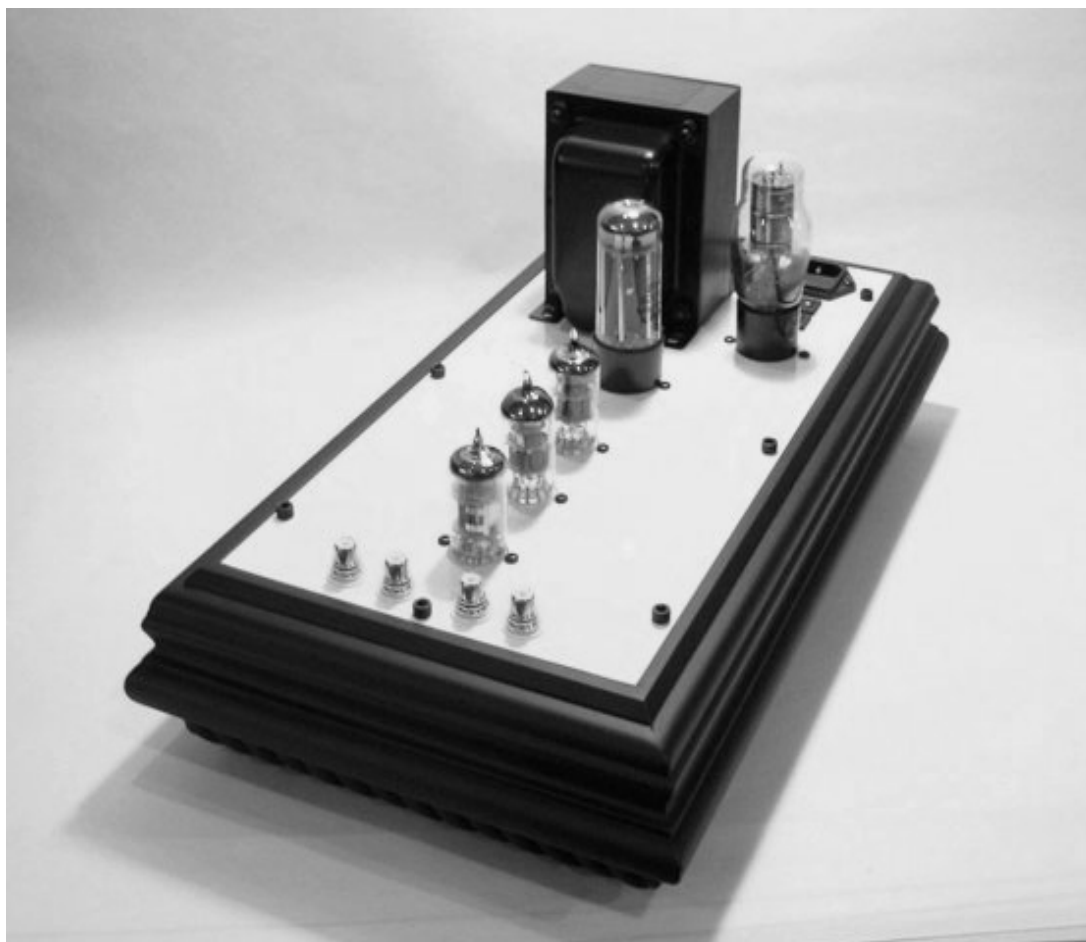


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Zen Triode Phono Stage
Model ZP3
Single Ended Passive RIAA Triode with Buffer

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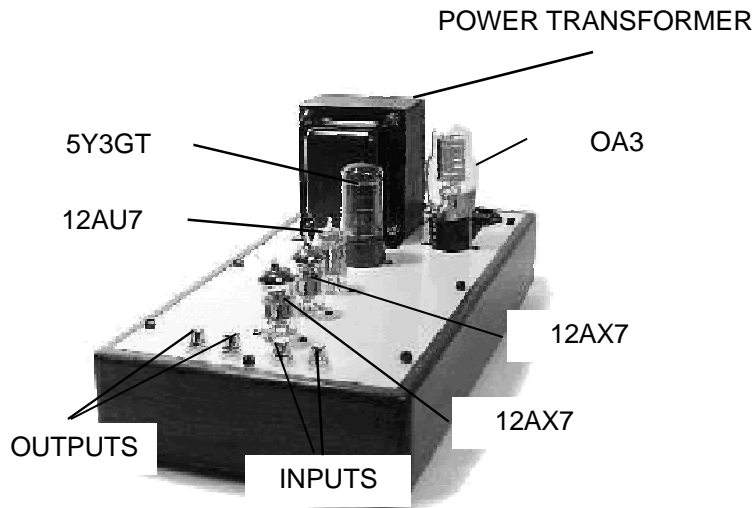


