

Marantz 2215B Complete Rebuild Instructions:

Hi, thank you for buying this kit from me. This will allow you to completely rebuild a Marantz 2215B. These are brand new, high-quality parts, and will work great for you. If your Marantz is not currently in working order, I would strongly recommend you fix it before you install this, though this will fix a lot of problems that a 2215B may have. You can download a free service manual here (make sure you get the B model):

https://www.hifiengine.com/manual_library/marantz/2215.shtml

This can help you with a number of things.

You will need a pencil-type soldering iron, rosin-core solder, wire cutters, a Philips screwdriver, needle-nose pliers, and some sort of desoldering device, whether it's a desoldering iron or a solder-sucker or whatever.

What I like to do when I'm repairing stuff is to replace a few components, then test the equipment, then replace a few more, then test it again. If you replace a TON of parts all at once, and you do something wrong, it's going to be a lot of hassle trying to figure out where you went wrong.

This is a fairly complicated rebuild, and if you have not worked on vintage stereo gear before, this may be too advanced for you. **If you don't have a dim-bulb tester, please build one and use it with this.** You'll want to use a 40-watt, 60-watt, or 100-watt incandescent bulb.

<https://audiokarma.org/forums/index.php?threads/dim-bulb-tester-build-and-how-to.808399/>

1. Remove the top and bottom covers of your Marantz, and put all the screws somewhere safe, like a baggie or plastic container.
2. Take careful pictures of the top and bottom of the entire unit, and of the boards, using a smartphone or digital camera. Pictures are great because if you screw something up you can usually figure out what went wrong using your pictures.
3. Let's start with the P800 power supply board, on top in the front center. First, replace the capacitors. The capacitors in this kit are the exact same capacitance (uf) and the same or higher voltage ratings as the originals. They are much higher-quality, but are smaller because of advances in electronics design. In order to replace each capacitor, carefully desolder ONE capacitor, then pull it out of the board, noting which way it goes in. Each cap will have a line along one side of the body, showing that to be the negative side. Make sure you put in the new caps exactly the same orientation as the old ones. Sometimes the circuit board will have a little + or - sign to show you which way the cap goes, and you can always double-check in the service manual, but sometimes there are errors in the manual or on the PC board, believe it or not, so the easiest way to do it is just to pull the cap out carefully and put in the new one exactly the same way. Some of the old caps are glued down. If you want, you can clean the old glue off the top of the circuit board before you put in the new cap. You don't need to glue any of the new caps.

Capacitor C808 is marked 220 uf 50v in the service manual, and is usually a 220 uf 50v, but is a 100 uf 50v capacitor on some 2215Bs, for whatever reason. You can go ahead and replace it with the new 220 uf 50v either way.

The big 3300 uf capacitor is the tricky one here. The old one has 3 metal pins, one of which is a dummy lug and doesn't do anything. The new capacitor only has two leads, one positive and one negative. The board under where the old cap was has a white line on it with a hole at each end. The hole closer to J806 (you'll see a + near it) is the positive terminal, and the hole closer to H808 is the negative. Once you've put in the new cap, making sure to observe polarity (+/- orientation), bend the leads on the underside to hold the cap in place, and carefully resolder it. Then trim the leads so they match the others, and discard the wire bits. Don't leave wire bits lying around--they'll short stuff out and cause problems. You should mount the new caps pretty much flush with the circuit board--don't leave them sticking up. Replace all the capacitors, one by one. Make sure you put the correct ones in the correct locations.

4. Replace the small diodes. The 3 glass diodes at H806, H807, and H808 all get replaced with 1N4004 diodes, which are the smaller black ones. Desolder each diode carefully, and put in the new one carefully. You can remove the white ceramic standoffs on each old diode's legs and use them for the new one, but you don't have to--you can just put them flush with the board if you want. Make sure you observe polarity--the white line on one end of the diode should be at the end that has the flat line marked on the board. Trim the leads and discard the bits.

5. Then replace the four large white diodes at H802, H803, H804, and H805, replacing them with the larger 1N5404 diodes. You can carefully bend them and reuse the ceramic standoffs, but you don't have to--you can put them flush with the board if you want. Make sure you observe polarity--the white line on one end of the diode should be at the end that has the flat line marked on the board. Trim the leads and discard the bits.

6. Now it's time for the amp board, at the top left. Replace the caps first. The four 1 uf electrolytic capacitors on this board are replaced with the new 1 uf red Wima film capacitors, which are non-polar, so they can go in either way.

