

GENZ·BENZ

EL *Diablo* 100

OWNERS MANUAL



CONGRATULATIONS!

Thank you for your purchase of the GENZ BENZ EL DIABLO 100. I believe you will find that this tube amp will immediately become an invaluable tool in your quest for the best possible guitar tone. EL DIABLO's versatile features will certainly enhance the feel and character of your individual playing style.

Our engineers and resident "tone staffers" have worked extremely hard to develop and build this world-class guitar amplifier for you. Please take time to read through this manual and familiarize yourself with the features and design of your new EL DIABLO 100.

We are proud that you've chosen this professional and attractive tone machine and we trust that you will discover all that it offers.

Have fun and take it to the limit!!!

Respectfully,

Jeff Genzler
Founder/Builder/Player

FEATURES:

- 50/100 Watt Output Selection
- Two Versatile Tube Channels
- Five Button Footswitch Included
- Three Effects Loops
- Frequency Compensated D.I. Section
- Accutronics® Long Pan Reverb
- Our Unique Edge Lift Handles
- Quality Padded Cover Included
- Six Triode Preamp Stages (3-12AX7's)
- Four Power Tubes (w/Ruby Tubes™ EL 34's)
- Military Spec. Double-sided Glass Epoxy Circuit Boards
- All Custom Wound Transformers
- Transformer Based Phase Inverter for Optimum Power Tube Grid Drive
- Heavy-duty Steel Chassis, Mounted within a Sturdy Birch Plywood Case

CAUTIONS AND WARNINGS:

- Tube amplifiers, especially high-powered tube amps, generate heat. Allow at least 4 inches (100mm) of clearance at the back, top and front of the amplifier cabinet. Do not block ventilation vents and keep clear of curtains and other flammable materials. Avoid contact with hot tubes.
- Do not expose amplifier to moisture, rain, splashed water, beverages, etc.
- Be sure that a speaker load is connected to the amplifier before applying power; otherwise damage to the amplifier could result.
- Be sure that the amplifier is properly grounded. Do not defeat the ground pin on the AC power input plug. The ground is there to protect the user from the possibility of shock.
- Be sure that the AC power (mains) voltage selector switch is configured for the proper voltage (115 volts or 230 volts) for the area you are located before connecting the amplifier to the power source. In the event of a thunderstorm, remove the power plug from the wall socket to prevent damage due to the possibility of lightning strikes.
- Turn off power to the amplifier (or place in standby) when changing wiring connections to prevent damage to speakers from possible (and unexpected) loud noises.
- **WARNING:** This amplifier is capable of extreme high decibel output. Always protect your hearing. Your hearing is an invaluable tool in appreciating the tone of EL DIABLO 100.
- There are no user-serviceable parts inside the chassis. Refer all service to qualified service personnel.
- Always unplug the amp when changing the power or preamp tubes. Never touch the tubes if they are still hot.
- Always wait to move the amp after use until the tubes have cooled. This will prevent tube damage and extend tube life. A few minutes should be sufficient.
- While we have made every attempt to outline all general cautions, the ultimate responsibility for safe operation of this or any amplifier product rests with the consumer. Common sense should be practiced at all times when using the amplifier.

AMPLIFIER OVERVIEW:

The GENZ BENZ EL DIABLO 100 contains a unique combination of circuits, including vintage tube circuits, carefully engineered "hot-rod" tube circuits and advanced tone shaping techniques. EL DIABLO 100 delivers unique tone, drive and versatility, which is exemplified by the 12 distinctive tone variations easily accessible from the 5 button footswitch (included). This flexibility allows endless possibilities to craft your own personal repertoire of tone and expression.

This hi gain tube amp is actually 2 amps in one. EL DIABLO offers a 50 watt/100 watt switch on the back panel which will allow more output tube distortion and a different character and feel when used in the 50 watt position.

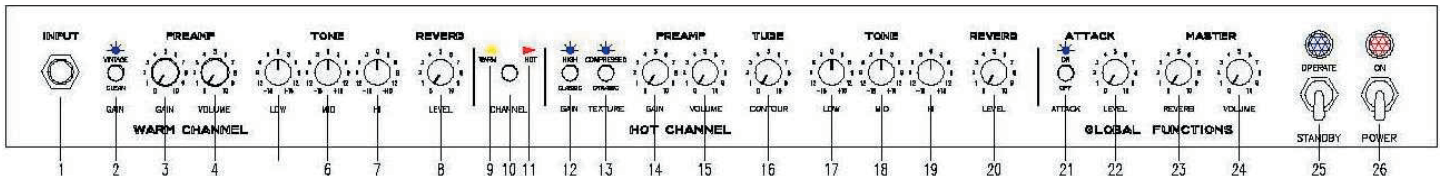
The WARM channel offers full, round pristine clean response cascading up to pushed vintage gain with warm upper mid break-up, rich bass and abundant sustain.

