

My Nakamichi CD-45z Installation Manual

Introduction: I created this short manual to assist people in installing a new stereo to their Subaru. I have attempted to provide relevant pictures and diagrams to assist. Some of these have been taken from other websites and I have tried to reference them where appropriate.

Background: I have owned my '95 Subaru Impreza since I was in high school and have loved every minute of it. When I graduated my parents got me a new stereo for it, an Eclipse 5341R. This is a very nice stereo. One year later, when in school in California, my parents got me a '99 Subaru Outback. I had the Eclipse moved over to this vehicle. Later, upon coming back to Kansas, I began to drive my Impreza again. It has the standard Subaru stereo in it which provides truly unacceptable sound. Sometimes I wonder why car manufacturers even waste their time putting in the horrible stereos they do into cars. They must own large amounts of stock in the companies they use... Anyways, after suffering with it for a while I became frustrated enough to purchase a new stereo. I decided to do the install myself despite the entirely lacking amount of information on the web about the wiring on a Subaru. The head unit I decided to install was the Nakamichi CD-45z. I got an incredible deal on one on eBay. So, doing my own install helped to further save me money.

Tools Needed:

- Philips Screwdriver (preferably magnetic tipped to aid in not losing screws)
- Regular Screwdriver (helps in prying apart some components, remember to be gentle!)
- Wire Cutters and/or Needle Nose Pliers that can cut wires
- Larger Pliers that can be used to exert large amount of force to crimp things
- 6 Male Bullet Plugs for 14-16 Gauge Wire
- 6 Female Bullet Plugs for 14-16 Gauge Wire

The Installation: Below is a picture of where the install both starts and should ideally finish. This is, obviously, not my original stereo. I had already gone through installing my new Nakamichi before I wrote this manual.

Disclaimer: I am in no way responsible for anything you do to your car, your stereo, yourself, anyone else, or any other form of property. I suggest that before starting you remove the power from your vehicle. **You could and likely will cause serious damage or possibly even loss of life by failing to do so.** Basically, I am not responsible for anything you do or any mis-statements made in this manual. Remember, you need to do your own thinking. I am not here to do it for you. If something I say doesn't make sense, then do not proceed. Either I am wrong, or you do not understand what to do properly and so you shouldn't be doing it in the first place!



One of the first steps to start off with is to pull the parking brake and to stick the car in first. To do this you will need to stick the key in the ignition and rotate it.

REMEMBER, DO NOT FORGET TO PULL THE PARKING BRAKE!!!

The purpose of this is to give you more space to use, which is particularly needed when removing the center dash unit which holds the stereo, lighter, and ashtray.





The next step is to remove the shifter cover. To do this note the small notch at the bottom, near the parking brake, insert a regular screwdriver there to pop it up and then rotate it 90 degrees to take it over the shifter. The picture on the left shows this process com-



Now, open the cup holder. We are then going to remove the screws to the left and right of the cup holder. This frees the top portion of the outer trim assembly for the center of the dash.

In the two pictures below, I show the two screws to remove to release the lower portion of the outer trim assembly. Make certain to keep these 4 screws for use when reinstalling the trim piece.





A quick snapshot of the 4 screws removed in the previous steps. Just provided for reference incase it is useful for someone...



The next step is to remove the outer dash trim piece. To do this just start pulling up at the top and work your way down. I have shown the before and after pictures on the left and right respectively.



Now, remove the four screws holding in the center dash rack. This rack holds the entirely CD, ashtray, lighter, etc assembly. Be careful, underneath this unit is the airbag control system. We would not want to inadvertently damage it in the process. On the next page is a large picture showing the four screws to remove. The picture on the left is before removing them. On the right is after.

