



Installation Manual

CWC-1

(1990-1998 MX-5 / Miata Sound Systems)



Step 1: Parts and Overview

Please be sure to read our instructions thoroughly before attempting installation.

Congratulations on your purchase of the ultimate car audio upgrade available for the Mazda Miata/MX-5!

Below are some of the features associated with this speaker component set:

- This system was specifically designed for the Miata/MX5.
- Hundreds of hours have gone into the testing and design of this audio system.
- Measurements were made with the industry's top equipment.
- No other speakers in the world have been so meticulously designed specifically for one vehicle.
- The system was designed so that anyone can install it with minimal tools.
- There is no need to do any drilling, cutting, tearing or splicing with this install. This will keep your factory warranty intact.
- As with all Clearwater purchases your satisfaction is guaranteed!!

We are passionate about our audio and you should be too!

Parts Included:

- 1. Door Speakers (2)*
- 2. Door speaker water shields (2)*
- 3. Installation Manual (1)*

Tools Needed:

- 1. Phillips Head Screwdriver (#2)*
- 2. 1/8" Flat Head Screwdriver or similar tool*

Before You Begin:

In 1994, Mazda made a few changes and modifications to the Miata. The modification that pertains to the speaker installation is the updated door panels. While still quite easy to remove, a few differences do exist.

Step 2: Installation

Model Year: 1990-1993

- Open door. Carefully pop off the speaker/grille assembly. A slotted screwdriver or your fingers work well for this. (Hint: tape over the screwdriver blade to prevent scratching).
- If your car has a speaker, remove the three screws holding the factory speaker and gently pry the speaker out. Disconnect the speaker wire from the factory plug. Be sure to release the retaining clip holding the plastic plugs together.
- Connect new speaker wires to factory connector.

New speaker / Factory wires

Red wire (+) Red / Green Stripe

Black wire (-) Red/ White stripe

- Position new speaker with wires facing toward the bottom of door and the plastic water shield toward top of door. Insert new speaker into hole and attach with original (3) screws. (If you do not have screws, use # 8 pan head Phillips sheet metal screws, approximately 1/2" long).
- Now position grille/panel over each of the four pop-in holes and press until each one snaps. When four "pops" are heard, the grille is correctly attached. Repeat for the other door.

Model Year: 1994-1998

- Roll down window. Position window crank in down position. Stand over the window and locate the brass colored metal "C"clip holding on the door window crank. It is visible between the door crank and the round plastic washer. (See figs. 2 & 3) This clip must be removed.
- Rotate the window crank to the up position. Only the ends of the "C" clip will be visible, but it will be easier to push the clip down this way. Insert a small slotted screwdriver between the plastic washer and the window crank. Gently push one of the "C" clip ends downward, then the other. It may be easier to now rotate the window crank down and remove the clip. If it is not visible, rotate crank and try pushing again. Remove "C" clip, washer and crank. Note: Be careful not to scratch or tear the vinyl door cover with screwdriver!
- Using the small slotted screwdriver, carefully remove the large plastic cap covering the top screw on the door pull. Also, remove the small plastic cap covering the screw on the rear of the door pouch.

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Step 2: Installation

- Using the Phillips screwdriver, remove the (2) large screws holding the door pull. Remove the door pull. Now remove the single screw on the door pouch.
- Using the Phillips screwdriver, remove the small screw in the center of the door latch release handle. Also remove the plastic cup held on by the screw.
- There are (14) plastic clips holding the door panel on. They each simply “POP” off. Using your fingertips or a large flat head screwdriver, gently pry the door panel off starting at the lower edges. Work your way around until all clips have been detached. Lift door panel off.
- If your car has a speaker, remove the three screws holding the factory speaker and gently pry the speaker out. Disconnect the speaker wire from the factory plug. Be sure to release the retaining clip holding the plastic plugs together.

New speaker / Factory wires

Red wire (+) Red / Green Stripe

Black wire (-) Red/ White stripe

- Position new speaker with wires facing toward the bottom of door and the plastic water shield toward top of door. Insert new speaker into hole and attach with original (3) screws. (If you do not have screws, use # 8 Pan head Phillips sheet metal screws, approximately 1/2” long).
- Position door panel over door and starting at the top, hook panel to door and begin reattaching door clips.
- Reattach door pull and plastic cup.
- Be sure window is fully rolled down. Before attaching window crank, install “C” clip onto handle as per (fig. 2). Place washer against door panel (fig. 3). Position crank over washer in down position. Gently push crank inward until it clicks. Test the window crank to be sure window works.

Notes:

- On cars with power windows and/or locks, a wiring harness is attached to the backside of the door panel. There is no need to disconnect this, just rotate the door panel to gain access to the speaker area.
- For models with upgraded factory sound systems we recommend that the tweeter in the door panel be disconnected as this will change the sound from what is intended.