The **HOT channel** takes you from rich classic tube break-up to full-bodied hi gain splendor. The option of a dynamic or compressed setting insures the amplifier responds to your every touch; no squashed tone or harsh buzziness here!!

Our **GLOBAL** section offers master controls of the internal Accutronics® reverb, amplifier output volume and our unique attack circuit that provides a wide range of variable upper mid frequency boost that enhances pick attack and bite which is extremely effective as a lead boost and cutting through the mix.

Overall, we ask you to take some time and experiment with the many options and tonal variations that you will discover at your fingertips within the EL DIABLO 100. Reading through the OWNER'S MANUAL will give you an excellent baseline of knowledge and insight as to the tones you can accomplish and harness for your individual playing style.

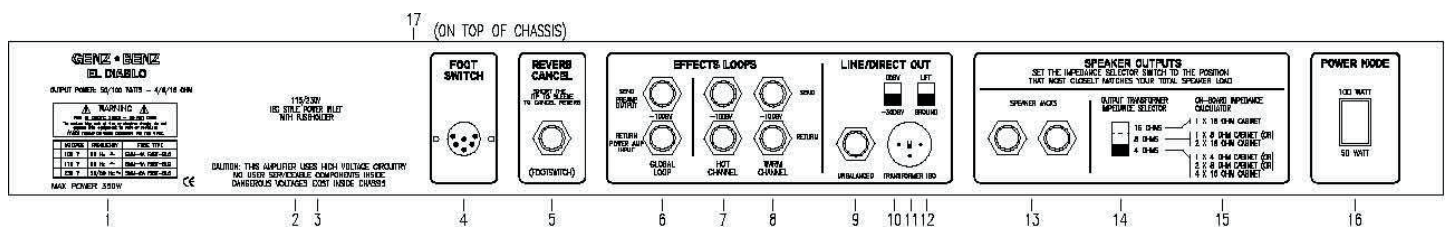
FRONT PANEL OVERVIEW:



1. **1/4" INPUT JACK** - This jack is unbalanced and high impedance to allow for the correct matching of the instrument's pick-ups with the input circuitry of the amplifier. The input circuitry has been carefully engineered to minimize pick-up loading and maximize tone and sustain. This is a tube buffered input stage.
2. **GAIN SWITCH / CLEAN or VINTAGE** – The switch sets the gain level of the warm channel. This works in conjunction with the warm channel gain control. When the footswitch is used this switch should be in the out position.
3. **GAIN CONTROL** – The warm channel gain control provides a variety of gain settings, from “spanky clean” to “pushed” vintage sustain. Use this control in conjunction with the gain switch for this channel. Lower settings will provide a cleaner tone.
4. **VOLUME CONTROL** – This preamp volume controls the overall volume of the warm channel. Use this control together with the gain control and gain switch.
- 5-7. **TONE SECTION** – Three tone circuits are included for the warm channel. The bass, mid and treble frequencies have been pre-selected in order to provide articulate, full-range tone shaping response specifically tailored to the design of the EL DIABLO 100. As you can see, these circuits provide a huge cut or boost of 15db offering untold flexibility in tone shaping. Use this section with subtle changes-click by click-at first so that you can gain a “feel” for the versatility of our tone network. *We do not recommend running all tone controls at the full +15db position. Due to the extreme gain this could cause some unwanted distortion of the network.*
8. **REVERB CONTROL** – This control pot adjusts the signal send level to the on-board ACCUTRONICS® long pan reverb which is mounted to the back-panel of the EL DIABLO. This control works in conjunction with the global reverb control and different styles of lush, or “splashy” warm analog reverbs are possible by running the channel reverb high and the global control low and also vice versa. Experiment with these settings to find the sound that best suits your style.
- 9-11. **CHANNEL SELECTOR SWITCH AND INDICATOR LIGHTS** – This is your channel selector switch for the warm or hot channels. Along with the unique arrow indicator lights, the placement of this switch between the channels clearly illustrates which channel is active. This switch should be in the out position when the footswitch is used.
12. **GAIN SWITCH / CLASSIC or HIGH** – This gain switch sets the gain structure for the hot channel. Use this switch in conjunction with the hot channel gain control. With a little experimentation it will be easy to hear that driving the gain control in the maximum position is not as critical as on other amps. Articulate high gain splendor can be achieved without cranking the gain to 10. When using the footswitch this switch should be in the out position.
13. **TEXTURE SWITCH / DYNAMIC or COMPRESSED** – This switch changes the character of this tube channel. Changing from dynamic to compressed will provide another tonal variation for the guitarist. The compressed setting will offer additional compression of the signal along with a more aggressive, overdriven character, ideal for tight and punchy bass response. This feature is more distinctive depending upon the setting of the gain control. When using the footswitch this switch should be in the out position.

