

**THE**



**GT-100**

**100 WATT GUITAR AMPLIFIER**

**Owner's Manual**

Guytron Amplification  
586-254-5717

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

***PRECAUTIONS***

**NOTE: IT IS VERY IMPORTANT THAT YOU READ THIS SECTION TO HELP INSURE MANY YEARS OF TROUBLE FREE USE. THIS UNIT REQUIRES CAREFUL HANDLING.**

All warnings on this equipment and in the operating instructions should be adhered to and all operating instructions should be followed. Do not use this equipment near water! Care should be taken so that objects do not fall and liquids do not spill into the unit through any openings. The power cord should be unplugged from the outlet when left unused for long periods of time.

Operating temperature: Do not expose the GT-100 to excessive heat. This unit is designed to operate between 32F and 104F and 0C and 40 C

**DO NOT ATTEMPT TO SERVICE THIS EQUIPMENT YOURSELF!**

THIS EQUIPMENT SHOULD BE SERVICED BY QUALIFIED PERSONNEL ONLY. DO NOT MAKE ANY INTERNAL ADJUSTMENTS OR ADDITIONS TO THIS EQUIPMENT AT ANY TIME. DO NOT TAMPER WITH INTERNAL ELECTRONIC COMPONENTS AT ANY TIME. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY VOID THE WARRANTY OF THIS EQUIPMENT, AS WELL AS CAUSING THE RISK OF A SEVERE SHOCK HAZARD.

### **Unpacking:**

Before you plug in, inspect your GT-100 amp for any damage. Your amp was inspected and sound-tested before shipment, but shipping can sometimes be tough. Check that the footswitch and power cord have been shipped with the amp. If parts are missing, or if any damage has occurred, contact your dealer.

### **Packing Materials:**

We designed the original box and packing materials to protect your amp during shipment. Save them. If you ever need to send your amp to us or to anyone else, the original box and packing materials will ensure safe transit.

## *Before you plug in .*

**Take a quick look inside the back of your amp and make sure of the following:**

- The tubes are securely seated in their sockets.
- A speaker cord is plugged between the Speaker jack on the amp, and the jack on the speaker cabinet.
- The impedance selector is set to match the cabinet's impedance.
- The power cord is plugged in.
- The footswitch is plugged in (this is optional).

**Now look at the front to make sure:**

- The Master Volume control is set at a low level. (9 O'clock is a good starting point).
- The Power switch is off.
- The Standby switch is set to standby mode.

### **Plug in!**

Now plug the amp into the wall, plug your guitar into the input jack, and set your controls to one of the Sample settings outlined here. Then turn on the Power switch. Wait for about a minute for the tubes to warm up. Turn on the Standby switch.

### **Have Fun Jamming!**

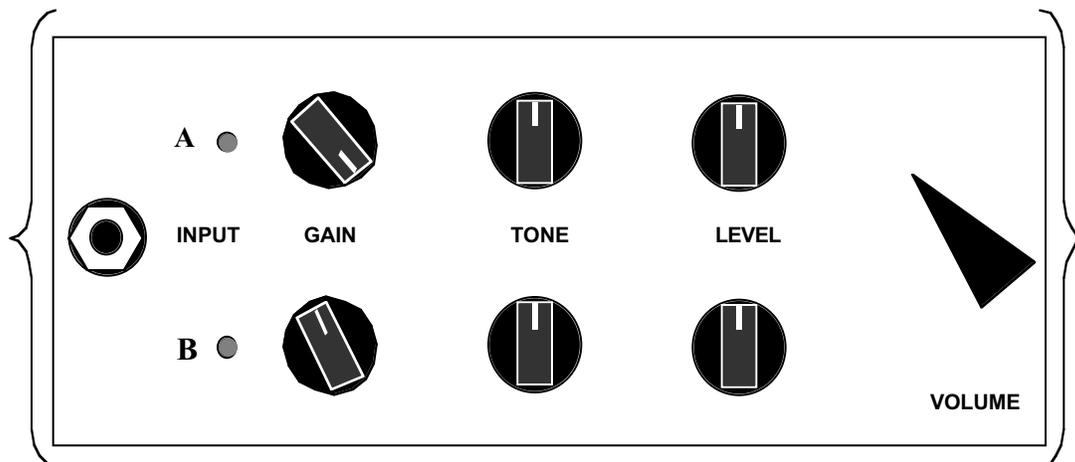
After you've played with your GT100 for a while, check out the rest of this manual for some good tips on getting the most out of your new GT100 guitar amplifier. And keep an eye on our web site as well, for sound bite and sample settings to come in the near future, as well as links to musicians using Guytron.

## FORWARD

Thank you for purchasing the Guytron GT-100. The exclusive patented design delivers that "On 10" sound at any volume (without external power attenuators), restoring power amp distortion and harmonics missing from conventional master volume technology. The GT-100 is a two channel, 100 watt, pure tube amplifier with vintage tones and modern features, all hand built in the U.S.A.

## INTRODUCTION

The heart of the tone generation is in the unique foot switchable pre-amp design that incorporates two EL84's running in "Class A" configuration. Class A is the oldest and purest way of amplifying a signal. Naturally, there are raging disputes among audiophiles as to what is Class A and what is not, but this section of the amp is Class A, and that is where the feel and basic tonal character get established. The signal does however make a transition into the Class AB arena and that is one of the secrets of the Guytron tone.



