



Electro-Voice®

a MARK IV company

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SERVICE DATA

EVX180, EVX180A WOOFERS



**NOTICE — The EVX-180A is an improved design over the EVX-180.
Both are repaired using the newer, EVX-180A recone kit.**

Specifications:	EVX-180A
Power Handling:	1000 watts continuous program
Voice Coil Diameter:	102 mm (4 in.)
Sensitivity (SPL/1 W/1 M),	
100-800-Hz Average:	98 dB
Impedance:	8 ohms
Frequency Response:	20-2000 Hz
Highest Recommended Crossover:	500 Hz
Magnet Assembly Weight:	8.3 kg (18.3 lb)

CHANGE SUMMARY EVX-180A Reconing Instructions

If you are familiar with the repair of EVX-180 woofers, this list will provide a quick reference for reconing both EVX-180 and EVX-180A woofers using the new (EVX-180A) recone kit.

- New recone kit number: **82835-XX**. This includes a new cone (71442A) with a cloth surround, new voice coil (82619), and new spider (72897).
- When reconing an EVX-180 for the first time, as an EVX-180A, replace the outer rubber gasket with a new (37438) gasket. This gasket must be

ordered as a separate part if required.

- Use the new *EVX-180A* centering fixture: **#10895-FA**.
- Turn the **spider neck down**, rather than up. This provides a "V"-shaped trough for the epoxy bead. The cone and spider do not touch but are separated by approximately 3/8".
- The **insulation breakdown test is no longer required**, since the new cone is made of Kevlar, rather than carbon fiber. Kevlar is non-conductive.

MATERIALS REQUIRED (Recone Kit # 82835-XX)

QTY.	DESCRIPTION	PART #
1	Cone	71442A
1	Coil	82619
1	Spider	72897
1	Dust Dome	72362
1	Fuse	4100B
1	Tubing	66093B
1	Gasket (if required for EVX-180)	37438

ADHESIVES REQUIRED

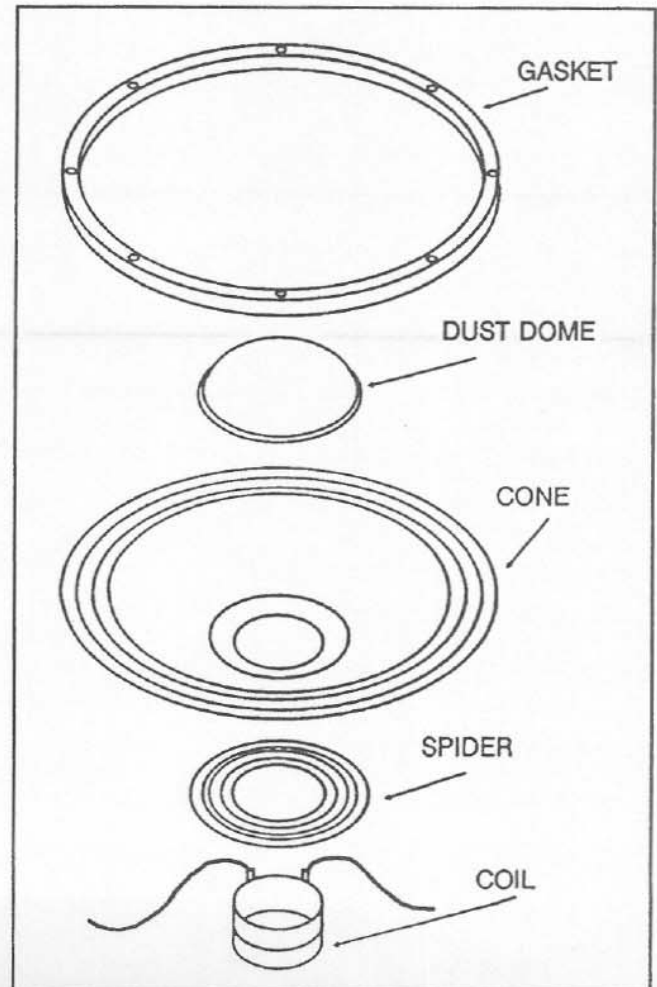
DESCRIPTION	PART #
A - Epoxy Hardener	97012
B - Epoxy Resin	97008
C - RTV Silicone	97411
D - Rubber Cement	9749
E - Spider Cement (clear)	97323
F - Damping Compound	97346

TOOLS REQUIRED

Centering Fixture #10895-FA
Soldering Iron
Sharp Knife
Phillips Screwdriver
Chisel
1/2-inch Paintbrush
Heat Gun (optional)
Heat Lamp (optional)

TEST EQUIPMENT REQUIRED

Sine Wave Generator
200-watt (or greater) Power Amplifier
ac Voltmeter
Ohmmeter



Pictorial 1. EVX-180 Parts

RECONE INSTRUCTIONS

(Refer to Pictorial 1)

1. If the speaker is an EVX-180 (recognizable by its foam surround), discard the gasket and replace it with a new gasket (#37438). Otherwise, remove the outer rubber gasket and set aside; this part will be reused later.
2. Remove the old cone, spider, and voice coil by cutting along the outer perimeter of the cone and spider. Cut both lead wires and remove the cone and discard.
3. Using a chisel, remove any excess adhesives where the cone and spider were attached. Heating these areas with a heat gun will simplify this operation. Be careful not to get any debris in the magnetic gap. Vacuum the speaker to remove all the debris. Remove any particles from the magnetic gap using a piece of folded masking tape.
4. Remove the white heat shrink tubing from the fuse that is attached to the positive input terminal (see Figure 1). Replace the fuse with a BUSS GFA10 (10A, FAST BLOW) fuse.

