



# YGGDRASIL

**BALANCED UPGRADABLE DAC**

**IN NORSE MYTHOLOGY, YGGDRASIL IS THE WORLD TREE.**

**THE SOURCE OF ALL THINGS.**

**IT'S ALSO PRETTY MUCH UNPRONOUNCEABLE.**

**WHICH IS WHY WE CALL THIS DAC "YGGY."**

**IT'S THE BEST DAC WE KNOW HOW TO BUILD...**

**WELL, WITHOUT A SECOND MORTGAGE AND 50 AMP POWER RUNS.**

**OWNER'S MANUAL**

# INTRODUCTION

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Yggdrasil is the ultimate DAC—for Schiit, and maybe for anyone. Compare it to anything, at any price.

Yggdrasil is the culmination of 5 years of research that started with 1917 Western Electric papers on Pulse Code Modulation, continued with a professor emeritus of mathematics to solve a divide-by-zero problem, followed by a RAND Corp mathematician to devise the code, and completed with a team consisting of the “father of the DAC,” Mike Moffat, and exceptional digital, firmware, and analog engineers.

It is the antithesis of noise-shaping technologies like DSD, preserving all the original PCM samples from input, through clock reconstruction at the original sample rate, the digital filter, to true multibit DACs suitable for medical and military technology. It is an extension of multibit technology that deviated into noise-shaped solutions 20 years ago. It is unlike any other DAC in the world. Enjoy.

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## IN THE BOX

- (1) Yggdrasil
- (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

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## 1. Connect Yggdrasil to your source and your amp or preamp.

You'll need a set of XLR or RCA cables to connect the Yggdrasil's outputs to your amp or preamp, and a digital cable or cables (coaxial BNC or RCA, Toslink, or USB) to connect your sources.

## 2. If you are using USB and have a Windows computer, you may need to download drivers.

Many newer Windows computers will automatically install the correct drivers, though, so it's best to simply plug the Yggdrasil in via USB and see if it does so. If it doesn't, our drivers are available at [schiit.com/drivers](http://schiit.com/drivers)

## 3. If you are using a computer source, ensure it is set to output to the Yggdrasil.

Sometimes PCs and Macs get confused and want to use internal speakers, or your powered USB headset, or whatever. Plus, you need to select the Yggdrasil via Control Panel or System Preferences and via your music player software—many types of music players can override the output specified in the OS.

## 4. Select your source using the button on the front panel. And enjoy your music!

## ABOUT UPGRADES

Yggdrasil is upgradable via its modular design—the USB Input, SPDIF/Input Processing, DSP, and DAC/Analog cards are all separate and updatable. Upgrades can be purchased on the Schiit website. All upgrades must be done by authorized personnel.

**USB Input.** Allows you to keep up with changes in USB technology.

**SPDIF/Input Processing.** If there are changes to the SPDIF inputs or Adapticlock system, you can keep up with them.

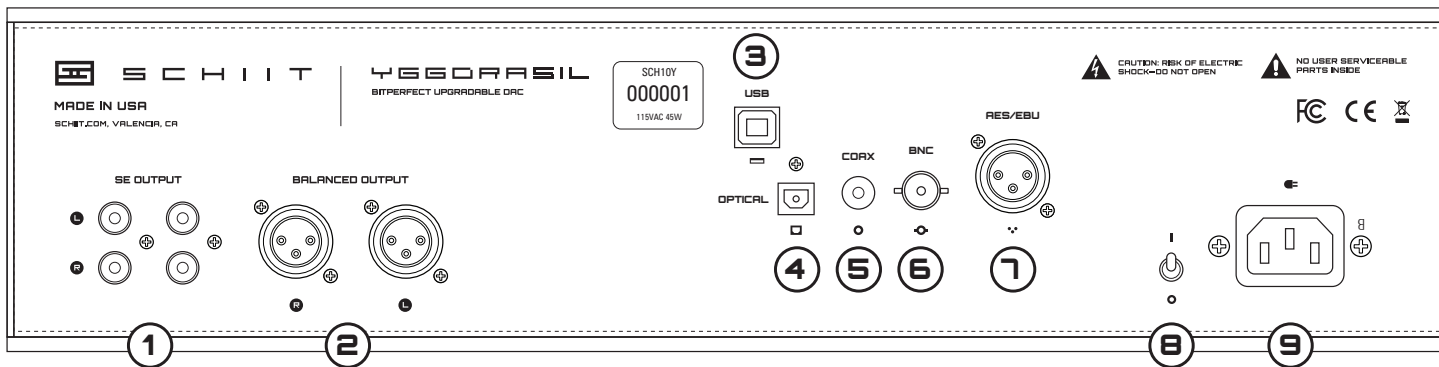
**DSP.** Allows you to keep up with changes in digital signal processing technology, including additional processing power.

**DAC/Analog.** If there are significant changes to DAC technology or associated analog processing, we'll announce new DAC/Analog cards so you can take advantage of these changes.

When it's time for your upgrade, and it has to come back to us, the Schiit Upgrade Queueing system ensures you can keep your DAC until the moment we're ready to do the upgrade and turn it around fast. When you order an upgrade, you'll be automatically added to the queueing system.

If you'd like to be the first to know about upgrades as they become available, sign up on the SPAM link on our site.

# CONNECTIONS



## 1 Single-Ended Output.

Connect to your preamp or integrated amp with good RCA cables.

## 2 Balanced Output.

Connect to your balanced gear with good XLR cables.