- 14. GAIN CONTROL** – The hot channel gain control provides a variety of gain settings, from a richly saturated clean tone to fully overdriven high gain nirvana. Use this control in conjunction with the gain switch for this channel. Lower settings will provide a less overdriven tone.
- 15. VOLUME CONTROL** - This preamp volume controls the overall volume of the hot channel. Use this control together with the gain control and gain switch.
- 16. TUBE CONTOUR CONTROL** – This is a unique circuit to the EL DIABLO design. This contour control adds an additional “tone stack” within the tube preamp which interacts and changes the loading of the tube as the control knob is turned. When the control is left of center it produces a more midrange tone and adds a more “vintage” character to the tone. When used from the center position to the far right it produces a more modern tone with more bass and highs. This circuit will also interact with the classic and high gain settings and the dynamic and compressed settings.
- 17-19. TONE SECTION** – Three tone circuits are included for the hot channel. The bass, mid and treble frequencies have been pre-selected in order to provide articulate, full-range tone shaping response specifically tailored to the design of the EL DIABLO 100. As you can see these circuits provide a huge cut or boost of 15db offering untold flexibility in tone shaping. *We do not recommend running all tone controls at the full +15db position. To avoid having the preamp tubes becoming micro-phonic and producing feedback or squeal, keep the treble and attack features to moderate (below 2:00) settings, when using maximum gain settings at high volumes.*
- 20. REVERB CONTROL** – This control pot adjusts the signal send level to the on-board ACCUTRONICS® long pan reverb which is mounted to the back-panel of the EL DIABLO. This control works in conjunction with the global reverb control, and different styles of lush or “splashy” warm analog reverbs are possible by running the channel reverb high and the global control low and also vice versa. Experiment with these settings to find the sound that best suits your style.
- 21. GLOBAL ATTACK SWITCH** – Different than a presence, this unique circuit boosts a specific range of upper mid frequencies which enhances pick attack and bite. This “frequency multiplier” circuit is extremely effective as a lead boost and helps to cut through the mix. This circuit can be engaged in either preamp channel or gain setting and can add a more aggressive attack to any tone setting on the amp. When the footswitch is used, this switch should be in the out position.
- 22. GLOBAL ATTACK LEVEL CONTROL** – This level control provides a variable amount of attack “boost” to the amp.
- 23. GLOBAL REVERB CONTROL** – This control adjusts the level of the reverb return signal from the on board ACCUTRONICS® long pan reverb pan. This control works in conjunction with the channel reverb send controls to provide different styles of warm, lush analog reverb.
- 24. GLOBAL VOLUME CONTROL** – This knob controls the final output stage of the amplifier and is the master volume for EL DIABLO. It should be noted that this control is best set between the 10 o'clock and 3 o'clock positions. Each channel volume should be adjusted accordingly to achieve the desired total amplifier output. For lower volume settings, you can power the unit down to 50 watts with the power level selector switch on the back panel.
- 25. STANDBY SWITCH** – The standby switch removes the high voltage from the plate circuit of the output tubes to protect the tubes from “cathode stripping” when first powering up the amplifier. The recommended start-up procedure is to place the standby switch in the standby position, turn on the power switch and allow the amplifier to warm up for at least 30 seconds before switching the standby switch to the operate position. This will help to prolong the life of your output tubes.
- 26. POWER SWITCH** – This switch turns on the AC power to the amp. When this switch is turned on, power is applied to the heater circuits of all tubes, the high voltage power supplies are allowed to stabilize and the low voltage power supplies are energized. Power should be switched on only with the standby switch in the standby position. Refer to #25 for information concerning the operation of the standby function.

REAR PANEL OVERVIEW:



1. VOLTAGE CHART – Your EL DIABLO 100 is truly a “world class” amplifier. This voltage chart is provided so that choosing the correct fusing for the desired international country is simple and accurate. The EL DIABLO’s internal power transformer can be re-wired for 100 volt use for JAPAN.

WARNING: ONLY A FACTORY QUALIFIED SERVICE TECHNICIAN SHOULD EVER ATTEMPT THIS ALTERATION.

2. VOLTAGE SELECTOR SWITCH - This switch changes the voltage of the AC power with which the amp will operate. 115 volts is the standard in the USA and CANADA. 230 volts is the standard for most of EUROPE and SOUTH AMERICA. Consult the voltage chart if you plan to use this amp for a different voltage other than how it was shipped from the factory so that the proper fuse can be inserted. The DIABLO 100 is rated for operation on both 50 Hz and 60 Hz power sources.