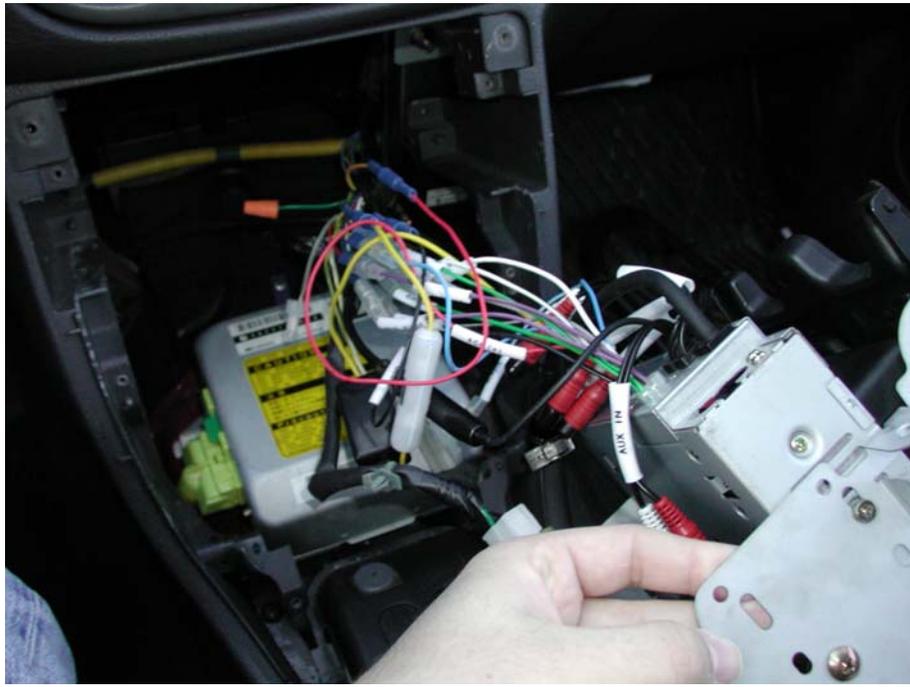




This is where I remind you to remove the faceplate before going any further. In fact, you should have disconnected the power from the negative lead of the battery before even starting this whole process, but since I knew I was not actually going to be doing the whole assembly, I decided to forego showing all of that because I wanted to enjoy my music while taking these pictures. I should not that you could either ruin your head unit, ruin your whole car's electrical system, or injury/kill yourself and possibly others by failing to turn off the power to the vehicle before doing this. Please, be safer than I am! ;-)



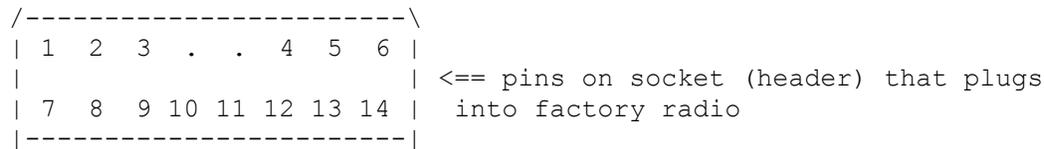
Pull the center dash rack out about 4 to 6 inches. Once you have done this, reach over to the right side and pull off the ground connector as shown in the picture on the right. Continue to pull the rack out. This step is why it is important to put the car in a gear lower than park. You will find that if you do not, you won't be able to pull the rack out. The shifter will get in your way which is very annoying when your hands are busy with other things.



Here is the stereo pulled out. The box with the big yellow sticker on it is the airbag control box, leave it alone! Now you can disconnect your current stereo and connect up your new one. Below I have included the pin-out for the 14-pin connector standard in a Subaru.

This information was obtained from this Usenet Post:

<http://groups.google.com/groups?hl=en&frame=right&th=874c5b9f385fd337&seekm=NOab888SPAM-0705992311010001%40ip28.ts6.mn.dialup.ottawa.cyberus.ca#link1>



Note: The above diagram is done from the perspective of looking directly on to the connector pins. If you are having trouble figuring out which way is which, just use the ground wire, which is always black, as a reference for making sure you are doing the pins correctly. It is very important to correctly wire up these pins. If you don't you could cause serious damage to your stereo or entire car. Please do not attempt this unless you truly know what you are doing.

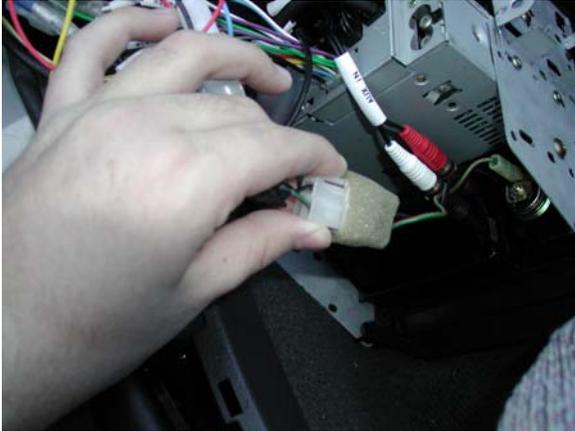
But I noted that Subaru, most inconveniently, changes the colors that they use for their wiring on a regular basis and do not conform to the wiring standards in anyway. So, if you have a 1998 Outback you may find the Usenet post useful for determining the proper colors. The MOST important thing is the pin-out. Do not worry in particular about the colors. The specific pins functionality is always the same as far as I know. I can't imagine them changing that anytime soon either.

