

ITEM	OWNER'S MANUAL		
FOR	FREYA		
DESCRIPTION	BALANCED PASSIVE, ACTIVE, OR TUBE REMOTE PREAMP		
MODEL NO	SCH-21	REVISION A	RANDOM NUMBER AA06
NOTES	<p>IN NORSE MYTHOLOGY, FREYA IS A GODDESS ASSOCIATED WITH LOVE, SEX, BEAUTY, FERTILITY, GOLD, SEIR, WAR, AND DEATH. LEAVING ASIDE THOSE LAST THREE, THAT SOUNDS PRETTY COOL. SHE ALSO APPARENTLY HAD CATS. YEAH. WE DON'T RECOMMEND YOU LET YOUR CATS SLEEP ON FREYA, BUT WE'RE NOT GONNA COMMENT FURTHER.</p>		
		<p>SCHITT</p> <p>AUDIO EQUIPMENT</p>	

## WELCOME TO FREYA

Freya is a no-compromise, ultra-high-end balanced preamp cleverly disguised by a low price tag. You won't find any volume-control chips or other shortcuts in Freya—just uber-quality techniques like a relay-switched stepped attenuator and all-triode gain stage—you know, just like what's used in the most expensive audio gear.

## IN THE BOX

ONE Freya  
ONE Power cord  
ZERO Stick-on feet (they're pressed in)

## SAFETY INSTRUCTIONS



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.



Application for Council Directives 72/23/EEC  
Conformity declared for EN60065, EN50082-1

# GETTING STARTED

## CAUTION! Dangerous voltages inside!

### 1. Before plugging in the preamp, insert the tubes.

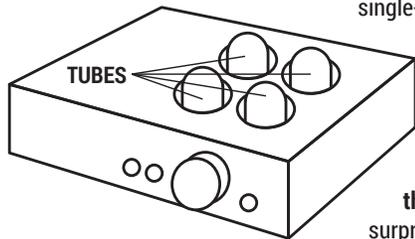
Carefully align the key in the tube base to the notch in the tube socket for each tube. It doesn't matter which tube goes where—all tubes in Freya are the same exact type (6SN7, or, for Russian NOS tubes, 6N8S).



2. **Ensure tubes are well-seated.** Push down firmly until the tube is seated on the tube socket. This may take a fair amount of force.

3. **Plug it in and turn it on.** The tube will glow after a few seconds, and the microprocessor will connect the output after about 30 seconds.

4. **Connect your sources.** Connect up to 5 sources to Freya's balanced and single-ended inputs.



5. **Connect the output.** Connect the output of Freya to your amp or amps using XLR or RCA cables

6. **Ensure the volume is turned down if you're using Freya for the first time.** You don't want any big surprises!

7. **Power it up, turn it up, and enjoy your music!**

# REPLACING TUBES

Freya accommodates any 6SN7, 6N8S, or 5692 tube type. 6SL7, 6N9S, and equivalent types also work, but will have higher distortion and higher output impedance.

If you're curious, the right tubes are for the differential voltage gain stage. The left tubes are for the cathode follower output stage. All tubes are of the same type on Freya.

To replace or swap tubes:

1. **Turn off and unplug the preamp.** Wait a while for the tube to cool. Seriously, these suckers are pretty hot.

2. **Carefully extract the tube** by gently rocking it back and forth and pulling upwards.

3. **Carefully insert the replacement tube.** Align the key to the notch and press down firmly until the tube is seated.

4. **Plug the preamp back in and turn it on.**

# REMOTE CONTROL

Yes, this preamp comes with a remote control. And yes, it's a relatively simple plastic affair. Yeah, we know you want milled aluminum, but you also probably don't want to spend a fortune on a remote control either. This remote is inexpensive enough that if your dog eats it, you can simply get another one without any financial stress. It also probably won't kill your dog, like an aluminum remote might.

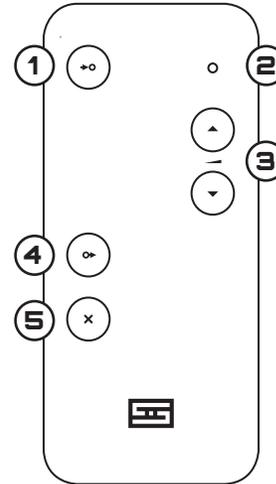
**1 Input.** Press this button to select the input you want to listen to. If you skip the input, keep pressing—it cycles back around.

