

# Eastern Electric

UNCOMPROMISING AUDIO DESIGNS  
MADE AFFORDABLE

**MiniMax**  
Tube DAC Supreme

Owner Manual

# Eastern Electric DAC Supreme

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

## **Introduction -**

*Thank you* for purchasing the MiniMax DAC Supreme. You give us the ultimate complement by choosing an Eastern Electric product.

The DAC Supreme is designed and made to the highest sound quality. The DAC Supreme comes with the following great features:

- DSD Play Back
- Tube and Solid State (SS) switchable outputs
- ESS9018 DAC chip channels paralleled
- Dual power transformers
- Digital display for frequency and file type

With careful engineering, selection of the best electrical parts available and careful assembly by hand, each Eastern Electric product is lovingly constructed to bring you years of listening enjoyment. Please read this manual carefully before unpacking, setup, and operating the

Again, thanks for placing your trust in us. In return, we promise your complete and total satisfaction. It is a promise we take seriously and aim to keep.

## **Opening the Box and Contents -**

Place the box right-side up and open from the top. In addition, the spare fuses are small and can be easily misplaced.

The box contains the following items:

- o The DAC Supreme with the following tube plugged in  
12AU7 x 1pc.
- o One power supply cord
- o A warranty card
- o An owner manual
- o Two spare fuses

We suggest you keep the box and all packing as it comes in handy for moving or shipping the DAC Supreme..

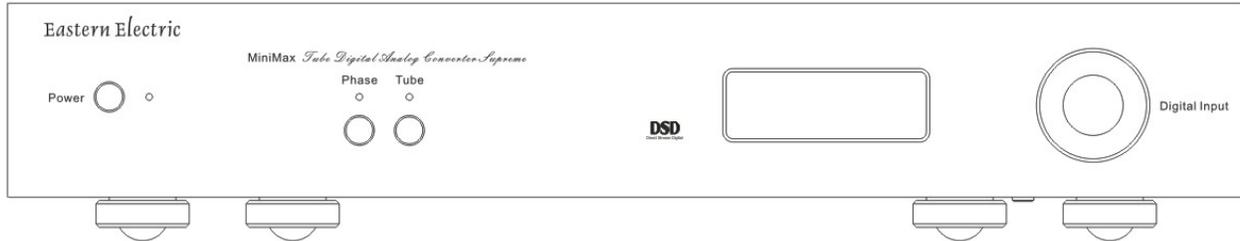
***Please take just a moment to fill out your warranty card and return it.*** It takes only a minute and is the one item we need to insure your absolute satisfaction in the unlikely event of a problem where warranty work is needed.

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## Overview of the DAC Supreme

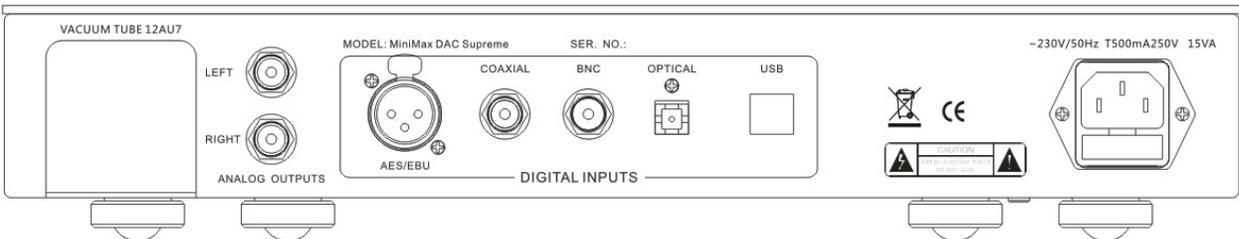
Diagram 1.



From left to right

1. On/Off power switch, light is on when power is on
2. Phase switch in (green light), out (red light)
3. Tube output (green light), Solid State output (red light)
4. Display Panel
5. Digital Input selector

Diagram 2



From left to right

1. Output tube 12AU7
2. Analog Output (L & R)
3. AES/EBU input
4. RCA input
5. BNC input
6. Optical input
7. USB input
8. Main power input

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## Using your DAC Supreme

Please download the driver from [www.eeaudio.com](http://www.eeaudio.com) and install it to your computer if you are using Windows OS. Please connect the DAC Supreme to your computer via USB when installing the driver.

No driver is needed if your computer is Mac IOS.

Connect your digital sources to one of the inputs of the DAC Supreme. Turn on the power, it will take 30 seconds to warm up and initialize the DAC. Connect the analog outputs to your preamp or integrated amplifier inputs.

Turn the Digital Input knob to the kind of input you desire the DAC Supreme to play. The display will show the input type, frequency and signal type (PCM or DSD).

Press the Phase button to switch the phase in or out this is similar to swap the + and – of the speaker poles. Press the Tube button to switch the output to tube (green light) or solid state (no light).

## DSD play back

The computer by default is not able to play the DSD format. You will need to use some players (soft wares) to play DSD music for example the Audirvana Plus (IOS) or Foobar (Windows). You may need different setups and or install different plug-ins in order to play DSD, please refer to the software official web sites.

When the DAC Supreme detects the DSD signal, it will display the DSD form for example DSD64 or DSD128.