FIGURE 1

**Zen Triode Phono Stage
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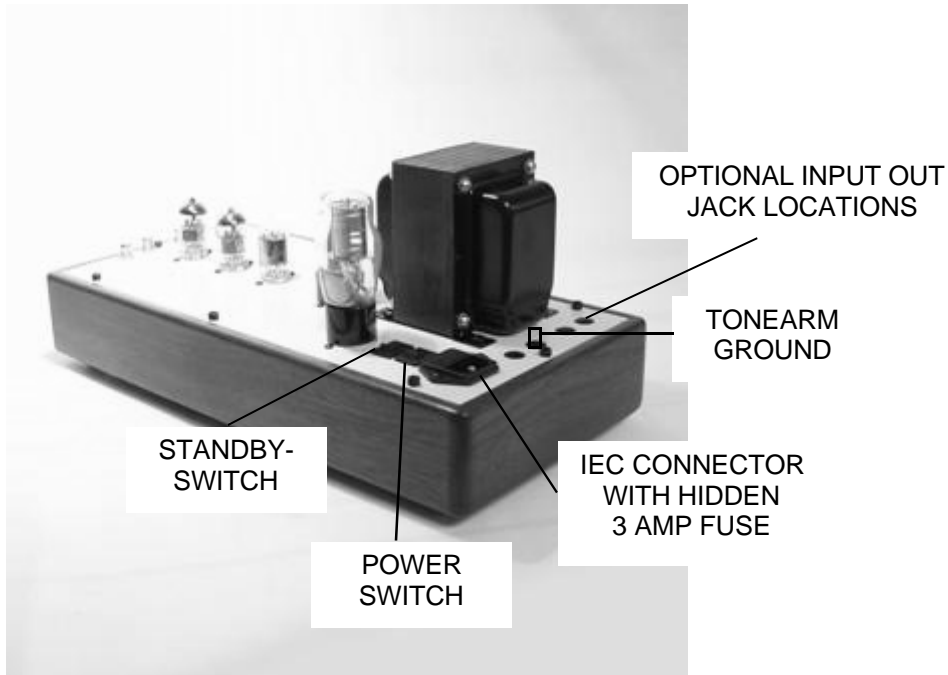


FIGURE 2

**Zen Triode Phono Stage
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START UP

After unpacking your ZP3 refer to figure 1 to install the supplied tubes.

ABOUT THE TUBES

Your phono stage is configured as a single ended triode gain stage driving a passive RIAA filter with a cathode follower (buffered) output stage.

The 3 small tubes make up this circuit. From front to back is a 12AX7, 12AX7, 12AU7. Of these three the 1st one is the most critical for noise, so some care in tube selection for this position is advised.

The rectifier is a 5Y3GT and should not be substituted unless it's a different brand of 5Y3GT. There are many NOS of these tubes available.

The voltage regular located by the switches is called an OA3. This tube was common throughout the 1950's and 1960's but is no longer made. OA3's are only available as N.O.S. (New Old Stock). The OA3 tube does not create heat like the other tubes and can be touched during operation. This tube regulates the circuit voltage and provides a vacuum gap of high impedance to aid in filtering the power.

TUBE LIFE

All of the tubes in your ZP3 are rated for between 3000~5000 hours and are sure to last at least that long and possibly double that in part from the lower voltages used in the circuit. The only tube that requires some special note is the OA3. This tube is fascinating to watch as it won't light until there has been some delay after turning it on. Once the tube has lit, it is desirable to keep it on for no less than 20 minutes otherwise it's life may be reduced. Keeping it on all the time would be no problem. This also means that it takes approx 20 minutes for the regulator to stabilize so you may find the sound gets into a zone after a good 20 minute warm up.

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START UP CONTINUED

Now that you have the tubes installed and know what each one is for, hook tonearm up to the input jacks and hook the output jacks to your preamp or amplifier.

TONEARM GROUND

Your tonearm may have a ground wire. If so it can be connected to the grounding lug on the rear of the ZP3. Not all tonearms have a ground wire. If you have a second ground wire from your turntable you can also connect it here.

MOVING COIL CARTRIDGES

If you're running a moving coil cartridge, you will need a step up transformer or separate head amplifier to raise the output level for use with this 47K phono stage. We have found this to be the best solution sonically for using hi-end MC type cartridges both from a noise perspective and from the nice shimmer they lend to the top end of the music.

