

# how to Replace the Stock Speaker

**WARNING: Performing any of these modifications may void your warranty!**



## Is it Difficult?

I've heard a lot of people ask "how hard is it to replace the stock speaker?" It's not difficult, but it's not a stroll through the park either—as we'll soon see. Replacing the stock [Eminence Legend 125](#) could be one of the best moves you can make to help improve your amp's tone. A loudspeaker, sometimes called a "driver," is basically a master EQ that cannot be modified. For instance, we can adjust an EQ so that a sound is overly bassy or harsh. Because of this some speakers will work better with different circuits and different cabinets (open or closed back). Our quest for "tone" is finding a speaker that has all the right characteristics which achieve balance in our amp and guitar. This is easier said than done and *very* subjective.

## Choices, Choices, Choices...

Many [Harmony Central](#) users swear by the Celestion Vintage 30, many internet users swear by [WeberVST](#) speakers and a few frown upon the Vintage 30, others recommend a Jensen C12N if you want "that classic Fender sound." Depending on the unique sound we're after we may need a different speaker, and there are enough choices to make your head spin! Still, others go through four or five speakers only to return to the original Eminence! Chances are you'll end up changing speakers more than once, so a good rule-of-thumb is to keep the original cardboard box. If you ever decide to sell the speaker on ebay it will not only sell for more, but also ship more safely.

In defense of Eminence, they actually make pretty nice speakers. For instance, many consider the original '59 Bassman Reissue speakers to sound closer to the original Jensen speakers than the Jensen reissues! For reference, this speaker was the Eminence 8 ohm Legend 102 with paper bobbin, which has now been replaced by the Jensen P10R reissue. Eminence also manufactures many other company's speakers like Mojo, Magic Parts, and New Sensor. Still, some owners feel the Hot Rod Deluxe's stock speaker leaves something to be desired.

## What Happens to the 5-year Warranty?

Another common question is if a speaker change will void the warranty. Here there seems to be some controversy. Some Fender Certified techs at the FDP, the ones who actually void warranties, say that you can swap out speakers worry free. On the other hand, I've heard other people argue that it does in fact "technically" void your warranty. That said, you should proceed at your own risk. Whether your warranty is voided or not may depend on whether your tech's having a good or bad day. Remember, you can always put the old speaker back in if a major repair is needed.

## Lets Do It!

I've prepared 16 very simple steps to help you on the way.

### 1. Unplug Amp/Remove back panel.



**2. Drain the filter capacitors!** This is done for safety reasons. If you've ever read around, you may have heard that amplifiers can kill you—even if they are unplugged and turned off. This is because capacitors hold a voltage, and they can release deadly current into you if touch both of its leads. [CLICK HERE to learn how to drain the capacitors.](#) After we're certain that the filter caps have been drained, and the amp is safe to work on, feel free to put the back panel back on if you so choose.



**3. Remove tubes. Careful! Hot!** We don't want them to accidentally break when the chassis comes out. (A.) If your amp was just on, use a thick rag or oven mitten to take the tubes out. If you only warmed it up to drain the caps, then they shouldn't be too hot. I'd still use something instead of your hand, and be sure to put them on something that won't burn. (B.) Be sure to remove both poweramp and preamp tubes.



### 4. Remove speaker cable from jack.



**5. Unscrew chassis.** The chassis is heavier than it looks so be prepared to catch it!



**6. Gently lay chassis down beside the amp.** You don't want to damage the choke or transformers.

**7. Unhook speaker cable from speaker.** You'll have to pull that metal connective piece off of the speaker's lug. It's a bit tight, but it'll come off. There should be a red dot indicating which one is positive and negative. If not, put a piece of tape around the positive wire. This will help you remember which is which when you hook the new speaker up.



## 8. Unscrew speaker.

**9. Set speaker aside.** I placed mine in the new speaker's box. It's a good idea to keep the new box because you might change speakers again—or even several times. If you have several speakers you can sell the old ones on ebay.

**10. Screw new speaker into place.** The speaker is heavier than it looks. Lay the cabinet on its front so you won't have to hold it in air. Be careful not to damage the cone.

**11. Hook speaker cable to new speaker.** Hook the positive (red dot) to the "+", and the other connective to negative or "-".

**12. Place chassis back into cabinet.** The easiest way to do this is if the amp is laying on its front. Trying to do this with the amp standing up will wear out your arms, especially with that giant magnet pulling on the chassis. My chassis has torn up the shielding on the inside of the cabinet. To keep the amp as quiet as possible this will have to be eventually replaced.

