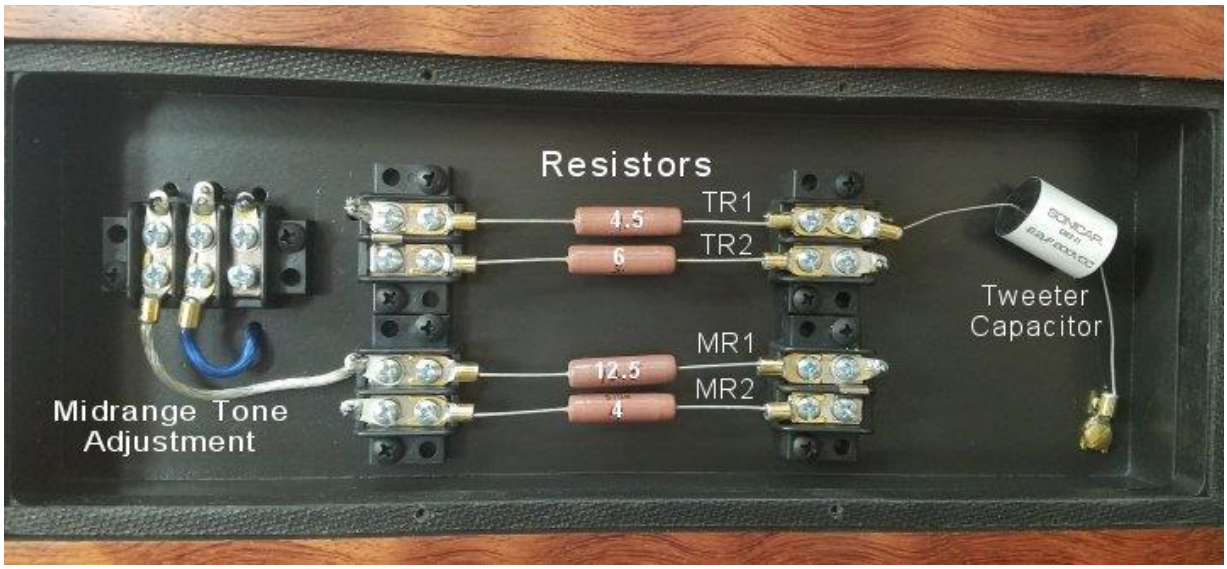
Rival V-1 Crossover Adjustments
Remove the cover from the top/back of the speaker



You can adjust the output level of the midrange and tweeter in relation to the woofer (which always runs full output) by changing resistors in the crossover. Note the four resistors in the center of the crossover labeled in the photo above:
TR1 – Tweeter Primary
TR2 – Tweeter Shunt
MR1 – Midrange Primary
MR2 – Midrange Shunt

Note that all level options shown here are negative numbers, which means that the tweeter and midrange are being attenuated (turned down) in relation to the woofer to balance the three drivers in the system. For instance, -7db means the tweeter is operating 7db lower than its maximum output in order to balance with the woofer output. If you want the tweeter to be louder, you want LESS attenuation, or -6db. If you want the tweeter to be quieter, you want MORE attenuation, or -8db,-9db. The same is true for the midrange output.

Here are the options for choosing tweeter level – note the factory settings are highlighted in RED. Resistors included with your rivals will allow you to choose levels shown in RED and GREEN. If you'd like to try other levels, please contact us for the proper resistors.

TR1 – 4ohm and TR2 – 8ohm = -6db
TR1 – 4.5ohm and TR2 – 6ohm = -7db
TR1 – 5ohm and TR2 – 5ohm = -8db
TR1 – 5ohm and TR2 – 4ohm = -9db

Here are the options for choosing midrange level – note factory settings are highlighted in RED
MR1 – 12.5ohm and MR2 – 6ohm = -11db
MR1 – 12.5ohm and MR2 – 5ohm = -12db
MR1 – 12.5ohm and MR2 – 4ohm = -13db
MR1 – 13.5ohm and MR2 – 3.5ohm = -14.5db

The factory setting on the four resistors,
from top to bottom should be:
4.5
6
12.5
4

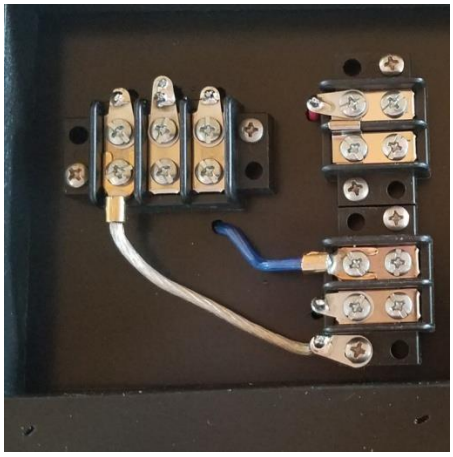
In addition to changing the output level of the tweeter and midrange, there are several adjustments that can be made to the tone of the Rival.

