

~ Putting the Jangle in the Jingle ~

by Ted A. Breaux

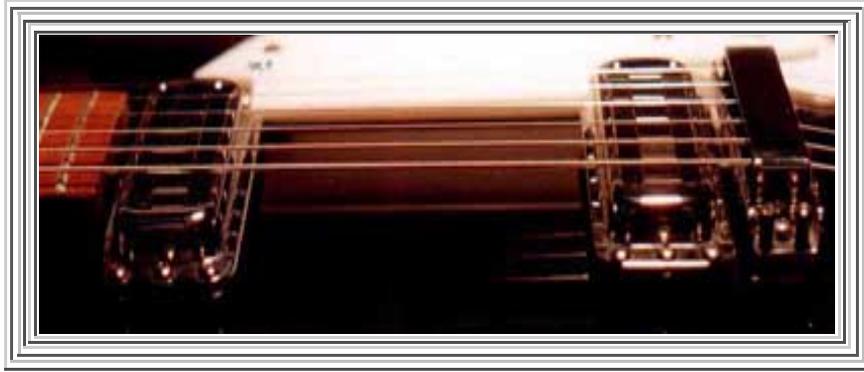
While the reissue Rickenbacker guitars sound fine to most people, those who either own or had an opportunity to play the original guitars know that the reissues, despite their impressive construction and beauty, just don't 'jangle' quite like the originals. Anyone with an ear for the finer points of sound knows that a particular tone is usually a result of a complex mixture of small factors, each lending its important contribution to the overall tonal picture. If we take a fine work of impressionist art, and let's say, remove the color blue from it, we still have a recognizable piece of artwork, but something is missing. Remove a few more colors, and while the image may still be recognizable, the impact left on the connoisseur is certainly less memorable.

We buy reissue guitars because we want them to be like the originals in every way possible (save for the hefty price tag), otherwise, we'd buy a standard model for less. Unfortunately, the manufacturers tend to make 'improvements' in an attempt to give the instrument a broader appeal, which more or less defeats the purpose of offering such an instrument in the first place. Go figure. Nevertheless, since we are stuck with buying a reissue 360V64/12 for \$1200 instead of an original for \$12,000+, we can certainly afford to reverse the factory 'improvements' to get our guitar to not only look like the original, but sound like it as well.

Authenticating Rickenbacker guitars is a relatively easy proposition compared to some other reissue guitars out there. In order to make your reissue Ric sonically indistinguishable to its expensive ancestors, there are two major areas of discrepancy which must be addressed: Strings; and Pickups.

Strings

This is the easy part. The old Rickenbacker string sets were nickel flatwound, which give a substantially different sound from the modern roundwound sets used by Ric today. The nickel flatwound strings employ different gauges and deliver a sweet, balanced jangly sparkle which is unobtainable from modern strings. Pete Townshend mentioned in a popular book that 'tape wound' strings were an important part of his early sound. He is right. If you like the old Ric sound heard in the early Who, Byrds, and Beatles records, you will have to invest in a quality nickel flatwound string set such as those made by the old German company Pyramid (www.pyramidstrings.com). If cared for properly, these strings deliver fine sound for the better part of a year with regular use. Furthermore, they are identical to the original gauges used by Rickenbacker on these guitars, which improves the intonation of the instruments, especially the 12 string guitars. My 360V64/12 intonates perfectly with Pyramid strings and the factory old-style 6 saddle bridge. As you may already know, this is virtually impossible with the Ric strings! The strings are half of the journey. The second half requires a little more invasive action.



Reissue Toasters on 1993 Model 1997

Pickups

The reissue vintage or 'toaster' pickups leave a lot to be desired. If you don't think so, that's probably because you've never really played an original. Put them against each other, and the difference is vivid. The reason for this is that the reissues tend to have almost twice as many windings on them than the originals, which reduces the frequency response of the pickup and makes a much louder signal. Play a reissue next to an original, and the reissue will give a loud, boomy sound with noticeably less high end resolution. Not very sweet to the ears by comparison. Mr. Hall of Rickenbacker informed me that all Ric pickups have used the same gauge of wire from as far back as he can find.

The original pickups used in the 50s were typically wound to 4.8-5.0k ohms. The 60s pickups were typically wound to 7.0-7.5k. The early reissues were wound to about 8.5k, and sometime in the late 80s, the pickups began to be wound to 11-12k. I've seen some late examples wound to almost 15k ohms! Clearly, this is a substantial difference which significantly changes the character of the instrument. The original sound however can be recovered simply by carefully

removing the excess windings from the pickups until they meet the old specs. This sounds scary, but it is a very straightforward and easy procedure if you have a little coordination and patience. When you hear the pickups following this procedure, you'll really have a smile on your face when you play your favorite old licks, especially if played through a beat up old top boosted AC30 with alnico speakers.