3. IEC RECEPTACLE & FUSE HOLDER – The detachable power cord should be inserted here before the cord is plugged into an AC power source. Within the bottom portion of this receptacle is a small drawer that holds the mains power fuse. An extra fuse is included in this plastic receptacle. It may be necessary to use a small tool to pry the small drawer open.

WARNINGS:

- **NEVER TRY TO OPEN THIS FUSE HOLDER WITH THE POWER CORD PLUGGED IN.**
- **USE ONLY THE FUSE VALUE AS INDICATED IN THE VOLTAGE CHART.**
- **NEVER ATTEMPT TO DISABLE THE MAINS POWER FUSE.**

4. FOOTSWITCH INPUT – This 6 pin DIN connector is where EL DIABLO’s 5 button footswitch should be attached. A 25 foot cord is attached to the heavy-duty steel footswitch. This should provide plenty of room for the performer to get out in front of the rig. Some internal circuitry “clicking” may be heard if the amp is on when this footswitch is plugged in. This is normal and is actually part of the circuitry that provides the noiseless switching on the EL DIABLO 100. NOTE: The front panel function switches over-ride the footswitch functions. The function switches should be in the out position when the footswitch is used.

5. REVERB CANCEL FOOTSWITCH – This jack is provided so that the reverb may be turned on and off by the performer. This function is achieved with any industry standard single button footswitch (not supplied).

6. GLOBAL EFFECTS LOOP – EL DIABLO is designed with 3 separate serial effects loops. The global effects loop is a post master section loop and is an ideal place to send the entire preamp signal out to another amp using only the send jack, or to insert a global effect such as a compressor (serial effect) or a digital effects processor (a serial effect when used with the processor’s own “wet/dry” mix control). It is also a handy input for connecting the power amp stage to the output of another preamp or signal source.

7. HOT CHANNEL EFFECTS LOOP – This separate effects loop is provided for use in the hot channel only. This serial effects loop allows the insertion of outboard effects which will be automatically engaged when you switch to the hot channel using the front panel switch or footswitch.

8. WARM CHANNEL EFFECTS LOOP – This separate effects loop is provided for use in the warm channel only. This serial effects loop allows the insertion of outboard effects which will be automatically engaged when you switch to the warm channel using the front panel switch or footswitch.

9. UNBALANCED LINE OUTPUT – This ¼” jack provides an unbalanced signal that is derived after the power amplifier and output transformer. The output can be switched (along with the balanced direct output) between line level (0dBv) and a hot instrument level (-30dBv). This line level is ideal for driving a powered speaker that requires a line level input, or for driving an additional instrument amplifier that requires an instrument level signal. This signal is frequency compensated to emulate the same tone coming through the amplifiers speaker cabinet.

10. BALANCED DIRECT OUTPUT – This XLR male jack provides a balanced signal that is derived after the power amplifier and output transformer. The output can be switched (along with the un-balanced direct output) between line level (0dBv) and a hot microphone level (-30dBv). The line level is ideal for driving the input of a professional console that can accept a real line level signal source or a powered speaker that requires a line level input. It is also suitable for driving the input of a semi-professional or MI grade mixer by switching the level control to the -30dBv position. This signal is frequency compensated to emulate the same tone coming through the amplifiers speaker cabinet.

11. LINE/DIRECT OUTPUT LEVEL SWITCH – This switch sets the nominal output level of both the ¼” unbalanced and the XLR balanced outputs. Generally, the 0dBv position is used in conjunction with professional equipment and the -30dBv position is used with non-professional equipment, but consult the owner’s manual of the equipment you are connecting to for information about that equipment’s input sensitivity.

12. GROUND LIFT SWITCH – This switch lifts pin 1 on the XLR balanced output only. The purpose of this switch is to safely break ground loops when connecting to equipment with balanced inputs such as mixing consoles. Use the position that produces the least amount of hum or buzz. This switch does not affect any other jack except the XLR direct output jack.

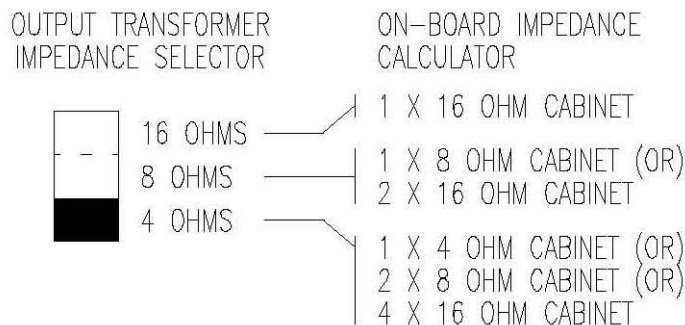
13. SPEAKER OUTPUTS – These parallel speaker jacks are provided for connecting to the guitar cabinet of choice. It is important to become familiar with using the impedance selector switch and impedance calculator so that the proper cabinet impedance is selected for the safe and efficient operation of this high output tube amplifier.

