

ROCKVILLE



RVA600.1
TROUBLESHOOTING ADDENDUM

Troubleshooting

PROBLEM	CAUSE/SOLUTION
Amp goes into protect mode	<p>1. Short-circuit protection - Caused by the power or ground wire not being fastened tightly. Disconnect the speakers from the amp. If the amp is still in protect mode, you now know the issue is somewhere with the power, ground, or remote wire. You should check and make sure the ground is tight. You should check the power wire terminals. Make sure the positive is going to the positive, and the negative is going to the negative. If all this is secure, you can use a multimeter and make sure you are getting 12 – 14.4 volts coming from your power wire. If this is all checking out properly, then you should check that the remote wire is properly connected to the remote wire on your receiver. Many times people mistakenly connect it to the antenna wire instead. If this is correct, you should also use a multimeter and make sure your remote wire is getting 5 volts.</p> <p>2. Thermal protection - This happens when the amplifier overheats. Check that your subwoofers are compatible with your amp and that they are wired correctly.</p> <p>3. Blown speaker - To check for a blown speaker, disconnect all the speakers from the amplifier. If the amp goes out of protect mode, then the problem is indeed a blown speaker. Find which speaker is blown and replace it.</p> <p>4. Wrong speaker impedance - Replace the speaker(s) with one of the proper impedance.</p> <p>5. Speaker wires touching - If the positive and negative speaker wires that run from your speakers to your amplifier touch each other either by the speaker terminals or by the amplifier terminals, the amp will go into protect mode. Check all speaker connections to ensure that the wires are not touching.</p> <p>6. Reverse polarity protection - Reverse polarity means the positive and negative power wires are backward. Connect the speaker wires to the correct terminals.</p> <p>7. Power wire gauge - If your power and ground wire are not thick enough, the amp will go into protect mode to protect itself from unsafe signals. Be sure to use the proper gauge wires.</p> <p>8. RCA cables - RCA patch cables that are grounded out or otherwise faulty can also cause the protect light to come on. To check this, you can simply hook up a set of known good RCA cables to your head unit and amp. If that causes the light to turn off, replacing the RCA cables will fix the problem.</p>

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Amp won't power on	<ol style="list-style-type: none"> 1. The external fuse is not properly secured to the power wire or is not making proper contact to the wire. Ensure the fuse is properly seated and making contact. 2. Your external fuse (inside the fuse holder) is blown. Replace the fuse. Never replace the supplied external fuse with one of a larger value 3. Amplifier's internal fuse is blown (the fuse on the side of the amp). Replace the fuse. Never replace the built-in fuse with one of a larger value 4. Check the ground wire. Make sure the connection is 100% secure and tight. 5. Power wire is not connected properly to the ring terminal or it has acid corrosion on it. Check the connection to the ring terminal and use a wire brush to clean any corrosion off the ring. 6. Check the power wire. Make sure the positive is wired to the positive, and the negative is going to the negative. Make sure the power wire is secure. 7. Check the remote turn-on wire. Make sure that this wire is connected securely to the amplifier on one end, and make sure the other end is connected to the remote turn on of the receiver. A common error we see is the remote turn-on gets connected to the antenna wire instead of the remote turn-on wire of the head unit. Please note the remote turn-on wire is a required wire. The amp will not work if this is not connected. It is also possible the remote terminal is loose and fell out. 8. Power wire is connected to the ground terminal of the amplifier. Connect the power wire to the +12V terminal of the amp. 9. Power or ground wire became loose. Check all connections and make sure they are tight.
Power but no sound	<ol style="list-style-type: none"> 1. Check if any protection lights are on. If protection lights are on, please refer to the "Amp goes into protect mode" section on page 17. 2. Make sure the RCA cable that is plugged into your amplifier is plugged into the RCA input. If you have it plugged into the RCA output, then the amplifier will not get any sound. 3. Check the RCA cable that is going from the amplifier to the receiver. We recommend having a spare RCA cable to test with. Many times RCA cables go bad since they are thin cables. You can also test your