## Tube Rolling (or Tube Replacement)

Tube replacement, often termed “tube rolling”, is an optional step for those who are interested in tweaking their system to its optimum level of performance. This is a common and fun practice in tube-based audio equipment.

Tubes by various manufactures will impart their own sound. Some tubes may impart a warm sound. Others might yield more detail or provide a wider soundstage, etc. Given the vast array of manufactures, tube types and even manufacturing techniques, the mix and variations are endless.

Be aware however, all tubes must be used in same numbers and same structures.

Before you roll the tubes, we suggest a new DAC Supreme be used for 100 or more hours with the stock tubes to allow the unit to “break in”. This one-time exercise allows the internal electronic components to settle-in.

There is a wide variety of vintage tubes commonly referred to as “New Old Stock” (often abbreviated as “NOS”). New old stocks refers to tubes manufactured years, or even decades ago but have never been used (thus, “new” old-stock). There is also “used” old-stock as well as current day production tubes. Some of these tubes, especially old-stock or vintage tubes, have excellent tonal qualities and are highly valued by the audio community. Unfortunately, vintage tubes are not made anymore and can be hard to find. The internet is a good source for information about NOS tubes but be very careful about purchasing from anyone you don’t know and trust.

When preparing to roll in new tubes, allow a few minutes after the unit has been turned off to insure the existing tubes have cooled down. It may help to use a cotton cloth to

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avoid being burned when removing the existing tubes. Then, simply follow the “Setup and Installation” section as it relates to installing the replacement tubes and enjoy! We think this is one of the more fun and rewarding aspects of the Avant. Check out our web-site and let us know your findings!

## **Troubleshooting**

Basic troubleshooting of the Avant is similar to any other electrical component. Check the most obvious things first. The following table is provided to give a few ideas on what to look for.

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Problem	Cause	Remedy
<p>Power indicator light or the display does not come on when power switch is toggled on.</p>	<p>No power at the receptacle. Test by plugging in a light or appliance that you know works.</p> <p>The power cord is not plugged in.</p> <p>Fuse may be broken.</p>	<p>Check and reset or replace the appropriate breakers or fuses.</p> <p>Insure both ends of the power cord are securely plugged in.</p> <p>Replace the fuse with one of the spare fuses.</p>
<p>No sound when the volume is turned up. Make sure the volume is turned up and be careful not to turn the volume up all the way (that should not be necessary and may hurt your amp or speakers)</p>	<p>Source selector is not set to the source that is playing.</p>	<p>Make sure the volume is not turned too loud and use the input selector to try the other inputs.</p> <p>You may need to adjust the cabling from your sources to better reflect the input source selector labels.</p>
<p>The system sounds strange. In particular, it has a poor imaging (soundstage) or sounds “out of phase”.</p>	<p>Check that you did not mix up the “Left” and “Right” input cables from your source and the output cables to your amp. Also double check the speaker terminals are not reversed.</p>	<p>Simply reverse the input and/or output cabling if they are found to be incorrect. Do the same for the speaker(s) if needed.</p>
<p>The sound is way too loud or too soft and volume control does not seem to work correctly.</p>	<p>This could be a cabling problem. The cable itself may be faulty. It is not recommended to have power cords or video cables running in parallel (or bundled with) your input and output cables. They should be separate.</p>	<p>To check if the cable is faulty, try swapping out one set of cables for a good set. Repeat the process for each of your sources. Finally, replace the outputs to the amp. If the signal cables are running parallel with a number of video and power cables separate them.</p>
<p>Hissing, popping, and/or crackling noise from the speakers</p>	<p>Bad tube(s)</p>	<p>Switch between Tube or SS output and check if it is a bad tube. Try inserting a spare tube if you have one.</p>

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## Warranty and Service

The DAC Supreme is hand assembled by people (not machines) that care about your satisfaction. Mistakes can happen. In the unlikely event you do have a problem, our Warranty is pretty simple.

To the original purchaser, we warranty, our product from any defects for a period of 12 months beginning from the date of purchase. In addition, we warranty the tubes for 60 days from the original date of purchase. This warranty includes both parts and labor to correct the defect.

To validate your warranty and obtain service, the warranty card must be filled out, in its entirety, and returned to your dealer within fourteen days from the date of purchase. The unit must be returned to your dealer for repair or replacement.

If the problem is due to accidental damage, misuse, abuse, unauthorized service or improper installation, it remains Eastern Electric sole discretion to honor this warranty. The maximum remedy of this warranty is limited to the replacement of a defective unit or refund of the original purchase price not including any taxes.

Eastern Electric disclaims all other warranties, expressed or implied, other than the warranty contained herein.

Specification :

USB signal type : PCM, DSD

Frequency Response : 15Hz – 32KHz

Sampling Rates : 32bit 32KHz 44.1KHz 48KHz 192KHz 352.8KHz 384KHz

Dynamic Range : 130dB

Digital Input Impedance : 75Ω

Output Impedance : Tube 22K Solid State 10K

Output Voltage : Tube 3.2V ±0.5dB Solid State 2.8V ±0.5dB

S/N Ratio : Tube 92dB Solid State 98dB

THD : Tube 0.4% Solid State 0.01%

Power Consumption : 12W

Main Power Input : 120V 230V 240V switchable

G.W. : 6.5kgs

N.W. : 5kgs

Machine : 371 x 295 x 70mm

Packing : 455 x 355 x 155mm