WARNINGS:

- **NEVER UNPLUG THE SPEAKER CABLE FROM THE GUITAR CABINET WHEN THE AMP IS ON!!!**
- **DO NOT OPERATE THIS AMP WITHOUT A SPEAKER LOAD PLUGGED INTO ONE OF THE SPEAKER JACKS.**
- **THE DIABLO OFFERS SOME PROTECTION AGAINST THIS DAMAGE BUT IT IS NEVER A GOOD IDEA TO OPERATE ANY TUBE AMP WITHOUT A SPEAKER LOAD ATTACHED.**

14. IMPEDANCE SELECTOR SWITCH – This 3 position switch is designed to easily select the appropriate output transformer impedance tap for the desired cabinet load being used. A 16 ohm, 8 ohm and 4 ohm position is offered. ***It is important to know the total impedance of the guitar cabinet being used with your amp.*** It is important for amplifier performance, tube life and output transformer protection to select the correct impedance for your chosen guitar cabinet. Consult the rear panel impedance calculator for this information.

15. IMPEDANCE CALCULATOR – As part of making the GENZ BENZ EL DIABLO 100 both user- friendly and convenient to use, we have included a comprehensive impedance chart so that this information is always accessible to the user.



16. POWER MODE – This switch easily and safely reduces the output power of the amp from 100 watts to 50 watts. This is done by internally disconnecting 2 of the power tubes; perfect for playing situations that require less power. The 50 watt setting will also change the tone and “feel” of the amp, allowing you to introduce power tube breakup at lower sound levels

17. TUBE BIAS SWITCH (mounted on top of chassis) – The Tube Selector switch is provided for setting the correct bias for the power tubes used. EL DIABLO 100 ships from the factory with a matched set of Ruby Tubes™ EL 34 power tubes. The EL DIABLO will also operate with 6L6 or 5881 power tubes. When using either of these tubes the bias should be set to the 6L6 position. For harmonic complexity and maximum power, we recommend EL34’s. When switching the tube types or brand of tubes, your amp should be re-biased to obtain optimum performance, tone and tube longevity. *(The rear panel of the cabinet will need to be removed in order to access the tube bias section. Be careful when removing this panel because the reverb pan is attached to this back panel.)*

SETTING THE BIAS – Generally your amp will only need to be re-biased if you are replacing the power tubes. However, if you replace the Ruby Tubes® EL34 power tubes with the same brand and type having the same “PC” number located on the label at the base of the tube then re-biasing is not necessary. To re-bias your amp you will need a small screwdriver and a multi-meter or volt/ohm meter set to measure DC voltage. (If you do not have this equipment, skill, experience or do not feel comfortable making these adjustments you should have a qualified technician perform this procedure.)

1. First make sure the Tube Selector switch located in the Tube Bias section matches the tube type installed. Then with the Master Volume turned all the way down turn the Power switch ON leaving the Standby switch in the Standby position.
2. Set your test meter to read DC voltage. Then place the negative (black) lead of your meter into the black Test Point located in the Tube Bias section on the rear panel. Then place the positive (red) lead of your meter into the red Test Point. Depending on the size of your test leads you may have to hold them in the Test Points to assure a good connection.
3. After the tubes have warmed up for about a minute turn the Standby switch to the Operate position and read the voltage on your meter. With a small screwdriver you will need to adjust the Bias Adjust trim pot located just below the Test Points so that your meter reads about **0.600** volts if you are using EL34 tubes and about **0.450** volts if you are using 6L6 tubes. Turning the Bias Adjust trim pot clockwise will increase the voltage and turning it counterclockwise will decrease the voltage.
4. After initially setting the bias allow your amp to warm up for about 5 more minutes then retest and readjust the bias as indicated above. Exact readings are not critical and some fluctuation is normal. Just try to get as close to the target voltage as possible.
5. Your amp is now biased and ready to play!

Tube Bias Background Information – All amplifiers (solid-state or tube) require bias to work properly. In a single ended amplifier, the requirements are simple in that the tube should be “biased” or operated so that with no signal present, DC current should flow through the output stage (tube and transformer) at approximately 1/2 the maximum design value. When the signal transitions “positive” the current increases from the quiescent position and when the signal transitions “negative” the current decreases from the quiescent position. So you can see that if there was no bias, there would be no quiescent current, thus no way to operate properly for the negative “going” portion of the signal, limiting the negative side of the waveform. Too much bias would limit the amount of current you could add for positive “going” signals, limiting that side of the waveform.