If you have a step up transformer that means you will be connecting your tonearm to that, and from that you will go to the inputs on your ZP3. In this case you may find better results grounding your tonearm and or table to the chassis of the step up transformers rather than the ZP3. Sometimes it's other way around, and sometimes you have to hook one ground to each component. You'll just have to experiment until you reach the solution with the lowest noise level.

INPUT SENSITIVITY

This is a 47K phono stage that is compatible with most standard moving magnet cartridges. If you have a moving coil cartridge we have 3 different models of step up transformers each with adjustable cartridge loading making it possible to dial in any moving coil perfectly.

GAIN

The ZP3 has approx 43 dB of gain which can go up or down slightly depending on the tubes used.

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START UP CONTINUED

POWER AND STANDBY SWITCHES

The switch closest to the power cord is your main power switch. When this is turned on, the heaters are lit for all the tubes. The OA3 will eventually light also, but only half as bright. In this state, the ZP3 is officially in "standby" mode. Once the tubes have warmed up, you can turn on the next switch. This will introduce the high voltage to the circuit and bring it to the operating state. You will see the OA3 tube get brighter when this switch is thrown.

There is no harm done to the unit by turning on both switches at the same time, or even in the reverse order (essentially the same thing) nor is there any harm done to the tubes so no worries. Standby was installed mainly so that if you want to keep your ZP3 half warmed up all the time you can.

CHECKING FOR HUM AND NOISE

Ground loops are particularly common with turntable setups due in part to the number of components required and in part to the extremely high gain required to take a cartridge to a line level output voltage. The best way to setup a new phono stage is to hook it to your system without hooking up the turntable. Turn it on and make sure there is no abnormal hum before you go further. If all seems ok then hook up the tonearm to the phono stage. If you get hum, you know the problem is in the tonearm/cartridge/wires and not the ZP3. Try grounding the tonearm and or table to different places if you have hum and or be sure that the tonearm cable hasn't become damaged places with an intermittent ground from excess handling (a common problem). Make sure you always turn the amp or preamp down all the way before hooking or unhooking the tonearm from the ZP3. If you forget you'll get a loud squeel when you unhook the first of the two channels.

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START UP CONTINUED

BREAK IN

During the first few hours or days with your ZP3 you will no doubt wonder about break-in, if for no other reason than hearing about it constantly every time you read about amplifiers.

If you're new to tube gear the amp will sound so good right out of the box that you will have a hard time worrying about break-in, so don't.

If you've been around the block once or twice, then the fastest way to break in the amp to a point where the sound stage and focus doesn't change back and forth from good to bad is this:

5 hours on and playing music at a normal level followed by 5 hours off. Repeat this 5 times. This process will speed the seating of the dielectric in the coupling caps and you can then expect the amp to bloom in the very near future.

Beyond this, the ZP3 will continue to improve and become more refined over the next 200 hours or so. After that it will just season with age, like fine wine, so as the years go by your ZP3 continues to sound sweeter and sweeter.

WEAK LINKS

Please, if even only for an evening, lift some of the handicaps you've placed on your new ZP3 so you can hear more of it's inner magic. Take the time to double check your cartridge and tonearm setup. The distances between the needle and pivot point on the tonearm, the angle of the cartridge on both planes, and the height of the rear of the tonearm must be exact as well as the tracking force and anti-skate. All of the above start with a perfectly level table.

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START UP CONTINUED

WEAK LINKS CONTINUED

Attention should be paid to the cables used to connect the ZP3 to your preamp or amp. Best performance from a noise standpoint is achieved by using shielded interconnects in this location.

MAINTENANCE

Cleaning should be done with the ZP3 at room temperature and of course OFF. Tubes should be removed prior to cleaning. A damp towel with alcohol is ideal for removing smudge marks from the black powder coat finish.

The input jacks can also be cleaned with alcohol on a Q-Tip swab inserted into the jack and rotated. If the Q-Tip comes out with any dark color on it, your jacks were dirty. Jacks can get dirty after only a single insertion of a non-cleaned interconnect cable. Having clean connections is important. Finger oils do not help the sound.

Products like Caig DeOxit, ProGold and other contact cleaners/enhancers can also be used as part of a regular maintenance program. Basically whenever you unhook your ZP3, you should clean the jacks. If you never unhook your ZP3, you should unhook it at least every 6 months and clean all the jacks.

The ZP3 is self biasing so there is no maintenance or adjustments to make after you install new tubes.

