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HIGH PERFORMANCE AUDIO

[http:// www.decware.com](http://www.decware.com)

1202 N.E. Adams St. Peoria, IL. 61603 (309) 671-2428 Fax (309) 672-1060
high@decware.com Steve@decware.com

***Zen Triode Signature Mono Amplifier
Model SV83M***

Operational Guidelines

Thank you for purchasing our signature edition single ended triode amplifier! These amplifiers are hand built with the highest quality components to offer you many years of both musical discovery and pleasure. In both quality and fidelity, you now own amplifiers that rank in the top 5% world wide. These operational guidelines are designed to maximize your pleasure by helping you to understand and use your new amplifiers.

SETUP

Your amplifiers should come with both a power cord and a complete set of tubes. Setting your amps up involves installing the tubes and plugging in the power cords. Your new amps have a removable power cord so that you can experiment with after market "audiophile" power cords and decide for yourself if they are worth the trouble.

Before installing the tubes it is wise to visually inspect them for cracks or damage. Shake them to see if anything rattles. Check the pins to be sure none are severely bent. Your amplifier has the tube number silk screened on the chrome deck next to each tube socket. This is how you will know where each tube is to be placed. NOTE: 6N1P, 6DJ8 & 6922 are all compatible and your amps may be shipped with any of the three.

The output tubes supplied are SVETLANA model SV83 (just like the amp) and have been factory matched. It does not matter what order the three output tubes are placed in. The output tubes are in parallel with a common cathode circuit. This self balances the array of three output tubes at all times. You may discover one day that the amplifier will function with less than all three output tubes. While using one or two output tubes instead of all three will cause no damage to your amplifier, we biased the amp for all three so we would expect it to sound better with all three tubes used.

TUBE SUBSTITUTIONS

You may substitute the EL84/6BQ5 output tubes in place of the SV83 output tubes without any modifications to the amplifier. It is important however to NOT MIX different brands or types of output tubes. Always make sure that all three output tubes are the same type and brand.

The signal tube (smaller one at the front of the amplifier) shipped with the amps is a 6N1P, 6DJ8 or 6922. This tube is of premium quality, but if damaged or smashed around in shipping can develop small cathode leaks to ground. The sonic effect of this would be HUM. These amplifiers have less than 1.0 mv of noise and hum which means that you should hear nothing in the way of hum. On 93dB speakers you would have to place your ear ON the dust cap of the speaker to detect any hum or noise of any kind. Our view on hum is this: If you can't hear it from the listening chair it doesn't exist.

RECTIFIER

Your new amplifiers are rectified by a 5U4 tube rectifier. This rectifier is 10 times higher in current capacity than the circuit. Yes, it is overkill, however we choose this rectifier based on the way it sounded. The amplifier is biased specifically for use with this rectifier. You will notice that your new amplifiers come with a standby switch. Proper use of this switch will enhance the life of the output tubes.

RECTIFIER SUBSTITUTION

You can use other rectifiers such as different brands of 5U4 and you will discover each makes a subtle change to either the performance or signature of the amplifier. 5AR4 rectifiers can also be used as well as 5Y3GT. It is important to understand that different types of rectifiers have varying efficiency (losses) and effect the actual B+ voltage in the amplifier. This in turn effects the bias voltage of all the tubes in the amplifier. That in turn effects the performance and signature of the amp. WE HAVE BIAS THE AMP SPECIFICALLY FOR THE 5U4 rectifier tube ONLY, and while using the other tubes mentioned will not cause damage to your amplifiers, they may not sound right.

A special note on the pretty looking SOVTEK 5U4 rectifier currently available on the market. It is a very attractive looking tube, however we have found it to be miserable in performance. Don't use it.

WIRING YOUR AMPLIFIERS

The SV83S comes with a high quality 3-way binding post on the rear. This is where you hook your speaker wires. It will accept banana plugs, Spade connectors, or up to 8-gauge wire. Please do not wonder what Edison Price, WBT, or other overpriced "music posts" would sound like. We've tried them all in evaluation for this product and found no sonic differences. We did however find the ones we use to be more ergonomically correct, and use real 24K gold instead of Rhodium (fake gold). The input jack, RCA type, is also of high quality with a Teflon dielectric insulator. Replacing this with a suspected "high quality" jack will make no difference in fidelity except to probably reduce it. The vary act of someone else soldering inside your amp, using different solders and techniques could introduce enough dissimilar metals to grossly outweigh the advertised benefits of these overpriced "audiophile" connectors. The RCA jack is labeled INPUT and should be connected to your preamp or line amp.

