



44 Fairfield Street
Buffalo, New York 14214-2004
(716) 832-7974

G 1 A and G 1 B GUITAR AMPLIFIERS

OWNER'S MANUAL

NOTE: PLEASE READ THIS MANUAL

If you don't, you will probably waste much more time than it takes to read the manual.

Study the instructions and the block diagram. They will help show you a logical, straightforward approach to obtaining the sound you want, with a minimum amount of noise, mistakes, and frustration.

Revised 11/3/86

SAFETY RULES

1. To prevent electric shock, do not open the unit. There are no user-servicable parts inside the unit. Refer servicing to qualified technicians.
2. To prevent fire or shock hazard, do not expose the unit to rain or excessive moisture.
3. Use a grounded outlet whenever possible. A shock hazard may otherwise result, especially when the unit is connected to other equipment.
4. Always be certain that the voltage selector switch is in the correct position before connecting the AC power source and before turning the power on.
5. Do not operate the unit in an excessively hot environment - permanent damage may result. It is designed to operate in ambient temperatures of up to 120 degrees F (49 deg.C). If you are using the unit in an equipment rack in conjunction with other heat-producing equipment, we recommend adding a cooling fan.
6. Do not connect speakers totalling less than 4 ohms impedance. Under some circumstances, such as very clean and "punchy" playing styles, it may be practical to drive loads as low as 2 ohms, but always consult the factory before doing so. There are no problems created by using the amplifier without a speaker connected.

PEARCE ELECTRONICS, INC. WILL NOT BE RESPONSIBLE FOR DAMAGE
DUE TO VIOLATION OF THESE SAFETY RULES

TWO YEAR LIMITED WARRANTY

Pearce Electronics, Inc. warrants the G1 to be free from defects in materials and workmanship, and agrees to repair or replace any unit that fails to perform as specified for a period of two years after the date of purchase. Send in the Warranty Registration Card (last page) within two weeks of your purchase in order to validate this warranty. Please consult the factory for return authorization on any unit requiring repair. You are responsible for paying postage to return the unit to us; we will pay the postage for returning the repaired unit to you. You must save all of the packing materials in which your amplifier was delivered in order to make any return shipments.

This warranty shall not apply to:

1. Units which have been subject to misuse, negligence, accident, or used otherwise than in accordance with the instructions provided by Pearce Electronics.
2. Units which have been repaired, modified, or tampered with by persons not specifically authorized by Pearce Electronics.
3. Speakers, which are covered separately by the specific manufacturer's warranty.

Furthermore, Pearce Electronics reserves the right to make any improvements in the design or construction of its equipment without any obligation to make any change whatever in units previously delivered.

Write your unit's serial number here for future reference: 1277

OPERATING INSTRUCTIONS

First and foremost, please be both patient and adventurous when searching for new sounds. Considering the great variety of sounds the G1 will produce, every setting may not give the most desirable results. The purpose of this manual is to help you to find the settings that work best for your style of playing. There are 3 basic operating modes most commonly used with the G1. Decide which mode is most appropriate, then follow connection instructions (-->).

MODES OF OPERATION

I. NORMAL 2 CHANNEL (UNSWITCHED) MODE

Without a footswitch connected, both channels are active. Using "Ch1" and "Ch2" inputs, the G1 can be used in a manner similar to most other 2 channel (non-channel switching) amplifiers - keeping in mind the two "master" VOLUME controls, and 3 REVERB controls.

~~By using the "Ch1+Ch2" input, this mode can also be used to blend both channels together to obtain a "thicker" sound, or for adding effects or reverb to only a portion of the sound. For example, you could dial in a very sustained, "trebly" sound, with lots of reverb and chorus on channel 1, and blend it with a very punchy sound with lots of bass on channel 2. Be sure to turn the DRIVE and VOLUME controls on any unused channel to "0".~~

--> Connect instrument(s) to appropriate input jack(s). Proceed with "Getting a Sound", pg. 4.

II. MONO SWITCHED MODE

This is the most commonly used mode - switches a single, mono wired instrument to either of the two channels. Effects devices inserted into OUT TO EFFECTS - IN FROM EFFECTS jacks will be switched in and out along with their respective channel. Effects devices inserted into LIMITER OUT - PWR AMP IN jacks will function on both channels.

--> Connect instrument to "Ch1+Ch2" input jack and connect footswitch to CHANNEL SELECT FOOTSWITCH jack. Proceed with "Getting a Sound", pg. 4.

III. STEREO SWITCHED MODE

Each channel has its own input, effects devices are switched the same as in Mono Switched Mode. Use this mode with 2 separate instruments, guitars with stereo outputs, or double neck guitars with separate output for each neck.

--> Connect instrument(s) to "Ch1" and "Ch2" input jacks. Connect footswitch. Proceed with "Getting a Sound", pg. 4.

NOTE: There are several other modes of operation available to the G1 owner. These include: driving one channel into the other, driving a "slave" amplifier/speaker with one or both channels for stereo effects, etc. "Sound Charts" are included at the end of this manual to give you a head start on some of the more popular control settings. Refer also to the section on "Patching and External Effects".

GETTING A SOUND

1. After connecting instrument(s) and footswitch, decide which channel will be used to produce the most sustain/distortion (usually channel 1), and select that channel with footswitch (or plug-mounted channel switch). Start by centering BASS, MIDRANGE, and TREBLE controls, then set VOLUME control to about "2". Set mode (BOOST/NORM) switch to NORM and increase DRIVE control until you get the desired amount of sustain and distortion. If DRIVE setting of "10" doesn't give you enough "balls", lower DRIVE setting to "0", set mode switch on BOOST, and increase DRIVE setting again. Now you can use DRIVE to adjust the basic tonality, and VOLUME to adjust the loudness.

--> NOTE: This procedure assumes that you desire at least a small amount of "tube distortion". If you want a "clean as possible" sound, instead of the procedure in step 1, start with VOLUME control at about "8" ("10" if you also want it as loud as possible, but still clean) then increase DRIVE control to obtain the desired loudness. BE SURE TO START WITH DRIVE CONTROL AT "0" and gradually increase. Also consider using the limiter (page 5, step #6).

