



RAGNAROK 2

NEXUS™ INTEGRATED AMPLIFIER

IN NORSE MYTHOLOGY, RAGNAROK IS THE END OF THE WORLD.
NOW, DON'T GET TECHNICAL WITH US ABOUT WHO SURVIVES.
OR ABOUT HOW IT'S THE TWILIGHT OF THE GODS.
OR IT NOT REALLY BEING THE END OF THE WORLD.
FACE IT, RAGNAROK 2 IS JUST AN AUDIO PRODUCT, NOT A COSMIC EVENT.
AND WE'RE DUMB AMERICANS WHO READ TOO MANY COMIC BOOKS.

OWNER'S MANUAL


INTRODUCTION

Ragnarok 2 is a modular, remote-control, balanced differential integrated amplifier for both speakers and headphones. It introduces our Nexus™ topology that seamlessly integrates balanced and single-ended sources and outputs, accepts standard Schiit Universal DAC and phono modules (and maybe others in the future), and can be conveniently controlled with a small milled-aluminum remote.

Or, in English, it may be the single box you need to bring together speakers, headphones, digital, analog, and phono sources—especially if you've ordered it Fully Loaded with both phono and DAC cards. Or, you can pair it with any one of our DACs as an Amp Only. And, in either case, you have modularity to customize to future needs.

IN THE BOX

- (1) Ragnarok 2
- (1) Power cord
- (0) Stick-on feet (they're screwed on)

 The following is required by the roughly 9,542 government agencies and regulations we have to comply with. If you have some common sense, they should seem pretty straightforward. In any case, read these instructions before proceeding farther, follow all instructions, and heed all warnings. Or else!

1. If you don't know how to install audio devices, get a qualified professional to help.
2. Never use this device near water, and clean only with a dry cloth.
3. Assure adequate ventilation, do not block any ventilation openings, or place near heat sources.
4. Use only the supplied power cord or suitable replacement. Route cords away from traffic areas and protect them from being pinched. Unplug the cord from the outlet if the apparatus is unused for a long period of time.
5. To prevent electric shock, do not use the plug with an extension cord, receptacle, or outlet unless blades can be fully inserted.
6. Refer all servicing to qualified service personnel. Service is required when the device has been damaged, including cord or plug damage, liquid has been spilled or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.

 **WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS DEVICE TO RAIN OR MOISTURE.**

GETTING STARTED

1. Make sure you have enough space. Ragnarok 2 idles cool, but it can get plenty warm when it's operating—if you're using it in a rack, make sure there's plenty of ventilation above and to both sides. Do not stack other equipment on top of Ragnarok 2. Do not put it in a Snuggie. You get the picture.

2. Keep out of reach of children (and adults who act like them). Ragnarok 2 can deliver full speaker power output to the balanced headphone jack. If you know someone who might think it's funny to turn the volume all the way up and leave it on mute (trying to give you a nasty surprise) or someone who might forget they have headphones plugged in when they're air guitaring to Motley Crue, it might be best to keep them away from your new big insane amplifier.

3. Remember this is a speaker amplifier. This means massive power. This can be a wonderful thing for many headphones, especially some hard-to-drive planars or high-impedance dynamics. However, it may not be the best thing to use with your super-sensitive custom IEMs. If you're looking at a 30-lb brick as a dedicated IEM amp, well, maybe time to think about that—or at least look at something a bit more appropriate.

ABOUT MODULES

Ragnarok 2 uses the same optional internal modules as many Schiit products, including Jotunheim and Lyr 3. These modules allow you to configure the Ragnarok 2 to your specific needs, or to change modules if there are upgrades in the future. Alternately, you can use Ragnarok 2 as “just an amp” with the standard RCA-input modules.

Ragnarok 2 is factory-configured in one of two ways:

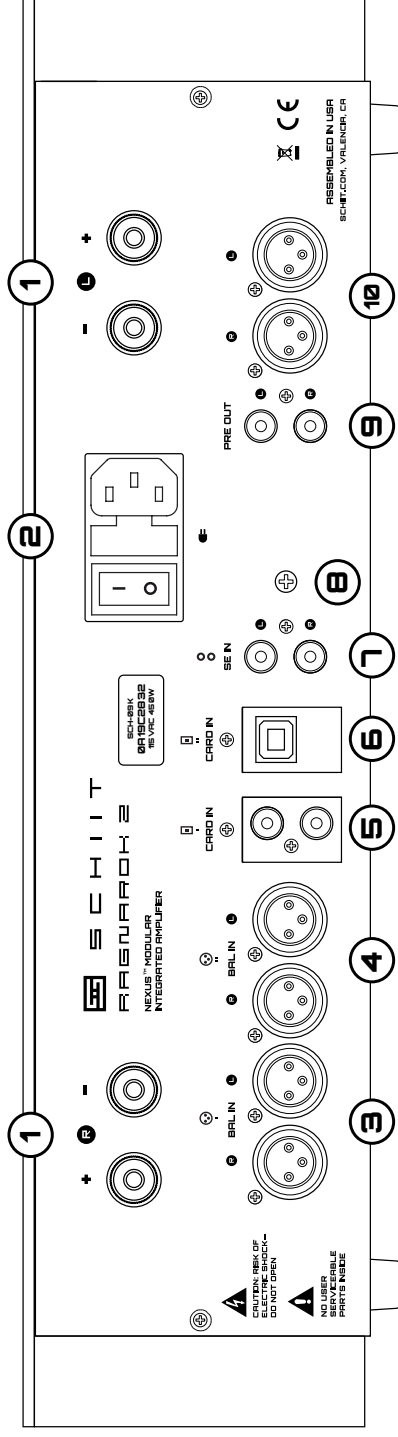
Fully Loaded. Includes the Balanced MM Phono Preamp module and Multibit DAC module, so you can use Ragnarok 2 with your phono and USB sources, without any external boxes.

Amp Only. Includes only two RCA Input modules, to give you a total of three RCA inputs on the Ragnarok 2.

Ragnarok 2 also accepts all current and past Schiit modules as used in the Jotunheim and Lyr 3, including the 4490 DAC modules. If you have a technician, or are a technician yourself, you can configure Ragnarok 2 to your needs. No firmware changes are needed to use any of the modules.

Ragnarok 2 accepts two modules simultaneously. However, only one module slot is wide enough to accept the Multibit DAC module.

CONNECTIONS



1 Speaker Outputs. The right hand speaker outputs are on the right side. Guess where the left speaker outputs are? Yep, got it in one. **Very important:** *BOTH positive and negative terminals are active. Do NOT short negative output to ground, or use with speakers that have common grounds.*

2 Power Input. Plug the end an IEC cord in here, and the other end into the wall. Make sure the voltage is correct – running a 115V product at 230V may be a bad day. For the power switch, up is on, down is off—you know, pretty much like everything else out there. Need a more accessible switch? Plug Ragnarok 2 into a switched power strip or remote controlled outlet (yes, those are a thing.)

3 Balanced Input 1. Connect to a balanced source with high-quality XLR cables.

4 Balanced Input 2. Connect to another balanced source with high-quality XLR cables.

5 Card Input 1. If you purchased a Ragnarok as an Amp Only, this will be a line-level RCA input. Connect this to any single-ended source with RCA cables. If you purchased a Ragnarok Fully Loaded with Phono and DAC input, this is a phono preamp input for most moving-magnet cartridges. Connect this to a turntable with short, heavily shielded, high-quality RCA cables, and attach the turntable ground to the ground lug (8).

6 Card Input 2. If you purchased a Ragnarok as Amp Only, this is a line-level RCA input. Connect to any single-ended source with RCA cables. If you purchased a Ragnarok 2 Fully Loaded, this is a USB digital input. Connect this to a USB source (computer, streamer, etc –see the online FAQ for compatible devices.) You may need to download drivers for older Windows versions from schiit.com/drivers. Connect using a true USB 2.0-rated cable, 2m or less in length.

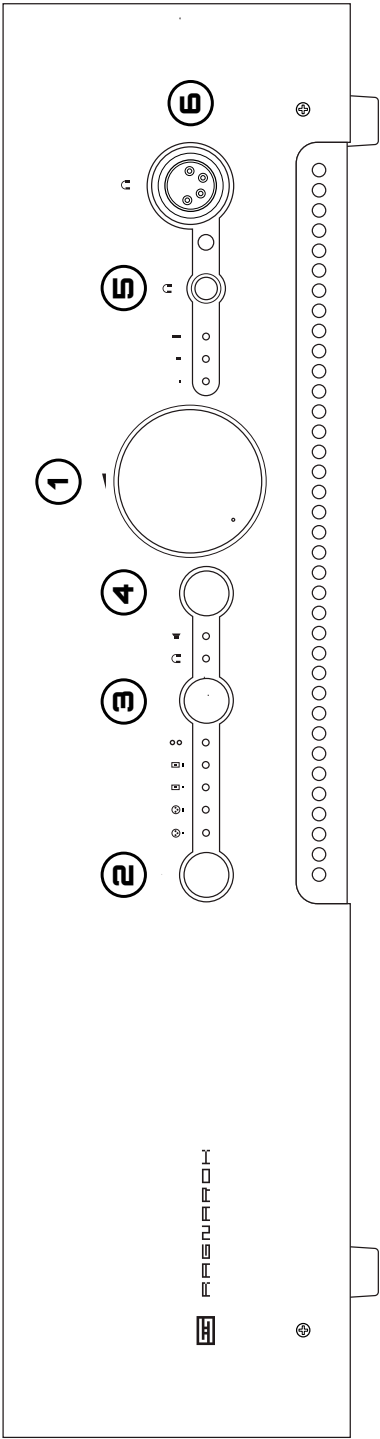
7 RCA Input. Connect this to any single-ended source using RCA cables.