TYPES OF WIRE

It is of paramount importance to use good wire before and after your amplifiers. The wire industry as whole has gotten fairly perverted with some pretty stiff price gouging. This means you can spend 1000's of dollars on ultra fancy, ultra pure, ultra fat wire. This does not mean

however that the wire will be really good. If you want a decent reference to see how good expensive cables are you can try the following experiment. Take a piece of romex 10-gauge wire and remove the copper ground wire. It's the one with no insulation on it. Get yourself 4 pieces like that and use them as speaker wire. Although no harm will come to your amplifier if the bare wires touch together, try to keep them apart and off the floor. This will show you what basic simplicity sounds like without any of the skin effects that insulators bring. Chances are this could even sound better than the wire you are using and if it does, you may use it for a reference while you shop for better wire. If your wire sounds better, then you are on the right track already.

INTERCONNECTS

These are probably the most single important cables in your audio system. Again, many overly complex, overpriced cables out there. Over the years I have found very few interconnects that we would consider "high fidelity". Since the quality of this (or any) amplifier is largely dependent on quality of the interconnects, we are now making silver/Teflon cables for our customers at very reasonable prices. Equivalent to cables costing between \$500 and \$1500 per meter and up.

PREAMPS

Even though you may have a wonderful pre-amp in your own mind and by popular opinion, chances are it's not all that great. Since your amplifiers do not have an adjustable gain control, you will need some type of variable volume control or preamp. If you have a source (DAC) with a variable output that is in the analog section of the outputs, you will probably stand a reasonable chance at hearing high fidelity provided you have a top notch pair of interconnects by simply not using a preamp at all. Passive preamps with most CD players as a source are a step in the wrong direction. Although you may have found in the past that they sound better than your active preamp, that is only because the vast majority of active preamps are not all that terribly great, and in fact do more to hurt the situation than help it.

Your new amplifiers come to full power with 2 volts, and 2 volts is typically what is on the outputs of most CD Players. I only said that to bring to point the fact that preamps are not used for gain in most systems, but used for attenuation.

We manufacture the Zen Triode Preamp (ZTPRE) as a no compromise unit equal in fidelity to these fine mono amplifiers.

LINE STAGE VS. PASSIVE PREAMPS

If you can't afford our Signature dual mono ZTPRE (Zen Triode Pre Amp), we have developed a special line stage tube buffer for the purpose of driving the Zen Monoblocks with an adjustable volume control. We **highly** recommend it over 80% of your available options. It has been designed and voiced to perfectly match your new amplifiers and ensure perfect impedance between the amps and your source. This special line amp also

comes with it's own special SILVER interconnects with SILVER RCA type connectors set up to plug directly into your source and directly into these amplifiers. It uses the same signal tube as your new amplifiers, is wired with the same silver wire as your new amplifiers and built with the same mind and ears as your amplifiers. Because *with it* we have control of the *entire signal path* we know you will find nothing out there better in this price range. We are aware of the raved about and popular tube preamps out there in this price point and have had most of them in here in our listening room. Most do not compare to our line amp in the fidelity department. None that we listened to were close to the ZTPRE, which is the ultimate combination with the Zen Mono's.

SPEAKER RECOMMENDATIONS

These amplifiers are intentionally designed to have low power because it places them in the highest rung of the fidelity ladder. Because of this some care **MUST** be taken in selecting efficient speakers. Stay away from speakers designed with Complex crossovers, not because your amps won't drive them, but because overly complex crossovers designed to offer high power solid state amps a friendly impedance curve often have no problem spending a watt or two as heat. These types of speaker are known to sound good only once you get enough power behind them. Bad choice with these amps. Also, this school has not heard the kind of detail possible with amplifiers like these on efficient speakers. **WE RECOMMEND SPEAKERS 90dB 1w/1m** as the ideal lower limit. Anything higher is a bonus. However it's not necessary to get carried away either. Our reference speakers that I prefer are about 93dB, are a simple two way design with no crossover on the woofer and a single cap on the ribbon tweeter.

Your amplifiers are NOT typical SET amps and actually **INCREASE** in power with drops in impedance. That means you can expect around a 3dB increase in power just by changing from an 8 ohm speaker to a 4 ohm. Will the amp do crazy stuff like drive 2 ohms speakers? All day. Got a speaker with a ½ ohm dip that only two amps in the entire world will drive... These will do it.

SPEAKER PLACEMENT

Your new amplifiers are world champions in the imaging and sound stage department. They are capable of projecting a completely holographic sound field provided your speakers are set up for this type of resolution. Casual speaker placement against walls or in corners will ensure you never hear it. Pull your speakers out into the room so they are several feet from the wall, and place them 6 to 8 feet apart, toed in so that the sound intersects just in front of your nose or just past your head. Room acoustics and speaker placement account for 50% of the resulting quality of the sound, so take both seriously. If you need help setting up your room with a purist listening apex, call us.