Note also that the VOLUME setting can affect the power output; the VOLUME control must be set to at least "7" (approximately; higher when using the limiter) to obtain full output power.

2. The "Ch1+Ch2" (middle) input has been provided with a +/-10 dB gain switch to compensate for instruments with very high or very low output voltage.

A. Test for input overload: Select a channel, set the mode switch on NORM, the DRIVE control to about "3", then set the volume and tone controls on the instrument to maximum. Bang out a few chords while setting the VOLUME control to a reasonable level. If you notice a nasty crackling, set the +/- switch at "-10 dB". Also note that some instruments with active electronics can overload themselves - especially when the batteries are getting low.

B. If you don't get enough "balls" even with the DRIVE control at "10" and the mode switch on BOOST, try setting the +/- switch at "+10 dB".

If you don't encounter either of these two problems, leave the +/- switch set at "0"; all three inputs will then have the same gain.

3. Adjust BASS and TREBLE controls to taste. Experiment with MIDRANGE and FREQ controls - MIDRANGE controls the amount of boost or cut, FREQ controls what portion of the musical scale is most affected by the MIDRANGE control (over a 5 octave range). Refer to the block diagram on page 8. Note that:

A. MIDRANGE is a boost/cut control, therefore, if this control is centered ("0") the FREQ control will have no effect.

B. The MIDRANGE controls are before the distortion circuit. Thus, the MIDRANGE and FREQ controls will influence which notes distort the most in proportion to other notes. For example if the MIDRANGE is set at "+5" and FREQ is set at "100 Hz", the low notes will be much more distorted than the high notes. In this manner, these controls can be used to make a portion of the scale distort/sustain less (MIDRANGE -5 to -1) or more. (MIDRANGE +1 to +5).

Also note that after setting the MIDRANGE and FREQ controls, the DRIVE control may have to be readjusted to maintain the proper amount of distortion/sustain.

PEARCE G1 OWNER'S MANUAL

GETTING A SOUND - cont'd

4. Switch to the other channel and repeat steps 1, 2, and 3 for that channel.
5. Decide which channel will have the most reverb, switch to that channel, and set that channel's REVERB (send) control to about "8". Set the MASTER REVERB (return) control for the desired amount of reverb. Switch to the other channel and adjust that channel's REVERB (send) control for desired amount. Your goal is to always use the most "send" and the least "return" possible. This will insure the lowest noise and the highest immunity from "reverb crash" when the unit is accidentally bumped or vibrated.

--> NOTE: If you are not using reverb, turn all 3 REVERB controls to "0"

6. LIMITER: The limiter is used for two main purposes: to allow cleaner sound at higher volume, and to increase sustain, especially with a clean sound at moderate volume. The THRESHOLD control acts as a "maximum power" control; when it is set at "-9", the maximum output is 1/8 of full power; at "+8" the power amp can be overdriven by 2:1, (with a 9 or 10 VOLUME setting).

To limit distortion at maximum playing volume, set the THRESHOLD control at about "0" to "+6" (the higher the VOLUME setting, the lower the THRESHOLD setting you will need to use.). To add sustain, increase VOLUME setting (on the correct channel!) and set THRESHOLD according to maximum volume desired. Increasing the VOLUME control will then start to have less effect on loudness, but it will increase sustain. The THRESHOLD control will start acting like a volume control. Some juggling of the THRESHOLD and VOLUME controls should result in the proper combination of level and sustain. Note that, since distortion adds a lot of compression of its own, the limiter will have much less effect with a highly overdriven sound.

PATCHING & EXTERNAL EFFECTS

In general, the most useful way to approach connecting the G1 to other devices is to consider it as a group of interconnected "building blocks", i.e. the input mixer, the two preamplifier sections, the output mixer, the reverb section, the limiter, and the power amplifier. Careful study of the block diagram should allow you to find a way of connecting external devices to achieve excellent results.

There are several ways that effects devices are most often used with the G1. First is the usual arrangement of using the effect between the instrument and the amplifier. This configuration can lead to increased hum and noise, as well as degraded treble response due to the effect(s) loading the instrument. Using one of the G1's three effects loops should improve the performance. If you want the effect(s) to function on both channels, use the LIMITER OUT and PWR AMP IN jacks. If you want the effect(s) to be automatically switched in and out along with the channel, use the appropriate OUT TO EFFECTS and IN FROM EFFECTS pair of jacks. These jacks are "normalled" together - the signal normally flows right through the jacks, but you can interrupt the signal flow by inserting a plug.

All three pairs of jacks are normalled together in the same manner - inserting a plug into the upper jack will not break the normalling connection and inserting a plug into the lower jack will break the normal. This configuration of the effects loop jacks can be used to accomplish several things:

PATCHING & EXTERNAL EFFECTS - cont'd

1. To use with effects, simply connect a cable from the LIMITER OUT, or one of the OUT TO EFFECTS jacks to the input of the effects device. Connect another cable from the output of the device to the appropriate IN FROM EFFECTS or PWR AMP IN jack. Note that this second cable breaks the normal connection.
2. To drive a slave amp/speaker or P.A. mixer use the LIMITER OUT jack. This output will drive an external 600 ohm line without interfering with the normal operation of the G1. If you wish to drive an external device, mixer, etc. with only one channel, use the appropriate OUT TO EFFECTS jack. Note that this leaves the normal connection intact.
3. The two OUT TO EFFECTS jacks can also be connected to a stereo power amplifier (or one of them connected to a mono power amp) in order to end up with a full stereo system. Note that the reverb signal is not present at these outputs. One of the most common connections is to patch channel 1 to a separate amplifier and speakers for leads. (insert a "dummy" plug into Channel 1's IN FROM EFFECTS jack to prevent Channel 1 [lead] from feeding the G1's power amp [rhythm]) Then the reverb, limiter and power amplifier sections will operate on channel 2 (rhythm). Also note that any REVERB added on the lead channel (1) will appear on the rhythm channel (2) speakers.

