

*Egnater*TM
CUSTOM AMPLIFICATION

ARMAGEDDON[®]

Owner's Manual

**120-watt
Tube Amplifier**

Greetings.....

I would like to personally thank you for choosing Egnater as your “Tone Partner”. Our goal is to provide you with the best tools we can to help you express yourself to the fullest. Your amplifier is an integral piece in your never ending “Tone Quest”. Our commitment to helping you achieve that goal is our passion. Our hope is that you will take advantage of the years of innovative tube amp designs we offer and use it to find the sound that is “in your head”.

Thank you for putting your trust in Egnater.

Best Regards,

Bruce Egnater

Bruce Egnater

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ARMAGEDDON® is here!

The Armageddon is a 120 watt, 3 channel, fully MIDI capable, metal amp with the ISP Decimator™ built-in. Four premium 6L6 power tubes and six hand-selected 12AX7 pre-amp tubes fuel this goliath. The 3 distinct channels take you from pristine open clean to extreme high-gain metal crunch. Egnater's signature Tight and Bright voicing switches on each channel custom tailor the low and high end response. The ISP® Decimator™ G-String offers complete noise reduction without sacrificing an ounce of tone and can be turned ON and OFF via the footswitch. The master midrange controls fine tune the mid cut or boost while reverb can be adjusted independently per channel. The Armageddon is designed to integrate seamlessly into any MIDI rig. A seven button footswitch (connects via standard XLR cable) and heavy duty cover is included.

- 120-Watt All Tube Head
 - Selectable Full / Half Power
- Premium Tubes:
 - 4 x 6L6 & 6 x 12AX7
- Channel 1:
 - Volume, Gain and 3-band EQ
 - Tight & Bright Voicing Switches
 - High/Low Gain Switch
- Channel 2 & 3:
 - Shared 3-Band EQ
 - Independent Volume & Gain Controls
 - Tight & Bright Voicing Switches
 - High/Low Gain Switch
- Built in ISP® Decimator™ G-String Noise Reduction with Threshold Control
- Master Controls:
 - Presence & Density
 - Midrange Sculpting via Depth & Level Controls
- Independent Reverb for Each Channel with “Spillover”
- Seven Button Footswitch Connects Via a Standard XLR Cable
- Simple Bias Adjust with External Test Points
- XLR Cabinet Emulating Line / Record Output
- Buffered Effects Loop with Send and Return Levels
- MIDI In and Thru with External Setup Switches
- 117V/230V Voltage Selector



DECIMATOR™ G-STRING NOISE REDUCTION FROM ISP® TECHNOLOGIES

The Armageddon has a built-in Decimator™ G-String which provides the latest generation in high performance noise reduction technology. Unlike traditional noise gates, the Decimator™ G-String provides patented technology with level detectors that track the guitar signal directly. With the Decimator™

G-String Signal Tracking Technology, you can set the threshold and no matter what the level of noise, the Decimator™ G-String will track perfectly.

Decimator™ and Decimator™ G String are Trademarks of ISP® Technologies LLC

IMPORTANT INFORMATION

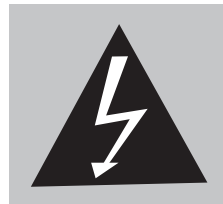
Please keep this instruction manual for future reference and for the duration of owning this Egnater Tweaker. Please carefully read and understand the instructions inside this user's manual before attempting to operate your new amp. This instruction manual includes essential safety information regarding the use and maintenance of the Tweaker. Take special care to heed all warning symbols and signs inside this manual and those printed on the amplifier itself.



WARNING

TO PREVENT FIRE OR SHOCK HAZARD, **DO NOT EXPOSE THE AMPLIFIER TO WATER OR MOISTURE. DO NOT OPERATE NEAR ANY WATER SOURCE**

1. Read these instructions – All the safety and operating instructions should be read before this product is operated.
2. Keep these instructions – The safety and operating instructions should be retained for future reference.
3. Heed all warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow all instructions – All operating and use instructions should be followed.
5. Do not use this apparatus near water – The appliance should not be used near water or moisture – for example, in a wet basement or near a swimming pool, and the like.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacture's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of grounding plug. A grounding plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric



WHAT'S THE MEANING OF THIS?

The lightning flash with an arrow triangular symbol is intended to alert the user to the presence of non-insulated "dangerous voltage" within the products enclosure, and may be of sufficient magnitude to constitute a risk of electric shock



WHAT'S THE MEANING OF THIS?

The exclamation point triangular symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the user manual accompanying this amplifier

- shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
16. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.
17. WARNING: For the terminals marked with symbol of "⚡" may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the used of ready-made leads or cords.
18. WARNING: The mains plug and ac connector is used as disconnect device, the disconnect device shall remain readily operable



19. This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.
- Warning: To reduce the risk of electric shock, do not remove cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.
 - The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.
- Ensure that the ventilation is not impeded by covering the ventilation opening with items such as newspapers, table-cloths and curtains etc.

WARNING



Handle the power supply cord with care. Do not damage or deform; it may cause electric shock or malfunction when used. Hold plug attachment when removing from wall outlet. Do not pull on the power cord.

FOLLOW THESE SAFETY PRECAUTIONS

1. **READ INSTRUCTIONS** – All the safety and operating instructions should be read before this product is operated.
2. **RETAIN INSTRUCTIONS** – The safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS** – All warnings on the amplifier and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS** – All operating and use instructions should be followed.
5. **WATER AND MOISTURE** – The amplifier should not be used near water - for example, a bathtub, washbowl, kitchen sink, laundry tub, wet basement, or near a swimming pool, and the like.
6. **CARTS AND STANDS** – The amplifier should be used only with a cart or stand that is recommended by the manufacturer.




- An amplifier and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the amplifier and cart combination to overturn.
7. **WALL OR CEILING MOUNTING** – The product should never be mounted to a wall or ceiling.
 8. **HEAT** – Amplifier should be situated away from heat sources such as radiators, heat registers, stoves, or other amplifier (including amplifiers) that produce heat.
 9. **POWER SOURCES** – This product should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company.
 10. **GROUNDING OR POLARIZATION** – This product may be equipped with a polarized alternation-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
 11. **POWER-CORD PROTECTION** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the cord in correspondence of plugs, convenience receptacles, and the point where they exit from the amplifier.
 12. **CLEANING** – The amplifier should be cleaned only as recommended by the manufacturer. Clean by wiping with a cloth




CAUTION
DO NOT OPEN
RISK OF ELECTRIC SHOCK

**CAUTION:** To reduce the risk of electric shock, do not remove any cover. No user-serviceable parts inside. Refer servicing to qualified service personnel only.



The lightning flash with arrowhead symbol within the equilateral triangle is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within the equilateral triangle is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying this amplifier.

CAUTION

To prevent electric shock, do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

slightly damp with water. Avoid getting water inside the amplifier.

14. **NON-USE PERIODS** – The power cord of the amplifier should be unplugged from the outlet when left unused for a long period of time.

15. **OBJECT AND LIQUID ENTRY** – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

16. **DAMAGE REQUIRING SERVICE** – The amplifier should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the amplifier; or
- C. The amplifier has been exposed to rain; or
- D. The amplifier does not appear to operate normally or exhibits a marked change in performance; or
- E. The amplifier has been dropped, or the enclosure damaged.
- F. The amplifier needs tube replacement or biasing

17. **SERVICING** – The user should not attempt any service to the amplifier beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

18. **VENTILATION** – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack.

19. **ATTACHMENTS** – do not use attachments not recommended by the product manufacturer as they may cause hazards.

20. **ACCESSORIES** – Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product.

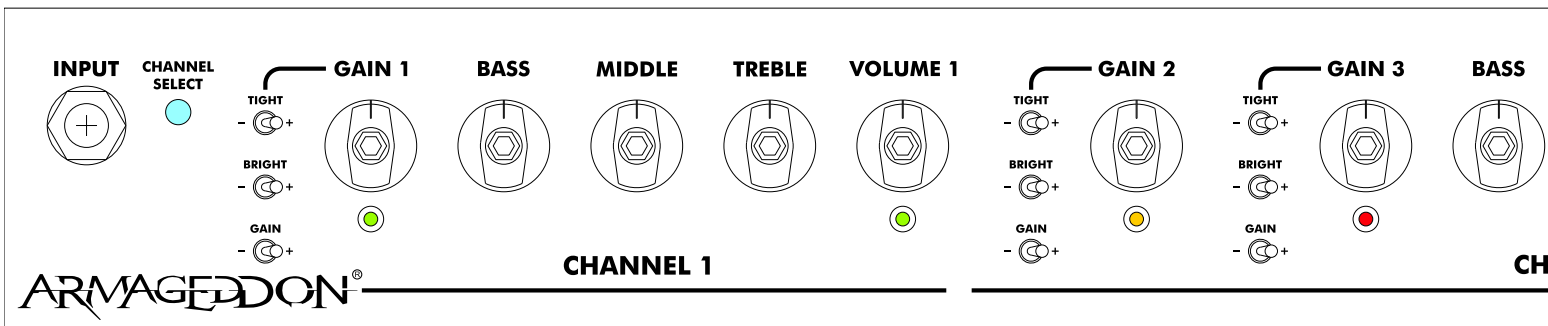
21. **LIGHTNING** – For added protection for this product before a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.