OPERATING YOUR NEW AMPLIFIERS

You will notice two switches on the back of your amplifiers, one is labeled "**STANDBY**" and the other is labeled "**POWER**". The standby switch

turns the heaters on inside the tubes. The power switch turns on the B+ voltage to operate the amp. The standby switch is not needed to protect tube life. In fact you may turn both switches on at the same time if you wish. The reason we included a standby switch was to let you pre-warm your amps prior to listening. Handy if you know a friend who is coming by to listen but you don't know when. You can leave the amps in standby as long as you want without damage or excess heat.

Always make sure that when first turning your amps on your source is turned down.

You will notice that after an hour, your amplifiers are nice and toasty warm to really warm. Do not be alarmed by the temperature, we designed the amps to run really warm. These amplifiers should not be placed inside a stereo cabinet because of the high heat output. If you place them on the floor and have carpeting, place a board under the amps so that the feet raise the chassis to create a small air space underneath.

RECTIFIER NOTES:

The Ruby Tube 5U4 shipped with your amplifiers is a wonderful sounding tube comparing to the US NOS GE or Sylvania in sound. This is why we choose the tube, even though it flashes a little bit on start-up, and has a certain amount of physical vibration. You may use any brand of 5U4 rectifier in your new amplifiers.

FRONT LOCATED TOGGLE SWITCH

If you have the DUAL-CORE option on your amps (SV83M-DC) then the front located toggle switch is used to activate our dual core output transformer (harmonic recovery). Towards the back activates it and towards the front de-activates it. This switch can be operated "on the fly" while you listen. If you have the standard SV83M without the dual core option, the front located toggle switch operates the bias of the output tubes which controls bass response. On the SV83M-DC this bias switch is moved to the rear of the amplifier.

PRECATIONS

Do not open the amplifier bottom cover unless you are qualified to deal with 400 volts DC. Do not attempt to modify this amplifier in any way and expect the sound to be the same. We have built and listened to over 100 variations of this amplifier and can tell you what any particular modification you might want to try will do to the sound. Obviously we have selected each part with great care and for specific reasons. Some of the variations had a thousand dollars worth of extra parts stuffed in and didn't sound as good.

When you clean your amplifier make sure it is ROOM TEMPERATURE. Do not spray cleaners onto the amplifier, instead spray your lint free towel and then wipe the surfaces of your amp. Always remove the tubes to before cleaning your amp, and take GREAT CARE not to get any cleaners on or in the tube sockets. Tube pins can be cleaned with a pencil eraser. The input jack can be cleaned with a cotton cloth. Windex works well as a cleaner, and car wax works great as a polish for the chrome provided you don't get any wax or wax dust inside the tube sockets.

Tubes can be cleaned with any glass cleaner. Your amplifier is not ventilated like most, but relies on convection cooling through the chassis. This is why it runs so warm but is also why the inside of the amp stays perfectly clean over the life of the amplifier. Smoke, dust, grease and other airborne contaminants have no way inside the amp to compromise connections and solder.

LINE CONDITIONERS

To date the only line conditioners we know of that make a profound difference are made by PS AUDIO. Good clean power is essential to high fidelity, and good line conditioners can make a dramatic difference in clarity and image focus. DO NOT USE EXTENSION CORDS. Make sure other appliances are not operating on the same circuit as your stereo during listening sessions.

To find out if a line conditioner will really improve the sound of these amplifiers you can do the following test: Listen to your amps between 1:15 and 2:45 A.M. This is what clean power sounds like.

POWER CORDS

Your amplifiers come with removable power cords. They are of high quality, however if you are thinking about using after market "audiophile" cords make sure your priorities are in order. Before you spend a grand on some fancy cord you should be able to say you've already spent a grand on room treatment, a difference you will actually hear.

MAINTENANCE

Tube replacement is the only maintenance required. The amp is self biasing. Output tubes should be replaced at least yearly. Constant use at clipping levels may require replacement two or three times a year. We offer matched TRIOS of 6X4 output tubes for around 30 dollars a set. The rectifier (large tube) and the signal tube (smallest one) should last for many years.

SERVICE

90% of all service problems are tube related. Having a spare set of all 5 tubes will give you the ability to trouble shoot your own amplifier when and if a tube starts to act up. Spitting, Noise, excessive clipping, and or HUM are all signs of tube related problems. **Your amps come with a lifetime warranty to the original owner, parts and labor against defects in materials and workmanship.** If you ever have to return an amplifier to us for repair or testing it is imperative that you use the original shipping container to prevent damage during

shipping. Our warranty will not cover damage that occurs during shipping from you to us.

If you have questions of any type please feel free to contact us. Understanding is proportional to pleasure. We really want you to enjoy these rare amplifiers as much as possible.

Our shipping address:

DECWARE / High Fidelity Engineering Co.

1202 N.E. Adams Street

Peoria IL 61603 USA

Phone: (309) 671 2428

Fax: (309) 672 1060

E-mail: high@decware.com for shipping/billing related questions

E-mail: fidelity@decware.com technical questions for designer Steve

Deckert

WEBSITE: www.decware.com