There are many other patching configurations that can be created using your imagination and resourcefulness. Consult us regarding any questions you may have.

GENERAL NOTES:

1. The G1 is equipped with 2 different kinds of distortion. Channel 1 features a circuit which is optimized for most solo applications. This distortion, when used at high drive levels, has a smoother sound, most similar to a highly overdriven tube amp. The distortion in Channel 2 is designed to emphasize even harmonics, thereby producing a warmer, softer sound (when used at moderate drive levels). It is especially useful for Jazz and rhythm applications. Note, however, that both channels still have BOOST and NORMAL modes, and you should experiment with several combinations to determine which works best for you.
2. The effects loops are intended for use at "line level", and with devices having approximately unity gain. The voltage level at all three sets of patching jacks is about 0.1 volt to 1 volt nominal (-18 to +2 dBm). It may go as high as 8 volts (+20 dBm), especially when using the limiter with the VOLUME controls set very high. Check to see if this causes excessive distortion in the effect. Many effects devices are now being designed with internal line/instrument level switches. Some also have input attenuators (pads), which should be able to prevent distortion, but they might not have output level controls which allow them to make up for gain lost by the input pad. Check to see if your effects have these features; if not, many devices can be easily modified.
3. The most common problems associated with equipment of this type are related to jacks, switches, controls, etc. - not transistors, I.C.'s, etc. Periodically (weekly to monthly) clean the plugs on your guitar cords with contact (TV) cleaner (available at Radio Shack, etc.). Spray a small amount on a plug, and repeatedly insert it into each of the input and patching jacks. It is also a good idea to periodically flip all of the switches several times and rotate all of the controls through their range (especially the ones you never budge).

PEARCE G1 OWNER'S MANUAL

NOTES - cont'd

4. There are some effects devices which must be used in a certain position in the signal path to produce the desired effect. For example, the addition of an external compressor is usually intended to smooth out the attack and add sustain without adding distortion; it must be used between the instrument and the amplifier in this case. Equalizers, phasers, flangers, etc. will have more effect than usual when used in the effects loops because of the harmonics which have usually been generated by the G1's distortion circuit. These harmonics give the effects device a more complex signal to operate on. We doubt you will ever need to use an external distortion device with the G1; the complete control of distortion and tone is one of the main benefits of the G1's full-feature, 2 channel system.
5. All effects loops are located after the "master" VOLUME controls. The VOLUME control will not affect signals coming from the effect. To control the level in some situations [for example, when using infinite hold on a digital delay], you will have to use the output control provided on the effect, or use a volume pedal, etc. after the effect.
6. When using Channel 1, you may notice a drop in volume when going from "NORMAL" to "BOOST"; conversely, there is an increase in volume when going from "BOOST" to "NORMAL". This "backwards" gain shift helps reduce noise at high drive levels. Simply use the Channel 1 master VOLUME to compensate.
7. The reverb "pan" (mounted in the top of the G1 amplifier unit) is very sensitive to buzz caused by external magnetic fields. When using the G1 mounted in a rack, take care not to place the unit directly below another piece of equipment, especially one with a large power transformer (power amp, etc.) The G1's own power transformer is specially shielded to prevent interfering with the reverb.
8. The best load impedance for the G1 to operate at is 4 ohms. Operating the unit at higher impedances will cause no harm, but the full 110 watts will not be available. 4x12 cabinets, such as Marshall "stacks" can usually be rewired very easily to obtain optimum results. Using the unit with a single 8 ohm 12" speaker, and adding an extension speaker (also 8 ohms) for larger venues is also a relatively efficient use of the G1's power.
9. Squeals, thumps, etc. occurring several seconds after the amplifier is turned off are normal, and will not excessively stress the amplifier or speakers.
10. Stick-on rubber feet are provided with the G1B. Install them on the G1's bottom if you will be placing the unit on top of other equipment (not in a rack).
11. Pay close attention to the guitar cords you are using. Excessive cord capacitance can cause loss of treble frequencies, and a marked change in tone. Guitars with active electronics, direct boxes, and wireless systems can help alleviate this problem.
12. Our factory offers a number of custom modifications for the G1, some of which are: a reverb or limiter footswitch, the addition of extra loops at various points in the signal path, AC power outlets, changes in the tone control frequencies, etc. (Consult the price list for a breakdown of the standard configurations). Call or write for cost estimates, "down time", etc. We are genuinely interested in hearing about any problems you encounter, or any ideas you may have for new applications.



NOTES :

CHANNEL 1:

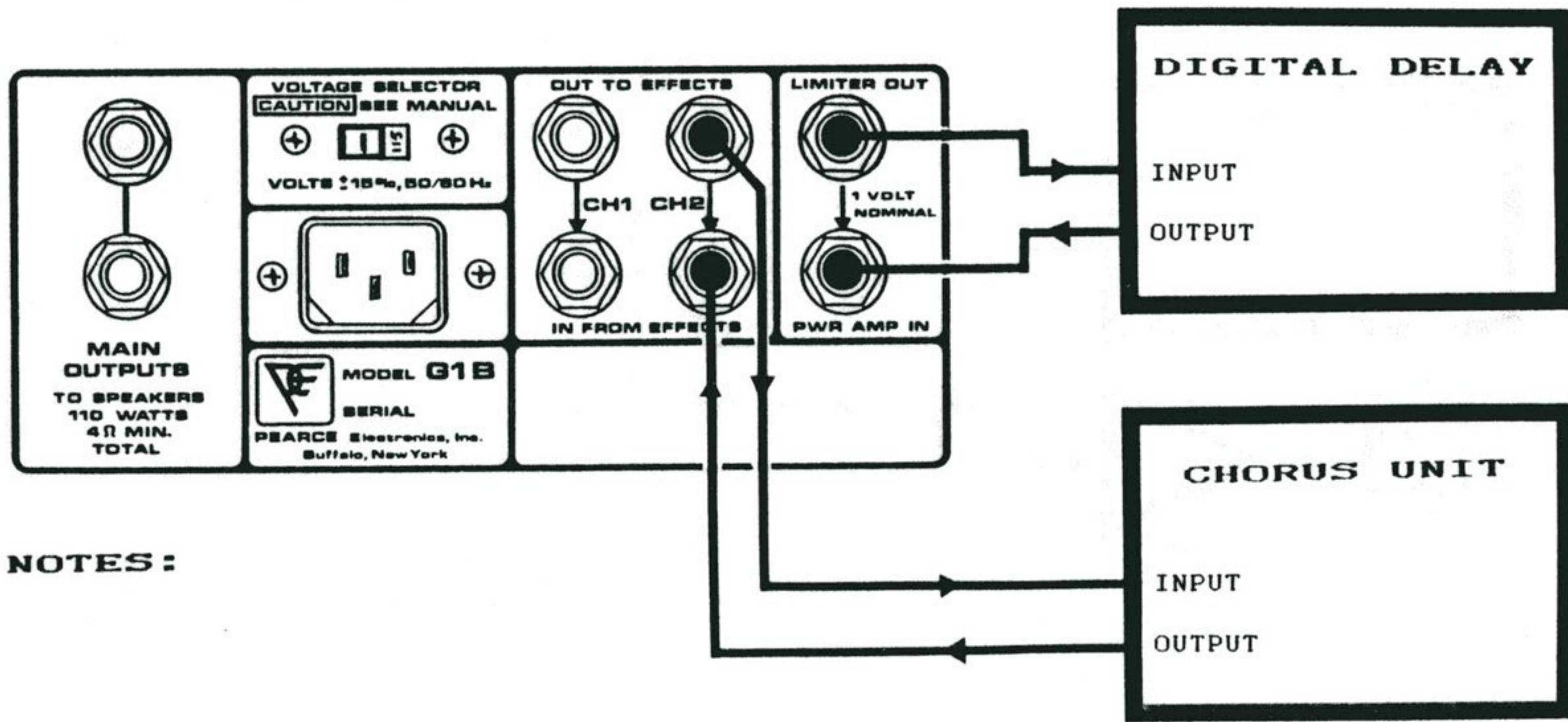
The setup shown here on channel 1 is a basic rock overdriven sound, suitable for solos on a "Strat" type guitar. The VOLUME setting will, of course be dependent on how loud you wish to play - an approximate range is shown.

CHANNEL 2:

The setup shown here on channel 2 is appropriate for a "Funk" type rhythm sound, and should work with the same guitar and the same settings on the guitar used in the channel 1 example above.

EFFECTS DEVICES :

The chorus unit shown patched into channel 2 will function on that channel only. The Digital Delay Line (DDL) shown patched into the LIMITER OUT -PWR AMP IN loop will function on both channels. It may have to be re-adjusted for each channel for best results.

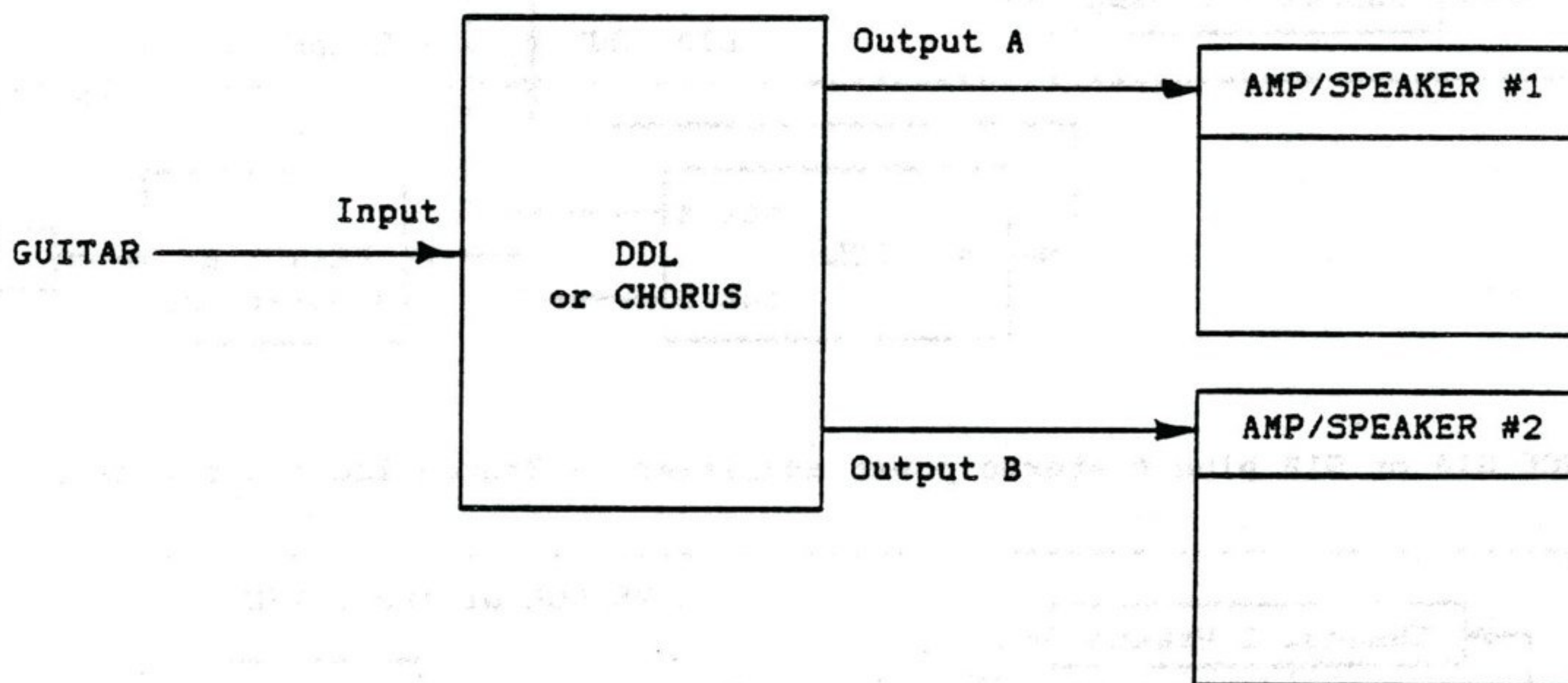


NOTES :