## 3 USB Input.

Connect to your computer source with a short (2m or less), USB 2.0-rated cable.

## 4 Toslink Input.

Connect with a short (3m or less) Toslink cable to any optical digital output.

## 5 Coax Input.

Connect to any coaxial digital source with a high-quality 75 ohm coaxial cable.

## 6 BNC Input.

Connect with a good, 75 ohm coaxial cable to a BNC digital source.

## 7 AES/EBU Input.

Use a high-quality XLR cable to connect to any AES/EBU digital source.

## 8 Power Switch.

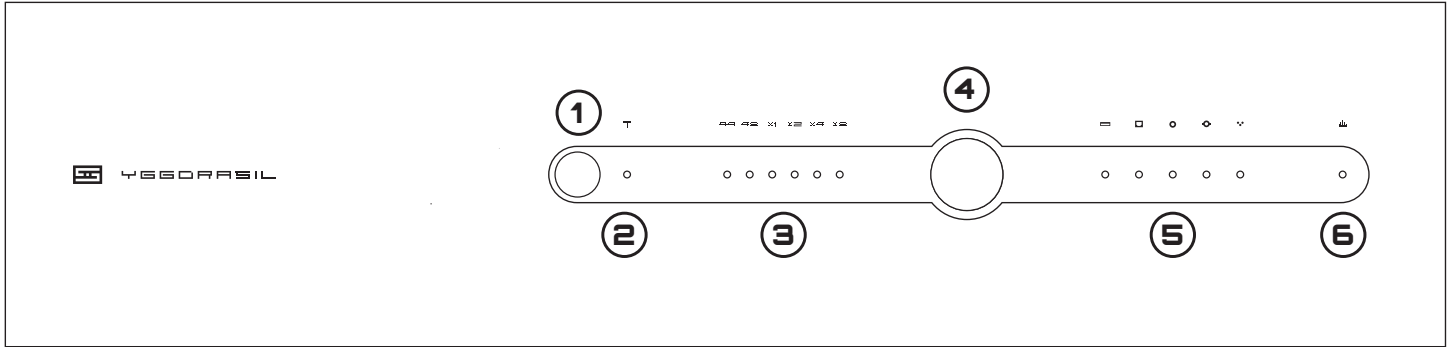
Up for on, down for off. Very simple.

## 9 Power Cord.

Plug the end of the supplied IEC cord in here, and the other end into the wall. Yep.

# CONTROLS

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## 1 Phase Invert Button.

Press this button to invert the absolute phase. This may help with some recordings that do not maintain absolute phase.

## 2 Phase Invert Indicator.

When this is lit, the absolute phase is inverted.

## 3 Sample Rate Indicators.

These indicate what format is coming in to Yggy—44.1K or 48K, plus the multiple (1, 2, 4, or 8X.)

## 4 Input Select.

Push this button to walk through the inputs: USB, AES/EBU, BNC, Coax, Toslink.

**5 Input Indicators.** These show what input you've selected. Hopefully it doesn't show more than one.

## 6 VCO/VCXO Indicator.

Also known as the “buy better gear” light. If this is illuminated, the Yggdrasil's input clock regeneration (Adapticlock) is in VCO mode. This means your source does not provide a good center frequency, or jitter is too high for the VCXO mode to operate.

## FAQ

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### **I hear hum from Yggdrasil. What do I do?**

Yggdrasil's noise floor is insanely low, so it's most likely a ground loop. To fix a ground loop, try a HumX or a ground loop isolator.

### **Hey, this thing clicks between songs/between inputs/etc!**

Yes, it does.

### **Care to explain why, smartass?**

Sure. That's the muting relay engaging when there's no input. Many computer sources turn off the digital audio output between songs and when changing sampling rates. We went with a muting relay because it's the best way to ensure there are no clicks or pops when the input is unlocked. But it does click a bit.

### **It takes a few seconds to change inputs and play music!**

Yes, it does. Yggdrasil is doing a lot when you change inputs. It's actually looking at the quality of the input signal and making a decision on which clock regeneration system to use, as well as which clock frequency is appropriate to the sampling rate. It's a hell of a job, so it can take a little while to lock in.

### **My computer doesn't see the Yggdrasil via USB. What's up?**

It depends on the computer. Some Mac and PC operating systems have draconian restrictions on the amount of power their USB ports can provide. Check [schiit.com/faq/USB-problems](https://www.schiit.com/faq/USB-problems) for some possible solutions.

### **How do I install the Windows USB drivers?**

Many newer Windows systems won't need drivers at all—just plug in and it will find and install the correct driver. If you need drivers, our drivers are available at [schiit.com/drivers](https://www.schiit.com/drivers).

### **What if I'm still having glitches or intermittent connectivity when connected to a computer?**

Start at [schiit.com/faq/DAC-problems](https://www.schiit.com/faq/DAC-problems) for troubleshooting.

### **I don't get any sound from Yggdrasil!**

Are your sources on? Check those first. If you're using a computer source, ensure that your computer's sound output is set to go to the Yggdrasil via SPDIF or USB in BOTH the Control Panel/System Preferences AND your music player software.

### **Can I leave Yggdrasil on all the time?**

Sure, if you want to. In fact, we leave all our DACs on all the time. It won't hurt anything.

### **So when do I get the killer upgrade to the next level from you?**

Make sure you're on the mailing list, and we'll let you know when we've released new USB or analog boards.

### **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

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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](mailto: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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