



PINWOOFER

PinWoofers™

JJP Tweeter Assembly Installation Instructions

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Take your time, follow the instructions, relax and enjoy yourself!

WARNINGS:

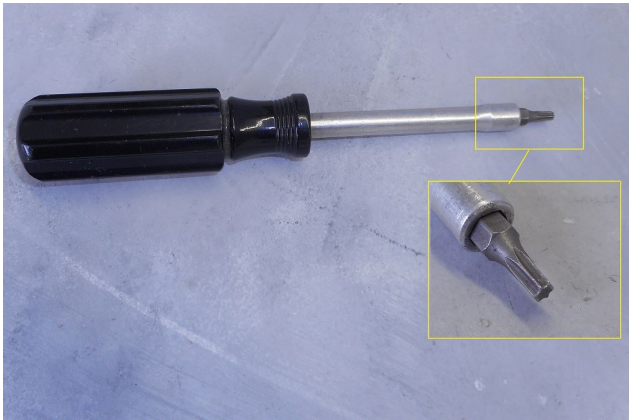
- Perform installation with your pinball machine turned off and unplugged from AC power.

JJP Tweeter Assembly **For Tweeter Assemblies shipped prior to** **6/28/2021**

Tools Needed

- 1) Phillips Head Screwdriver (not pictured).
- 2) Hand Driver with a T15 / T20 Torx bit (varies by machine). Available at most hardware stores and home centers. (Pictured below.)
- 3) Wire Cutters and Wire Strippers. (Pictured right.)

Also shown are the included red and blue speaker crimp lugs used at a later step.

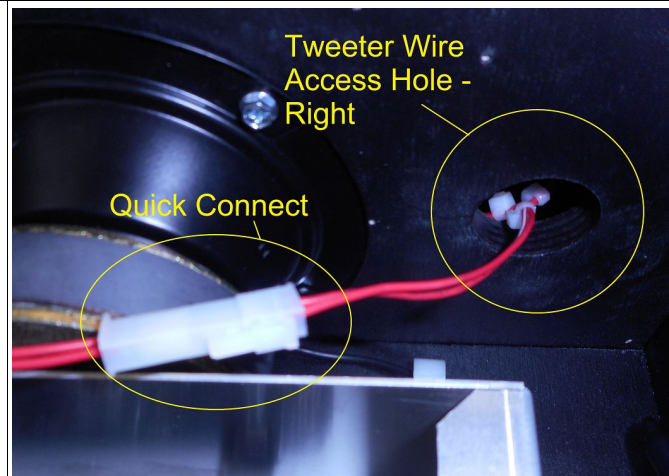


Installation Step 1 – Tweeter Wires

Locate the tweeter wires for both the left and right backbox speakers. Shown to the right are the right-hand set of speaker wires and the tweeter quick connect connector. The left set will be a mirror of the right.

Disconnect the quick connect connectors on both the left and right sides.

Next, feed the tweeter wire sets up and through the access holes until they disappear from view.



Installation Step 2 – Remove Speaker Panel

Using the T15 / T20 Torx bit, remove the two screws on the front of the speaker panel. Hand loosen and support the panel with your free hand so you don't drop the panel or scratch the backbox side walls.

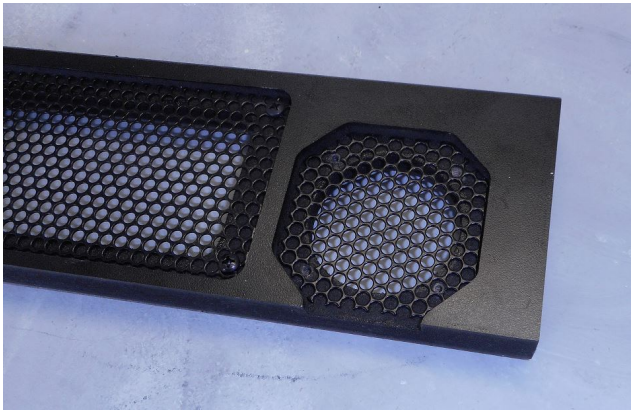


Installation Step 3 – Remove Old Tweeters

There are 4 pan head screws securing each tweeter to the speaker panel.

Using a phillips screwdriver, remove the 4 screws that secure each tweeter as shown on the right. The screws will be re-used later.

There will be a small ~2in metal speaker grille for each tweeter. You will re-use these in a later step. The back side of the speaker panel with the 2in grilles still in place is shown below:



Installation Step 4.a – Clip Tweeter Wires – Guns N' Roses

All but the earliest Guns N' Roses have a wiring configuration as shown to the right where the black capacitor is connected in-line with one of the two wires routed to the factory tweeter. The capacitor WILL be re-used in this case.

Using wire cutters, clip each of two tweeter wires per tweeter as shown to the right.

Clip the wires to leave as much length as possible on the wire harness since you'll re-use these small harnesses for your new tweeters and the more length remaining, the better.