**2 Remote Light.** This extremely bright light was designed to irritate everyone who carps and moans about the brightness of our LEDs. Just kidding. It lights when you use the remote. If it doesn't light, the battery is probably dead. Pull the battery out from the bottom of the remote and replace it with one of the same type.

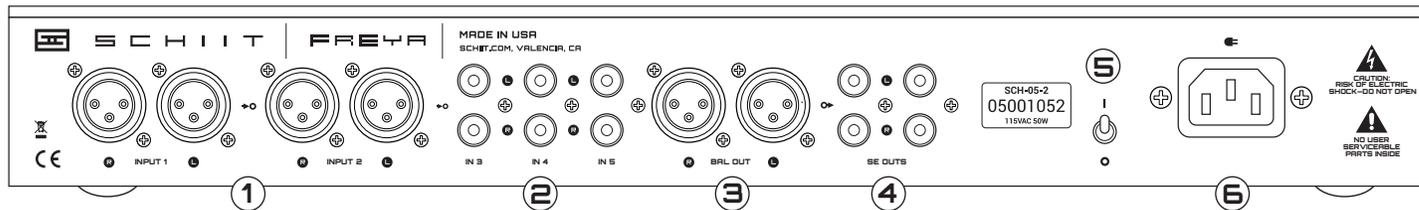
**3 Volume Up/Down.** Press the up arrow to turn volume up, press the down arrow to turn it down. Simple as that.

**4 Output.** Press to change between passive and tube hybrid buffer output.

**5 Mute.** Press to mute the preamp. All input lights will turn off.



# FREYA CONNECTIONS



**1 Balanced Inputs.** Freya offers two sets of balanced inputs. Connect to your balanced sources using XLR cables. You can select your source with the front panel controls.

**2 Single-Ended Inputs.** Freya offers three sets of balanced inputs. Connect your single-ended sources here using good RCA cables. Note: Freya does not convert single-ended to balanced, except when using the tube gain stage.

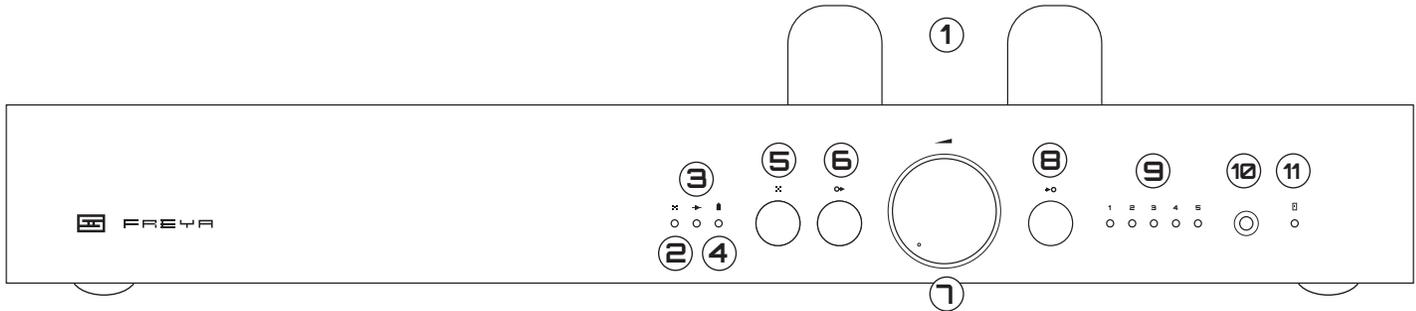
**3 Balanced Output.** Connect to external power amplifiers or powered speakers that accept XLR connections, using good XLR cables.

**4 Single-Ended Output.** Connect to external power amplifiers or powered speakers that accept RCA connections, using high-quality RCA cables, especially for longer runs.

**5 Power Switch.** Up for on, down for off. Very simple. There are no fancy “power down” modes with Freya, just on or off.

**6 Power Inlet.** Plug the end of the supplied IEC cord in here. You can also use fancy audiophile types, but they won't really do anything—what about the thousands of feet of crap copper cables in your walls, huh?

# FREYA CONTROLS



## 1 Hot Tubes.

Freya's tubes run fairly warm, so we don't recommend letting your pets sleep on them.