G1 SOUND EXAMPLES-

USING the PEARCE G1 for STEREO

There are actually several different meanings to the term "stereo" as it applies to guitar amplification. It is possible to use a complete two channel system to amplify two different pickups on the same guitar, bass, Stick, etc. or even two separate outputs from a double neck. The most common arrangement, however, is to use a stereo chorus, or digital delay line (DDL) to produce a stereo image from a mono input. This is usually accomplished in the following manner:



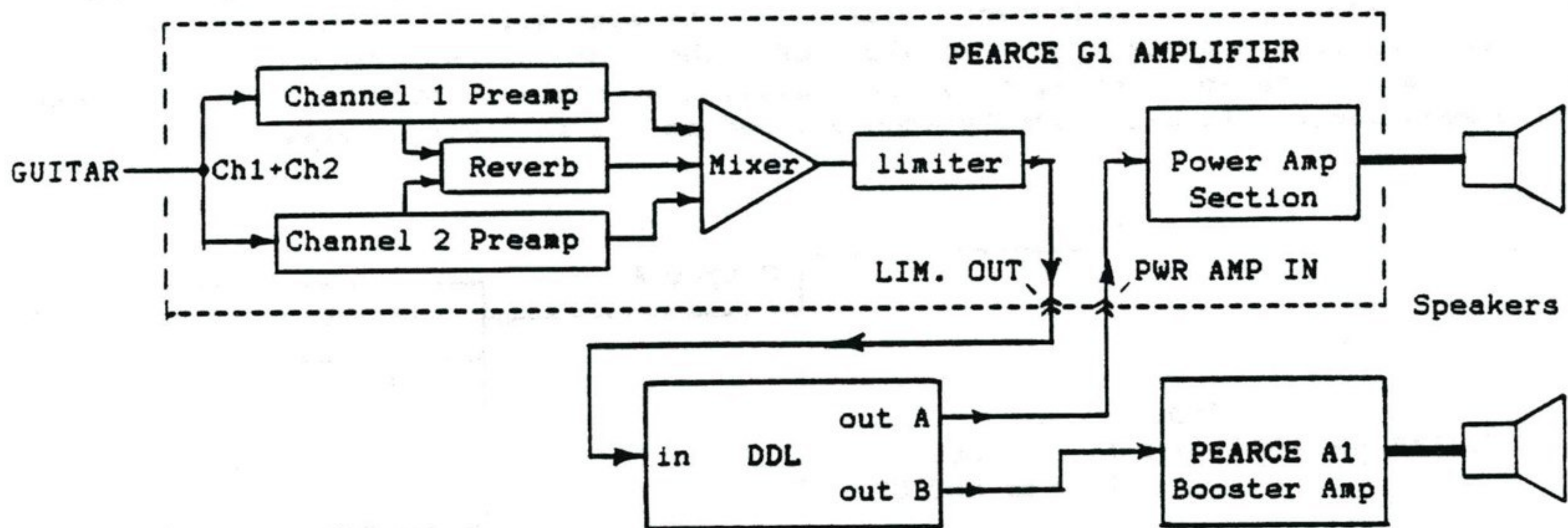
There are three common ways of improving the efficiency and performance of this arrangement by using the PEARCE G1 as the basis of the system. These illustrations all are based on the method of using a DDL or stereo chorus (with one input and two outputs) to generate the stereo effect. - NOTE: The DDL must be useable at line level (+4 dBm). Almost all rack-mount effects meet this requirement.

1. Add a PEARCE A1 booster amplifier and another speaker cabinet to provide the second channel. This allows you to use the G1's channel switching capability, and both the leads and rhythms will be delivered in stereo (unless you use the bypass switch on the DDL!).
2. Use the G1 as a preamp in conjunction with an external stereo power amplifier and two speaker cabinets. This allows you to use a power amplifier of any size to power your system, and the G1's power amp is available as a backup, or for smaller gigs where stereo is not desired. There are no problems caused by using the G1 without a speaker connected.
3. Use the G1 with an external stereo amplifier and three speakers. This provides stereo rhythms and mono leads (with speakers optimised for each application). The channel switching in the G1 will take care of routing the proper signals to the proper amp/speaker combination. The limiter and reverb can also be assigned to the rhythm channel only using this method (the lead channel REVERB control must be set to "").

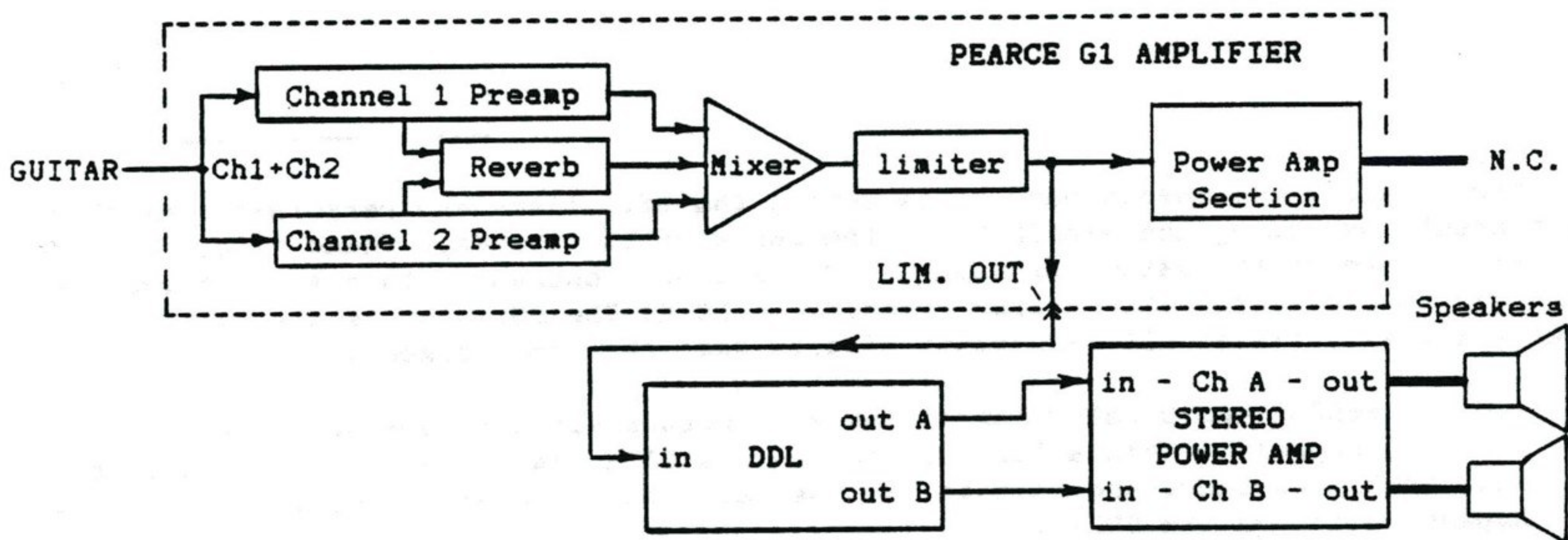
See the other side of this page for diagrams of these hookups. Hopefully, these illustrations will get you thinking on the many other possibilities for complete amplification using the PEARCE G1.