8 Ground Lug. If you are using a turntable, you may need to connect it to this ground lug in order to eliminate loud hum. Or maybe not. Sometimes it depends on the turntable. Try it either way. If you are not using a turntable, no need to connect anything here.

9 SE Preamp Output. If you'd like to extend your system by adding more amplifiers, or by connecting to a subwoofer, you can connect them using RCA cables to this preamp output.

10 Balanced Preamp Output. You can also connect additional amps or subwoofers with the balanced preamp output, using XLR cables.

CONTROLS



1 Volume. The biggest knob on the front of the chassis controls volume. It works like any other volume knob you've ever used. Turn it up to turn up the volume, turn it down to turn it down. The position of this knob tracks the remote control. And yes, the clicking sounds you hear when using it are normal—this volume knob controls a 128-step resistor ladder, for virtually perfect channel balance at any volume level.

2 Source. Press this button to pick what you want to listen to. It walks through the sources in order, from Balanced 1 to SE Input, then cycles back around again.

3 Speaker/Headphone. Press this button to listen to speakers, headphones, or both. Be careful with both—if you crank speakers with headphones connected, you may not hear them blow up.

4 Gain. Push this button to select the gain. Be careful if you've already got the volume up and you're increasing gain—best to turn it down.

5 SE Headphone Output. Plug in your single-ended headphones here.

6 Balanced Headphone Output. Plug in your balanced headphones here. Fair warning: this outputs full power (just like the speaker outputs), so be careful with more sensitive headphones!

REMOTE CONTROL

Yes, Ragnarok 2 comes with a remote control. It looks a lot like the one that comes with our preamps (Saga and Freya), but it's not the same. It has an extra button for gain selection, and it won't work with Freya and Saga. Nor will Freya and Saga remotes work with Ragnarok 2.

1 Input. Press this button to select the input you want to listen to. If you skip the input, keep pressing—it cycles back around.

2 Volume Up/Down. Press the up arrow to turn volume up, press the down arrow to turn it down. Simple as that.

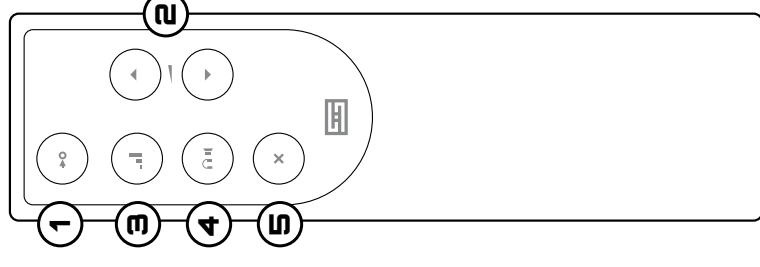
3 Gain. Press to select gain. If you skip the gain you want, keep pressing--it cycles back around like the input.

4 Speaker/Headphone Selector. Press to select speaker output only, headphone output only, or speaker and headphone output.

5 Mute. Press to mute Ragnarok. Press again to un-mute.

Changing the Battery

1. Flip the remote over to reveal a single hole on the back.
2. Push the remote open by inserting the end of an open paper clip into the hole in the back and pushing firmly. It's held together with magnets.
3. Replace the battery inside with one of the same type.
4. Reassemble the remote by first inserting the clear LED in the front, then dropping the panel down onto the matching magnets. Press down gently to pop the panel in place.



FAULT CLEARING

Okay, so you have a flashing light. No worries. Deep breath. We'll get this taken care of shortly.

When the Ragnarok 2 stops playing sound and flashes its gain LED, or if it never stops flashing after you turn on the amp, there's a problem, or fault. There are three kinds of faults:

1. Over-temperature. The heatsinks are too hot, and Ragnarok 2 has shut down to protect its output. If the amp is very hot, turn it off, wait a while for it to cool down, and try turning it on again.

2. Over-current. If Ragnarok 2 is connected to very low-impedance speakers (2 ohms or less), playing very loud music can cause an over-current condition. Simply turn the amp off and on again to clear this fault.

