Peavey VK112 Bias Mod

By Charles Peck 06/06/2009

In this package I will discuss the steps I took to mod my VK112 so that it can be biased manually. Besides the parts that are shown you will need tools for the job. Below is a list.

1. Good quality soldering iron.
2. Cutting pliers (small)
3. 17/64 drill bit
4. Countersink for deburring
5. Drill
6. Multimeter
7. Bias Rite or similar
8. Small diameter electrical solder (rosin core)
9. A shoe horn or paint can opener to remove knobs
10. Cut yourself some wood blocks to prop board on, long enough to reach across chassis and not too thick
11. Wrenches to remove jack and pot nuts and Standby Switch
12. Small Phillips screwdriver

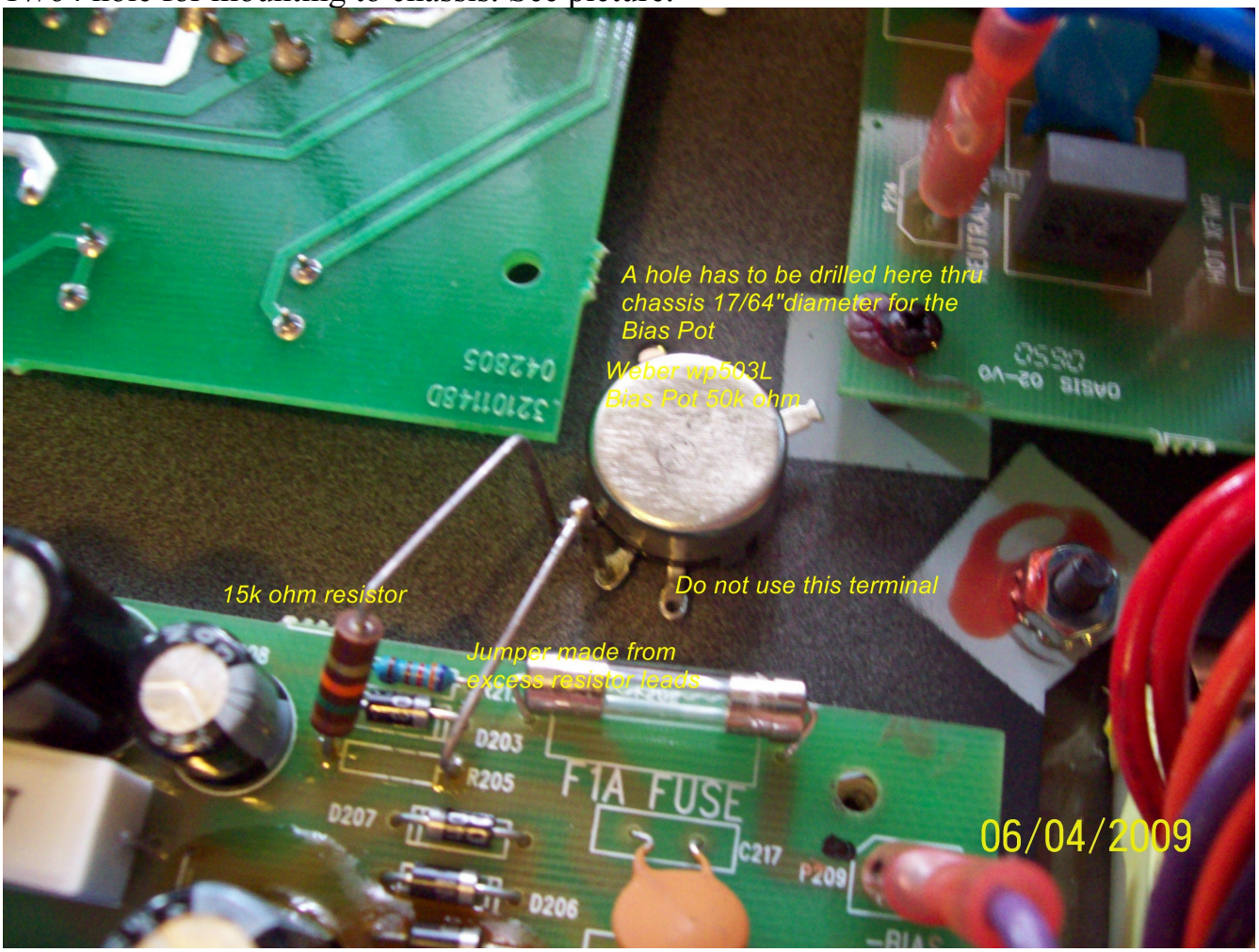
This picture shows the parts for the bias pot mod. You need one each.