USING the PEARCE G1 for STEREO

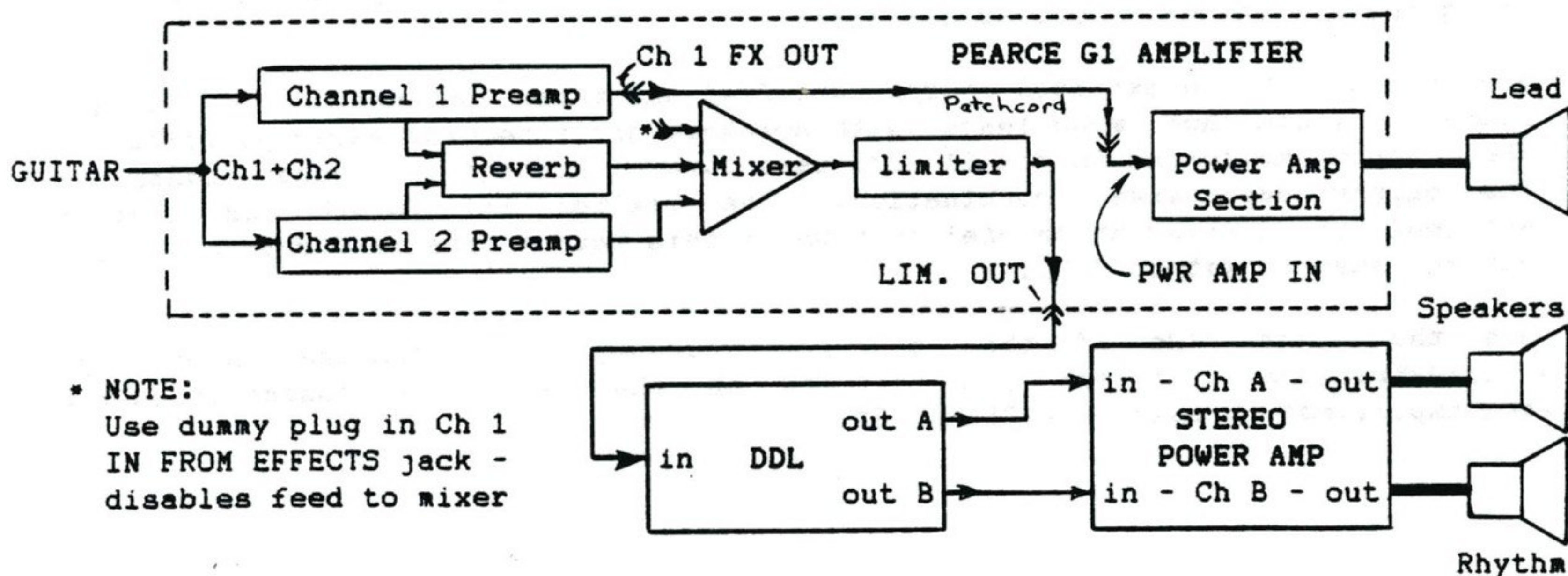
1. PEARCE G1A or G1B plus PEARCE A1 booster amp. - Stereo leads & rhythms.



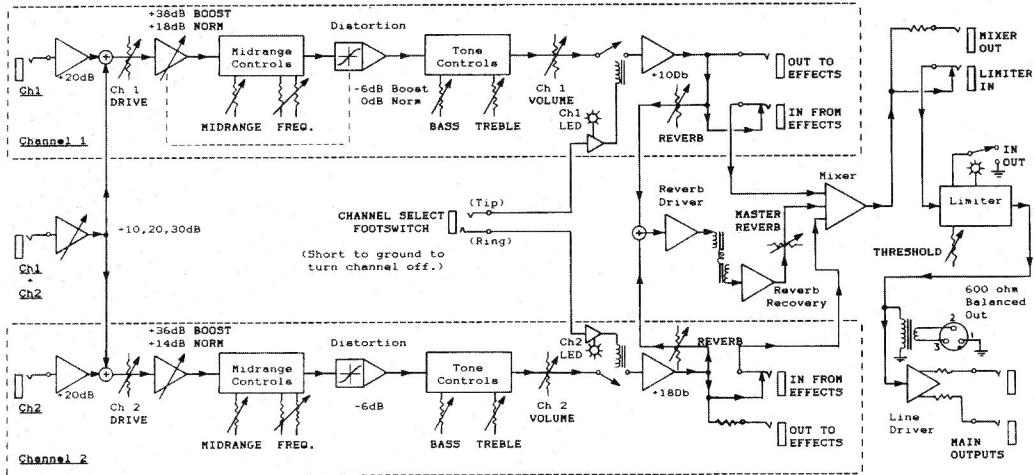
2. PEARCE G1A or G1B plus a stereo power amplifier. - Stereo leads & rhythms.

