



TQ-440/SP

HF HORN FLARE RETROFIT INSTRUCTIONS

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HF horn retrofit instructions

INTRODUCTION

This instruction manual covers the retrofitting of an additional high frequency horn assembly to the TQ-440 and TQ-440SP three-way loudspeakers. This hardware upgrade improves the high frequency directivity by fitting a horn flare to the exit of the high frequency compression driver. Please read the contents of this manual carefully, making sure that you have all the necessary parts and materials before you begin, so that you can obtain the best possible performance from this upgrade.

If you would like further information about this or any other TURBOSOUND product, please contact us. Detailed product information is available on our web site at www.turbosound.com

PARTS LIST

- 1 off horn flare front, supplied with suspension attached
- 1 off horn flare, rear
- 2 off No8 x 1 1/4" black countersunk screws
- 1 off inductor disc (for TQ-440 bi-amped version only)

ADHESIVES REQUIRED (NOT SUPPLIED)

Restrictive laws within the shipping industry preclude us from supplying adhesives. However the following adhesives should be available locally:

Clear acetoxycure silicone (commonly used as a bathroom sealant)

Black Evostik

After unpacking the unit please check carefully for damage. If damage is found, please notify the carrier concerned at once. You, the consignee, must instigate any claim. Please retain all packaging in case of future re-shipment.

FITTING PROCEDURE

Remove the 12" driver from the cabinet by undoing the eight fixing screws, disconnect the speaker wires and lift the driver out and away from the cabinet. Lay the driver on a suitable workbench or other work surface.

Using a sharp knife or scalpel, make a cut at the edge of the dust dome, near to the cone surface. Carefully cut the dust dome out from the centre of the loudspeaker, cutting as closely as possible to the cone and taking care not to damage the cone surface in any way. Remove the dust dome and dispose of it. It may be necessary to trim any remaining pieces of the dust dome.

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fig. 1 removing the dust cap



fig. 2 horn flare assembly

Assemble the two halves of the HF horn flare together, fitting the screws finger-tight only. Apply an even bead of silicon adhesive to the base of the flare and a further bead of adhesive to the tip of the flare. Turn the assembly over and place it in the hole at the centre of the driver.

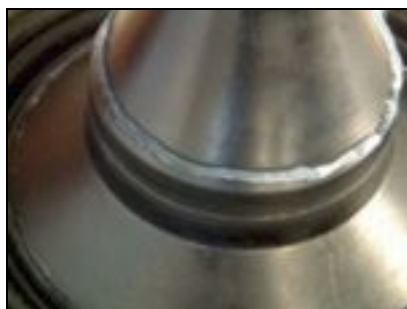


fig. 3 horn flare

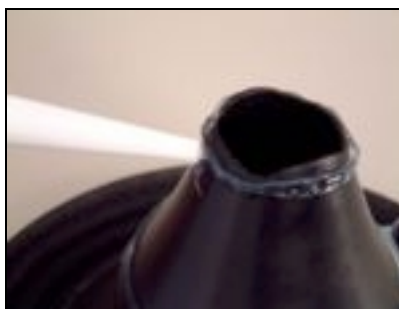


fig. 4 horn flare

Place a straight edge across the frame of the speaker, lining it up with the centres of two opposing chassis fixing holes. Rotate the horn flare until both of the moulded alignment indicators are directly under the straight edge. The object is to ensure that the horn flare lines up accurately with the vertical axis of the speaker, which in turn will ensure the optimum HF directivity pattern.

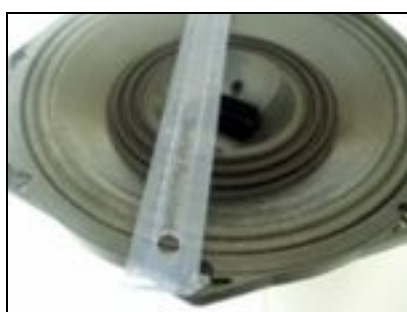


fig. 5 aligning the horn flare

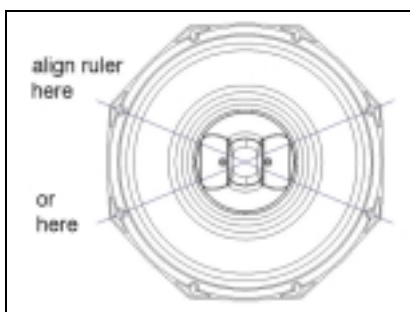


fig. 6 alignment method

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Allow approximately one hour for the adhesive to become sufficiently dry. Carefully remove the front half of the horn flare and set it aside. Remove any adhesive that may have accumulated around the neck of the horn flare and at the rear of the speaker.



fig. 7 horn flare in place



fig. 8 check for excess adhesive

Apply an even bead of adhesive to the underside of the suspension, re-assemble both parts together, not forgetting the supplied gasket, and tighten the fixing screws. Run a finger round the top surface of the suspension to ensure proper adhesion to the cone surface; it may be necessary to do this several times since it is common for the cone and rear suspension to have sunk slightly with usage and over time. Run an additional bead of adhesive over the join between suspension and cone to complete the bond.



fig. 9 apply adhesive to the suspension...



fig. 10 ...and a final bead of adhesive

Leave to dry for one hour. As soon as the suspension is adequately glued, reconnect and replace the driver in the cabinet, making sure that the HF horn flare is aligned with the vertical axis of the cabinet. Replace the grille and test the cabinet.

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