22. **REPLACEMENT PARTS** – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

23. **SAFETY CHECK** – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

24. **FUSES** – Always use the correct rating and type of fuse as indicated on the rear panel. Note the proper rating fuse is determined by the AC line voltage in the country this unit is being operated.

25. **AC SELECT SWITCH:** This switch must be set to match the AC line voltage in the country this unit is being operated. To change the setting, loosen (do not remove) the two screws above and below the slide switch. Temporarily move the protective cover strip and slide the actuator to match the voltage in your country. Place the protective cover strip back over the switch and tighten the two screws.



1) **GUITAR INPUT:** Plug your guitar in here using a high quality, shielded instrument cable.

2) **CHANNEL SELECT:** This pushbutton switch is used to step through the channels in sequential order.

3) **CHANNEL 1 VOICING:** This group of three powerful switches gives you the freedom to TWEAK your tone beyond the normal EQ controls.

TIGHT: This switch is really GREAT for tightening up the low end, especially when pushing the gain. It works by cutting the deep bass at the beginning of the preamp. Setting the TIGHT switch to [+] will result in a clearer, tighter tone.

Setting the switch to [-] will create a fuller, fatter tone but can tend to get a little muddy with high gain settings, especially with humbucking type pickups.

BRIGHT: The [+] setting boosts the high end. As with most BRIGHT switches, the effect diminishes with higher settings of the GAIN knob. Do experiment with different combinations of the BRIGHT on [+] and TREBLE knob down compared to the BRIGHT off [-] and the TREBLE up. You will find that with the BRIGHT on [+] and the TREBLE down, the tone will be a little less midrangy compared to the BRIGHT off [-] and the TREBLE turned up.

GAIN: The [+] setting increases the GAIN in the preamp. If you are looking for a huge crystal clean sound set the GAIN switch to (-). For a more overdriven rock & roll sort of rhythm, try the [+] setting.

4) **CHANNEL 1 GAIN:** This controls the amount of “drive” in the CLEAN channel. Low settings of the GAIN knob (with higher settings of the VOLUME knob) will keep the sound big, full and beautiful. You can also use higher settings of the GAIN

knob to push the channel into overdrive to get some really raucous rock & roll crunch tones. This knob is active when the green light below it is on.

5) **CHANNEL 1 TONE CONTROLS:** This channel features the familiar passive tone control designs of many revered classic tube amps. Dial in beautiful, pristine clean sounds to bold, powerful overdrive tones. Don’t hesitate to turn the knobs. You’ll find a vast array of stellar sounds.

6) **CHANNEL 1 VOLUME:** Adjust the loudness of CHANNEL 1. The green light indicates this knob is active.

7) **CHANNEL 2 VOICING:** This group of three powerful switches gives you the freedom to TWEAK your tone beyond the normal EQ controls.

TIGHT: This switch is really GREAT for tightening up the low end, especially when pushing the gain. It works by cutting the deep bass at the beginning of the preamp. Setting the TIGHT switch to [+] will result in a clearer, tighter tone. Setting the switch to [-] will create a fuller, fatter tone but can tend to get a little muddy with high gain settings, especially with humbucking type pickups.

BRIGHT: The [+] setting boosts the high end. Do experiment with different combinations of the BRIGHT on [+] and TREBLE knob down compared to the BRIGHT off [-] and the TREBLE up. You will find that with the BRIGHT on and the TREBLE down, the tone will be a little less midrangy compared to the BRIGHT off and the TREBLE turned up.

GAIN: The [+] setting increases the GAIN in the preamp. For a mildly overdriven crunch rhythm sound, try setting the GAIN to [-]. For a more massively overdriven tone, set the GAIN to [+].

8) **CHANNEL 2 GAIN:** This controls the preamp “drive”. Lower settings of the GAIN knob (with higher settings of the VOLUME knob) will produce a mildly overdriven sound. Great for a powerful crunch rhythm. Use higher settings of the GAIN knob to push the channel into overdrive to get some really raucous rock & roll crunch tones. Set the GAIN switch to [+] and crank the GAIN knob for massive drive and sustain. This knob is active when the yellow light below it is on.

9) **CHANNEL 3 VOICING:** This group of three powerful switches gives you the freedom to TWEAK your tone beyond the normal EQ controls.

TIGHT: This switch is really GREAT for tightening up the low end, especially when pushing the gain. It works by cutting the deep bass at the beginning of the preamp. Setting the TIGHT switch to [+] will result in a clearer, tighter tone.

Setting the switch to [-] will create a fuller, fatter tone but can tend to get a little muddy with high gain settings, especially with humbucking type pickups.

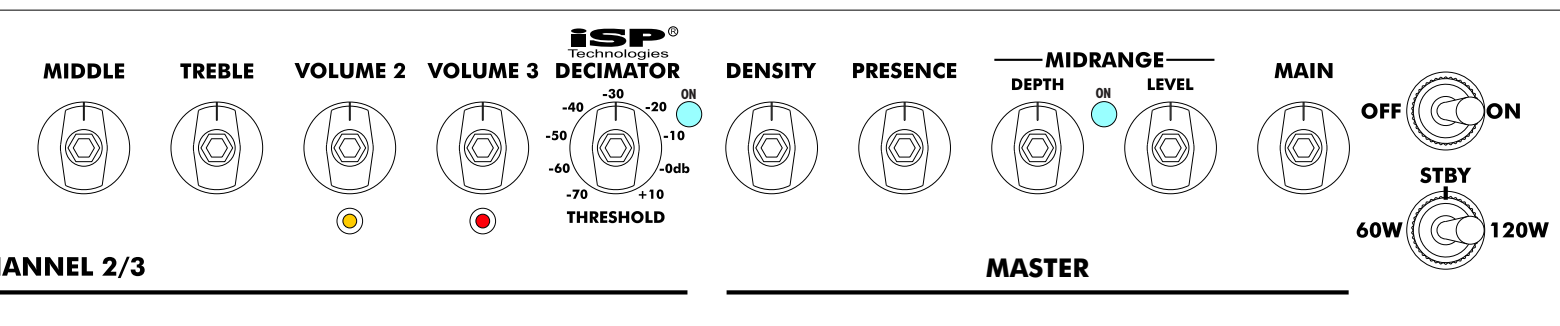
BRIGHT: The [+] setting boosts the high end. Do experiment with different combinations of the BRIGHT on [+] and TREBLE knob down compared to the BRIGHT off [-] and the TREBLE up. You will find that with the BRIGHT on and the TREBLE down, the tone will be a little less midrangy compared to the BRIGHT off and the TREBLE turned up.

GAIN: The [+] setting increases the GAIN in the preamp.

For a mildly overdriven crunch rhythm sound, try setting the GAIN to [-]. For a more powerful overdriven tone, set the GAIN to [+].

10) **CHANNEL 3 GAIN:** This controls

QUICK START GUIDE



CHANNEL 2/3

MASTER

11 12 13 14 15 16 17 18 19 20

the preamp “drive”. Lower settings of the GAIN knob (with higher settings of the VOLUME knob) will produce a mildly overdriven sound. Great for a powerful crunch rhythm. Use higher settings of the GAIN knob to push the channel into overdrive to get some really raucous rock & roll crunch tones. Set the GAIN switch to [+] and crank the GAIN knob for massive drive and sustain. This knob is active when the red light below it is on.

SPECIAL NOTE: CHANNELS 2 and 3 are identical. This makes for a seamless transition when switching between the two overdrive settings.

11) CHANNELS 2/3 TONE CONTROLS: These channels share the passive tone control designs of many revered classic tube amps. You’ll find a vast array of stellar sounds at your fingertips.

Try some of our “suggested” settings as a starting point to help you find your own voice. Don’t be afraid to turn the knobs. Find “YOUR TONE” with your ears, not your eyes.

12) CHANNEL 2 VOLUME: Adjust the loudness of CHANNEL 2. This knob is active when the yellow light below is on.

13) CHANNEL 3 VOLUME: Adjust the loudness of CHANNEL 3. This knob is active when the red light below is on.

14) ISP DECIMATOR™: A unique feature you won’t find anywhere else. This is ISP Technologies latest generation of high performance Noise Reduction technology, and it’s built into the Armageddon. Not only does the DECIMATOR™ reduce noise but will also solve the high gain feedback or squealing problems that the high gain guitar player fights. You know how difficult this problem can be. You play staccato notes and in between each note you have a

squeal or burst of noise and feedback that’s virtually impossible to control. Proper setting of the threshold can eliminate this problem for good. Typical threshold settings are between 10:00 and 1:00, depending on your playing style. The unique thing about the DECIMATOR™ is that it tracks the signal from the guitar, rather than the noise level, as with most gate type systems. This means the DECIMATOR™ will follow the dynamics of your playing without “chopping off” your sound as a gate typically does. The DECIMATOR™ is active only on the high gain channels.

15) DENSITY: This control varies the amount of deep, low end in the power amp section and affects all channels. Higher settings create a really big, full low end. Use this control sparingly at high volumes. Excessive bass boost at high volumes can cause some speakers to break up (technical term is “fart out”).