To start, I inserted my bias probes and took readings on each tube before proceeding and recorded those readings. I also took readings across the 15k resistor touched at left terminal and probed center terminal. I then preset the resistance for pot with 15k resistor to 33k. Same as the resistor you will be removing. Using alligator leads on the terminals and your multimeter leads so you can adjust setting.
Now you are ready to disassemble the amp. Make sure amp is unplugged leaving standby on..Drains Caps!

Remove all tubes, power and preamp.
Unplug speaker and reverb. The reverb has white plug at the chassis so you don't need to unplug at the tank. Just pull gently. Take out the two screws under back ledge. Remove the Peavey logo at front and the metal plate at front just under chassis. Now remove the 4 long bolts at the top of the amp and support the chassis. You then slide the chassis out and put on your work bench.
Now it is time to gently pry the knobs off each pot on the front of chassis using the shoe horn as shown.

Use appropriate wrench to remove nuts from Standby switch, pots and front jacks. Check standby switch with mm for voltage before proceeding. Always check voltages for safety. The capacitors are not accessible until board has been removed and flipped. VK I think is self draining but beware anyway. I assume no responsibility if you undertake this mod. If you don't have the experience, don't do it. The reason the standby switch is removed is to give you room to flip the main board. You will find a plastic wire tie that holds the wires near the switches. Clip and remove it. Power switch stays in, do not remove.
Now you will find small black screws holding the board in. Approximately 7 or so. Remove them with the appropriate size Phillips screw driver. With the standby switch loose you can gently lift and slide the board out of front pot and jack mounts.
Locate resistor R205 on the board. This is the baby you will remove, mark it's position on the opposite side when board is gently flipped. With board turned slide the wood blocks under the board for support. Now you can check voltage at Capacitors. Shouldn't be any. Beware tho. If all is good voltage levels you can proceed to unsolder the 33k resistor at R205. Use a probe to pull it down on each pin until it comes out. Clean out

the 2 holes. Take the new resistor and cut one lead about 1/4” on one end only. Insert that end thru far enough to get it soldered to the board at the left hole shown in picture. Before going too far tho you should test place the bias pot to determine where to drill the 17/64 hole for mounting to chassis. See picture.



The board is shown here where it mounts but is not yet screwed back in. Once you have ample clearance to get pot connections soldered drill and deburr the hole in chassis. Clean all chips out of the chassis and board areas using a small vacuum or blow it out good with a can of air. Don't want any chips shorting things so check good. Mount the bias pot as shown and gently tighten. Now insert the jumper into the other board hole and solder at the circuit side. Flip the board back to its final assembly spot and gently bend the resistor with small pliers until it meets the pot terminal shown. Put a shim under the terminal so the lead does not short to chassis and solder it to the terminal. Repeat with the jumper and solder. My jumper is actually two resistor leads soldered together. Be sure you made good solder joints, very important. Damage can be done if it is not a good connection. Notice which terminals were used. In this picture the far right is not used. By using the left one and the middle it gives you an increase in milliamps going clockwise.

If the other end terminal were used instead of the one shown the increase in milliamps

would have been CCW. Check all your work and make sure it is clean. Put the screws in the board snug. Put the standby back in. Put the plastic nuts on all the jacks and only finger tight. The nuts will split if over tightened. Put the metal nuts on the pots and snug them, don't over tighten. Push the knobs back on and reassemble the amp in reverse of taking it apart.
Remember we preset the ohm rating of the pot with the 15k resistor. Now you have to use the Bias Rite or similar to set the bias. It is best to use an old set of tubes to start with. The pot should be close enough to get it fine tuned. Once you are confident every thing works right you can put in the good tubes and tune it in.

Now the good part. Play the damn thing!