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Power but no sound	<p>RCA signal using a multimeter.</p> <ol style="list-style-type: none">4. The next thing to check is the speaker wire that is going from the amp to the speakers. If the amplifier is in bridged mode, then be sure you connected the speaker wire to the proper terminals. You want to check that the5. Check your gain – on the amp and/or on your bass remote. If it is on 0, then turn it up slowly.6. Check the RCA cable that is plugged into your receiver. Make sure you plugged the amplifier into the pre-amp output that is red and white. In many cases we have seen customers plug the RCA into the RCA video of their receiver, which is yellow. If this is the case, just plug the RCA into the proper connections and your problem will be solved.7. There is a setting on your receiver that can disable your RCA outputs. The setting is under fader/balance control. On your receiver navigate to fader/balance and find the setting, then make sure you enable front, rear, and sub pre-amp outputs. Sometimes the head unit will allow you only to enable front and rear, which would cause the amp to have no sound.8. Speaker wire is not making a good contact on the speaker output of the amp or on the speaker terminal. You need to make sure the speaker wire is securely tightened into the speaker terminal and the amplifier terminal.9. A pinched or cut speaker wire that is now not running a signal. Speaker wire is very thin and can rip or tear easily. If you have spare speaker wire, then you can test this issue with new speaker wire and see if that solves your issue. You can also visually inspect your current speaker wire.10. Make sure the positive and negative speaker wire are running to the positive and negative speaker terminal of the amp. If they are reversed, then the speaker will play no sound or very little sound.
Amp is clipping	<ol style="list-style-type: none">1. Speakers/subs are too powerful for the amplifier you are using. Check the compatibility of your speakers/subs. Replace incompatible speakers/subs with compatible ones.2. If the speakers/subs are wired at a lower impedance (ohms) than the amp is supposed to be playing, this can cause the amp to clip. Wire the speakers/subs at the proper impedance.3. If the gain setting is too high, this can cause the amp to clip. The proper way to set your gain is to turn your receiver volume to 75% of the max, and then slowly turn your gain up. The second you hear any slight distortion,

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Amp is clipping	<p>turn it down one notch and leave it at that setting. Amps are not meant to be played with the gain up to the max. If this is the case, lower your gain slowly until you hear the amplifier stop clipping.</p> <ol style="list-style-type: none"> 4. A poor ground cable connection can cause your amp to clip because improper power is getting to the amp. Check your ground connection and make sure that the cable is securely tightened. 5. A very common cause of amplifier clipping is power and ground wire that is too thin of a gauge size for the amplifier. Determine the proper wire gauge necessary and replace existing wires. 6. If using multiple devices that all have a volume control (such as an equalizer or processor, receiver, and the amp), then you would need to lower one or two of those devices to stop the amp from clipping.
Distortion, background noise, crackling, or hissing in the speakers	<ol style="list-style-type: none"> 1. First check to see how your wires are run. If your RCA cables and speaker wire are run alongside your power cables, they will pick up feedback. If this is the case, you will need to run the RCA cable on the other side separate from your power cable. 2. A poor ground cable connection can cause your amp to clip because improper power is getting to the amp. Check your ground connection and make sure that the cable is securely tightened. 3. Engine noise – You will know it is engine noise if every time you rev your engine the noise gets louder. You can install a ground loop isolator on the receiver’s power lead to cut down on signal pollution. Most often, however, engine noise comes from a loose or intermittent ground connection. Make sure your ground connection is tight and that you are using the proper gauge cable. 4. If your gain on your amp is set to the max and your receiver has a high preamp voltage, it will cause some unwanted noise. To properly set your gain, play a CD or other music. Now put the receiver volume to 75% – 80% of the max. Then slowly turn the gain of the amp to a setting where you do not hear a loud hiss. A low hiss is acceptable, as with music playing you will never hear it. Please note the amp gain is not a volume control. It is meant to be matched to the pre-amp voltage of a head unit. It is important to properly set your gain when you buy a new amp. 5. Noise can be picked up due to bad RCA cables. Specially the super cheap ones. We recommend doing a test with different RCA cables. Replace the RCA cables if needed. 6. Low-quality speaker wires will also cause noise. We recommend you buy high-quality insulated speaker wire made for marine applications.