Step 2: Installation

1994-1998 Miata Drivers Side Door Panel

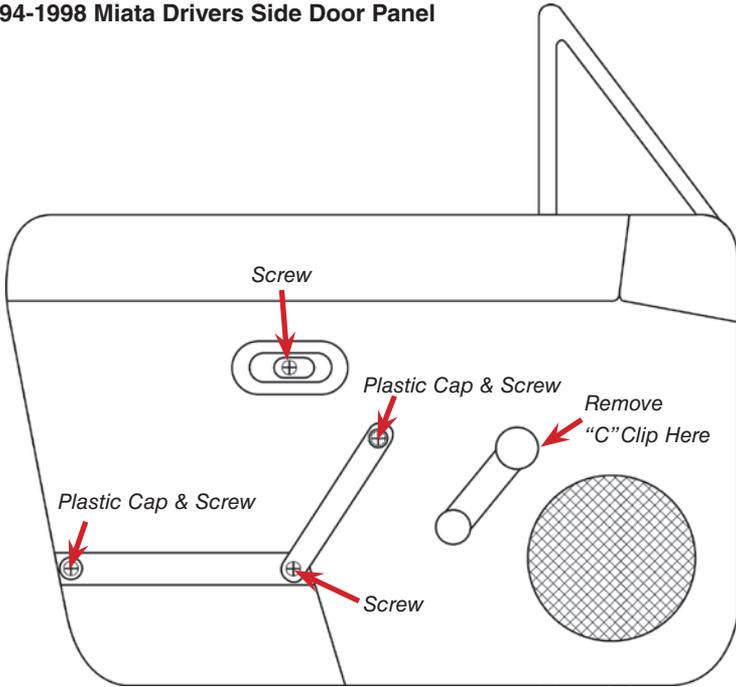
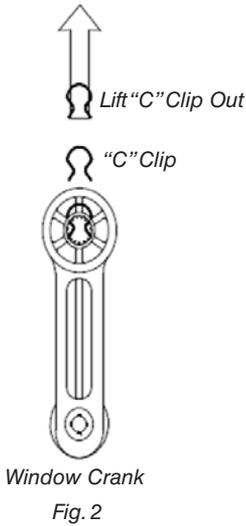
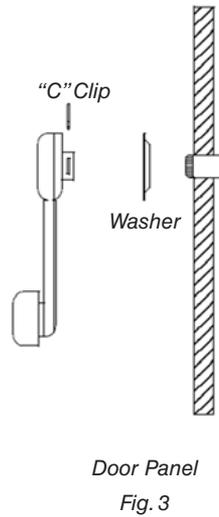


Fig. 1



BACK VIEW



SIDE VIEW

Step 3: Testing, Re-assembly & Product Specs.

Testing:

- Before completely re-installing the door panel, verify the tweeter wires are connected together and turn on the radio to confirm that all connections are secure.
- If there is no sound from the woofer, re-check the woofer wire connections.

Re-Installation:

- Make sure to re-connect the wiring for the power door locks (if equipped).
- The door panel can now be re-installed in the reverse order.
- Make sure that all of the snaps are pushed into place.
- Make sure to re-install all of the factory screws back into place.

Product Specifications:

Frequency Response:	<i>30 Hz - 20,000 Hz \pm3dB</i>
Sensitivity:	<i>90 dB SPL at 1 meter (1 watt)</i>
Continuous Power Handling:	<i>100 watts</i>
Peak Program Power Handling:	<i>150 watts</i>
Nominal Impedance:	<i>4 Ω</i>
Crossover Slope Rate:	<i>24 dB/octave</i>
Crossover Frequency:	<i>3150 Hz</i>
Crossover capacitors:	<i>High performance Mylar</i>
Tweeter magnet:	<i>Neodymium</i>
Cone Material:	<i>Polypropelene</i>

Optimized for off axis listening in Miata Door panels.

Custom 60's style steering wheel speaker frame.

Notes

The Clearwater Company is pleased to offer this specially designed speaker for the Miata automobile. Many hours of development time went into designing this product. Only the finest quality components have been used. The sound of this system has been optimized for the Miata's interior using the latest computer simulation software and digital acoustical measurement techniques. These techniques have helped us design a system that offers superior sound at rest and at motion (where it really counts).

Upon first listening, you will hear a wider frequency response. Higher highs and lower lows. Musical notes that were not noticeable with the factory speakers, now come through loud and clear. These speakers can also play much louder than the factory speakers. The Clearwater speakers can handle the full output of the factory radio, and more.

Additionally, our headrest speakers add the final dimension to the Miata sound system. This set comprises of (4) two-way speakers and a custom harness specially designed for the Miata headrest application. They are the only aftermarket headrest speakers specifically designed for the Miata. They offer higher output and better clarity than any other available speaker.

We at Clearwater are dedicated to offering high quality products and award winning customer service. With over 18,000 satisfied customers, we must be doing something right! We offer a one year replacement on any component that fails due to manufacturing defects.

Thank you for purchasing your Clearwater Speakers. Please feel free to send us comments or suggestions at any time. We love to hear from our customers. If you have the time we would love to see some pictures of you and your car. Send your photos to us at sales@clearwateraudio.com or mail them to us at P.O. Box 428, Folsom, CA, 95630.

Sincerely,

Glenn and the team at Clearwater.



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Version 6.0 | 7/31/12