

# Owners Manual

## Congratulations

You have purchased one of the finest, most reliable, most serviceable amplifiers available today. This amplifier was designed and built to give you a lifetime of enjoyment.

The EL84 tube has a cult like following like some of the S.E.T tubes. This EL84 based amplifier takes the EL84 tube to a whole new level of sound.

Nothing is better than having a component that not only fits your lifestyle but also fits every aspect of it with uncompromising sound quality, and a size that makes it easy to fit into your life.

## Description of detail and sound quality

Every detail of this amplifier has been extensively researched to find the absolute best possible parts available. Everything from the PTFE tube sockets with gold pins to transformers capable of near flat frequency response from 5Hz to 50,000Hz. This is extraordinary bandwidth for any transformer to achieve. It is these types of details that make this amplifier stand out. We found that parts of the highest quality has helped this amplifier achieve the level of quality that only few amps are capable of achieving. We use the best 1% resistors we can source and we still test each and every one just to make sure every part is within its specifications. We are especially proud of our case design with perforated sides to dissipate heat. Hookup wire is PTFE (Teflon) coated, Silver tinned copper. Input wire is Mogami ultra flexible, pure copper shielded cable. Mogami is highly regarded in the recording and audio industry and we find many benefits from using it.

## Break in

There is no scientific reason any audio equipment should need “breaking in” but it is well known in the audio world that it does make a difference - why, we don’t really know for sure. Allow 100 hours before any serious listening as this will give the unit time to break in and sound its best. When listening daily, this will allow the unit to reach its full temperature and will result in the best sound possible.

## Tubes

I am finding that every tube combination I try yields completely different results. Definitely feel free to try different brands until you find your perfect combination. Tube swapping is possible as long as the tubes are compatible. Each will have its own unique sound. There are many different types of tubes compatible with the EL84 and the 12AU7. This makes this amp especially fun for tube rolling. Some tube ideas are the 6189, the 5963 or the ECC82. Do NOT use a 12AX7 or 12AT7 in place of the 12AU7, while it will play, the circuit was designed to use the 12AU7 which is a much better choice for phase splitting in this circuit. For the EL84, you could roll in the Russian 6P14P-EV or a 6BQ5. There are others too. The tube locations are marked on the bottom of the unit. I have chosen to ship each unit with all Mullard tubes, but I also think the Psavne tubes are completely amazing in this amplifier. The Soviet EL84M’s along with the Tung-Sol 6189 (12AU7W) has amazing impact - A great choice if you want massive bass and slam at the cost of some silkiness that you get with the Psavne tubes.

## Connections

There are 2 sets of input jacks on the back of the unit. The set marked in red are the right channel and the black set is the left channel. Inputs ( 1 ) and ( 2 ) give you the option to hookup a DAC and a phono stage popular in today's system setups.

There are 4 output connectors for each channel, The ones marked in red are for the right channel and the ones in black are the left channel. Use the impedance selection that closely matches your speakers. For example, if your speakers have an advertised 8 ohm impedance, you would connect the positive ( + ) connection to the jack marked as 8 ohm and the negative of your speaker cable to the one marked ( - ). You will do this for both the right and left channels. Never turn on the unit without speakers connected as damage could occur.

The IEC connector module contains a switch, a fuse and a power input block. The fuse **MUST** be replaced with a 2 amp slow blow 5 x 20 type. For the power cord, if in the U.S., a heavy duty 14 AWG cable can be supplied upon request. We find that most people these days don't use a stock power cord anyway so it would be wasteful to supply one with each unit. The internal wiring from the module to the power transformer is 14 AWG pure copper. This should help you in choosing the power cord that is right for you.

## Controls

The switch in the back left hand corner powers the unit up. On the front panel, the left control marked volume is the gain control. This control can be turned manually or by using the up and down buttons on the remote. The other button on the remote is not active for this unit. The control on the right side of the front panel is used to select inputs 1 or 2 and the middle position is mute. With the switch all the way to the left, input 1 will be selected. In the middle position all channels are muted. With the switch all the way to the right, input 2 will be selected.

## Ventilation

This amplifier puts out a fair amount of heat. There should be adequate space around the unit to allow it to cool properly. The absolute minimum shelf spacing is 7" (17.78cm) but ideally 10+ is recommended.

## Speaker compatibility

While this amplifier is rated at about 10 watts per channel, it is compatible with a wide-range of speakers. When used for its intended purpose, this amp has enough power to play music extremely loud. Any speaker with a 90+ dB efficiency will work very well. Depending on the room, type of music and loudness required, even speakers in the 88-89 dB can work.

## Service

The EL84 tubes are biased at 40mA, There should be ~ 11v on the 270 ohm resistors. The 12AU7 is biased at 3mA and should have ~4v on the 1K2 cathode resistors. The amp is fed between 300 - 310 volts (depending on the wall voltage) and idles at 155mA. The phase splitter is a paraphase phase splitter. The circuit should have ~250 ~280 volts applied to the 47K resistor at 3mA giving 120v on pins 1 and 6. The circuit runs in ultra linear with pin 9 connected to the primary of the transformer. There is no feedback applied in this circuit. Each pair of the output tubes has its own heater winding from the transformer as does the pair of 12AU7's. For reference, the first input cap is 56uF. For those that like to tube roll, this can make a difference in the choice of rectifier used.

### Technical Specifications:

Power Output Per Channel	~10 Watts @ 4, 8 or 16 Ohms
Number of channels	2
Input Impedance	100k
Input Sensitivity	1.3 Volts
Rated Power Band	20Hz to 20kHz
Tubes	1-EZ34/5AR4, 4-EL84, 2-12AU7
Wattage	106 Watts Idle, 192 Watts Peak
Dimensions (W x H x D)	18" W x 6 1/2" H x 6 D, (7" Including connectors on back)
Weight	24 lbs, 30 lbs shipping weight

Here at Still Audio, we are always conscious of our environment and strive to maintain the smallest footprint possible. This is why this manual is "online" and not in printed form and why we don't supply stock power cords that will never be used.