Bass:

There is an adjustment that can be made to the sound of the low bass on the Rival. The adjustment is made to the port, which is the rectangular shaped opening at the front/bottom of the cabinet. If you reach inside the port, you will find there is a top "shelf" that can be removed. The shelf is held in place with magnets, so you simply push up on it and it will pop right off. Note the orientation of the shelf when re-installing. Removing this shelf will make a slight difference in the sound of the lower bass. With the shelf, the bass is more extended and smoother. Without the shelf, the bass is less extended and punchier. It is a very slight difference that may be more noticeable in some rooms more than others.

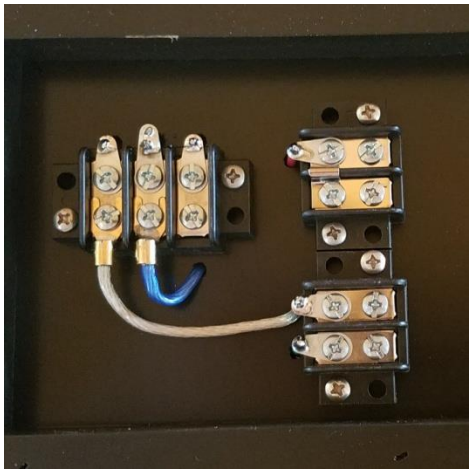
Midrange Tone:

You can change the tone of the midrange by simply moving the wire on the three-gang barrier strip shown in the photos below. Factory setting is denoted in RED. The change is made to the upper midrange, and the changes will affect how you perceive the clarity and sharpness of the upper mids, as well as how the midrange integrates with the tweeter.



Setting 1 has no inductor engaged in the midrange crossover filter circuit. This will result in the sharpest and most pronounced upper midrange sound. Note that the blue wire has been moved from the 3-gang strip to the 2-gang, replacing the silver wire which is located on that screw in all other settings. The silver wire is not connected to anything, but is simply being "stored" on one of the mounting screws for the strip so that it does not make contact with anything accidentally.

Setting 2 has one small inductor engaged in the midrange crossover filter circuit. This will result in a slight roll-off of the upper midrange frequencies as compared to Setting 1. Note that the silver wire is back on the 2-gang strip and the blue wire is moved over to the 3-gang strip.



Setting 3 has a larger inductor engaged in the midrange crossover filter circuit. This will result in a little bit more of an upper midrange roll-off and a softer sound to the upper midrange as compared to Setting 2. This is the factory setting.

Setting 4 has a combination of the two previously mentioned inductors engaged in the midrange crossover filter circuit. This will result in even more of a roll-off of the upper midrange frequencies, and is the softest, or dullest upper midrange setting of all the Settings.

Tweeter Tone:

To change the tone of the tweeter, you can simply change the tweeter capacitor value, shown in the photo above. Alternative capacitors are NOT included with your speakers, please inquire with Volti Audio for options.

The factory capacitor is a 2.2uFd. We feel this strikes a nice balance between a smooth extreme high frequency response and good integration with the midrange.

A “lighter” sound can be obtained by changing the capacitor to a 1.5uFd. This raises the crossover point to the tweeter, which tips the balance more to the extreme upper frequencies. Some people describe this sound as having more “air”.

A “sharper” sound can be obtained by changing the capacitor to a 2.7uFd. This lowers the crossover point to the tweeter, tipping the balance to the lower frequencies coming from the tweeter. This can be described as a crisper or more defined tweeter sound.

Also it should be noted that different capacitor brands of the same value will make a difference in the sound of the tweeter, so you may want to experiment with different brands of 2.2uFd capacitors.

Don’t want to be bothered? No problem, just leave the factory settings as they are and enjoy!

You won’t be disappointed, we promise. Rival speakers sound wonderful as they are, direct from the factory. During the development, there was serious consideration given to NOT providing these adjustments due to the fact that it can turn some customers off. If the adjustments are really too much to deal with, we suggest putting it out of your mind and pretend you’ve received these fine speakers that do not offer, nor require crossover adjustments. Then enjoy the heck out of them just the way they are!