



# TRANSCEND

## PUSH PULL

ARIC AUDIO TUBE GEAR

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# INTRO

My re-design of this popular amplifier incorporates better coupling capacitors, improved output transformers, a dead silent toroidal power transformer, and more power, finesse, and smoothness over the original! Fewer and higher-end components provide a transparent 3D soundstage and “meat on the bones” midrange that only SET designs are known for.

I’ve designed this amplifier exclusively to provide more power than a traditional SET amplifier while preserving the rich harmonics that they’re known for! The venerable 6SN7 is used as both the driver and phase splitters while using only two coupling capacitors per channel and cathode auto-bias to the output tubes. It runs exclusively in Class “A” and offers both Ultra-Linear Mode/ Triode-Mode operation with variable damping. This amplifier is an exception to the typical “push-pull” signature sound and does not sound strident or bright in any way; it has warmth, dynamics, and excellent spatial qualities!

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**Aric Kimball**  
*Owner*



# IN THE BOX

- Aric Audio Transcend Push Pull Amplifier
- Power Cord
- (3) 6SN7 tubes
- (4) EL34 tubes



# ABOUT

This amplifier represents all of the upgrades and changes I've come up with over the years to boost the performance of my previous amplifier. It brings the performance to the next level. A new toroidal power transformer runs quieter and cooler, providing better regulation over the previous magnetic core unit. Vishay low-noise precision 2-watt metal-film resistors are now used throughout the tube circuits, and the bias points for the input stage and phase splitters have been optimized. To top it off, copper-foil and paper-in-oil capacitors are now used in the plate circuit to drive the power tubes, and a single copper-foil film coupling capacitor per channel provides the signal to the second triode in the phase inverter. This combination of coupling capacitors excels in bringing forth minute details while providing the pure sound of copper. It was not an arbitrary decision to use these specific capacitors in these locations- they were chosen after extensive trial and error to find the best sonic blend to allow the amplifier to breathe and sing with whatever signal is fed to it.

UPGRADED — HIGH END — LOW NOISE



# FRONT PANEL



1. Off/ON Toggle
2. Left Channel Tube Meter
3. Right Channel Tube Meter
4. 6SN7 Tube
5. 6SN7 Tube
6. 6SN7 Tube
7. EL34 Tube
8. EL34 Tube
9. EL34 Tube
10. EL34 Tube



# TOP PANEL



1. UL/Triode Toggle (located behind EL34 Tube)



# REAR PANEL



1. Right Speaker Outputs
2. Left Speaker Outputs
3. Inputs
4. Gain
5. Feedback
6. Power



# OPERATION

On the rear are the speaker connections with various taps, which are to be used depending on the impedance of the speakers being driven. Note that with an 8-ohm speaker, the 8-ohm tap will provide more power, but the 4-ohm tap will provide more headroom. Regardless of the impedance of the speakers, it is best to experiment to see which taps sound the best. **NOTE:** Do not ever power the amplifier up without speakers connected to both channels, as this can cause the output transformers to fail catastrophically.

Also on the rear are the RCA Input jacks, and directly next to them is a gain control used to set the maximum gain (not power) of the amplifier. This allows preamplifiers of varying output levels to drive the amplifier successfully. If using a digital streamer or DAC with a built-in volume control, you can leave the gain control turned all the way up.

Next to the gain control is the feedback level control, which allows various levels of feedback to be employed based on what speakers are being used. In most cases, feedback set between 66% and 90% of the way up works best with the amplifier set to ultra-linear mode, whereas little to no feedback will sound best with the amplifier set to triode mode.

On the top plate of the amplifier is a high-current silver-plated contact switch, which is used to set the mode of operation from ultra-linear to triode mode. *NOTE: Do not flip this switch while the amplifier is powered up and running, as it can emit a loud pop through the speakers, which could be damaging.* With this switch flipped to the rear of the amplifier (so the toggle is facing the output transformers), this sets the amplifier to Ultra-Linear mode, and the amplifier will be capable of providing more power. With the switch flipped towards the front of the amplifier, this will set it to Triode mode and provide more of a lush and organic sound, typically suitable for strings and female vocalists.

The meters on the front of the amplifier each monitor the power tubes for that channel. After around 10-15 seconds, these meters will rise after the amplifier has been switched on. If one of the meters fails to rise, this could indicate a shorted power tube or a blown fuse for that channel's output transformer. *NOTE: There is a fuse for each channel of the amplifier underneath the bottom cover plate. Each channel uses a 500 ma fast blow fuse to protect the transformer and amplifier in case of a tube failure.*



# TUBE LAYOUT

Front row- (3) 6SN7s (the left is the phase splitter for the left channel, the middle is the input stage for both channels as it is a dual triode, and the rightmost 6SN7 is the phase splitter for the right channel). You can use different brands and styles of 6SN7 in the center position, but the left and right-hand tubes should be matched as closely as possible (note that a specific “matched pair” is not necessary).

Behind the 6SN7s are the (4) power tube slots, and EL34, KT88, KT120, KT150, and KT170 may be used. The leftmost two sockets are the push pull pair for the left channel, and the rightmost two sockets are the push pull pair for the right channel. Be sure to use the same type of tube in all four power tube sockets.

Also note that EACH of these tubes has a center guide pin located at the bottom of the tube, and each socket has a guide slot for this pin. Make sure to visually observe the pin location on the tubes before inserting them into the amplifier, and make SURE the center pin resides in the pin groove in each socket. Failure to do so will cause possible tube and amplifier failure. Do not use the logo or lettering on a tube to try and identify where the center pin is located, as ALL tubes are different. Some tubes have thinner geode pins, and it IS possible to insert the tube incorrectly. Please ensure you are looking at the guide pin when you insert the tubes.



# SPECS & FEATURES

- Class “A” Push-Pull operation- Cathode “Auto-Bias” requires no adjustments and prevents Bias failure issues- 6SN7 input direct-coupled to 6SN7 LTP phase splitter
- Toroid power transformer for low EMI
- ALPS input and feedback potentiometers
- Dual chokes in the power supply provide excellent noise performance
- 100% film capacitors used throughout the power supply
- Ceramic tube sockets with gold-plated pins
- Jupiter copper foil signal coupling capacitors
- Jupiter Cosmos cathode bypass caps
- Vishay resistors used throughout
- Minimal signal path and less gain stages for increased transparency
- Triode/UL mode (switchable)- Continuously variable negative feedback loop for optimum speaker matching
- 4 and 8 ohm outputs
- Integrated volume control to be driven directly from a source
- EL34- triode-mode= 20 watts/U.L. mode=35 watts
- KT88- triode-mode= 25 watts/U.L. mode=45 watts
- KT120- triode-mode= 40 watts/U.L. mode=55 watts
- KT150- triode-mode= 45 watts/U.L. mode=65 watts
- KT170- triode-mode=50 watts/U.L. mode=70 watts



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