16) PRESENCE: Adjusts the amount of overall “brightness” or “bite” in the power amp section and affects all channels. Use this knob sparingly also. Too much PRESENCE boost at high volumes can make your amp sound harsh. The louder you play the less PRESENCE boost you will need.

17) MASTER MIDRANGE: This cool feature gives you incredible control over the critical midrange frequencies. It can be assigned to any or all channels using the mini toggles switches on the footpedal. The DEPTH sets the amount of CUT or BOOST while the LEVEL knob adjusts the volume level. If you wish to cut the midrange, set the MIDRANGE ON/OFF switch to the ON position. Using the DEPTH knob, adjust the amount of midrange you want to cut. As you cut the midrange, you will hear a natural de-

crease in volume. Use the LEVEL knob to compensate for this drop in volume. You can also use this for a midrange boost by turning the DEPTH knob past 12:00 until you get the amount of mid boost you want. Now adjust the LEVEL control for the desired volume change. For just a volume / solo boost without the midrange coloration, set the DEPTH knob at 12:00 and use the LEVEL control as a footswitchable volume boost.

18) MAIN MASTER: This is the MASTER VOLUME knob that controls the entire amp. Once you get your balance between the three channels, you can now turn up or down without messing with those settings.

19) ON/OFF SWITCH: Turns the main power On and Off.

NOTE: The correct procedure for turning your amp ON and turn OFF is as follows. When first powering the amp on, always have the STANDBY switch in the STANDBY (CENTER) position. Turn the POWER switch ON. Wait about 30 seconds or longer before moving the STANDBY switch to PLAY. Reverse the procedure when shutting the amp off. By following these steps you will help extend tube life by not “slamming” the tubes with high voltage while they are cold.

20) STANDBY/PLAY SWITCH: When in the STANDBY [CENTER] position, the amp is warmed up and ready to play. To play, switch to 60 watts (outside pair of power tubes only) or 120 watts (all four power tubes). Placing the switch in the STANDBY position when you are not actually playing for extended periods of time will also help increase tube life in the long run.

TONE SETTINGS: CHANNEL 1

GAIN 1 **BASS** **MIDDLE** **TREBLE** **VOLUME 1**

TIGHT
- ○ +

BRIGHT
- ○ +

GAIN
- ○ +

(TRY CUTTING THE MIDRANGE IN THE MASTER SECTION FOR THIS TONE) ALMOST ACOUSTIC CLEAN

GAIN 1 **BASS** **MIDDLE** **TREBLE** **VOLUME 1**

TIGHT
- ○ +

BRIGHT
- ○ +

GAIN
- ○ +

CALIFORNIA CLEAN

GAIN 1 **BASS** **MIDDLE** **TREBLE** **VOLUME 1**

TIGHT
- ○ +

BRIGHT
- ○ +

GAIN
- ○ +

BRITISH CLEAN

GAIN 1 **BASS** **MIDDLE** **TREBLE** **VOLUME 1**

TIGHT
- ○ +

BRIGHT
- ○ +

GAIN
- ○ +

AMERICAN BLUES

GAIN 1 **BASS** **MIDDLE** **TREBLE** **VOLUME 1**

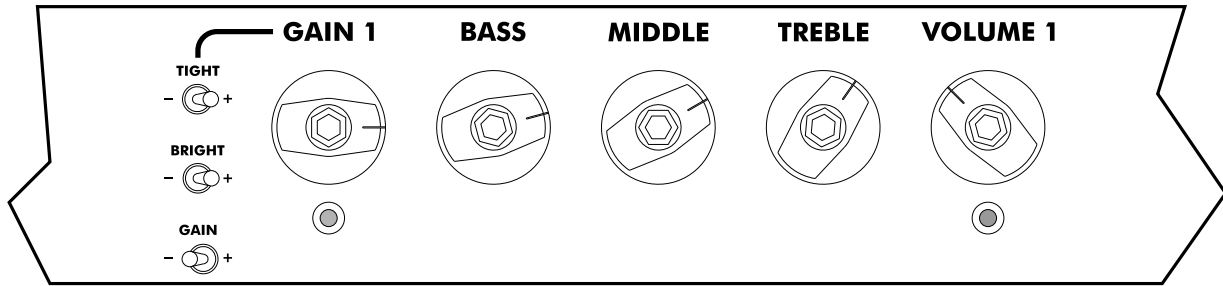
TIGHT
- ○ +

BRIGHT
- ○ +

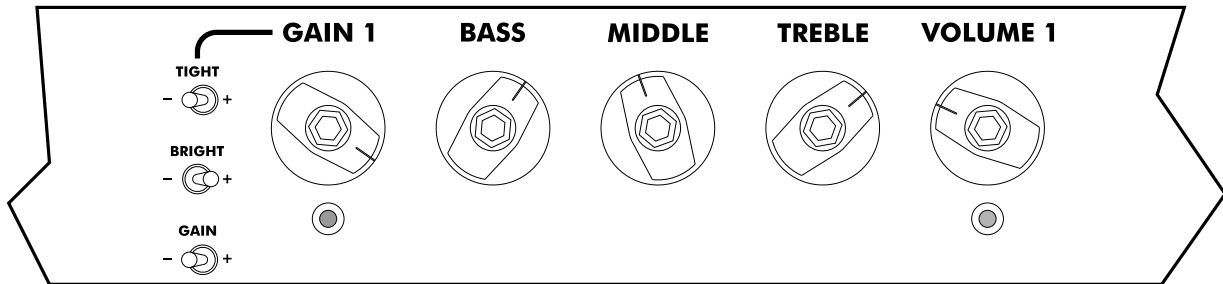
GAIN
- ○ +

BRIT ROCK RHYTHM

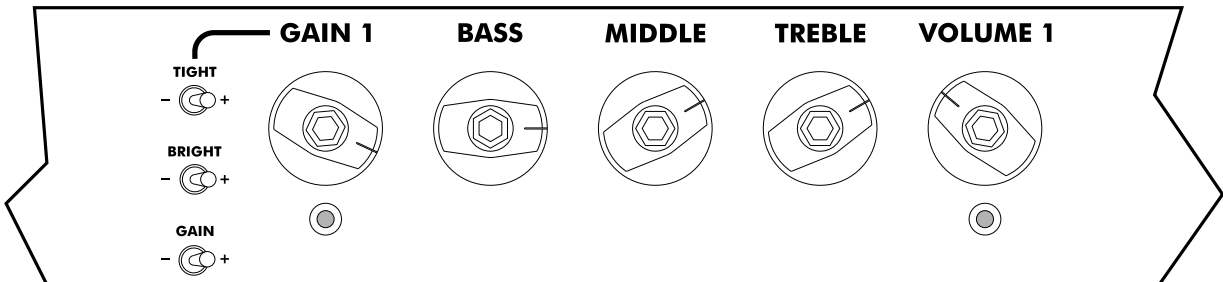
TONE SETTINGS: CHANNEL 2 & 3



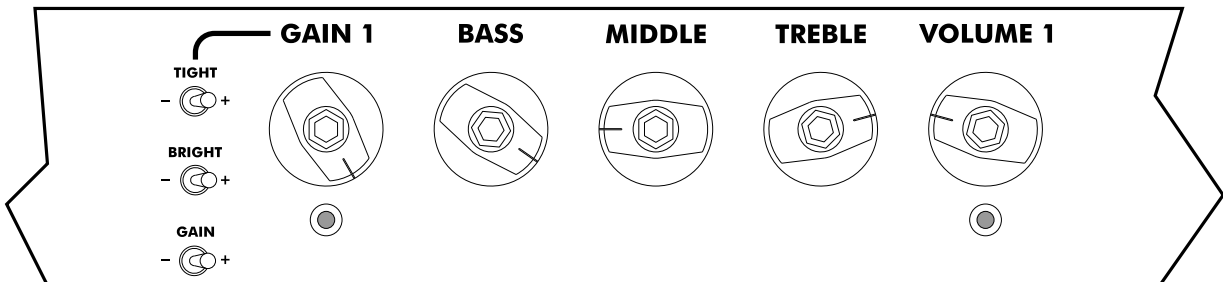
CLASSIC BRITISH ROCK



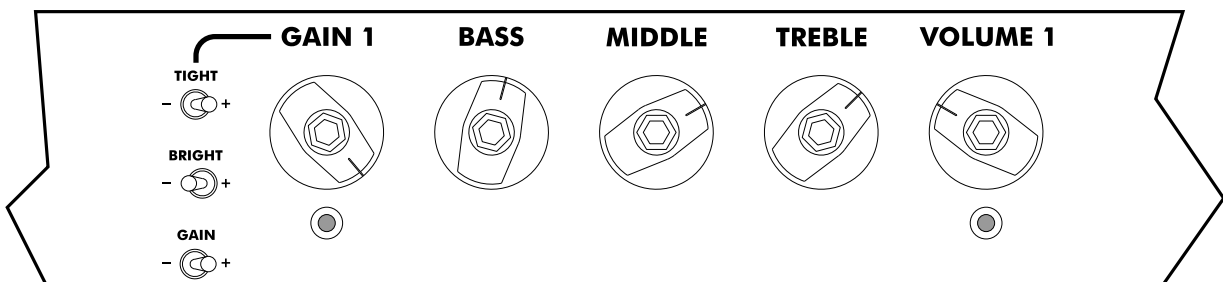
AMERICAN HEAVY ROCK



TRY USING THE MASTER MIDRANGE WITH DEPTH SET AT 1:00 METAL RHYTHM



TRY USING THE MASTER MIDRANGE WITH DEPTH SET AT 10:00 DEATH METAL

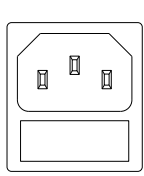


SCREAMIN' SOLO

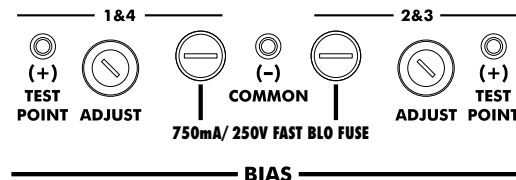
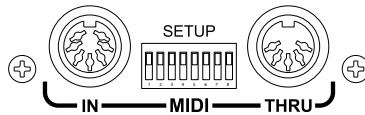
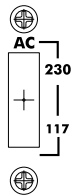
MODEL: EGNATER ARMAGEDDON SERIAL:

U.S. Patents No. 6,944,305 and 7,532,730, other patents pending.