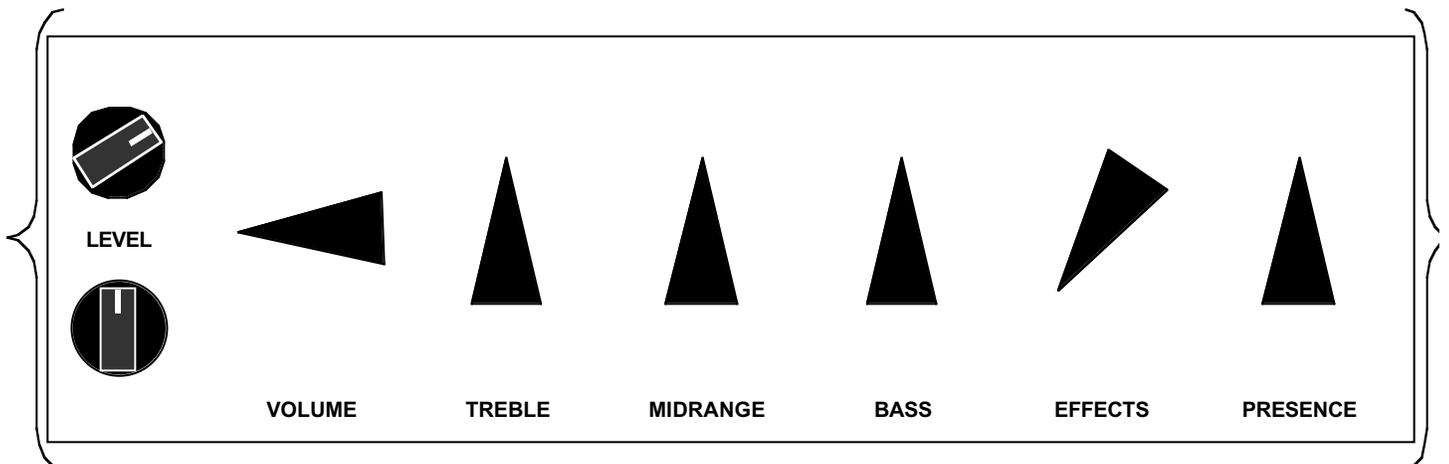
Channel "A", favoring the 50's to 60's stock amp tone, starts out crystal clear at low gain settings, progressing smoothly up to a 'cranked up' stock amp type of overdrive. The Channel "A" tone control involves the gain structure and the amp picks up more gain in the treble range as you turn it clockwise, yielding a progressively more "English" tone along the way. Channel A has become very popular and is known for its unique brand of sparkle, and punch.

Channel "B" takes over where channel "A" leaves off, encompassing most of the favored tones of the modded amp era, mid 70's, to present. The gain control in Channel "B" is a monster, by utilizing a dual pot it controls two stages of gain simultaneously, allowing a continuous sweep

from warm and clear to over the top gain and distortion. The tone control on channel "B" is a post gain type, and serves as a treble gate to the power amp, it has no effect on the gain structure, (unlike Channel A). It serves well in setting the relative brightness of the two channels, ultimately adding to the versatility and allowing you to get a warm distortion with a variety of power amp settings.

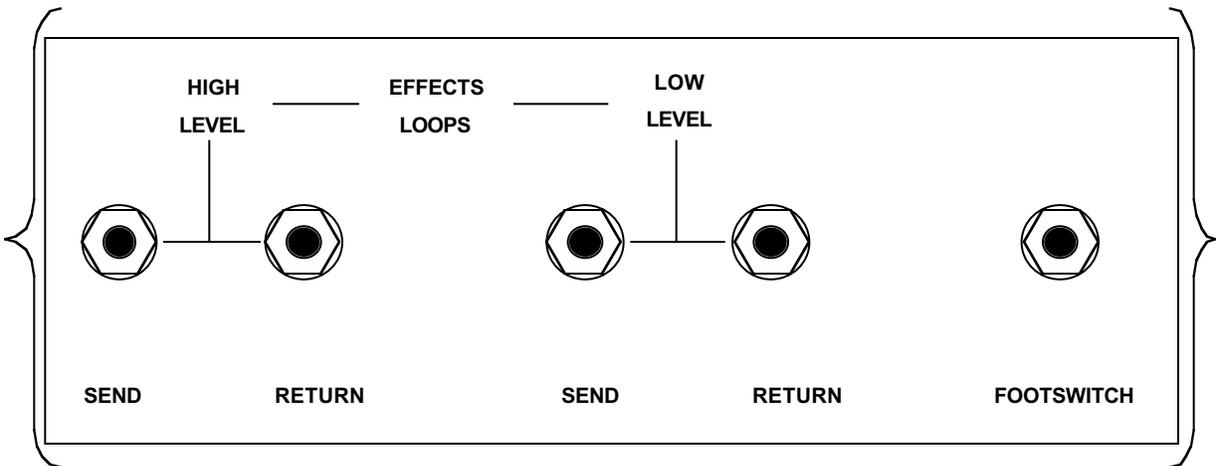
A master tone section is provided to shape the final sound before it gets delivered to your speakers. The master tone section is integral to the 100 watt all tube output section; utilizing four EL34's running in class AB2. This configuration can deliver massive amounts of power on demand. The master tone controls can be used to adjust for different rooms, as well as emulate the tonal characteristics of different amp types, speaker configurations, etc. It is also at this stage that effects can be blended in to further enhance the tone.

The tone controls which sometimes seem a bit subtle, are set up for emphasis and musicality, and not designed for an exaggerated wide range of sweep, but to gently add or subtract emphasis on important musical frequencies, without crossing into a non-musical realm, or introducing excessive phase shift. The amp does, however, faithfully deliver the usable feel and sound of all my favorite most popular amps, and does so at the widest possible spread of listening levels ever available in a single package.