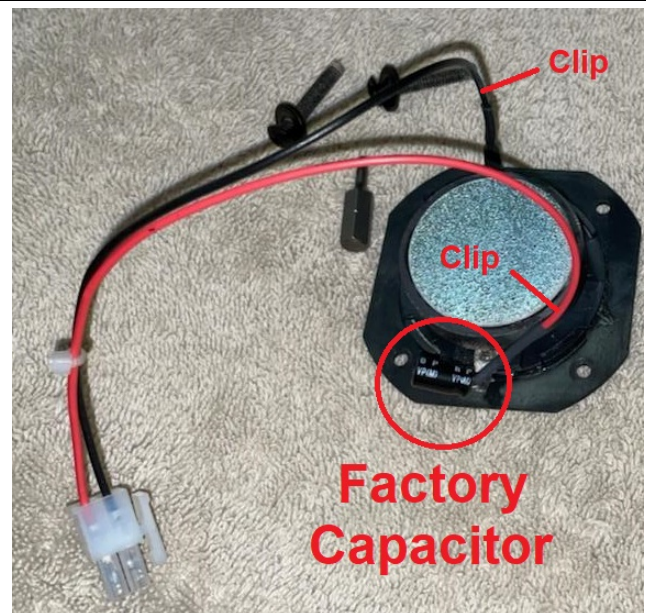


Guns N' Roses

Installation Step 4.b – Clip Tweeter Wires – Early Guns N' Roses, Dialed In!, Pirates of the Caribbean and Willy Wonka

The factory tweeters are shown to the right for early Guns N' Roses, Dialed In!, Pirates of the Caribbean and Willy Wonka.

The factory capacitor is soldered to the “+” factory tweeter terminal and IS NOT re-used in your PinWoofers installation (you were to have been supplied with tweeters that have pre-installed capacitors and short wire segments with quick connect crimps). Leave the capacitor soldered to each tweeter, and clip the wires where indicated as “Clip”, leaving as much wire remaining on the harness end as possible.



Early Guns N' Roses, Dialed In!, Pirates of the Caribbean and Willy Wonka

NEVER operate a tweeter without a series capacitor. The capacitor removes low frequencies that carry lots of extra energy not used by the tweeter. If you do not use a capacitor you are guaranteed to blow your tweeters. Use only one capacitor per tweeter or else you'll get the same result - blown tweeters.

Installation Step 5 – Prepare Tweeter Wiring Harnesses

JJP backbox wire colors vary from title to title. **All but the earliest run Guns N' Roses are as follows:**

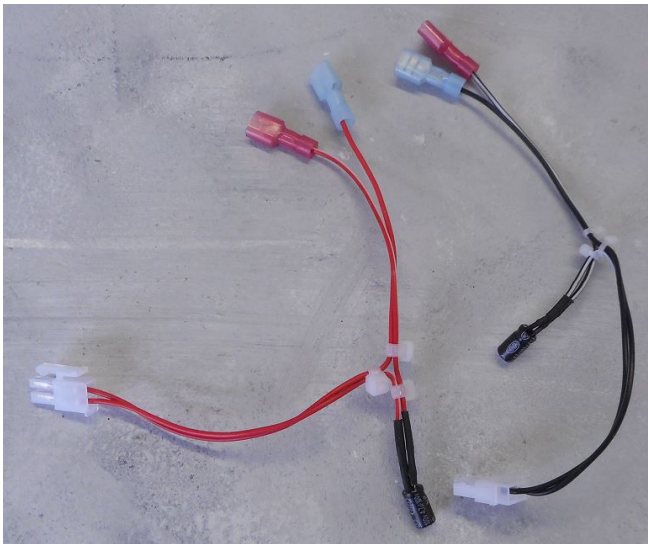
Left - BLK-WHT (+) / BLK (-), **Right** - RED-WHT (+) / RED (-)

Early Guns N' Roses, Dialed In!, Pirates of the Caribbean and Willy Wonka are generally as follows:

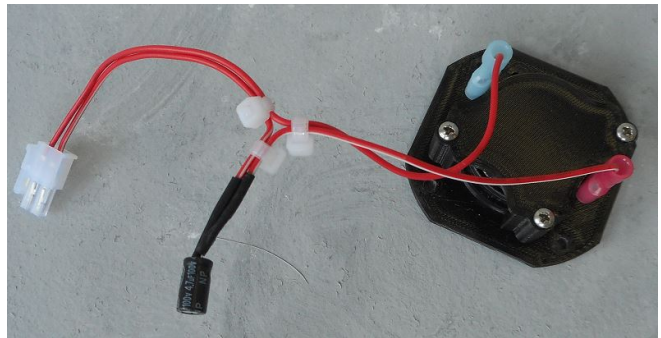
Left - BLK-WHT (+) / BLK (-), **Right** - RED-WHT (+) / BLK (-)

In all cases, strip back 1/4" of insulation from the tips of each wire and add a red crimp lug to the (+) wires and a blue crimp lug to the (-) wires as appropriate for your wire colors. Wires and crimps can be delicate so handle with care – handle by crimps only, do no pull on the wires. Crimps can be “snugged” up to better fit a terminal by gently pinching them to close the contact gap: use your thumb / index finger, or GENTLY pinch with pliers.