TUBES: 1



100/117VAC-T5AL/250V
230VAC-T2.5AL/250V
50/60 Hz 450 WATTS



CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN

1

2

3

4

5

1) AC INLET and FUSE: Connect a universal IEC type power cord. Be sure the proper value fuse is installed and that it matches the ratings as indicated for your country on the rear panel.

2) AC VOLTAGE SELECTOR: Makes the Armageddon compatible with the line voltage in any country. Proper setting of this switch is absolutely critical. Be sure the switch position matches the line voltage in your country. Severe damage will result from improperly setting this switch and will void your warranty, as well as destroy your amp. To change the setting, loosen (DO NOT REMOVE) the two screws securing the plastic safety cover strip over the switch. Swing the cover aside. Using a small screwdriver, slide the switch to the proper setting. Replace the cover and retighten the screws. Be sure to install the proper value fuse.



INSERT A SMALL SCREWDRIVER INTO THE SLOT TO SLIDE THE FUSE CAP OUT

3) MIDI: See a detailed explanation of MIDI functions on Page 11.

4) FOOTSWITCH: The dedicated seven button pedal plugs in here using a standard XLR microphone cable. See a detailed explanation of the switching functions later in this manual.

5) BIAS: This group of technical looking stuff is very cool as you will discover later in the manual. See the section on "BIAS".

6) IMPEDANCE SWITCH: Set this switch to match the Armageddon to the IMPEDANCE of your speakers. The proper setting for the ARMAGEDDON Head is to match whatever your speaker impedance is.

7) MAIN SPEAKER OUTPUT: Labeled "USE FIRST" because you must use this jack...FIRST. There is a special circuit

inside the ARMAGEDDON that helps protect the amplifier from damage in case you forget to plug in the speakers and attempt to play. As we all know, NEVER operate a tube amplifier without a proper speaker load connected.....but we didn't have to tell you that did we?

8) EXTENSION SPEAKER OUTPUT:

Used for connecting an external speaker when a second speaker cabinet is used with the head. Since the MAIN speaker output is labeled USE FIRST, it would be reasonable to assume this jack could be labeled USE SECOND, which would be correct. See the section later in this manual for proper connections and IMPEDANCE SWITCH settings for different

speaker arrangements.

9) RECORD LINE OUT: This is an active, balanced "cabinet simulated" output for direct connection to the mic input on your mixer for recording or live sound. It effectively eliminates the need to place a microphone in front of the speaker. The frequency response of this output closely mimics the sound of a mic'd speaker cabinet. Using this output is great for getting a consistent recording or live output from your rig regardless of what mics are available and how competent the person setting up your gear is. Often setups on stage are done in a hurry and the mic is just hung from the top of the cabinet or stuck right in the middle of the speaker (the worst location) or even forgotten. By supplying a predictable, consistent output to the PA or recorder, you are never at the mercy of any of these issues.

10) REVERB: An added bonus. We have included our stellar sounding digital reverb in the Armageddon. You have a separate reverb level for each of the three channels.

The ARMAGEDDON reverb has a unique feature we call "spillover". Most amps with separate reverb knobs for each channel simply switch controls when switching channels. With different settings of the two knobs, without "spillover", there can be an abrupt cutoff of the reverb tail or a swell in the reverb level before it decays away. The "spillover" feature allows the reverb to decay naturally even when switching channels. There is also a STORE button in the reverb section to be able to assign the reverb when using MIDI.

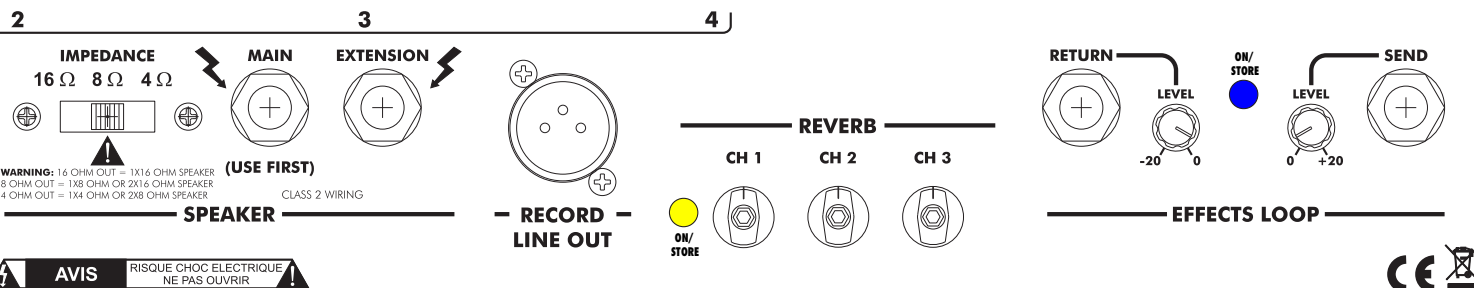
11) EFFECTS LOOP: Basically a series insert patch point between the preamp and power amp. When an external effects gadget is patched into these jacks, the path is interrupted and 100% of your signal is routed through the effects. This puts some special demands on the effects unit. First it must be essentially transparent, meaning it can't mess with your tone. Second, the SEND and RETURN levels must be properly set for lowest noise and maximum headroom. Proper setting of these controls can be achieved using the following method:

a) Set your amp/preamp volume levels for normal playing levels. Connect a high quality shielded cable from the series send jack to the effects input. Set the SEND level to 11:00 and the RETURN level to '0'.

b) Now connect another high quality shielded cable from the effect output to the return jack.

d) Adjust the RETURN level to match the volume you heard before connecting the return cable. You can check this by switching the LOOP in and out and verifying there is no substantial volume difference. This is called "unity gain". A cool "techie" phrase for "you get out what you put in". If your effects gadget does not have level controls, it can be assumed it will be unity gain when plugged in.

REAR PANEL



6 7 8 9 10 11

NOTE: Depending on how loud you play, the level at the loop may be higher than normal guitar level. Though many floor type and tabletop effects may work, some may tend to overload. You will know an effect is not made for higher levels if, when you plug the effect into the loop, you notice distortion and/or a loss of tone. Most modern effects (including many pedals) can operate just fine in an effects loop. We have gone to great lengths to make the ARMAGEDDON loop compatible with as many different effects gadgets as possible. Of course, you still may occasionally encounter a troublesome device. If you do find your effect is overloading when the loop is switched in, reduce the SEND level until the distortion stops. Now re-adjust the RETURN level for unity gain again. For the lowest noise with effects, DO set the SEND level as high as possible without overloading the effects and adjust the RETURN level accordingly. This is one of the reasons we discourage players from using pedals in a loop. You just spent a considerable amount of your hard earned dollars to get this awesome sounding amp. Sticking a mediocre pedal in the loop of your amp seems to be “counter-tone”. Remember what we said about the effect being transparent. Most pedals color your sound and not always in a good way.

THE MIDI CONTROL

We won't go into the details of how MIDI works here. That information is readily available from countless other sources. The information provided below assumes you have a general understanding of MIDI functions and applications.

DIP SWITCH SETTINGS:

On the rear panel of the Armageddon, you will find a dip switch for setting up the MIDI/channel switching parameters.

The Armageddon “reads” the DIP switch positions only on power up. Whenever a change is made to any dip switch,

S1 through **S4** are used to set the MIDI channel (1-16) the Armageddon receives data on. See the chart below.

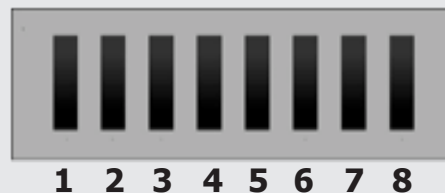
CHAN.	S1	S2	S3	S4
1	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF
3	OFF	ON	OFF	OFF
4	ON	ON	OFF	OFF
5	OFF	OFF	ON	OFF
6	ON	OFF	ON	OFF
7	OFF	ON	ON	OFF
8	ON	ON	ON	OFF
9	OFF	OFF	OFF	ON
10	ON	OFF	OFF	ON
11	OFF	ON	OFF	ON
12	ON	ON	OFF	ON
13	OFF	OFF	ON	ON
14	ON	OFF	ON	ON
15	OFF	ON	ON	ON
16	ON	ON	ON	ON

S5 is used to activate the “omni” mode. **Omni** is a special mode that allows the ARMAGEDDON to receive data on all 16 MIDI channels simultaneously. Turning the omni mode on overrides S1 through S4. Set actuator 5 up to turn the **omni** mode on or down for off.

