the electrical connectors. If your original sub woofer is as worn as ours, it might have already been disconnected to stop the hiss of a torn paper cone...

Save the bolts if you'd like to reuse them (takes a 10mm socket). Otherwise, Whole Hog Technologies supplies a set of new mounting hardware if you'd prefer new steel in here.



Figure 3. Detail of the factory sub woofer and amplifier that will no longer be needed. Using a 10mm socket, remove the panel and hold onto the factory hardware for your new panel.

Step 3: Preparing for the Whole Hog Tech Sub Woofer Mount Panel

Now for the new panel. Whole Hog Technologies laser cuts this new panel out of 6061 aluminum and forms it to fit in the factory mounting location. Making this out of aluminum prevents rust issues, and the CNC forming assures that this mount is at a level of quality that anybody would expect with a LandCruiser.

There was a factory plastic clip used to secure the factory loom to the 80-series as shown in Figure 4. Just pinch the plastic and this clip will release. This clip needs to be removed to allow the factory wiring loom to move in order to make room for the amplifier mounting tab.

Test fit the panel before mounting your new electronics just to see how things line up. This will give you an idea of what space requirements you should allow for adjustments and wiring. Figure 5 on the following page shows the mount test fit against the factory holes.



Figure 4. Detail of the factory wire loom clip. To release, simply pinch the tabs and push. After releasing the clip, the loom is free to move around to accept the new mount.



Figure 5. Test fitting the FJ80MONO Mount in the body panel space. Take this time to look at where the factory wires sit and where you want to tie off your new amplifier wiring. In this picture, the factory hardware secures the mount.

Step 4: Mounting the Amplifier

You have approximately 1-3/8 inches behind the amplifier mounting plate before running into the external body panel, but be careful to not use mounting bolts/screws that are too long for securing the amplifier.

We used a Kenwood KAC-8405 amplifier in this install. This is a 4-channel amplifier with a footprint of 11 inches x 9-1/2 inches. On the electrical side, we did a bridged setup to only run the sub woofer from the amplifier. Our head unit handles the door speakers just fine by itself. Position the amplifier and mount it as you see fit, but remember the test fit and where you will have access to the wires and amplifier adjustments. We used the mounting hardware supplied with the amplifier from Kenwood.

The amplifier mounting plate allows for two major footprint sizes; 12 inches x 11-1/2 inches for a vertical mount or 13-1/2 inches x 8 inches for a horizontal mount. As a technical reference, Whole Hog has identified amplifiers that fit this footprint (mono amps, 2-channel amps, 4-channel amps and 5-channel amps) on the Whole Hog web site. You can find it on the FJ80 Products page at www.wholehogtech.com.

After securing the amplifier to the mounting plate, we did a test fit again to plan ahead for wiring. Please note that the wiring and amplifier adjustments may not be accessible after the plate is secured depending on where you position the amplifier on the bracket, so keep that in mind during the install.



Figure 6. Position the amplifier on the mounting pad. The upper left corner is the most accessible, so the closer to that location the easier your installation will be.



Figure 7. Test fitting the FJ80MONO Mount in the body panel space with the amplifier installed. Take this time to think about where you want to route the wiring for the amplifier.

Step 5: Mounting the Sub Woofer and Final Wiring

After the amplifier is squared away, it is time to mount the sub woofer. Again Whole Hog has a technical reference page to identify available speakers for this mounting location at www.wholehogtech.com. We used a Pioneer TS-SW841D shallow mount speaker in this install. You have 3-1/2 inches behind the mounting plate to work with.

The Whole Hog mounting plate allows speakers with six (6) or eight (8) mounting bolt patterns at several different orientations. If the speaker fits in the mounting depth requirements and is of the 8 inch sub woofer variety, odds are that it will bolt right up.

After mounting the sub woofer to the plate, attach the appropriate electrical connections. Prior to attaching power to the amplifier, make sure to disconnect the negative battery terminal on the vehicle to prevent shorts.

During the Whole Hog sub woofer installation, we ran audio cables down the passenger door sills and the positive power cable along the driver door sills to prevent potential interference problems. There are several good grounding points at the passenger rear corner of the vehicle (make sure you don't try to use one of the isolated bolts for the factory rear bumper though...)



Figure 8. Final mounting of the FJ80MONO Mount in the body panel space with the amplifier and 8-inch sub woofer installed.



Figure 9. Mounting clips on the factory interior trim panel. For this mount, the stock cubby can be left in place. A perfect distraction for would-be thieves.

Step 6: Reinstalling the Interior Body Panel

Before you start buttoning the panel back in place, it's time to fasten the sub woofer and amplifier mount to the body. Use the three (3) factory bolts or the five (5) supplied by Whole Hog Technologies. You will need a 10mm socket to attach the hardware. If you want, you can attach the plastic loom clip in the same hole again by pressing it through the amplifier mounting plate hole, but we just left it below the mounting bracket in our install.

This is a good time to crank up something with some bass to make sure that you don't have any loose bolts on the subwoofer or amplifier mount. Also, if you need to make adjustments, this is the time to do that.

Now back to the requirements... the idea with this mount is to use the factory body panel. If you have any clips that broke or don't hold the panel in place well, get a set of new clips from Toyota (PN 67771-32060) to ensure that there are not any rattles added to the system from a little bigger speaker. As a reminder, there are 14 clips on this interior panel as shown above in Figure 9.

For FZJ80 or LX450 vehicles that did not have a factory sub woofer, you won't have a grill on the cargo panel. If this is the case on your vehicle, please contact Whole Hog Technologies for locating the center of the factory grill before you cut. This part is available from Toyota (PN 86269-60060). If you have a grill that you would like to use that is not the factory trim item, Whole Hog can still provide the center dimension values to line up with the speaker.

Slip the bottom tab under the tailgate trim plate and then snap the panel fasteners in place by pressing on them.

In the end, you have just accomplished the following with your FZJ80 or LX450:

- You have more bass and an accessory amplifier mounted out of harms way.
- You have a factory rear cargo area that won't set you apart from other vehicles.
- You have the same amount of cargo room that you did before the installation.
- You retain the factory trim panel with a fully-functional cubby hole.



Figure 10. The rear cargo area is left open for gear or any combination of seat arrangements. What better way to enjoy higher quality sound without sacrificing cargo space that we have available in a LandCruiser wagon.



Figure 11. The larger subwoofer and amplifier mounted behind the factory trim panel. Parked in a dark lot late at night is as safe as a factory setup would be!