Original Toasters on 1966 450/12

If you are playing a 325V59, your target (to sound like Lennon's guitar) is 4.8-5.0k, and you'll want to disconnect the middle pickup like Lennon's guitar. If you are playing a 325V63, 1997, 381, 360V64, or any other Ric equipped with vintage pickups, you probably want to opt for the 60s spec. 7.0-7.5k. Bonus Tip: Now for the bonus. All the old Ric 3 and 6 series guitars had a .0047mF capacitor placed between the treble pickup and its volume pot. Go to a good electronics parts supplier, and get an audio quality (silver mica or polypropylene) capacitor (<\$1.00), and insert it between the hot lead of the treble pickup and the volume pot. There is a ground lead (to the shell of the pot), and a hot lead (to the terminal), so make sure to put the cap in the right place.

If you change your strings, unwind your pickups, and install the old capacitor, you laugh with delight when you play the old Ric licks made famous by the Beatles, the WHO, and Byrds, etc. For less than \$50 and a little time, your guitar will chime exactly like the coveted originals, guaranteed! If you do not feel confident enough to perform this procedure, I can do it for you. It really isn't difficult, and so far, I've rewound quite a few with zero failures. I normally charge \$20 per pickup (shipping incl.) to cover my time (tabreaux@neworleans.com). Special thanks, for assistance in information compiled to write this article, goes out to Don Butler (www.tone-man.com) and Mr. John Hall of Rickenbacker.

Materials Needed

The material needed for the unwinding procedure includes: a small soldering iron; electrical tape; a small flat-head screwdriver; a Phillips-head screwdriver; an Ohmmeter; a lighter; and 2-hours and maybe a beer.

Pickup Unwinding Procedure

- 1) Lay the instrument on a soft, supportive surface, and loosen strings. Remove small bidge cover plate so that strings can be moved to side of bridge.
- 2) Using the phillips screwdriver, remove the top pickguard section, being careful not to lose the small rubber grommets which are under the screws.
- 3) Carefully unscrew the center screw on each side of the bridge pickup. When these become loose, carefully remove

the small rubber grommets under the corner pickup screws. If one of these falls into the 'f'-hole, you'll be lucky to get it back.

4) Carefully pull the pickup away from the body of the guitar. Cupping the pickup firmly in your hand, unscrew the corner pickup screws while holding the nuts on the bottom side. Remove all four screws and nuts. One screw holds the ground lug. Rest the backing plate on the guitar body.

5) Using the small flat-head screwdriver, pry the pickup body from the toaster cover. Carefully unwind the sticky electrical tape from the pickup windings. Stick this in a hanging position somewhere, as you will reuse it later.

6) On the bottom of the pickup body, you will see the magnet poles and two terminals. If you measure the resistance between the two terminals, the reading will likely be between 11.7-11.9k ohms. You will see the fine coil wire pass in a slot in the plastic bobbin near the outermost terminal. Don't worry about trying to unsolder it, just gently pull it from the terminal, and it will easily pop off.

7) Now, holding the pickup in one hand such that the face of the pickup is sideways, grip the little end of loose wire, and pull it away from the face. The first few times the wire will keep snapping off due to the glue, but soon, you'll be pulling a long, silky stream of wire off the pickup. Don't be bashful, you should be pulling off at least several windings per stroke of the hand. Make about 200-250 hand strokes, then break the wire.

8) Using the cigarette lighter, quickly burn the end of the wire. You'll see a little piece melt off, but the new end will be free of insulation. Carefully pinching the tiny end to one probe of your meter (with your finger), touch the inside terminal on the pickup with the other probe and measure the resistance. Make a mental note of this and continue

unwinding.

9) When you reach about 7.5k, break the tiny wire such that you can carefully return it to its tiny channel near the edge terminal. Place the pickup upside down on a towel. Place the tiny wire against the solder bead on the terminal, and just touch the tiny wire against the terminal with the soldering iron until the solder melts around the wire. The hot tip of the soldering iron will melt the insulation off the tiny wire, so don't be too concerned about that. Trim off any excess wire to prevent a short due to a dangling end. Measure the resistance between the two terminals to verify a good connection. The pickup selector switch, volume, and tone controls may affect the resistance reading, so just be sure that there is a connection without paying too much attention to the indicated reading.

10) Carefully rewrap the factory electrical tape around the coil, and follow with 2-3 turns of your electrical tape to compensate for the slightly smaller coil size. Verify the connection again with the meter. Press the pickup body back into the chrome top. It should fit snugly. Carefully remount the pickup to the guitar body. Plug the guitar into an amp and tap the pickup with a screwdriver to verify the connection. If all is well, repeat for the remaining pickup(s).

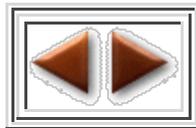
At some point, you'll likely want to remove the pickguard and insert the .0047F tone capacitor I discussed between treble pickup 'hot' lead and its terminal on the volume pot. When you go to play the guitar, I think you'll be pleasantly surprised. You'll notice that it sounds virtually identical to the Ric guitars in the famous records from the 60s.

Links to References

Pyramid Strings
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Don Butler

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Rickenbacker Resource