S6 is the “Program change enable” function. This is the most common mode of operation that allows the amp to receive **program change** (patch) commands from your MIDI controller. Set this switch up for on or down for off.

S7 is the “Controller data enable” function. Activating this mode allows the Armageddon to respond to instant access

the amp must be powered off and back on to “read” the change. Using a pen or similar pointy device, move the eight small switches ON or OFF according to your specific needs. See below for switch functions.



data from MIDI controllers. Below are the “note / controller” numbers that will turn on the modules.

S8 has no function at this time.

CONTROLLER NUMBER ASSIGNMENTS:

CH1:	56	Mid:	60
CH2:	57	Fx:	61
CH3:	58	Reverb:	62
Decimator™:	59	Mute:	64

Values 0-63 are off, 64-127 are on. For channel switching, only “on” messages are processed (you can't turn off a channel, you can only turn on a different channel).

STORING PRESETS:

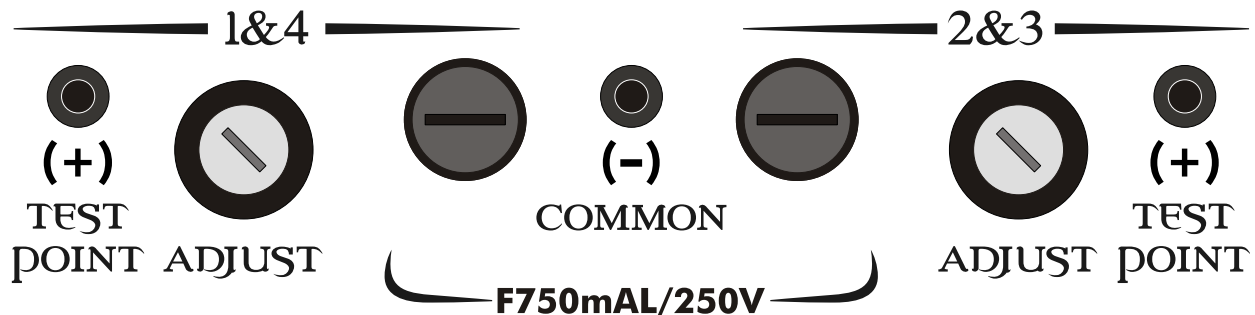
When using the MIDI PROGRAM CHANGE MODE in the Armageddon, certain front and rear panel switches can be stored as presets.

The storable functions are: CHANNEL SELECT; ISP DECIMATOR™; MIDRANGE; LOOP; REVERB

To store your switch settings, first select the patch (program) number on your MIDI pedal. Next, turn on the features you wish to save using the lighted panel pushbuttons. Now, press and hold the CHANNEL select pushbutton for three seconds. The patch is now stored. You can now save up to 128 different patch (program) combinations and recall them with your MIDI pedal.

POWER TUBE BIAS

TUBES: 1



BIAS

POWER TUBE BIAS:

What is bias? Simply put, it is a circuit inside the power amplifier section that controls the “idle current” that flows through the power tubes. Much like the idle speed on a car. There is an optimum setting where the engine (amplifier) is running (idling) fast (hot) enough to keep it from stalling (distorting) but not too fast (hot) to cause excessive wear and overheating. Get it?

WHY DON'T ALL AMPLIFIERS HAVE BIAS OR IDLE CURRENT ADJUSTMENTS?

Most do have some provision for that but typically involve removing the amp chassis from the box, exposing you to very dangerous high voltage. Special test equipment and knowledge of amp circuits and tubes is also needed. Not a skill most musicians possess and shouldn't need to.

WHY WOULD I WANT TO ADJUST THE BIAS?

All power tubes are different. They each have unique sonic and electrical characteristics. The Armageddon amplifier is shipped with a quad matched set of 6L6

tubes, but is designed to accept a variety of different tube types. EL34, 6L6, 5881, 6CA7, 6550, KT66 and KT77 are among the many possible choices. Because they are all different, each requires different bias settings for safety, reliability and optimum performance.

Please read the following instructions on how to use this cool feature.....

You will need a decent quality digital voltmeter capable of measuring in the 100 to 200 millivolts DC range. This is a very basic type of meter available at any electronic supply house or Radio Shack. They typically cost anywhere from \$10 to \$25, about the cost of one bias adjustment from your local amp tech.

You will also need a small, flat blade screwdriver to turn the adjustment controls that are recessed inside the grommets below each tube label on the rear panel.

1) Turn the amp on, standby switch in the PLAY position. All controls all the way down. Turn the meter on and set for reading DC millivolts. Consult the meter

instructions for how to do this properly. Since all meters are different, it is extremely important that you thoroughly understand what you are looking at on the meter display.

- 1) Insert the black (negative) test lead into the panel hole labeled (-) COMMON.
- 2) Notice there are two identical sections to the left and right of the common terminal.
- 3) First step is to insert the red (positive) meter lead into the left test point (+) hole.
- 4) With your flat blade screwdriver, turn the BIAS ADJUST control to obtain a correct reading from the chart below.
- 5) Repeat this procedure for the right tubes.
- 6) Now allow the amp to warm up for about 10 minutes and retweak so the readings are within the range of the recommended reading.

RECOMMENDED BIAS SETTINGS

6L6/5881.....	60mV to 70mV
EL34/6CA7	65mV to 75mV
E34L	70mV to 80mV
6550.....	70mV to 80mV
6V6 (JJ ONLY !!!!!!!).....	30mV to 40mV
KT66.....	60mV to 70mV
KT77.....	65mV to 75mV

Displays differ from one meter to the next. Some may indicate, for example, 60.0 for 60 millivolts. Others may show .060 for 60 millivolts. **Knowing how your meter works if of the utmost importance.** You should always check the bias readings whenever you replace output tubes and readjust if needed. Since we've made it so simple, there is no reason not to.

There are two fast blo 750mA (or 800mA) fuses located left and right of the COMMON test terminal. The left fuse protects power tubes 1 & 4. The right fuse protects power tubes 2 & 3. In the event of a power tube failure, the corresponding fuse will open protecting the amp from additional damage by effectively removing the failed tube from the circuit. You can keep playing with just a small reduction in performance and still get through the gig. If this happened in the past, you would need to take the amp to a repair shop. They would then hold it for ransom while you figured out how to raise enough money to pay them to fix it. No more. The amp will protect itself from the potential damage and you can continue to play. Read the quick trouble shooting procedure below if you suspect a tube failure: If you notice a sudden loss of power/volume or degradation in tone, you may have a blown power tube. Not really that uncommon these days. You now need to "check" the fuses located in the BIAS section. Often you cannot verify if a fuse is blown visually. Learn how to use your meter to check for continuity. A good fuse will indicate at or near '0' ohms. An open fuse will read many meg ohms. If you do find a blown (open) fuse, this is a pretty sure bet one of the power tubes in that pair

have failed. Note the left side of the BIAS section is for power tubes 1&4, the outside pair. The other fuse is for power tubes 2 & 3, the inside pair. Remove the suspect pair of tubes and replace the fuse with a 750mA (3/4amp) fast blo type fuse. Install a new, matched pair of tubes, plug the power cord back in and turn the power on and standby to 120W. Check the bias reading. If you get a reading that is reasonably close to the proper setting, you have just repaired your own amp. Simply readjust the bias control according to the chart and you are on your way. You can thank us later for saving you a bunch of money and a trip to the repair shop.

SPECIAL NOTE:

Obviously for this to work, you MUST carry spare power tubes, fuses, a flat blade screwdriver and your voltmeter with you. If a tube fails at a gig, you could be back up and running in a matter of minutes. You wouldn't drive your car without a spare tire, right? In a pinch you may continue to use your Armageddon with somewhat reduced performance, even with shorted tubes. No additional damage to the amp will occur. Do service the amp as soon as possible, of course. Because the BIAS readings are actually the sum of the currents for each tube pair of tubes, we highly recommend replacing power tubes in matched pairs. If your tubes are not matched, one tube could be running very hot while the other is barely on but you would still read the sum of the pair. This is not a good thing.

Advanced theory (for those who care): Those of you with electronic knowledge may notice we are referring to current draw but are making measurements in millivolts.

Ohms law states that $I=E/R$ or current (I) equals voltage (E) divided by resistance (R). Inside the amp are one ohm resistors in the cathodes of the output tube pairs. The external test points allow access to those resistors. When you measure across those resistors at the rear panel test points, you are reading the DC voltage drop across a one ohm resistor. Referring to ohms law, if $R=1$ in the formula, then $I = E$ or current equals voltage. So when you read for example, 60mV you are also seeing the equivalent numerical value of current or 60mA. You may have also figured out by now that since you have separate adjustments for each tube pair, it may be possible to use alternate tube types at the same time. Your suspicion is correct. You "tweakers" can combine different types by installing one type in the outside (1 & 4) sockets and another type in the inside (2 & 3) sockets. Be sure to adjust each pair for the proper range. This way you can combine the characteristics of the different types. The range of the bias adjustments are such that you should have not problem adjusting for just about any type of compatible tubes.