Dual level effects loops are provided to allow for simultaneous running of old vintage gear, and newer rack mount studio effects. Effects loops are transformer driven with operation dual levels of both +3 and -10 dB, and can be used simultaneously. As a general rule, the LOW level is for pedal type or old vintage delays, while the HIGH loop accommodates more modern "Rack Gear". Typically effects are set to full wet, with no dry sound in the loop, as you would with a studio mixer. A perfect blend between the loop effects and the original dry sound which

never left the amp, can then be quickly achieved quickly via Effects control on the front panel of the GT100 (above). As a rule, the on board mixer using the "original" dry sound will provide a quicker response with a more direct, natural tone and feel than you sometimes get with most mixing. The only time this presents a potential problem, is when an effects units Input is out of phase with its own output. This would cancel out with the original dry sound in the amp, because the Guytron's dry sound is (obviously) in perfect phase with itself. Another option would be a phase reversing buffer amp in the loop to return the signal to it's original phase relationship, if you have a problem effects unit.



A complete clockwise setting of the Effects control will function exactly like an old series effects loop for effects units where external blending is the preferred. In either case, the effects must always be set to unity gain, while the amp is set up as you would normally be using it. During the level setup process, the channels "Level" controls can be used as variable "Send" controls, and the "MasterVolume" can be considered the "Return Level". This comes in handy for some of the more picky effects you might run across.

The front panel channel selector switch is there for convenience, but is disabled while in the center remote position, to allow for any form of "Latching" remote switching of the channels. The switch is labeled (Center Remote) to suggest that the remote switch could be any number of remote switching methods. Example: Using an effects device to switch the GT100 as part of an effects pre-set.

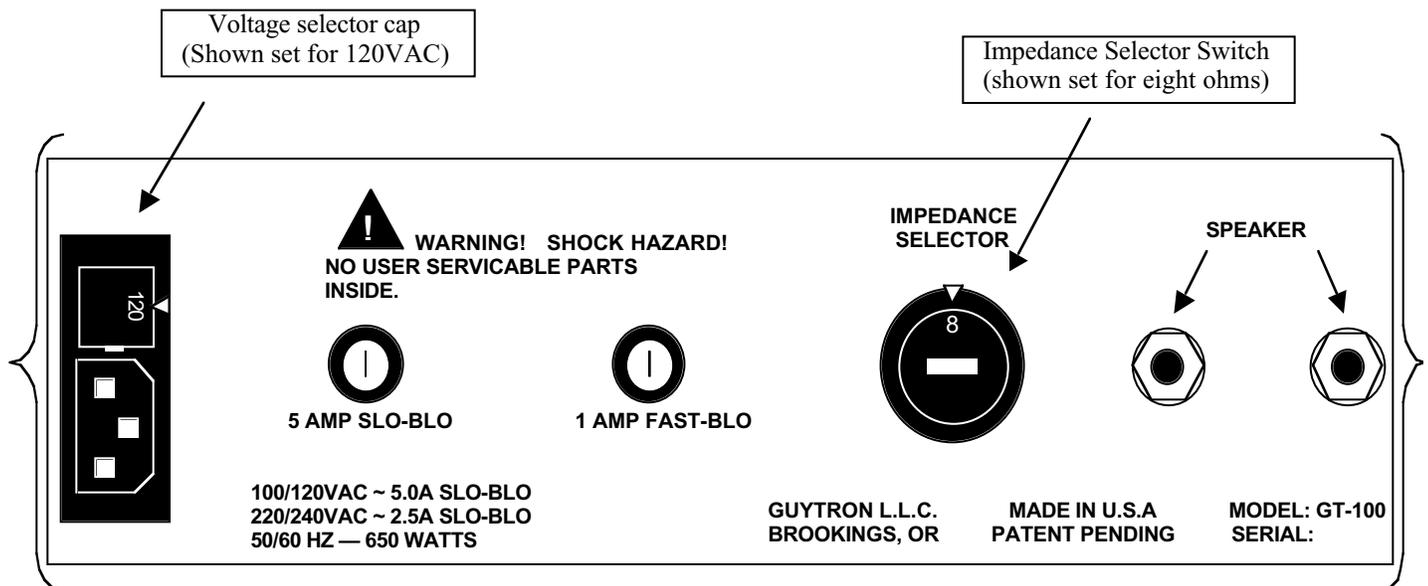
In any case, the front panel switch is set up to override any external switching in order to accommodate large stage situations where quick adjustments are needed. Thus eliminating the need to run back to the footswitch or whatever while adjusting your settings.

The amp is shown in the double "ON" position. While set like this, the amp is fully functional, and ready to play. During short to medium breaks 10-20 minutes, or between sets, it's best to turn the "Standby" switch to the "Standby" position. This will shut down the high voltage inside the tubes, thus extending tube life, but it also leaves the heaters on for quick

startup. If the break is very much longer than that, both switches should be in the down position. If nothing else, just to conserve energy. Tube life is also extended if the amp is allowed to warm up at least a minute, before turning the standby switch to the "On" position. This is less of a strain on the tubes, as well as the rest of the amp.

As for the Purple pilot light, this is an old tradition of mine that dates back to the late 70's. I used to get a lot of these old Kustom amps in the shop. You know, the cool padded ones you could sit on during those long boring practices. (I still think that was a stroke of genius) They had the cool purple lights, which also happened to fit my old Fender amps perfectly. After that, every time I did any "Custom" work on a Fender amp, I would grace it with a "Kustom" purple jewel. Some years later on a parts run down in Detroit, I came across several hundred of them, and that cemented the tradition. By the time the 90's rolled around, they were once again popular and back in production, and so there was never any decision as to which kind of pilot light we should use on the GT-100.