**13. Put screws back in.** This is the most difficult part of the process. If you do it with no problem, then you are lucky! The best way to do this is, with the amp on its front, stick your hand under the chassis and find where the screw hole is—in the chassis. Manipulate the chassis until the chassis's hole and the cabinet's holes are lined up. Start screwing the screw in, but don't put it all the way in. Once one is in, go to the other side and put another in. Once two are in, the rest are easy.

**14. Plug speaker back into speaker jack.** An amp needs a "load" to dissipate the energy created by high voltage. If you turn some amps on without plugging a speaker into it, they'll be damaged and it won't be cheap to fix. Fortunately, if you forget to plug the speaker into the HRDx, the output will automatically be shorted to ground. Fender is very good about installing this on their amps. Running your amp without a speaker won't cause any damage as long as it's not ran for long periods of time. If you forget just plug it back in.

**15. Reinstall tubes and check bias.** If you know how to [bias](#), go ahead and check your tubes. It should be fine, but I like to check.

**16. Put back panel back on.**



### **Speaker Break-In**

Finally, you may find that your new speaker(s) shake and/or rattle more than your old one. Many people assume the speaker's loose and try to tighten the screws that hold it to the baffle. This will not fix the problem, actually the rattle is quite normal. You see, the cone of a new speaker is much stiffer than that of an older, well-broken-in speaker. This causes the new speaker to dissipate quite a bit of the frequencies (especially the lower ones) into the cabinet instead of the air. This is why new speakers usually sound "muffled," "stiff," or "hard" when you first put them in—because they are!

To solve this problem the speaker needs to be "broken in," or played through at moderate to loud volumes for 8 to 48 hours. If you're forced to play at lower volumes the break in time may be longer. You should start noticing a better tone within a few hours, but there are ways to speed up the process. Ted Weber gives some suggestions on [his website](#). I strongly recommend avoiding using razor blades or chemical treatment to soften the cone or suspension! You'll do nothing but hack up a perfectly good speaker. Also, I'd avoid using your most expensive NOS tubes while breaking in the speaker. I'm pretty sure my new Weber AlNiCo BlueDog turned a semi-expensive NOS 12AX7 microphonic.

### **"What was Fender thinking?!!"**

I sometimes hear people exclaim how much nicer a good speaker sounds when compared to the old one. They'll sometimes ridicule Fender for using "cheap," "squawky" or "generic" speakers. On the other hand, I know several people who've went through five or six *nice* speakers only to return to the original Eminence. While at one time I may have voiced my own opinion on the subject, I now try to be bipartisan. I'd rather you make up your own mind on the stock speaker, rather than persuade you to agree with my own unique opinion. So why did Fender use the speaker that they did? Well...

The Eminence costs around \$40 new, while a speaker like the Vintage 30s costs \$110. Quality is always reflected in price no matter what product we're comparing. Now if we add up the difference in price that's going to greatly increase the final cost of the Deluxe and Deville. Suddenly there's a "price range" that Fender would not be fulfilling. People would have to pay \$390 for a Blues Junior or take the "next step up," which would be a Celestion equipped Hot Rod Deluxe at \$630! That's quite a difference at \$240. People who couldn't tell a Celestion from a Jensen, and you'd be surprised by how many that can't, would refuse to pay the extra money for "the same" amp. Let's not forget all the fierce competition: the most notable being the Peavey Classic 30, Marshall Valvestate, and Crate V-Series. It's a bloody fight for domination in the mid-level tube amp market because that's flat out where the money is. The consensus today is that it's "got to be all tube," and none of these people want to dish out any more than they have to. It's a battle of cutting corners to fulfill customer demand, and no major company (no matter how good the reputation) is innocent.

Of course there *are* people who would pay the extra money, and Fender recognizes this by releasing "Special Runs" and "Limited Edition" Hot Rods. These have "nicer" speakers and often "better" cabinets which are visually distinguishable. If you pay attention to the market you'd notice that Peavey has been there tooth and nail with their own Special Runs and Limited Editions—always right on the heels of the Hot Rods

releases (and sometimes vise versa). Have you seen the Peavey Classic 30 LE with a finished maple cabinet in sunburst? Look familiar? The more I learn about this amp, the more I find that Fender is doing everything they can to put out the nicest amps for the best prices—nor are they alone in their attempts! I am not surprised, however, that the Hot Rod amps are the best selling Fender amps of all time.

Fender representatives have reassured those of us at the FDP that they *do* listen to their own amps. ;) I hope this clears some things up. Good luck!

By Justin Holton