WARNING: DO NOT be tempted to run your tubes hotter than the maximum values in the chart. You may find it sounds really cool as you destroy your expensive tubes and possibly damage your amp, of course voiding your warranty! Also, in case you haven't found out the hard way yet, power tubes get extremely hot (as high as 800 degrees)!!!! NEVER touch the tubes while the amp is on. Always allow at least 5 minutes for the tubes to cool before touching them after turning the amp off.

TECH TALK TIPS: SOUND DISPERSION

Ever wonder why your 4x12 cabinet sounds better when you stand off to the side? Did you consider why the pros mic a speaker from the edge instead of in the center?

Ever have people in the audience tell you your guitar tone is really loud and shrill but it sounds great to you on-stage? This is a result of the directionality of loudspeakers. Speakers inherently do not project all frequencies equally. As the frequency increases, the dispersion decreases.

In non technical terms, this means the higher you play on your guitar neck, the more directional your sound will be. By nature, speakers tend to be somewhat non-directional at lower frequencies. This means you can stand off to the side of your cabinet and you will hear basically the same bass and lower mids as your audience is hearing right in front of your speakers.

On the other hand, and this is where the trouble starts, higher frequencies tend to “beam” from the speaker. While you are standing off axis from your cabinet (not directly in front of it) you are hearing an even balance of lows, mids and highs and feeling pretty pumped about your awesome tone. Unfortunately, unbeknownst to you, the listeners directly in front of your cabinets are being killed by the high end that is “beaming”. FYI, contrary to what one might deduce, having more speakers in a 2 by 2 arrangement, as in a 4x12 cabinet compounds the problem and makes the beaming even worse. Next time you play take a moment to walk from side to side and squat down in front of your speakers. You will be amazed at the difference between listening off axis (to the side) and listening on axis (directly in front).

Have you ever seen a band in a small place where you are hearing the stage volume and wonder why the guitars sound so bright? Doesn't that guitar player hear that obnoxious high end? That knucklehead must be deaf!?!? More likely he is standing close to his cabinets and all that high end is just blowing past his/her legs so he/she doesn't even hear it.

OK...so now I've pointed out how we've all been playing for years believing everyone in the crowd thinks our tone is as awesome as we think.....or is it? Great, so what can you do about it? The key is to place your speakers so you are hearing the same thing as everyone else.

If you can get the cabinets far enough behind you, you probably will pretty much hear everything just fine. If that is not possible, try placing the cabinets pointing across the stage sideways instead of forward at the audience. At least then you will only be killing your other band members instead of the audience. Chances are you often want to kill

the drummer or bass player anyway, right? The best thing you can do is to tilt your cabinets so that they are pointed at your head. I guarantee you will set your controls way different from what you normally do.

There are a number of possible options to combat the beaming problem. A few companies make a solid disc that you install in front of the speakers to help disperse or attenuate the high end.

These discs have met with some success though they do introduce some phasing issues. Also, because there is a solid piece in front of the speaker, if one places a microphone in front of the disc (which happens quite often at shows), it can sound weird because the disc is altering the sound into the mic. There are some other smart people attempting to address the problem.

Most involve using some form of foam piece in front of the speakers. The method we find works best for both live, and when placing a mic in front of the speakers, utilizes a sound absorbing 4" x 1" foam disc placed on the back side of the grill cloth directly in front of the speaker. The discs are made of an acoustical foam material that attenuates the beaming highs instead of blocking them.

I'm always surprised whenever this subject is discussed and many guitar players make the statement “I hate the way my guitar sounds when I stand in front of my speakers”. The answer is not to simply stand off to the side so it only sounds good to you because everyone else is still hearing the sound that you hate. Remember why we play music? It is for others to enjoy.

We should always make a conscious effort to think about what the audience is hearing, too.

On that happy note.....

Be the one who makes the shovels, not the one who digs the ditches

- Ed Kreske

TECH TALK: IDENTIFYING SPEAKER OR TUBE PROBLEMS

So your band is going on in an hour. You're setting up your gear and something is wrong with your amp...maybe? The following is a systematic troubleshooting guide for when this happens.

1) DON'T PANIC!

Here are the items you should carry with you in case of trouble.

- 1) Spare guitar cables
- 2) Spare speaker cables
- 3) Spare fuses for everything
 - a. Look at the fuse holders on all your gear and get replacement fuses for each one.
- 4) A spare preamp tube and power tubes.
- 5) A new 9 volt battery even if you don't use pedals (you'll see why later)
- 6) A reliable digital multimeter. Doesn't need to be fancy or expensive.
- 7) A small flat blade screwdriver for bias adjustment.
- 8) Band Aids. In case of injury. Has nothing to do with fixing your gear but they sure come in handy when you are bleeding.
- 9) A spare tire for your car. You wouldn't go anywhere without a spare tire would you? Same goes for your gear that you count on to work every time. Stuff goes wrong. If you are prepared, you won't need to freak out.

Your "rig" is just a combination of "sub-systems" consisting of, but not limited to, your guitar, cables, effects, amp and speakers. The trick is to quickly and accurately eliminate each component to narrow the trouble down to one part of the "system". A systematic approach using process of elimination will quickly tell you which component in your "system" has failed.

SYMPTOM = NO SOUND:

- 1) The first quick check is obviously to make sure everything is securely plugged in and all power indicators are lit on everything and the amp is not in STANDBY. I can't tell you how many times something didn't work simply because a plug was not fully inserted. Also, many amps have a MAIN and an EXTENSION speaker output. Verify you are using the MAIN output first. I've made that mistake myself.
- 2) Accurately verify if everything is absolutely, 100% dead or can you hear some tiny sound (hum, hiss, a little guitar, anything at all) coming from the speakers. This is important information because there are two

different approaches to troubleshooting depending on which symptom you encounter.

3) If you are sure there is absolutely no sound at all, do this:

a. This tells you either the amp or the speakers are dead. Here is a simple and quick speaker test. Get your 9 volt battery that you, of course, have in your emergency kit. Pull the speaker cable end out of your amp and hold it in one hand. Take the 9 volt battery and touch the two battery terminals to the tip and body of the plug simultaneously.

You will hear a fairly loud "thump" noise from your speaker cabinet each time you touch the battery. If you hear the "thump", you just verified the speakers and speaker cable are good and can be removed from the list of possible problem components. If you don't hear the "thump" either your cable or your speaker cabinet is at fault. By the way, you can use this same test for your combo amp speakers.

b. A special note is in order here. If you are having the "no or very little sound", do not...I repeat DO NOT just turn everything up louder or, worse, full up and try to play. This is not an acceptable repair technique. If your speaker cable or cabinet is bad, doing this will quite possibly blow up your tube amp that was probably not broken until you did this. Plus, if you have everything cranked and, by some chance things suddenly start working, you will probably damage your amp, speakers or hearing.

c. Next is the amp itself. First unplug everything from the amp except for the power cord. One very common failure is a shorted power tube. Many amps have a fuse that is dedicated to protecting the power tubes and transformers.

It is usually on the rear panel labeled something like HT or High Voltage or Power Tubes. Remove and inspect this fuse. If it looks burned inside, this is pretty much a sure indication of a shorted power tube. Often a fuse "looks" fine but can still be open (blown).

Learn how to measure continuity with your multimeter and use it to verify if the fuse is open or not. If the fuse reads just a couple of ohms on your meter, it is not blown and power tubes are not likely the problem.. If you get no reading, infinite or a very high ohm reading, it is blown.

If you do have the misfortune of blowing a power tube, which of course will only happen at the most importune time, there is a way out. It does require you carry a couple of extra power tubes and at least four of the correct value HT fuse for your amp. If you do find the fuse is open, your amp will not

produce any sound which is why we are talking about this here.

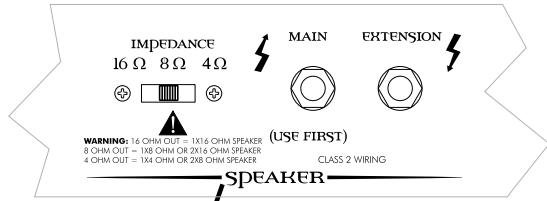
Follow this procedure to get your self out of trouble and back "up and running":

- 1) Turn the amplifier power off.
- 2) Replace the blown HT/Power tubes fuse.
- 3) Remove all the power tubes
- 4) Turn the amplifier power on and wait 30 seconds.
- 5) Move the STANDBY switch to the PLAY position.
- 6) Wait 30 seconds again and now turn the amp off.
- 7) Remove and recheck the HT/ Powertubes fuse.
- 8) If the fuse is blown, you are screwed. Nothing you can do right now will make it work.... sorry. Hope you brought a backup amp. If the fuse is not blown, one of your power tubes is shorted, which is good news.
- 9) Put one, and only one of the power tubes back in.
- 10) Turn the POWER switch on, wait 30 seconds and now turn the STANDBY on.
- 11) Next POWER and STANDBY off.
- 12) Recheck the HT/Powertubes fuse. If it is not blown, that tube is good. If it is blown, the tube is bad so get rid of it.
- 13) If the fuse is good, leave that tube in and install another one. Same drill, blown fuse=Bad tube, good fuse=Good tube.