The GT-100 now comes stock with the ability to travel internationally. The back panel is outfitted with a fused Primary voltage selector switch, which is built in to the IEC connector. To adjust for different countries, use a small screwdriver to pry out the square voltage selector cap (shown below) socket. Simply, install the proper fuse rating for your voltage requirements, and rotate the cap until the correct voltage lines up to the triangle marker on the right.



*There are a total of three user accessible fuses for the GT100 for extra protection and safety.*

**IMPORTANT!**

For domestic USA amps there are two (5 AMP SLO-BLO) fuses, one is under the voltage selector cap, and the other is located in the fuse holder marked 5 AMP SLO-BLO. BOTH

of these two fuses MUST get changed to 2 1/2 AMP SLO-BLO for any voltages higher than 120VAC.

***The 1 AMP FAST-BLO fuse remains the same value regardless of input voltage.***

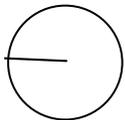
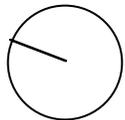
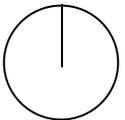
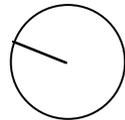
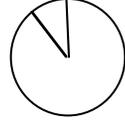
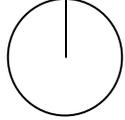
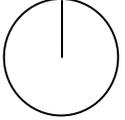
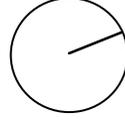
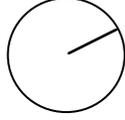
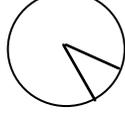
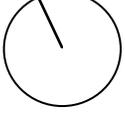
The speaker Impedance switch is shown adjusted for 8 ohms, which the standard setting for a single Guytron GT-212 cabinet. Use a penny to adjust it to the correct impedance for your application. For (2) Guytron GT-212 cabinets, the correct setting is 4 ohms. The speaker jacks are in parallel, so the selector should reflect the total parallel impedance for whatever is plugged into the two speaker jacks. I do know of people deliberately mismatching the amp and cabs, for tonal reasons. An impedance mismatch will cause different harmonic overtones in the output section. It will also lower the power efficiency of the output section. I have endeavored to make the transformers as tough as possible, and I have not seen any come back blown yet. However, It is still a practice that would void your warranty.

### ***About the Sample Settings:***

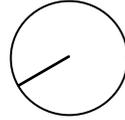
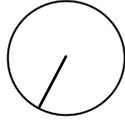
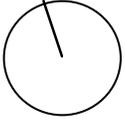
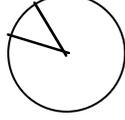
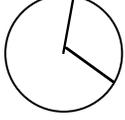
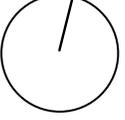
These sample settings are provided as a starting point that steers you towards a certain character of tone, not as proof and comparison study. They were never intended to be exact copies, only functional equivalents. In addition, many things make for an old amps character, old and worn, or even damaged parts sometimes add to the uniqueness of tone. That's what old amps are for!

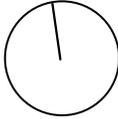
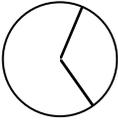
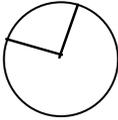
These sample settings were done with a maple neck Telecaster, it was chosen for it's excellent blend of clarity and sustain. It has a light ash body, stock vintage VanZandt pickups, stock wiring with volume and tone were kept full up (to eliminate coloration). We also used, .010 gauge GHS boomers, 18.6' pro-co lifeline guitar cord, and matching Guytron 2 x 12 cabinet. (I mention all these things because they are important factors, and I have found that all things involved influence the production of tone) During the sampling the master tone settings were all at twelve o'clock and it's a good idea to always start there when looking for your tone. The level settings are primarily for relative channel levels but do make a slight difference in tone. The recommended starting point is straight up. Obviously, physics dictate that these can only be an approximation, but in terms of usable tone I believe you'll find that it's like splitting hairs. Only much more fun!

<b>CHANNEL A SAMPLE SETTINGS</b>				
<b>SETTING</b>	<b>GAIN</b>	<b>tone</b>	<b>LEVEL</b>	<b>DESCRIPTION</b>

Silver face Twin				Round & clear with lots of mid coloration
Black face Twin				Round & clear with more clarity and a bit More Presence and drive.
Tweed Bassman/ early 60's Plexi				Lots of clarity rock tone, cleans up well by turning down guitar volume, starts to grind.
Late 60's Plexi				More grind, more upper midrange drive, Makes Humbuckers more clear sounding.
Vox AC30				Brilliant highs, cleans up great, warms up a lot as gain increases, cool sounding Mids. (Sweep Master Treble, Mid, and Bass to taste.)

**Note:** On the Vox setting you can see the differences with using the master tone controls. Some people think it sounds more like an AC30 with the Mids cut and the highs and lows boosted a little, but I sometimes like the opposite settings. You have to decide for yourself, it matters if your playing clean or dirty, loud or quiet, etc.

CHANNEL B SAMPLE SETTINGS				
SETTING	GAIN	STONE	LEVEL	DESCRIPTION
Old Valco amps (see note below)				Clean, sort of borders on cool edge, Kind of muddy But not really, lots of character.
70's aluminum panel				Can you say Kiss? This is a classic type of Overdrive, a must for us!

beefy JMP,JCM				This is more of what you re rockin for!
Over the top Hot / rod Tones				Not for the weak of heart at high volumes, but at very low sound levels it s a great substitute for moving a lot of air.