For a push-pull output stage (tube amps), the scenario is different, since one tube amplifies the positive “going” portion of the signal and the other tube amplifies the negative “going” portion of the signal. In fact, if the world was perfect, we would need no bias since the positive side of zero would be handled completely by one tube and the negative side of zero would be handled completely by the other tube. This would be the proper definition of “class B operation”. Since tubes are not perfect devices, the transition at zero is not very linear...this is as one tube turns off, the other tube may not be quite ready to turn on. This can lead to a discontinuity of the signal around zero which is the worst possible place for it to occur—as it is highly audible and rather ugly sounding. The solution once again is to bias both tubes slightly “on” to allow for a more graceful handoff between the positive and negative sides of the signal, called “AB operation”. This is done by adjusting the bias just enough to achieve the necessary results. Too much bias and current will be wasted as heat dissipated within the power tubes and output transformer greatly shortening your power tube’s useful life. Too little bias may give the amp a cold, grainy texture.

WARNINGS:

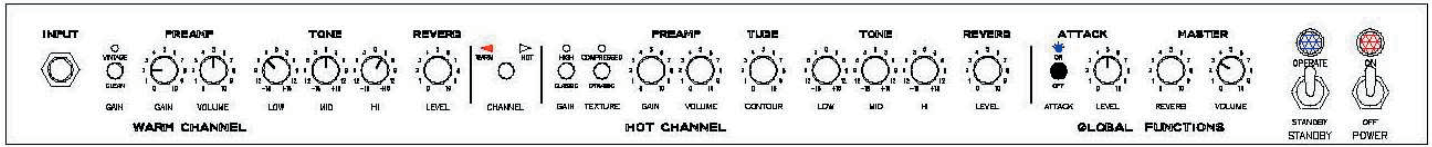
- **POWER TUBES BECOME VERY HOT AFTER BEING USED.**
- **NEVER CHANGE THE POWER TUBES UNTIL THEY HAVE COOLED FOR AT LEAST 15 MINUTES.**
- **NEVER CHANGE THE TUBES WITH THE AMP ON!!!**

GETTING STARTED:

- Since your EL DIABLO 100 ships with all tubes installed and the amplifier fully tested, biased and burned-in at the factory, the user set-up is quite simple.
- Un-box your EL DIABLO and verify that the AC input input voltage selector switch matches the power in your area. The EL DIABLO ships from the factory with the switch set to 115 volts.
- Verify that you have the correct mains cord-set for your area. This piece of information is primarily for our international customers who may have a choice of power receptacles in their country.
- Make sure to send in your warranty registration card.
- Read your owner’s manual. There is valuable information and safety tips in this manual and the knowledge you learn here will translate into enjoyable quality tone for years to come.

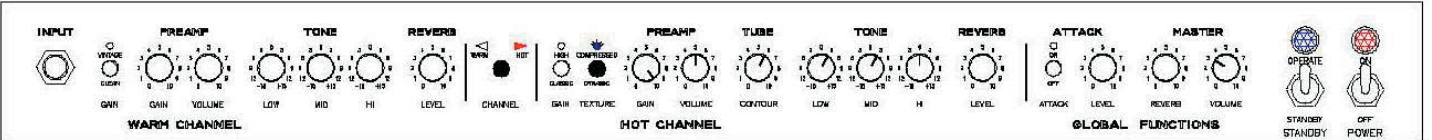
OPERATING EXAMPLES:

We've included a collection of "sample settings" below to use as a reference for getting yourself familiarized with some of the more popular sounds possible from the EL DIABLO 100. We recognize that tone is very subjective to each individual, but these settings are a collaboration of our "resident tone-stuffers".



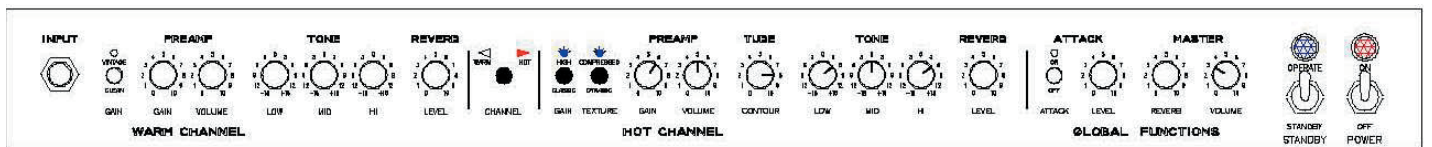
FULLERTON, CALIFORNIA SPANK AND SPARKLE

Turn this into a great "Chicago Blues" setting by adding a touch of reverb.