See the pattern? If you install the tubes one at a time like this, when you put the shorted one in, the fuse will blow. Once you determine that a tube is, in fact, shorted you have options. If the amp only has two power tubes, you will want to put one of your spare tubes in. Of course you brought them with you right? One note here, I suggest you buy a matched set of four power tubes for your amp. Use two and keep two for the spares. If they are from the same set, you won't need to rebias them and you are good to go. If your amp has four power tubes, you have two choices.

You can get through the show with just two power tubes with somewhat reduced power and headroom and not worry about replacing any tubes. To do this, simply leave in only two of the known good tubes. Install them as one on each end of the row of tubes and leave the center pair out or, put the good pair in the center sockets and leave each end out. Doesn't matter which way.

CONNECTING YOUR SPEAKERS



To 8 ohm
mono input

Set impedance
switch to 8 ohms



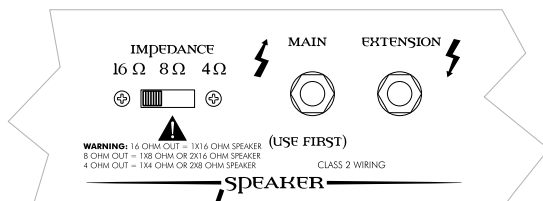
2x12

Always set the impedance switch to match the cabinet impedance. Here is some handy information.

To determine the proper setting using multiple cabinets of the same impedance, simply take the impedance of one cab divided by the number of cabinets. For example, if you have two 16 ohm cabs, simply divide 16 by 2 for a total load of 8 ohms.

The MAIN (USE FIRST) and the EXTENSION speaker outputs are in parallel. This means if you connect one cabinet to each speaker jack on the amp, you will use the example above to calculate the proper setting for the impedance switch.

For example, if you connect one 16 ohm cabinet to each output, the load the amp see is 8 ohms ... 16 ohms divided by two equals 8 ohms.



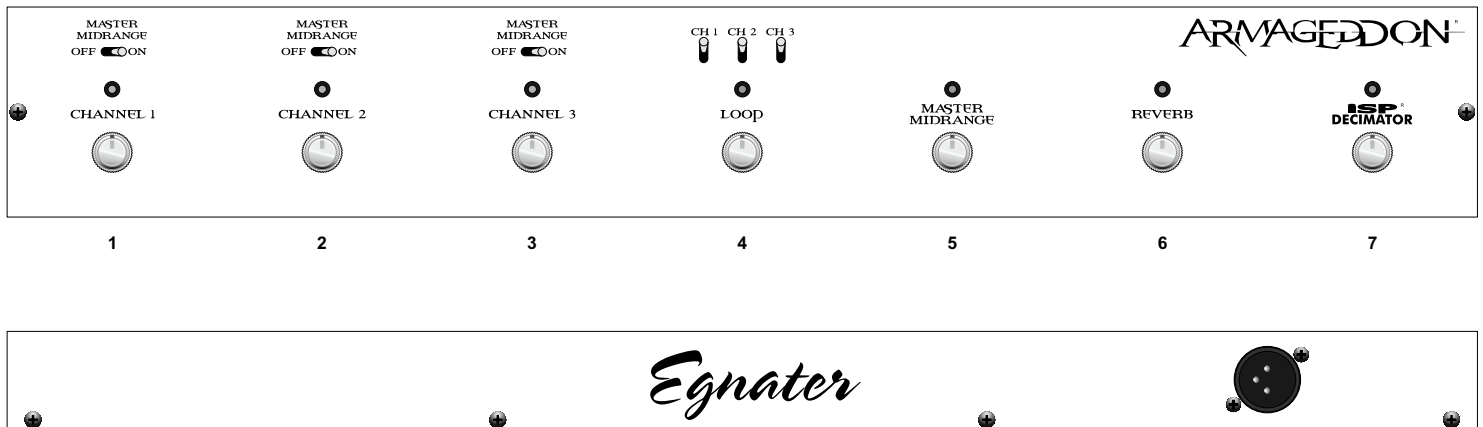
To 16 ohm
input jack

Set Impedance
switch to 16 ohms



4x12

SEVEN-BUTTON FOOTSWITCH



1, 2, 3) CHANNELS/MIDRANGE: This group of three footswitch buttons and toggle switches allows you to select the CHANNEL plus preset the MASTER MIDRANGE feature to automatically turn on when that channel is selected. Obviously, push the button that corresponds to the desired CHANNEL to activate that channel. Also, set the MASTER MIDRANGE assign switch to ON if you want the MASTER MIDRANGE section to turn on with the channel.

NOTE: You can “override” the preset MIDRANGE manually with the MASTER MIDRANGE pushbutton (5) “on the fly” while on the active channel. When you leave that channel and return, the preset MASTER MIDRANGE will once again turn on, unless you physically set the mini toggle switch to OFF.

4) LOOP: This pushbutton is used to turn the effects loop on/off. The loop can also be preset to come on with any or all channels using the mini toggle switches above the pushbutton. To preset the loop to come on with the channels, simply set the appropriate mini toggles to the up position (as shown above) and the loop will automatically come on with that channel. Of course, even in the “pre-set” mode, you can manually turn the loop on and

off with the pushbutton.

5) MASTER MIDRANGE: Gives you the option of turning the MASTER MIDRANGE section on/off “on the fly” or to override the MASTER MIDRANGE circuit when preset to a CHANNEL.

6) REVERB: Use this footswitch to turn the REVERB on/off. This is a global function and is not “programmable” per channel. Of course, you can use the three individual REVERB LEVEL knobs on the rear panel of the head to preset the reverb on each channel separately.

7) ISP DECIMATOR™: This pushbutton lets you turn the patented ISP DECIMATOR™ G-STRING noise reduction system on/off. This is a “global” function so it is NOT presettable per channel. When the LED is on, the DECIMATOR™ is automatically active on both CHANNEL 2 and CHANNEL 3. The DECIMATOR™ does not function on CHANNEL 1 as it is really not typically needed on a clean channel.

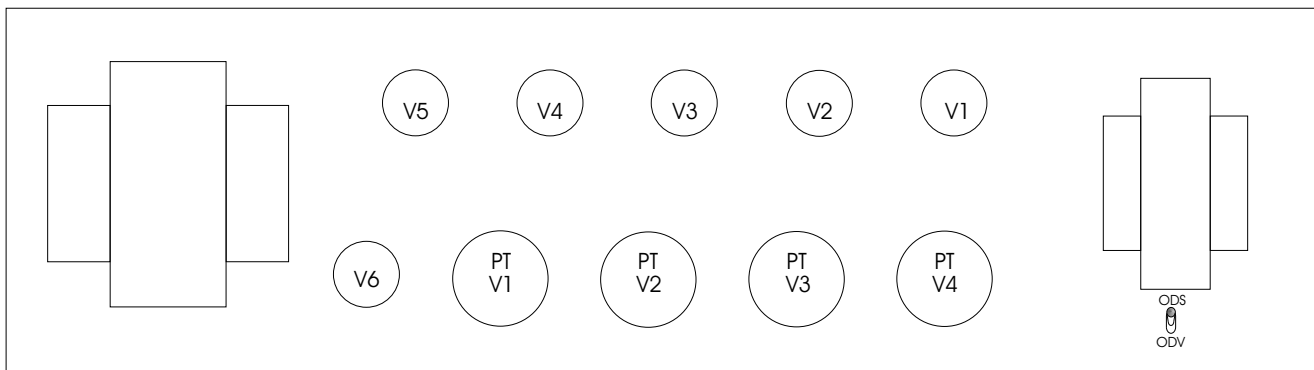
The last cool thing about the Armageddon pedal is that it connects to the amp using a standard 3 pin XLR type microphone cable.

FEATURES AND SPECIFICATIONS

- 120-Watt All Tube Head
- Premium Tubes: 4 x 6L6 & 6 x 12AX7
- Selectable Full/Half Power Switch
- **Channel 1:**
 - Volume, Gain and 3-band EQ
 - Tight & Bright Voicing Switches
 - High/Low Gain Switch
- **Channel 2 & 3:**
 - Shared 3-Band EQ
 - Independent Volume & Gain Controls
 - Tight & Bright Voicing Switches
 - High/Low Gain Switch
 - ISP® Decimator™ G-String Noise Reduction with Threshold Control
- **Master Controls:**
 - Presence & Density
 - Midrange Sculpting via Depth & Level Controls
 - Independent Reverb Controls for Each Channel with “Spillover”
- **Seven-Button Footswitch**
 - Channel 1, Channel 2, Channel 3, Effects Loop, Master Midrange, Reverb and ISP Decimator™ G String
 - Preset the Master Midrange to Any of The Three Channels
 - Assign the Effects Loop to and of the three channels
 - Connects to Amp Via a Standard XLR Cable
- Simple Bias Adjust with External Test Points
- Balanced XLR Cabinet Voiced Line / Recording Output
- Buffered Effects Loop with Send and Return Levels
- MIDI In and Thru with External Setup Switches
- 117V/230V Voltage Selector

V1 - V6 = 12AX7

PTV1 - PTV4 = 6L6



Egnater Amplification is dedicated to product excellence and therefore continuously attempts to improve each and every model we manufacture. This ongoing process includes refinements in design, materials and workmanship which may result in products which differ than those described in our literature. All features, specifications, prices and terms are subject to change without notice.