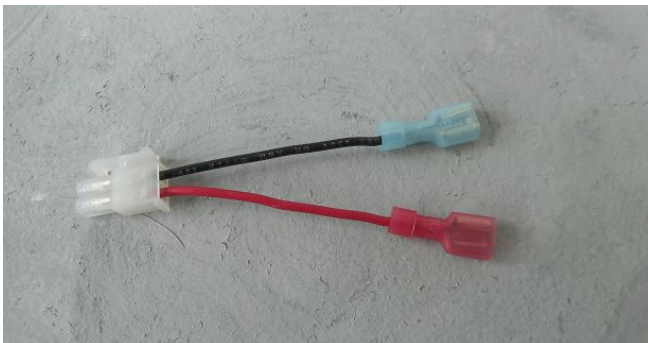
For Guns N' Roses, keep the harness wire-tied and as you found them with the capacitors in tact as shown in the image below – do not disassemble the harnesses in any way or remove the wire ties:



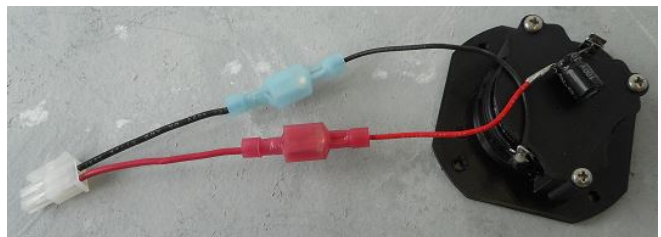
Completed Guns N' Roses tweeter harness connected to the tweeter assembly. The wide terminal takes (+) / Red and the narrow terminal takes (-) / Blue:



For Early Guns N' Roses, Dialed In!, Pirates of the Caribbean and Willy Wonka, you'll end up with a harness similar to what's shown below:



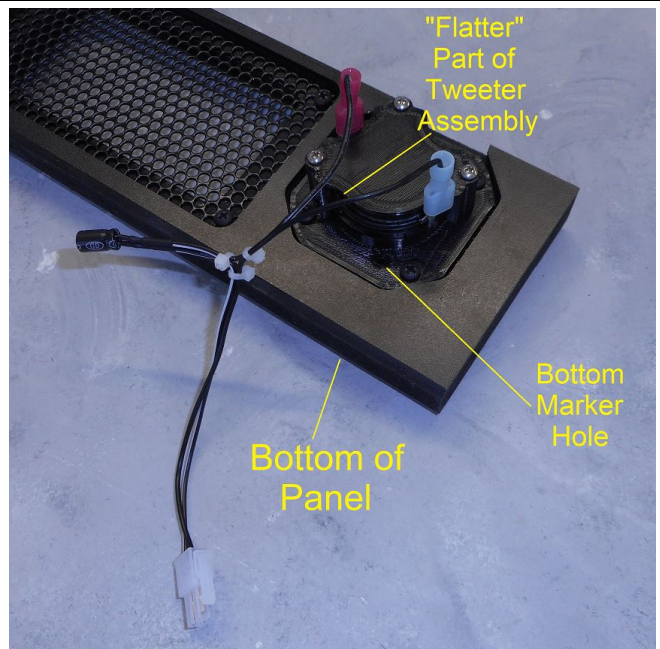
Early Guns N' Roses, Dialed In!, Pirates of the Caribbean and Willy Wonka tweeters with pre-installed capacitors. Connect red to red and blue to blue. Inspect each connector to ensure that the internal spades are not mis-aligned and that they are making electrical contact within the mated connection:



Installation Step 6 – Mount Tweeters

Mount the new tweeters, re-using the original screws and 2in grille. Perform this process on both left and right sides as shown and illustrated on the right.

Mount the tweeters so that their terminals are oriented side to side as shown, and not top to bottom. Do this by orienting the “Bottom Marker Hole” to the bottom of the speaker panel. Otherwise, the tweeter assembly may occupy too much of the backglass slot and prevent your backglas from being re-installed.



View of the Completed Panel with Tweeters Mounted (Guns N' Roses Shown)

Note that the crimp lugs / terminals are oriented roughly side to side so that they do not interfere with the closing of the speaker panel. The “flatter” part of the tweeter bodies are facing down in the image below:



Completed Panel

Shown to the right is the new outside view of your speaker panel.

As you re-install your speaker panel, you'll need to fish each tweeter harness back through the original access hole and re-connect to the other side of the quick connect connector.

Use caution not to drop the panel or scratch the backbox finish.



Our Sincerest Thanks for Choosing PinWoofers!