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WOOD BASES

The ZP3 comes with a real wood base available in two different styles. One is black with Early American styling and the other is Walnut with contemporary styling. Either base is interchangeable. Both should be cleaned with a damp cloth. In the case of the Walnut, furniture polish may also be used.

POWER CORDS and CONDITIONING

Upgraded power cords can and do make a difference when the overall strength of the audio chain begins to show a stock power cord as a weak link. It should be stated that we've heard as many high dollar power cords do little to improve things as we care to admit. However some are very noticeable. None will justify spending a grand or more unless you've gone off the deep end and wiring your entire breaker box with silver/Teflon and etc.

It makes little sense to invest too much in a power cord if your going to plug it directly into the wall outlet because far more of a problem than the cord itself is the dirty power coming from the outlet. What does make sense is to purchase a simple isolation transformer rated for 500 Watts or so and use that to decouple yourself from the grid and all the nasty harmonics that float in it. Then take a good power cord plugged into the isolation transformer and you will have a result.

TWEAKS

The biggest thing regarding tweaking the amplifier itself is going to be tubes. Every tube, even those sharing the same numbers, will sound slightly different. Rolling tubes, in particular the input tube, with other brands and or NOS (New Old Stock) can yield some very synergistic effects. Beyond that the only really thing left would be vibration control. As you can see the amp is built like an army tank of thick steel so it's not prone to resonate like a thin chassis will. Things like tube dampers and high mass stands or spikes in various combinations can further improve focus.

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SERVICE AND REPAIR

Your ZP3 is covered parts and labor for the lifetime of the original owner. Should it ever need repair or you just want it checked contact us or fill out the RA form on our web site and send it to us. We'll call you after it has arrived and let you know what we've found and determine the precise cause to prevent it from happening again.

GETTING THE MOST FROM YOUR ZEN

Your ZP3 comes with a lifetime warranty. Probably the only phonostage in production that has one. Decware is a small enough company to consider these hand built units more like children so we like to keep tabs on them, make sure they are in use and being enjoyed so they grow up to be great salesman. In that light, no one is going to buy a Zen amp if they come to your house and see it in the closet.

If you're not getting the sound you're after or grow bored with it we already know the 26 reasons that created that condition and would be pleased to offer our sincere problem solving and consulting skills to help you find what your looking for. In some cases it means helping your sell your amp and getting something else. In other cases it's speakers or tips on how to better set up your room without upsetting your spouse. Bottom line is we want you to enjoy music and stop listening to gear. The low power single ended approach has the potential to far exceed high power counterparts regardless of cost because of simple physics. Lower mass, higher efficiency / better speed, better linearity. You might think you need 500 watts to experience amazing dynamics but in reality, there is over 30 dB of dynamic range in the first watt. When you double that to 2 watts you gain 3 more dB. To gain another 3dB the power is doubled again and for every 3dB after that it doubles. So this is a game of preserving the first watt and being able to hear it. In a high power system, much of the first watt is spent into heat from complicated crossover networks and along with it much of that initial 30dB of dynamic range.

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We have developed affordable speakers based on this ideal that range in efficiency from 94 to 99 dB with 1 watt and have no crossovers. These type of speakers will demonstrate real dynamics and can give a real education in micro-dynamics often buried in higher power systems. All things your ZP3 excels at letting you hear.

SPECIFICATIONS:

Weight	13 lbs. ea.
Dimensions	8.5" H x 7.250" W x 14.75" D
Circuit type	Single ended Class A Triode Passive RIAA
Gain	+ 42 dB / With optional step up transformer + 61dB
Noise / Hum	Less than 0.5 millivolts
Input Impedance	47 kOhms
Output Impedance	Less than 1 kOhms
Response	15 Hz ~ 25 kHz
Feedback	ZERO negative feedback used
Rectification	5Y3GT tube rectification
Regulation	OA3 tube regulation for entire circuit
Signal tubes	12AX7, 12AU7
Transformers	Transformer custom made for this phono amplifier by Decware
Biasing	Self-Biasing circuit - never needs adjustment
Resistors	All resistors are audiophile grade
Signal Cap	Audiophile grade poly film/foil
Filter Caps	All filter caps are premium quality
AC cord	Fused IEC connector provided with removable power cord
Consumption	65 watts at full power
Input jacks	RCA type 24K Gold / Teflon
Output jacks	RCA type 24K Gold / Teflon
Distortion	0.03% at 1 kHz
Warranty	Lifetime to original owner / 90 days on tubes

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