A little unsolicited history: the unsung "Valco" was an amplifier company based out of Chicago. In addition to the Valco amp line, they also built amps for many other companies well into the 50's, like Supro, and other Hawaiian lap steel amps. When Hawaiian music was all the rage, back in the late 30's and well into the 40's and even 50's. Most "Lap Steel" companies offered a matching amp with their best Lap Steels. Several smaller Lap Steel companies just had Valco make them and put their own name on it. These amps usually had a dark full sound, never totally clean, but often beautiful and colorful tones. They were cool sounding, and certainly one of my favorites for recording, but the speakers were weak! They were almost always blown when they came in the shop.

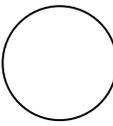
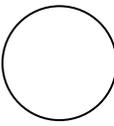
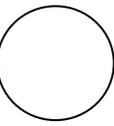
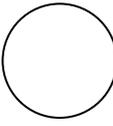
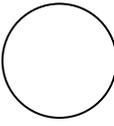
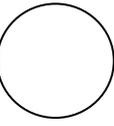
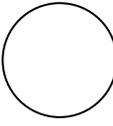
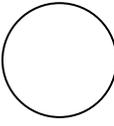
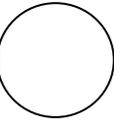
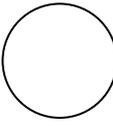
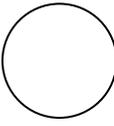
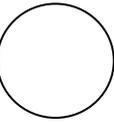
Incidentally, Leo Fender was the exception, starting out in the repair field; he built his own amps, and used "over-spec" speakers anticipating real life stage abuse. So later on, when the kids started using their parents old equipment for this new "Rock and Roll", Fender amps held up much better, and went on to become famous guitar amps. To this day, if you find an old Valco amp, it usually has a blown, damaged, or incorrectly replaced speaker in it. When you tried to replace the speaker, the proper kind was never available, so the amp tone changed drastically for the worse. These kinds of observations, as well as many other proven examples witnessed while running my little repair shop, are the reason Guytron amps will remain "Overbuilt to the Hilt."

## *My GT-100 Sample Settings*

Note: You might like to photocopy this page, you may find it a useful reference. Check out our web page soon, [www.guytron.com](http://www.guytron.com) , for contact with other GT-100 players to trade settings, and exchange good ideas, etc. It's also a good idea keep a folder with external notes sheets, for any external effects, or more descriptive notes, etc.

**Example: Effects Yes/No =( Y ) Effects =( 3 ) See Note # =( 22 )**

*\*\* Effects =( ) is for GT100 front panel setting.*

SETTING	GAIN	TONE	LEVEL	NOTES / DESCRIPTION
Channel A/B ( )  Date:				Master =( ) Treb =( ) Mid =( ) Bass =( ) Pres =( )  Effects Yes/No =( ) Effects =( ) See Note # =( )
Channel A/B ( )  Date:				Master =( ) Treb =( ) Mid =( ) Bass =( ) Pres =( ) <u>Description.</u>  Effects Yes/No =( ) Effects =( ) See Note # =( )
Channel A/B ( )  Date:				Master =( ) Treb =( ) Mid =( ) Bass =( ) Pres =( ) <u>Description.</u>  Effects Yes/No =( ) Effects =( ) See Note # =( )
Channel A/B ( )  Date:				Master =( ) Treb =( ) Mid =( ) Bass =( ) Pres =( ) <u>Description.</u>  Effects Yes/No =( ) Effects =( ) See Note # =( )

## *A note for the digital generation only!*

Settings are most often expressed in terms of old analog clocks. (Yes, I have had to explain this before.) Example: Treble = 12 O'clock means, a straight up knob setting, (↑). Therefore, 3 O'clock would be (⇒), and likewise, 9 O'clock would be (⇐), etc. Just like the hands of an old clock.

## **Tube Basics 101-A**

*What it is to own a tube amp or more notes for the digital generation, and other new tube users .*

### **Introduction:**

As a relative "old timer" in the tube business, I do not get all shook up if I hear a "Pop" or "Crackle" or some "Extra Hiss" now and then, and neither should you. I have however, recently become aware that something as small as this can send "Serious Warning" signals to the uninitiated. One the other hand, and for instance, that same inexperienced tube user might not "instinctively know", that a tube is malfunctioning if the plate glows red, as opposed to the normal glow which comes from the tube's internal heater operation. This is simply due to a lack of exposure on the part of the average new user.

I had not realized this before because I live and breathe this stuff and take it for granted, oops. Therefore what follows is an overdue two page attempt to initiate you to the idea of basic tube troubleshooting. There are some "Tube Basics", or basic realities and skills that I believe every tube amp owner should be aware of and comfortable with. Therefore, I will attempt to arm you with some "Tube Tech" pointers to help you for the next time your tube amp exhibits any weird or scary behavior. It will happen to you eventually, and you may even be able to skip the tech fees next time. In addition, your confidence in your gear will not be as shaken if you possess these basic skills.

Remember, tubes were designed at a time when the average grocery store had a tube tester, and people readily did this sort of thing with their TV sets and radios, after receiving years of faithful service. Troubleshooting tube problems was as common then as hooking up a printer, or phone is today.

### **Common Noises:**

In general, an occasional "Pop or Crackle" does not mean much and are usually nothing to panic about. They can usually be attributed to a dirty socket or corroded pin. Each tube requires a socket which will eventually get dirty some day, if so, do you need a tech to clean it with

spray? Not really. Other symptoms can include increased hiss, signal drop out, gain reduction, weak, lifeless or unusually distorted sound, and can also be the signs of one or more weakening tubes. These symptoms apply to both pre-amp and output tubes.

The good news is that the GT100 was designed to be really easy on tube life. So once you get a good set they should last quite a while. I have made every possible effort to outfit them with a great set from the start, with varying levels of success along the way. It's better than ever right now.