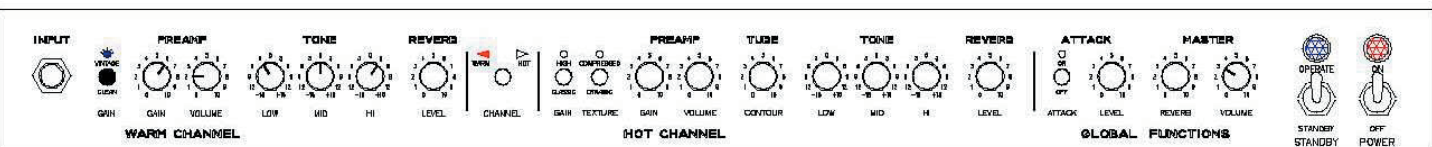
"BLACK MAGIC WOMAN"

Warm & vocal solo tone.



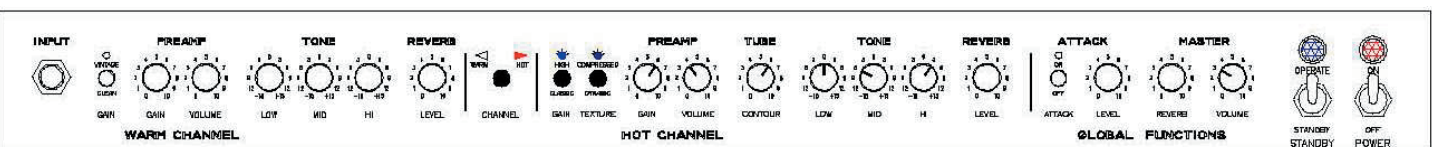
UNIQUELY GENZ BENZ

Modern rock tone suitable for any stage.



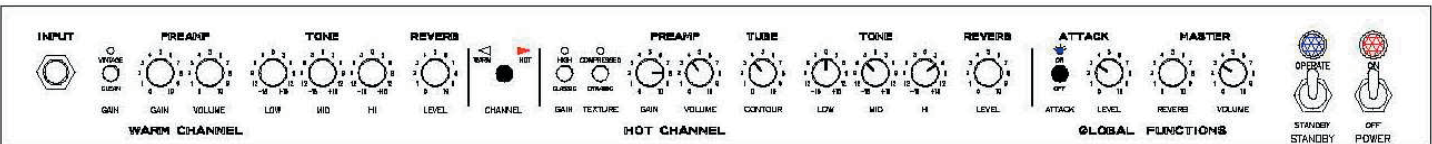
BLACK FACE WARMTH AND SHIMMER "BLUES SOLO"

Setting is very touch-sensitive. Dig in for a nice break-up.



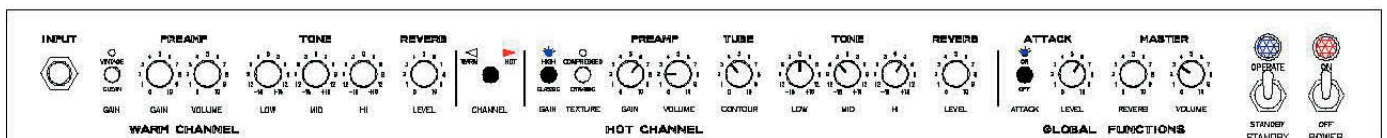
CLASSIC EDDIE "BROWN" SOUND

Need we say more?



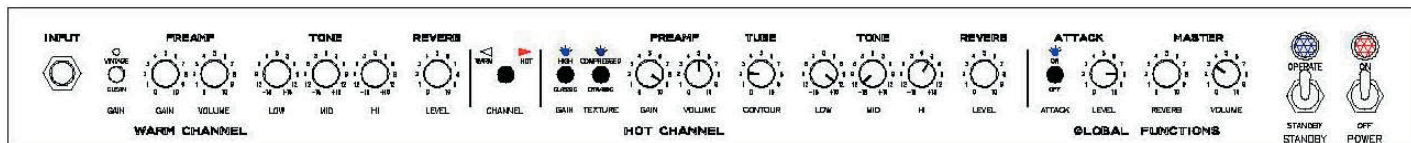
80'S BRITISH STACK-BARK AND GRIND

Great hard rock rhythm! Many of today's "hi-gain" amps are too compressed to get this growl.



LATE 60'S BRITISH STACK ON STEROIDS

This is it! The sound that others tried for, only to end up with a squashed sound that wasn't dynamic and wouldn't cut through the mix. Hotter than the EDDIE "brown sound"!