CAUTION: REPLACE THIS FUSE ONLY WITH ONE THAT IS OF THE SAME TYPE AND RATING.

5. Slide the voice coil onto the centering fixture until the top of the voice coil touches the tape at the top of the fixture. Place the fixture in the magnetic gap. The fixture should rest on the top of the pole piece.
6. Apply a bead of EV #97323 adhesive to the spider seating area on the frame. **DO NOT SUBSTITUTE THIS ADHESIVE.**
7. Slide the spider over the voice coil with the neck turned down. Press the outer perimeter of the spider into the adhesive.
8. There are three counterbores in the frame where the spider is attached. Apply a bead of EV #97323 adhesive to the top of the spider between the spider and the frame in these three areas.
9. Mix one part of EV #97012 epoxy hardener to two parts of EV #97008 epoxy resin. Stir for at least one minute.

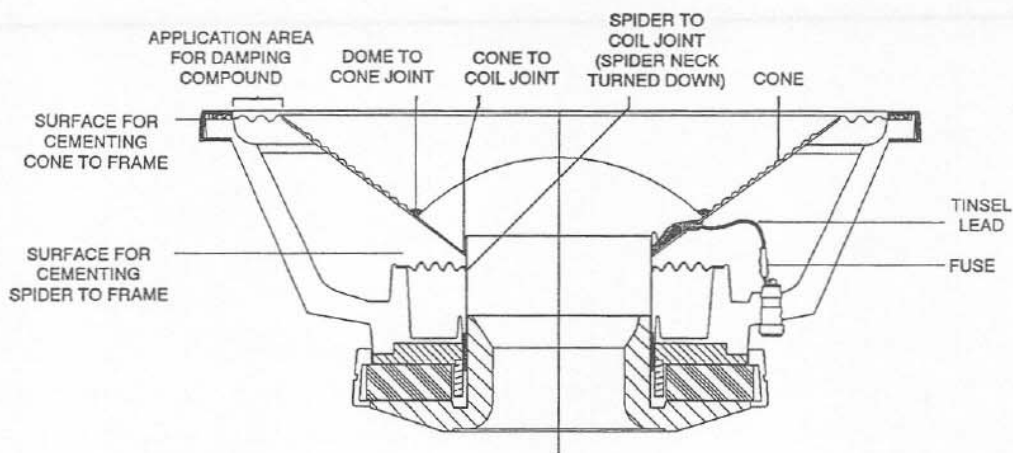


Figure 1. EVX Gluing Instructions

10. Apply a bead of the epoxy mixed in step nine to the inside diameter of the spider, between the spider and voice coil. Rotate the voice coil and centering fixture to allow the spider to position itself on the voice coil.
11. Apply a bead of EV #9749 rubber adhesive to the surround seating area on the frame. Slide the cone over the voice coil. Position the cone such that the two holes in the neck of the cone are aligned with the input terminals. Press the surround into the adhesive, being careful not to stretch the surround. Also be sure that surround is centered on frame.
12. Route the two lead wires through the holes in the cone. Pull the lead wires tight, past the solder lugs. The silicone insulation should extend 0.5 to 0.6 inches past the lug. This assures that an adequate loop is put in the lead wires.
13. Slide the piece of heat shrink tubing (EV #66093B) over the tinsel lead that attaches to the fuse which is connected to the positive input terminal (see Figure 1). Solder the tinsel lead to the fuse using a 10W, 500°F soldering iron. Using an iron of higher temperature may damage the fuse. Slide the tubing over the fuse and shrink using a heat gun.
14. Apply a bead of epoxy to the voice coil and cone joint. Cover the lead wires with epoxy on the inside of the cone. Be careful not to get any epoxy on the centering fixture.
15. Allow the epoxy to cure overnight. A heat lamp may be used to accelerate the epoxy cure. Position the heat lamp a minimum of 18 inches above the epoxy joint.
16. After the epoxy has hardened, remove the centering fixture.
17. To attach the dust dome, use EV #97323 clear adhesive. Do not use any other adhesive to attach the dust dome.
18. Apply a bead of adhesive to the lip on the outer perimeter of the dust dome and attach the dust dome to the cone. Apply a 1/4-inch bead of adhesive around the outer perimeter of the dust dome, between the dust dome and the cone. This step must be followed carefully to prevent the dust dome from coming loose.
19. Attach the outer rubber gasket to the frame.
20. Using a 1/2-inch paintbrush, apply a coat of damping compound, EV #97346, to the surround area of the cone.
21. Apply a drop of #97411 RTV to each voice coil lead wire at the point where it exits the cone.
22. Allow the speaker to sit for at least two hours before proceeding with tests.

TEST INSTRUCTIONS

1. Apply a 10-volt sine wave to the input terminals and sweep from 20 Hz to 2000 Hz. There should be no rums, buzzes, or spurious noises.
2. Apply a 25-volt, 20-Hz sine wave to the input terminals for one minute. The speaker should not bottom. This is indicated by a loud striking noise. Also, the tinsel leads should not straighten completely or bend the fuse lead.
3. A 20-volt, 20 Hz sine wave may be applied for 20 minutes to break in the suspension, if desired.



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