PERSONALIZE YOUR SETTINGS

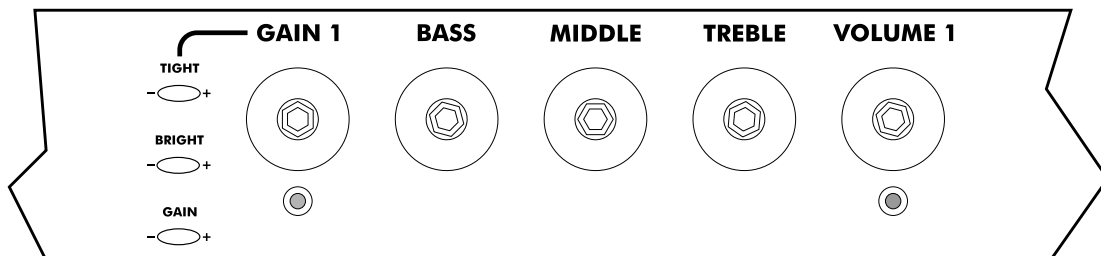
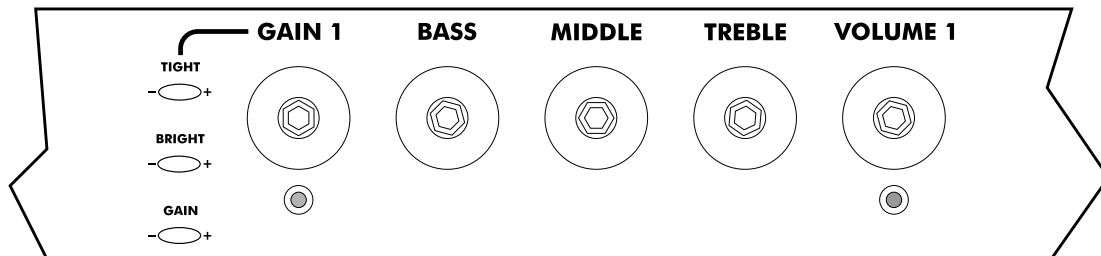
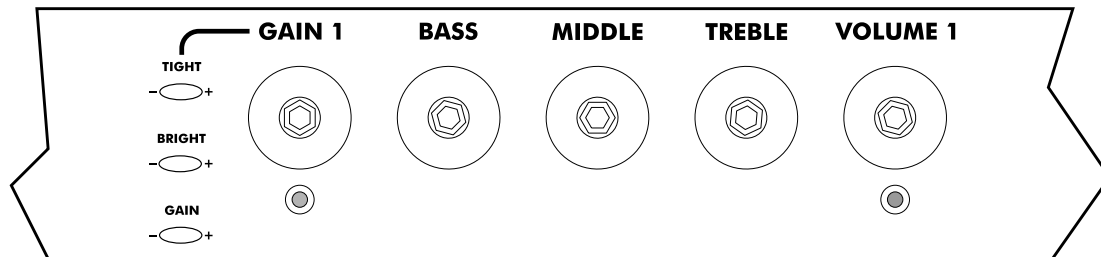
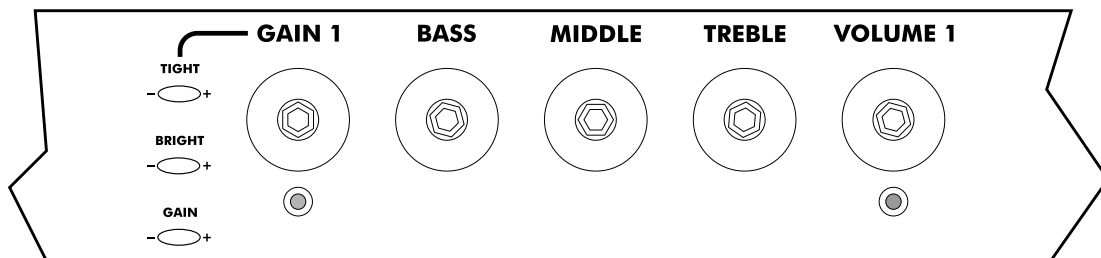
USE THESE TEMPLATES TO DOCUMENT SOME OF THE COOL SOUNDS YOU COME UP WITH. WE SHOULD ALSO MENTION SOME TIPS TO HELP GUIDE YOU THROUGH THE MYRIAD OF SOUNDS AND FEATURES.

1) USE THE MASTER MIDRANGE TO CUT OR BOOST. THINK ABOUT HAVING THE MASTER MIDRANGE IN A BOOSTED SETTING AND SWITCH IT OFF FOR YOUR RHYTHM TONES. ALSO, WITH THE MIDRANGE DEPTH AT 12:00, THE MIDRANGE LEVEL CAN BECOME BASICALLY A SOLO/VOLUME BOOST.

2) THE LOUDER YOU PLAY, THE LESS DENSITY AND PRESENCE BOOST YOU WILL PROBABLY WANT.

3) TRY TO KEEP A "REASONABLE" BALANCE BETWEEN THE CHANNEL VOLUMES AND THE MAIN MASTER. DON'T CRANK THE CHANNEL VOLUMES AND THEN HAVE THE MAIN MASTER BARELY ON OR VICE VERSA.. DON'T TURN THE MAIN MASTER FULL UP AND THEN HAVE THE CHANNEL VOLUMES BARELY ON. FIND THE SETTINGS THAT ALLOW YOU TO TURN UP OR DOWN EASILY WITHOUT HAVING THE CONTROLS BE OVERLY SENSITIVE.

4) CHANNELS 2 AND 3 ARE IDENTICAL WITH SHARED EQ CONTROLS. THIS MAKES SWITCHING BETWEEN TWO DIFFERENT OVERDRIVEN TONES MORE SEAMLESS. YOU CAN EASILY SET UP TWO VERY DIFFERENT YET CONHERENT OVERDRIVE TONES USING THE TIGHT, BRIGHT AND GAIN SWITCHES ALONG WITH THE GAIN KNOB.



LIMITED WARRANTY

Thank you for choosing Egnater. Egnater manufactures some of the world's most innovative all-tube amplifier, combos and speaker cabinets. Egnater takes great pride in thoroughly testing each product prior to shipment.

AMPLIFIERS, COMBOS AND SPEAKER

CABINETS: Egnater offers a three (3) year warranty to the original purchaser that an Egnater product will be free from defects in material and workmanship. A dated sales receipt will establish coverage under this warranty. This warranty does not cover service or parts to repair damage caused by accident, neglect, abuse, normal & wear, disaster, misuse, abuse, over-powering, negligence, inadequate packing or shipping procedures and service, repair or modifications to the product which have not been authorized or approved by Egnater. If this product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement as provided below.

TUBES: Egnater warrants the original purchaser that the tubes used in an Egnater amplifier/combo will be free from defects in material and workmanship for a period of 90 days from the original date of purchase. A dated sales receipt will establish coverage under this warranty. This warranty will automatically terminate 90 days after the original retail sales date. This warranty is in lieu of all other expressed warranties. If tubes fail within the 90 day warrant period your sole remedy shall be replacement of tubes as provided below.

RETURN PROCEDURES: In the unlikely event that a defect should occur, follow the procedure outlined below. Defective products must be shipped, together with proof of purchase, freight pre-paid and insured to the Authorized Egnater Service Center or directly to Egnater. If a product must be returned to Egnater for warranty replacement/repair, a Return Authorization Number must be obtained from our Customer Service Department prior to shipping the product.

Please contact our Customer Service Department for the Authorized Egnater Service Center nearest you. Products

must be shipped in their original packaging or its equivalent; in any case, the risk of loss or damage in transit is to be borne by the purchaser. The Return Authorization Number must appear in large print directly below the shipping address. Always include a brief description of the defect, along with your correct return address and telephone number.

When calling to inquire about a returned product, always refer to the Return Authorization Number. If Egnater determines that the unit was defective in materials or workmanship at any time during the warranty period, Egnater has the option of repairing or replacing the product at no additional charge, except as set forth below. All replaced parts become a property of Egnater. Products replaced or repaired under this warranty will be returned via ground shipping within the United States-freight prepaid. Egnater is not responsible for costs associated with expedited shipping, either to Egnater or the return of the product to the customer.

INCIDENTAL OR CONSEQUENTIAL DAMAGE:

In no event will Egnater be liable for any incidental or consequential damages arising out of the use or inability to use of any Egnater product, even if an Egnater dealer has been advised of the possibility of such damages, or any other claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

FOR YOUR PROTECTION: Please complete and mail the Purchase Information Card within (10) ten days of the date of purchase so that we may contact you directly in the event a safety notification issued in accordance with the 1972 Consumer Product Safety Act.

CUSTOMER SUPPORT: Our dedicated staff is ready to help you with any warranty or product questions you may have. Please call 1-877-EGNATER (9:00AM to 4:00PM Pacific Standard Time).

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