Alternately, Ragnarok 2 may shut off from over-current if the speaker cables are shorted. To troubleshoot this, turn off the amp, disconnect the speaker cables from the amp, and turn it back on again. If it comes back on, there may be a short in your speaker cables (or your speakers). Examine your connections to ensure there are no stray wires or shorts. Once those have been fixed, you can reconnect the speakers and play music again.

3. High DC offset. Ragnarok 2 is a DC-coupled amp. Its microprocessor monitors DC levels at the output. However, it may not be able to correct for high DC from your source (such as a preamp). To clear this fault, turn off the amp, disconnect the RCA cables or XLR cable from the amp, and turn it back on again. If the amp turns on normally, then there may be high DC on the output of your source. Have the source inspected and repaired.

FAQ

I hear hum. What do I do?

Depends on the hum. Are you getting loud hum on speakers? You probably have a ground loop. You should look into something like an EbTech HumX to eliminate the problem. Are you getting hum on IEMs? They may be too sensitive for Ragnarok 2.

Hey, this thing makes all sorts of clicking noises when I adjust the volume!

Yes, it does. That's the relay ladder volume control, doing its job. Completely normal and nothing to worry about.

I can hear music playing with the volume all the way down, is that normal too?

Yes. If you want a 100% mute, press the Mute button on the remote.

It takes a while for this thing to start up, and it flashes lights and stuff, is that normal?

Yes, Ragnarok 2 performs a self-check and tests important performance parameters as it is starting up. From then on, it monitors output continuously to protect against any faults.

It was playing fine for a while, and now it's just flashing?

See the Clearing Faults section on the previous page.

Can I install different modules in Ragnarok 2?

If you are, or know, a technician, yes. The modules just plug in. They are the same ones we sell for Lyr 3 and Jotunheim. There's no soldering required. If you're planning on adding modules, please note that there is only space for one "large" module—or, in other words, the Multibit DAC module, which is oriented horizontally rather than vertically, like the 4490 DAC module, Phono Module, or RCA Input Module.

I'm not getting any sound!

Make sure you have the correct source selected, and that it is playing. Ensure the amp isn't muted—when it is, neither Speaker nor Headphone lights will be on. Turn up gain and turn up volume until you hear something.

Wow, I have to turn this WAY up to get the volume level I want!

Yes. The volume control on Ragnarok 2 is perfectly linear. It still has 40dB of gain from 12:00 on the volume knob. It's perfectly normal to run it at 3-4 o'clock. Again, it won't hurt anything.

It doesn't turn on, what do I do?

Plug it in to a different AC socket. Ensure you are not currently in a blackout. Then email us if it still doesn't turn on.

WARRANTY

Schiit Audio warrants to the original purchaser that the product shall be free from defects in material and workmanship for five (5) years from the date of purchase. Exceptions: Tubes and remote controls. Tubes are covered by a 90-day limited warranty with the same terms, and remotes are covered by a 1-year limited warranty with the same terms. If a defect covered by this warranty occurs during this warranty period, Schiit Audio will repair the defective product, free of charge. Date of purchase will be based on customer-submitted receipts, otherwise date of manufacturing will be used to determine warranty period.

OBTAINING WARRANTY SERVICE

If you believe you need **warranty service**, **contact us first**. There may be a simple solution to your problem. Schiit Audio products sent back to us without a Return Authorization (RA) will be returned to the sender without repair. To contact us and obtain an RA, email info@schiiit.com. We will respond quickly to email inquiries.

WARRANTY LIMITATIONS

THIS WARRANTY SHALL NOT APPLY IF THIS PRODUCT: (a) IS MODIFIED OR TAMPERED WITH; (b) IS DAMAGED BY NEGLIGENCE, ACCIDENT, UNREASONABLE USE, COFFEE, OR BY OTHER CAUSES UNRELATED TO DEFECTIVE MATERIALS OR WORKMANSHIP; OR (c) HAS HAD THE SERIAL NUMBER ALTERED, DEFACED OR REMOVED.

ANY APPLICABLE IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY LIMITED IN DURATION TO THE WARRANTY PERIOD (5 YEARS). IN NO EVENT SHALL SCHIIT AUDIO BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM THE BREACH OF ANY IMPLIED OR EXPRESS WARRANTIES. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR EXCLUSION OF CONSEQUENTIAL OR INCIDENTAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state or province to province.



Application for Council Directives 72/23/EEC, 89/336 EEC
Conformity declared for EN60065, EN55022 Class B, EN50082-1



This equipment has been tested and found to
comply with the limits for a Class B digital device,
pursuant to part 15 of the FCC Rules.

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