DROPPED TUNING NU-METAL

If this is too much gain, then you're too old!

SPECIFICATIONS:

TUBE COMPLIMENT (as shipped):

- 1 ea. 12AX7CZ (Tesla/JJ) - Input Buffer and Hot Channel Gain
- 2 ea. 12AX7AC4 (Ruby Tubes™) - Warm and Hot Channel preamp tubes

RATED OUTPUT POWER:

- 4 x EL 34 power tubes: 100 watts
- 4 x 6L6 power tubes: 95 watts

POWER CONSUMPTION:

350 watts max.

FUSES:

Main power fuse (rear panel): 4 amp Slo Blo (100v, 115v), 2 amp Slo Blo (230 v)
 Power tube heater fuse (internal): 5 amp Slo Blo

DIMENSIONS: 10.75"H x 28"W x 11"D

WEIGHT: 52 lbs.

(Due to the Genz Benz commitment to quality and improvements, we reserve the right to change specifications without notice)

CHANGING TUBES:

Always use caution when changing tubes. The power switch on the amplifier should be turned off and the power cable unplugged from the source.

CHANGING POWER TUBES - The tubes should be cool. When changing the power amp tubes push down on the silver tube retainer and carefully work the tubes out of the ceramic socket by pulling up while rocking the tube slightly and gently. When re-installing power tubes note that both the tube base and the pin positions, are "keyed" to the socket. Make sure that you seat the tube base properly in the socket and carefully push it tight into the socket. Confirm that the BIAS SWITCH is in the correct position for the type of power tubes being used.

CHANGING PREAMP TUBES - The tubes should be cool. Each preamp tube is secured with a special tube retainer that keeps the tube seated properly and also helps to counter-act unwanted tube microphonics. A small Phillips screw-driver will be needed to unscrew the round tube retainer. After this retainer has been removed, rock the tube slightly and gently while pulling up on the tube and remove it carefully. When re-installing preamp tubes, note that the pin positions are "keyed" to the socket. Make sure that you seat the tube pins properly in the socket and carefully push it tight into the socket. Reattach the round tube retainer. Make sure the rubber grommet inside the tube retainer securely holds down the preamp tube.

OUTPUT TUBE BIAS – The output tube bias does not need to be adjusted if the tubes are replaced with Ruby Tubes™ EL 34 BSTR tubes that have the same "PC" number as the ones installed from the factory. However, if you are replacing the tubes with anything other than Ruby Tubes™ EL 34BSTR's with the same "PC" number, then your amp should be rebiased by a qualified technician who is familiar with high voltage tube power amp servicing. This will ensure optimum performance, tone and tube longevity.

NOTE: Dangerous and/or lethal high voltages are present inside the amplifier chassis. Refer all servicing to qualified service persons.

THREE YEAR LIMITED WARRANTY TRANSFERABLE

Genz Benz Enclosures warrants the EI DIABLO 100 to be free from defects in materials and workmanship, for a period of 3 years from the date of purchase, when purchased from an authorized Genz Benz dealer. **Tubes are warranted for a period of 6 months from the date of purchase.**

This warranty does not cover wear and tear incurred from the normal designed use of the product.

This warranty is only effective if a copy of the original sales receipt is presented at the time of warranty service.

This limited warranty is completely transferable to any subsequent buyer as long as the original sales receipt is transferred to such subsequent buyer. See your warranty card for all details.

ALL WARRANTY SERVICE MUST BE PERFORMED BY A GENZ BENZ AUTHORIZED SERVICE CENTER. Before returning any unit to the manufacturer for service, a RETURN MERCHANDISE AUTHORIZATION (RA#) must be obtained by calling 480-941-0705.

Declaration of Conformity (89/336 EEC-EMC Directive)

Manufacturer's Name: Genz Benz, a division of Kaman Music
Manufacturer's Address: 7811 East Pierce Street
Scottsdale, AZ 85287, U.S.A.

Product Type: Audio Amplifier
Model Number: ELDIABLO100
Operating Power Condition: 115/230 V, 50/60 Hz
Effective Date: 01-01-06

Conforms to the Following Standards:

- EN 55013: 2001 + A1: 2003
- EN 55020: 2002 + A1: 2003
- EN 60065
- IEC 61000-3.3: 1994 + A1: 2001
- IEC 61000-4.2
- IEC 61000-4.3
- IEC 61000-4.4
- FCC 47CFR Part 15-B, Class B
- RoHS Directive 2002/95/EC
- WEEE Directive 2002/96/EC
- CE Mark LV Directive 73/23 EEC

GENZ·BENZ

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