### **More Serious Noises:**

If the pop is accompanied or followed by a fade or drop in power, or a new power supply hum which increases in strength. Then an output tube is most likely failing, and damage is occurring! Quickly check the output tubes, if a plate is starting to spark, glow red, or worse yet "turn orange" hit the standby switch, IMMEDIATELY!

Power supply hum is like the sound of touching the exposed end of your guitar cord with your finger, only not as abrupt, and sometimes with a different pitch.

The plate is the largest gray metal thing inside the bottle. It has a heater running through the center of it which is supposed to glow at each end. However, the plate itself should never have any visible glow except some old Vox's, (and still it's not a good thing)

## **Tube Basics 101-B**

**DANGER! HIGH VOLTAGE!**

### **Output Tube Troubles:**

If an output tube does decide to go bad, you will know it! They carry the most current, and will melt or spark, turn orange, blow a fuse, or stink like burnt components, etc. If the amp smokes, take it to the shop! That's because, the amp only emits real "smoke" if something has been damaged, so the amp may risk being further damaged by continued use. You should at least get it checked out. Thankfully, this has been pretty much unheard of with Guytron amps to date. Power tubes need to be biased properly, or they can be damaged!

### **The GT100 is biased as follows:**

*EL84's = 45 to 50 ma. Per tube. (That's right, the smaller tubes run hotter in this case)*

*EL34's = 28 to 32 ma. Per tube.*

Any internal repairs should only be done by a qualified tech. This technically includes bias adjustment, but it has been done many times by well studied amateurs. However, Guytron assumes no liability what so ever for damages, injuries, bad tones, or otherwise.

### **Pre-Amp Tubes:**

Sometimes the trickiest ones to find are just pesky pre-amp tubes and the noises they will make. They are much more sensitive, so the slightest flaw will show up as extraneous noises. They are also the easiest to fix, as they never need adjustment. And with the GT100 you can freely exchange 12AX7, 12AT7, 12AU7 tubes, and name brands, to benefit from the differing tone and gain structures to customize your tone without modifying the GT100. If you are having a problem, first you have to find it, and there are several approaches which you can even do back stage, if need be.

### **Localize It:**

To find the culprit, first remove the back. **TUBES ARE HOT, SO BE CAREFUL!** Look at the tubes first, remove the metal covers from the 12AX7 tubes, look for whitish color, burnt appearance, or glowing plates, etc. Then turn the amp on setting all the controls half way up. And listen for the offending noise. Gently wiggle the tube in a small circular motion to test the contacts. This will sometimes reveal a corroded or dirty socket connection which can easily be solved with cleaning.

Next start to tap the tubes with a pencil eraser. Sometimes this will reveal an intermittent short or noise that would otherwise take hours to find. It can also reveal coming breakdowns in output tubes as well, so monitor their tap tones as well. If this reveals nothing, then, Substitute tubes!

This is mostly for 12AX7 types which do not require adjustment. Sometimes the most direct way is to swap a given tube with a known good one of equal value. If the swap makes it better, then you got it, if not, replace the original and swap the next one. Go down the line until you have checked each 12AX7. Working with the supplied "Block Diagram", you can begin to see which tube does what, and where, tracking down the noise even faster. Block Diagrams can be a serious helper in locating any problem with any piece of gear.

### **Stage Kit:**

I recommend bringing at least the minimum tubes and fuses to get the amp back running in case of a routine failure, or power surge, drink spillage, etc. To me, it's like having an extra set of strings, or a spare tire in the car! The better prepared you are, the less likely it is that you'll need it.

- Phillips Driver #1 & #2
- Pliers
- EL-34 tubes (2 each)
- E-L84 tubes (2 each)
- 12AX7 tubes (2 each)

And the following fuses:

- 5A-SLO
- 2.5A-SLO
- 1A-FAST.

And, an outlet "ground checker" and a can of contact cleaner.

## GT-100 Engineering Guidelines:

The GT-100 was designed for the working musician at any level of success, decibel level, or in any size room. The GT-100 endeavors to eliminate the need for a "library" of different vintage amps, and the guesswork of which one to use for any particular venue. It has been my experience that when it comes to guitar, nothing beats the sound of a cranked up vintage tube amp. (This has been a common experience confirmed by most veteran players)

Having owned and used virtually all of the most revered and collected amps long enough to get sick of carrying and repairing them, and or dealing with their limitations. I discovered that there were enough similarities between my favorites that it just might be possible to build a vintage styled 'everything' amp. I simply included everything that I truly needed, and excluded everything that I didn't need or want. (Plus I threw in a few dream features like usable channel switching and dual level effects loops!) All of the sounds are available with an absolute minimum of knob turning and tweaking. The amp is a true marriage between old trusted tones and new proven technology and application. Every knob or switch is necessary to address a real musical or functional need, and even these are kept to a minimum. The idea is to have simple operation, a minimum of "Having your back turned to the audience", and a maximum of musical enjoyment.

Also having been an amplifier repairman and modifier as well as professional musician for over 20 years, I designed the GT-100 from a reliability and usability standpoint. Deliberately overbuilt "to the hilt", and with great attention to detail, the GT-100 design incorporates hand wound, paper bobbin, interleaved transformers, top quality tube sockets, metal shaft pots, and high quality "over spec." components throughout. All components are selected with equal importance laid on tone and durability.