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Sound is too low	<ol style="list-style-type: none">1. This can be caused by wiring at too high of an impedance (ohms) and the amp puts out low power, at 4 or 8 ohms for example. To resolve this you will have to properly wire your speakers/subs to the amplifier.2. Check the gain level on the amp. You may need to turn it up.3. Power and ground wire that are too thin of a gauge size for the amplifier may cause low sound. Determine the proper wire gauge necessary and replace existing wires.4. Make sure your positive and negative speaker wires are not reversed, as this would cause the sub to move but not make much noise.5. Check your crossover setting on your amplifier. You may need to filter out more high frequencies, which your sub is not meant to play. So make sure it's on low pass mode and then you also should try lowering the frequency of that low pass crossover and see if that helps.6. On your receiver it is very common to have a volume level control for the pre-amp outputs (separate from your master volume control). To fix this, you can navigate to the audio settings, and search for subwoofer level controls, as well as front and rear pre-amp output controls. Crank up the level on this setting and you will be back in business.7. Amplifier may not be powerful enough. If this is the case, we recommend upgrading to a more powerful amplifier.
Amp keeps blowing fuses	<p>Main Fuse - If you determine that your main fuse is blowing, then you'll want to pay attention to when it blows. Try inserting a good, properly rated fuse with your head unit—and amplifier—turned off. If the fuse blows immediately, when everything is off, then you're probably dealing with some kind of short in the power cable between the main fuse and the distribution block, or between the main fuse and the amplifier if there is no distribution block in the system.</p> <p>Distribution Block Amp Fuse - If both sides of the main fuse have power, and one side of the distribution block has power, but the other side of that fuse is dead, then you're either dealing with a shorted power wire or an internal amplifier fault. There are a few ways to determine which one is the culprit, depending on how your amp is installed and where the wires are routed.</p> <ol style="list-style-type: none">1. Check if you can see power wire that connects the distribution block to your amp. In an ideal situation,

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<p>Amp keeps blowing fuses</p>	<p>you'll be able to see the entire length of the wire. If that isn't possible, then the next best thing is to just disconnect the power wire from your amp, make sure that the loose end isn't in contact with ground, and check whether the fuse still blows. If it does, then the problem is in the power wire, and replacing it will almost certainly fix your problem. Of course, you'll have to take care when routing the new wire so that it doesn't end up shorting out as well. If the fuse doesn't blow with the power wire disconnected from your amp, then you have an internal amplifier problem.</p> <p>Internal Amplifier Fuse - If the fuse blows when the amp is turned up, then you likely have subwoofers that are either incompatible or that are wired at too low of an impedance. Rewire to achieve proper impedance, or replace the subwoofers with compatible ones. Check and make sure the power and ground wires did not get crossed. Also, check and make sure your speaker wires are not crossed.</p>
<p>Amp gets very hot</p>	<ol style="list-style-type: none"> 1. The main reason amps overheat is if the impedance they are running at is very low, or if the subwoofer requires more power than the amp can give it. Also if the wiring cannot give the proper current fast enough, it can cause the amp to get hot as well. Make sure the amp is running at the proper impedance, or use subwoofers that are compatible with the amp. Make sure the wiring is correct and you are using the proper wires for your system. 2. A poor ground cable connection can cause your amp to get very hot. Check your ground connection and make sure that the cable is securely tightened. 3. Check the location where your amp is mounted. Make sure it is in a spot where it will receive proper ventilation.
<p>Amp or powered sub does not turn off when you turn off the vehicle</p>	<ol style="list-style-type: none"> 1. This situation happens when you connect the remote turn-on wire to a constant 12V power wire (often this is a yellow wire) instead of to the remote turn-on wire of your receiver's wire harness. Pull out your receiver and plug the amplifier's remote turn-on wire into the proper remote turn-on terminal of your receiver's wire harness. 2. In a rare situation, the remote turn-on wire input is touching the power wire, which can also cause this same issue. If this is what is happening, then simply take the remote turn-on wire out of the amplifier terminal and carefully put it back in so that it is not touching the power wire.

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One channel on the amp isn't working	<ol style="list-style-type: none"><li data-bbox="302 146 1495 235">1. Check the RCA cable that is going from the amplifier to the receiver. We recommend having a spare RCA cable to test with. Many times RCA cables go bad since they are thin cables. You can also test your RCA signal using a multimeter.<li data-bbox="302 242 1495 362">2. Check the RCA cable that is plugged into your receiver. Make sure you plugged the amplifier into the pre-amp output that is red and white. In many cases we have seen customers plug the RCA into the RCA video of their receiver, which is yellow. If this is the case, just plug the RCA into the proper connections and your problem will be solved.<li data-bbox="302 370 1495 490">3. There is a setting on your receiver that can disable your RCA outputs. The setting is under fader/balance control. On your receiver navigate to fader/balance and find the setting, then make sure you enable front, rear, and sub pre-amp outputs. Sometimes the head unit will allow you only to enable front and rear, which would cause the amp to have no sound.<li data-bbox="302 497 1495 554">4. Speaker wire is not making a good contact on the speaker output of the amp or on the speaker terminal. You need to make sure the speaker wire is securely tightened into the speaker terminal and the amplifier terminal.<li data-bbox="302 561 1495 618">5. Make sure the positive speaker wire is connected to the positive terminal on the speaker and on the amp, and make sure the negative is connected to the negative.<li data-bbox="302 625 1495 650">6. Each channel on your amplifier has a gain control. Make sure the gain on this channel of the amplifier is turned up.



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