**2 Mute LED.** This light is on when the preamp is muted.

**3 Buffer LED.** This light is on when using the JFET buffer stage.

**4 Tube LED.** This light is on when using the tube gain stage.

**5 Mute Button.** Press to mute output. Press again to unmute output.

**6 Output Select.** Press to select the output stage: passive, JFET buffer, or tube.

## 7 Volume Knob.

Turn up to increase volume. Stop before your speakers explode. Yes, it is normal to hear clicking as you do this. That's the relay attenuator.

**8 Input Select.** Press to select the input you want to listen to.

**9 Input.** These lights indicate which input you're listening to, from 1-5.

**10 Remote Window.** The IR remote beams invisible light through this hole to control the preamp remotely. Magic! Don't block it and expect it to work.

**11 Remote Indicator.** When you've used the remote control to adjust volume, this LED will light. You'll need to turn the volume down below the level set by the remote in order for the knob to control volume again.

## FAQ

### **I hear hum, what do I do?**

You may have a ground loop. To fix a ground loop, try a ground loop isolator or an EbTech HumX.

### **There's no sound for a while after I turn Freya on.**

That's perfectly normal. Freya delays the output for 20 seconds after you first turn the preamp on.

### **What's with the clicking noises when I turn the volume?**

That's the sound of the mechanical relays in the relay-switched stepped attenuator. Also normal.

### **The volume knob doesn't seem to work.**

When you adjust volume with the remote, you have to turn down the volume to minimum before the knob is enabled again. You know, so you don't blast yourself out of the room unexpectedly.

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

You can, but it'll dramatically shorten the tube lifespan. We recommend you turn it on and off as you need it.

### **Can I use both outputs at the same time?**

Most of the time, yes. If you have products that short the input when turned off, then that can cause distortion.

### **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 work.

## SPECS

### **JFET Buffer**

**Gain:** 1

**Frequency Response:** 20Hz-20KHz, -0.2db, 3Hz-500KHz, -3dB

**THD:** <0.001%, 20Hz-20KHz, at 2V RMS

**IMD:** <0.0015%, CCIR

**SNR:** >110db, A-weighted, referenced to 1V RMS

**Output Impedance:** 75 ohms SE, 600 ohms balanced

**Topology:** Single pair JFET per phase with passive distortion cancellation, DC coupled

### **Tube Gain**

**Gain:** 5 (14dB)

**Frequency Response:** 20Hz-20KHz, -0.2db, 3Hz-200KHz, -3dB

**THD:** <0.01%, 20Hz-20KHz, at 2V RMS

**IMD:** <0.01%, CCIR

**SNR:** >100db, A-weighted, referenced to 1V RMS

**Output Impedance:** 180 ohms

**Topology:** differential input/output, pure triode, with low impedance followers

**Crosstalk:** >75dB, 20-20kHz

**Inputs:** 5 RCA pairs, selectable via front switch or remote

**Outputs:** 2 RCA pairs, selectable via front switch or remote

**Volume Control:** relay-switched stepped attenuator with discrete thin-film resistors, 128 0.5dB steps

**Power Supply:** One 48VA transformer with regulated 300V rail, plus 24VA transformer with regulated +/-20C rails, plus 6.3VAC tube heaters and regulated 5VDC for microprocessor

**Power Consumption:** 35W typical

**Size:** 16" x 8" x 2"

**Weight:** 11 lbs

ITEM	<h1 style="text-align: center;">WARRANTY</h1>	
	<p>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.</p> <p><b>OBTAINING WARRANTY SERVICE</b></p> <p><b>If you believe you need warranty service, contact us first.</b> 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 <a href="mailto:support@schiiit.com">support@schiiit.com</a>. We will respond quickly to email inquiries.</p> <p><b>WARRANTY LIMITATIONS</b></p> <p>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.</p> <p>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.</p> <p>This warranty gives you specific legal rights. You may also have other rights which vary from state to state or province to province.</p>	
NOTES	<p><b>YES, ALL SCHIIT PRODUCTS ARE MADE IN THE USA.</b></p> <p><b>YES, PRIMARILY OF US-SOURCED COMPONENTS.</b></p> <p><b>YES, IT'S PRONOUNCED EXACTLY LIKE YOU THINK.</b></p>	
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