7. There are four small transistors to replace here. The two A564 transistors (H701/H702) are replaced with the new KSA992 transistors, which go in the same way. You can also use the board markings to see how these go in. All of the new transistors in the kit are ECB, so when you're looking at the writing, the left pin is E, the middle is C, and the right one is B. The board is marked with E, C, and B, so it's easy to put them in correctly.

After you replace those, replace the two C828 transistors (H705/H706) with the two KSC1845 transistors, which also go in the same way.

8. When you're done with the amp board, power it up on the dim-bulb tester and test it with some cheap test speakers and on FM. If it works, it's time to set the amplifier bias voltage. Do this plugged straight into the wall, with speakers attached, source on Aux, and volume at 0. You will need a multimeter with mini-grabber leads--don't use regular probes. Be extremely careful when doing this--if you short out terminals by being careless or using regular multimeter probes, you may undo all your hard work!

Attach one lead to one side of resistor R735 and the other lead to the other side of the resistor. Slowly and carefully adjust the white trimmer potentiometer R727 (the one closest to the resistor), until you get either 10mv DC or -10mv DC (either is fine, it just depends which way your leads are). Then switch your test leads to resistor R736 and adjust R728 (closest to that resistor) to 10mv or -10mv. Once those are set, you're done!

9. The phono EQ board is to the right of the power supply board. This one just gets the caps replaced. The three 1 uf capacitors at C413, C415, and C416 are all replaced with the 1.0 uf red Wima film capacitors, which are non-polar, so they can go in either way. The two 3.3 uf capacitors at C401/C402 are replaced with the larger 3.3 uf red Wima film caps, which again are non-polar so they can go in either way. The 2215B manual incorrectly describes these as 33 uf capacitors, but they are actually 3.3 uf. The two 100 uf capacitors at C405/406 are replaced with the 100 uf 25v or 100 uf 35v capacitors, and the larger 100 uf 35v capacitor at C417 is replaced with the 100 uf 50v cap.

10. A good way to test a phono board if you don't have a turntable handy is to turn on the amplifier with the phono input selected and turn up the volume all the way. If you hear a whooshing noise on both channels, you're probably fine. If you hear NOTHING AT ALL, on one or both channels, you probably put in at least one transistor backwards.

11. The tuner board is the big one on the right side. All the electrolytic caps here are replaced. Some are little blue blob tantalum caps. It should be pretty clear what gets replaced with what. The smaller values are replaced with the red Wima film caps, which are non-polar so they can go in either way. The C121 cap is a .022 uf and is replaced with the new small white non-polar cap. Recapping the tuner board shouldn't mess up the reception, but what I like to do is replace a few caps, test the receiver on FM, then replace a few more, etc.

12. The PE01 tone board is attached to the front tone controls, so you'll need to remove the faceplate and knobs to work on it. The four nuts in the corners can be loosened with a crescent wrench. Be GENTLE here--don't damage the nuts or scratch the faceplate. Once they're loose, undo them by hand. Then remove the faceplate. There are some nuts and washers holding in the tone controls--you'll need to loosen and remove these. The tone board will slide out the back. There are a lot of caps on here to replace. There are two different new 4.7 uf caps—CE15/CE16 are replaced with the little green Nichicon Muse caps, which are non-polar so they can go in either way, and the other two 4.7 uf caps are replaced with the black 4.7 uf caps. There are four 1 uf caps to replace with the new red Wima film caps, which are nonpolar. There are four 2SC1328 transistors to replace with the new KSC1845s, which go in the same way, or you can use the board markings. There are two 2SA722 transistors to replace with the new KSA992s, which go in the same way, or use the markings.

13. This is a good time to clean the controls with Deoxit D5 or a similar contact cleaner (NOT WD40). Do not do anything with the power switch—Deoxit is not good for it. When you're done here, reinstall the PE01 board and test the receiver on the dim-bulb. If it works fine, put the faceplate and knobs back together. I like to just finger-tighten the faceplate bolts—they don't need to be super-tight.

14. You should be done now. Close your receiver up and enjoy!

If you have any questions, you can contact me through eBay or you can post on Audiokarma.org in the Marantz forum. They'll be happy to help you out there.

<http://audiokarma.org/forums/index.php?forums/marantz-audio.134/>

I have many other kits and parts available--keep an eye on my listings!

Happy listening,

Ben