Pin #	Color (95 Impreza)	Function		Sign	EIA Color	Notes
1	Green	Illumination			Orange	Not Used
2	Red/Orange Line	Right	Front	+	Gray	
3	Brown/White Line	Left	Front	+	White	
4	Blue/Green Line	Right	Rear	+	Violet	
5	White/Red Line	Left	Rear	+	Green	
6	Blue/Yellow Line	Memory			Yellow	To Nakamichi Power Line
7	No Connect					
8	White/Black Line	Right	Front	-	Gray/Black	
9	Green/Black Line	Left	Front	-	White/Black	
10	Yellow/Red Line		12V		Red	To Nakamichi Accessory + Line
11	Black (Solid)	Ground	Black			
12	Red (Solid)	Right	Rear	-	Violet/Black	
13	Red/Green Line	Left	Rear	-	Green/Black	
14	Yellow/Green Line	Antenna	Up/Dn		Blue	

I have included the EIA colors for reference. It is interesting to see how much my 95 Impreza differs from them. It seems truly odd to me to have my red be a rear right - speaker connector. This makes it so incredibly easy to misconnect up the lines. I am shocked that Subaru did this in fact. But that is another issue...

So, disconnect your old stereo and unscrew it. Put your new stereo in its place according to the instructions in the manual that come with it. Then, you need to look at the connector for your new stereo and connect the proper pins according to its diagram to your Subaru stereo harness. I used bullet plugs and soldered them because my Nakamichi used bullet plugs for all the connections.

Wiring Harnesses vs Cutting Off the Original Connector: There are two camps of people, those who choose to use wiring harnesses and those who believe in cutting off their original connectors. I did not choose to use a wiring harness, though many nice ones are available for many car models as can easily be seen by a simple search on the internet. If you choose to use one, it might make your install much easier. In addition, it can greatly simplify the later removal of the stereo. I, choose not to use one because I am very confident in my skills, and I believe that they are detrimental to the signal quality. In fact, I know that they are if compared with an experienced person soldering with high quality solder. So, I chose to go with the latter route. The choice is yours. The soldering route does take considerably longer and requires you to work in the close/cramped space of your car. I am not concerned with the difficulties of later removing it as I am quite experienced in doing things like this. The choice is yours, either route is worth thinking about depending on your abilities/experience/if you are leasing,etc.



I chose to disconnect the cigarette lighter because I have never smoked, do not know any smokers, and really do not want anyone to ever smoke in my car without my knowing it. I figure that this helps to eliminate the chances of someone lighting up in my car.



This is a picture of something else I am very happy with. I used an RCA to mini-stereo plug adapter to allow me to attach my MP3 Player to the car stereo. I wired it up to the AUX IN connector. Now when I switch to AUX IN mode I can play from a friends MP3 player or my own.

Yes, MP3 is a sin to play on such a fine stereo, but when you got over 1k dollars of your audio CDs stolen, sometimes you have to deal with things like that... ;-(

Finally, now all you need to do is clean up any connections that are dangling and try to squeeze your stereo back into the recess. I would not suggest re-screwing it in until you are certain that it is operational. It is really annoying to have to re-extricate it because you messed up on a connection. An easy way to test some things is to like shift the fade to full rear, balance to full left, then balance to full right, then fade to full front, then balance back to full left. This should show all four speakers working. If you did not hear something in all 4 of these scenarios, then you have something mis- or disconnected. Go back and check your connections and try again.



Here is me trying out my new stereo, the Nak 45z. A very fine sounding stereo indeed. If you are in need of a very high quality stereo, I would definitely recommend it. You can't play your video games on it or any of that shit, but who the hell wants to do that type of crap anyways. I am not up for any ugly flashy buttons on my stereos, so I went with a Nakamichi. It is, in fact, the only one that did not make me puke with its looks. As you can tell from the final install pictures, it looks right at home in my car.



A couple of shots of my MP3 player cable cubby hole. I finally came up with a good use for the ashtray!!! Yipee!!!

I hope this install guide has helped others with any issues they might have been having. Good luck.

—Lance Feagan