Channel switching is done with ultra fast gold plated relays, and the circuit board is laid out for zero cross talk and "planar" signal degradation. Servicing is made simple by easily removable or accessible circuit boards, commonly available tubes and fuses, and can be serviced in minutes on the road by a qualified technician. Hopefully, since every step was taken to avoid failures, this feature will not be utilized. Nevertheless, all connectors and pots can be accessed and cleaned for basic standard maintenance, without removing the circuit boards. (That was always a personal pet peeve of mine back when I was doing repairs)

The cabinet and head are kept separate for a minimum of sound coloration and maximum tube life, and are equal in weight to facilitate carrying and minimize back strain. The cabinet is a sealed back, 8 ohm, 2 x 12" enclosure with an angled front baffle. It was sized, voiced, and configured to produce a smooth resonant frequency and a big clear sound not unlike your favorite 4 x 12. The sealed back pushes 90% of it's sound forward and will sound consistent from room to room. This is important to remember if a strange room gives you difficulty hearing yourself on stage. The recommended configuration is two of the GT-212 cabinets with one GT-100 head, this gets one cabinet up to your ears while the other stays coupled to the floor for a big full tone. To run two cabs, use a penny to set the impedance selector to 4 ohms.

The end result is a full stack that can be carried around in an economy car and can play any gig from a wedding band to a stadium performance with no compromise in tone. The next one will be lighter, I promise. As always, I sincerely hope you enjoy playing through this rig as much as I do.

## ***Warranty***

Subject to the Obligations and Exclusions found below, this GUYTRON product is warranted against manufacturing defects in material and workmanship for the period of one (1) year from the date of purchase, with the exception of tubes, which carry no warranty, and loudspeaker drivers, which are covered for 90 days.

The warranty period commences on the date of purchase by the original user. Performance under this warranty must be obtained at one of the following: a GUYTRON Authorized Service Station, by returning the unit to the GUYTRON factory with prior authorization, or (in countries outside of the United States) by a representative GUYTRON

distributor. A list of GUYTRON Authorized Service Stations can be obtained from Guytron at any time.

### **Obligations**

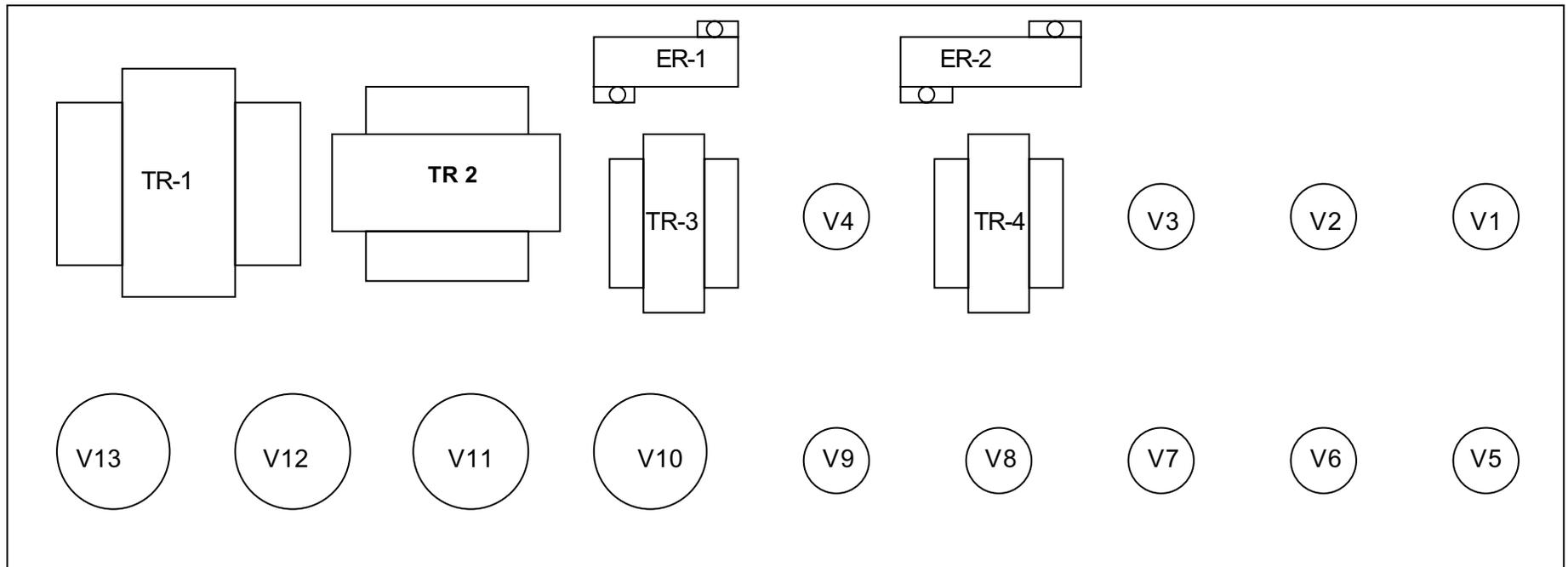
1. This warranty will be honored only on the presentation of the original proof of purchase.
2. Transportation of the product to the service station or GUYTRON factory is the responsibility of the user unless specifically stated otherwise in this warranty. GUYTRON will pay for return shipping charges if the repairs are covered by the warranty.

### **Exclusions**

1. This warranty shall not cover adjustment of customer-operated controls as explained in the appropriate model's instruction manual, or products that have been altered, replaced, or have missing serial numbers.
2. This warranty shall not apply to the appearance of accessory items including, but not limited to, cabinets, cabinet parts, or knobs.
3. This warranty does not apply to uncrating, setup, installation, or the removal and reinstallation of products for repair.
4. This warranty shall not apply to repairs or replacements necessitated by any cause beyond the control of GUYTRON including, but not limited to, any malfunction, defects, or failure caused by or resulting from unauthorized service or parts, damaged or broken tubes, incorrect line voltage, improper maintenance, modification or repair for the user, abuse, misuse, neglect, accident, fire, flood, or other Acts of God.
5. This warranty shall not apply to any loudspeaker drivers that have been damaged due to thermal destruction, or physical destruction such as moisture, rips, tears, shock, or transport.
6. Responsibility for any repair of any GUYTRON product sold outside of U.S. boundaries is borne by the GUYTRON representative in that particular country or territory. Also, the warranty term and conditions may be different from those stated above. Please contact the GUYTRON distributor or dealer in your country for more information.

The foregoing is in lieu of all other expressed warranties, and GUYTRON does not authorize any party to assume for it any other obligation or liability. In no event shall GUYTRON be liable for special or consequential damages arising from the use of this product, or for any delay in the performance of this warranty due to causes beyond our control. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of consequential damages, so the above limitations on implied warranty and consequential damages may not apply to you. This warranty gives you specific legal rights. You may have other rights that vary from state to state.

## GUYTRON GT-100 TUBE LAYOUT



### REAR PANEL OF AMP

#### GT-100 TUBE COMPLIMENT:

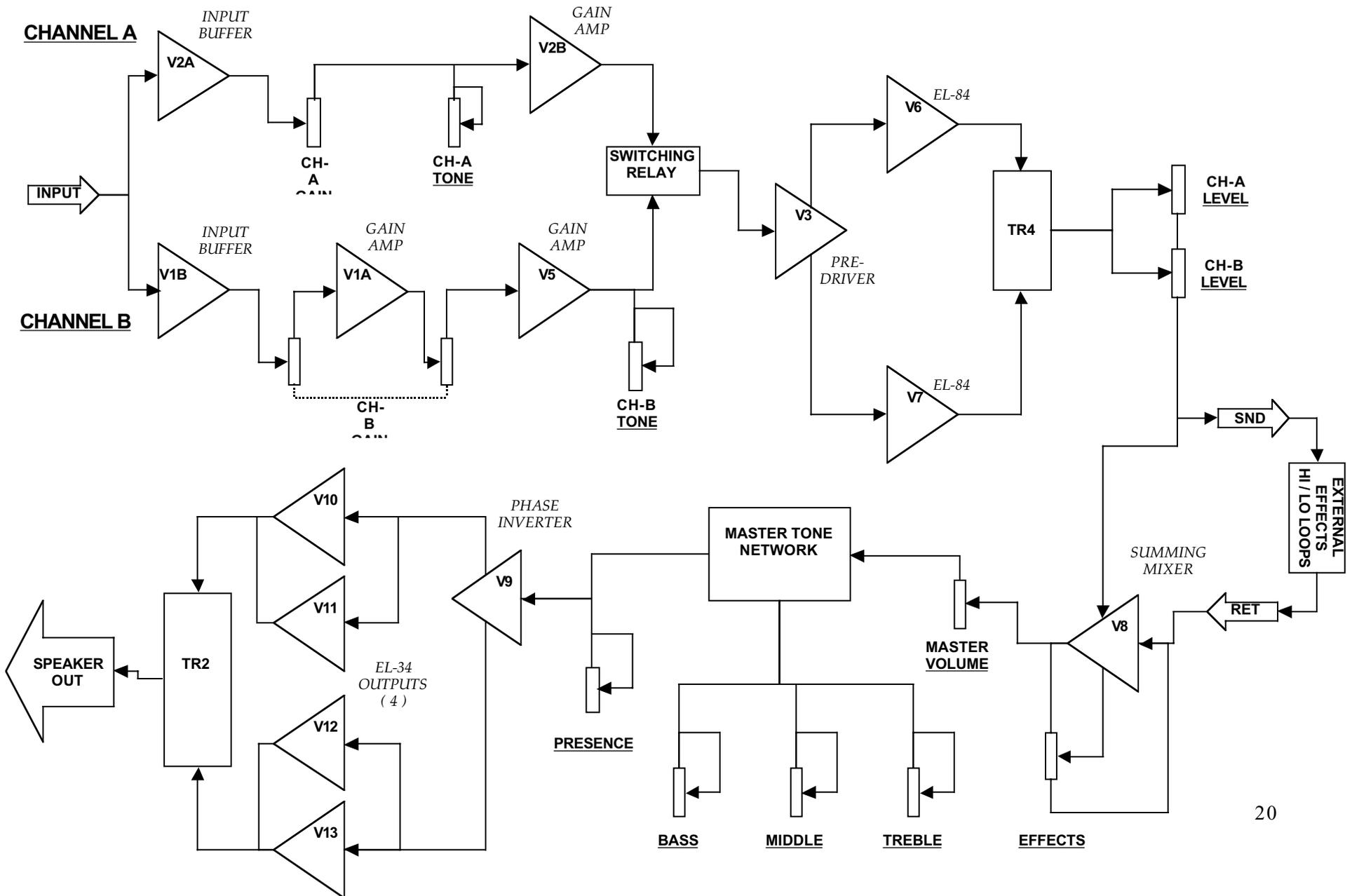
V10, V11, V12, V13 = 6CA7/ EL-34 -Some modification required, but can be substituted with 6550/ KT-88, 6L6/ KT-66

V6, V7 = 6BQ5 / EL-84

V1, V2, V3, V4, V5, V8, V9 = 12AX7A/ ECC83 - 12AX7 tubes may be substituted with 12AU7, 12AT7 with this circuit

**CAUTION:** All Tubes, as well as ER-1 and ER-2 normally run hot, DO NOT TOUCH until after allowed to cool down!

# Guytron GT-100 Block Diagram And Signal Flow Chart





**Please fill in for future reference:**

**Model Number:**     GT-100

**Serial Number:**     \_\_\_\_\_

**Purchase Date:**     \_\_\_\_\_

**Dealer s Name:**     \_\_\_\_\_

**Dealer s Address:**    \_\_\_\_\_  
\_\_\_\_\_