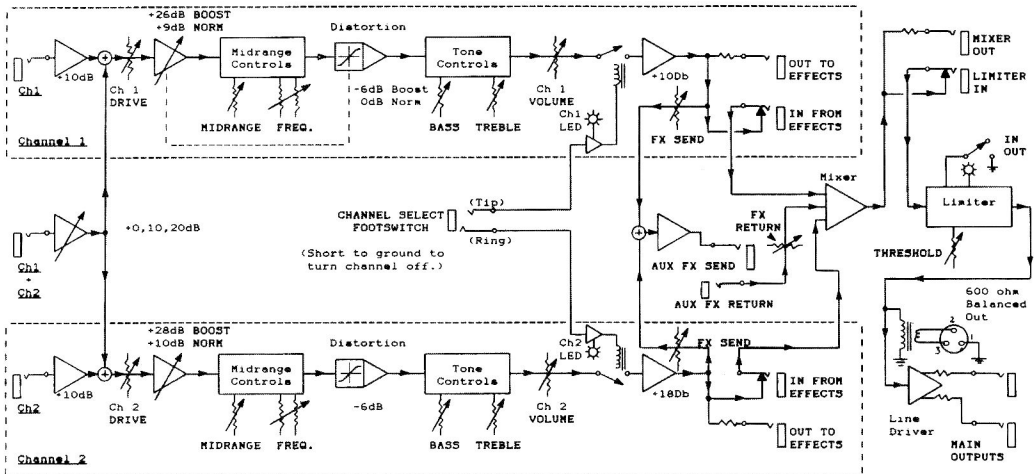


3. PEARCE G1A or G1B plus a stereo power amplifier. - Stereo rhythms with reverb & limiter, mono leads with different speaker(s).



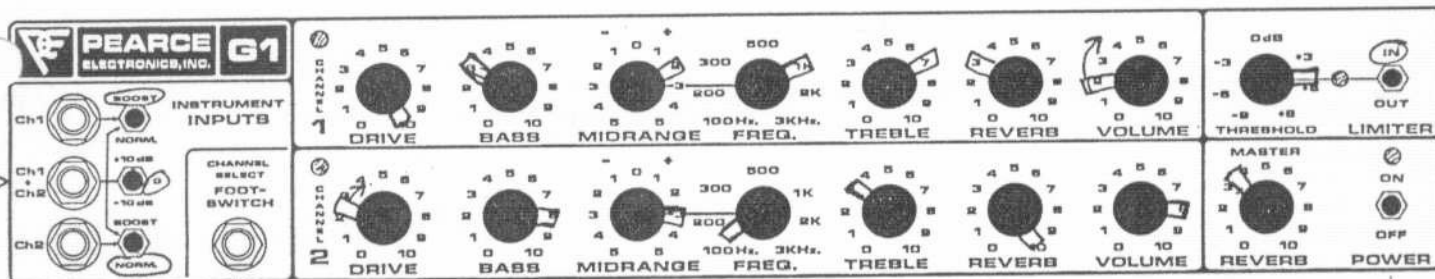
* NOTE:
Use dummy plug in Ch 1
IN FROM EFFECTS jack -
disables feed to mixer





SAMPLES

G1



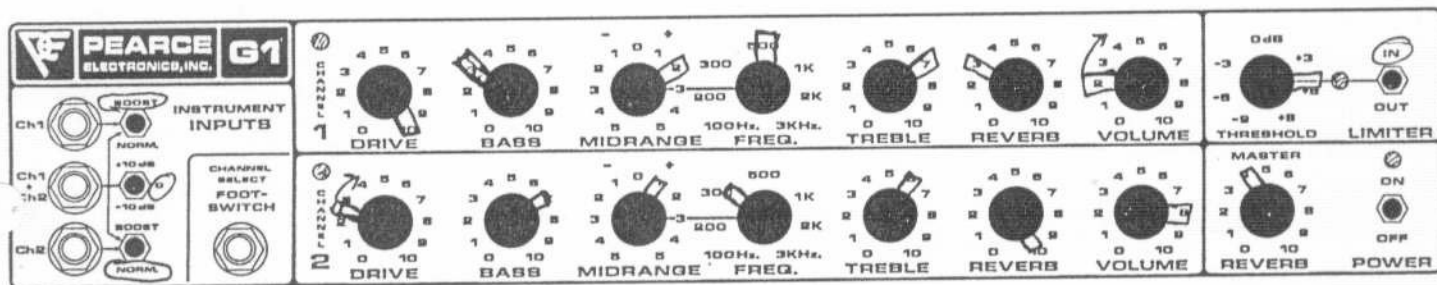
NOTES:

FS

CH 1: "Eighties" Rock sound- lots of upper range distortion + harmonics

CH 2: Warm "boxy" jazz type of sound - clean

EFFECTS DEVICES:



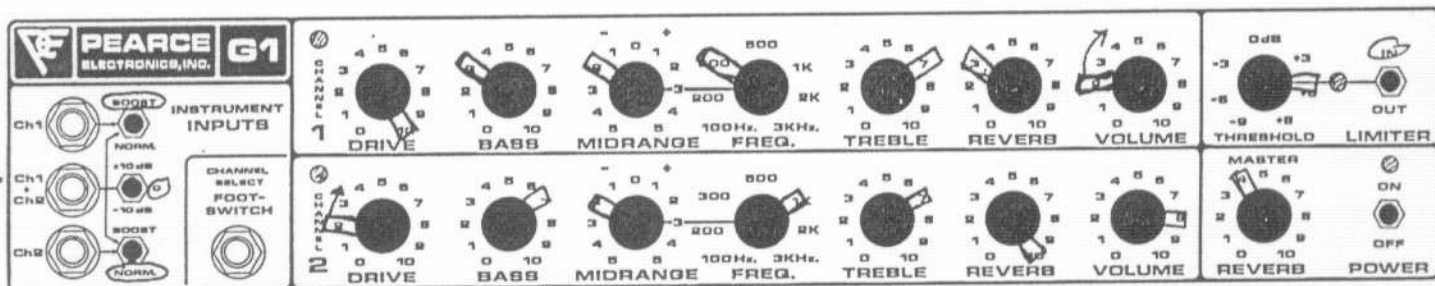
NOTES:

FS

CH 1: Round Smooth type of VanHalen-esq "brown" tone

CH 2: Full, rich, thick clean sound

EFFECTS DEVICES:

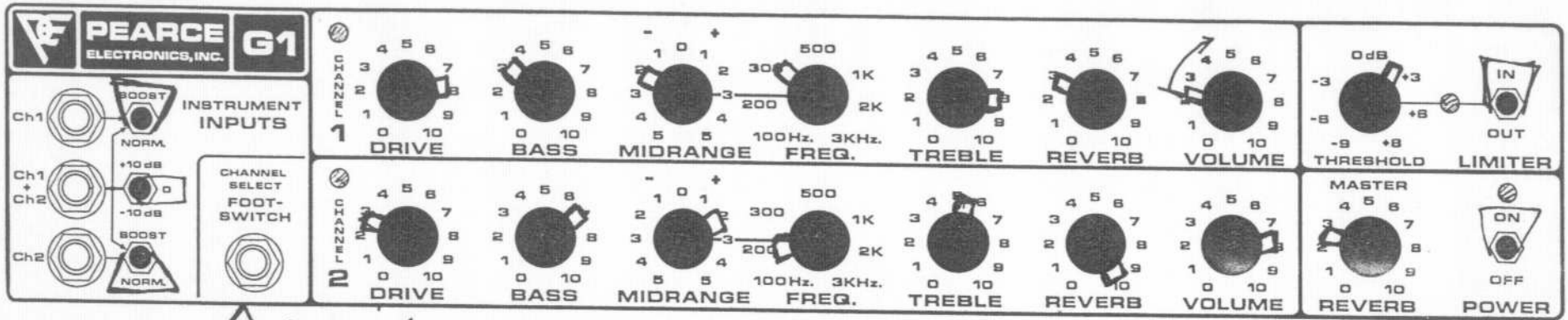


NOTES:

CH 1: FS Dry, less distorted "English" Rock sound

CH 2: Crisp, Twangy, Fender Twin-like clean

EFFECTS DEVICES:



INPUT

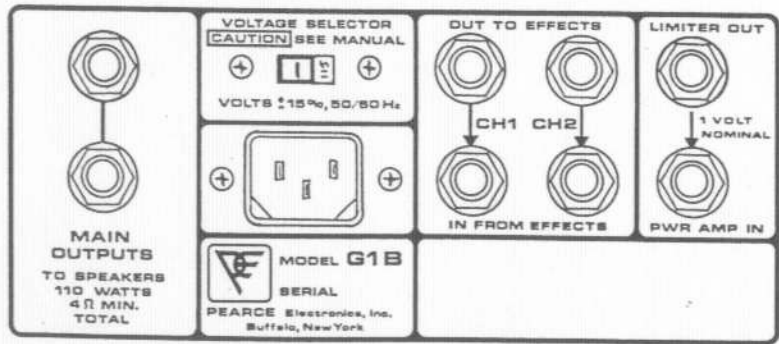
↑ Footswitch

NOTES:

CH 1: Marshall-ish crunch rhythm/lead sound

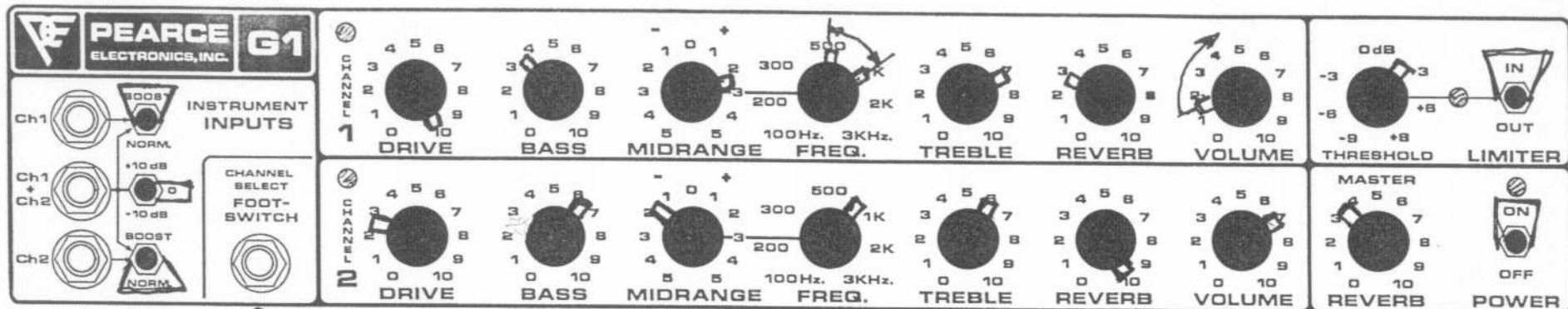
EFFECTS DEVICES:

CH 2: Jazz y boxy sort of clean sound



NOTES:

-G1 SOUND CHART-
for PEARCE
Model G1A and G1B

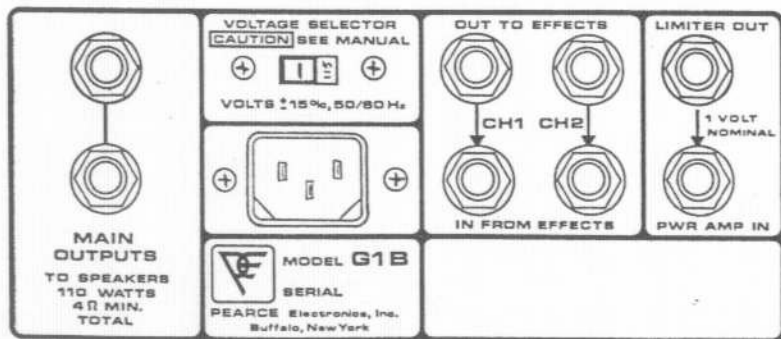


NOTES:

Footswitch
CH 1: Lots of distortion, very harmonically enriched

EFFECTS DEVICES:

CH2: Sort of Fender Twin-ish.

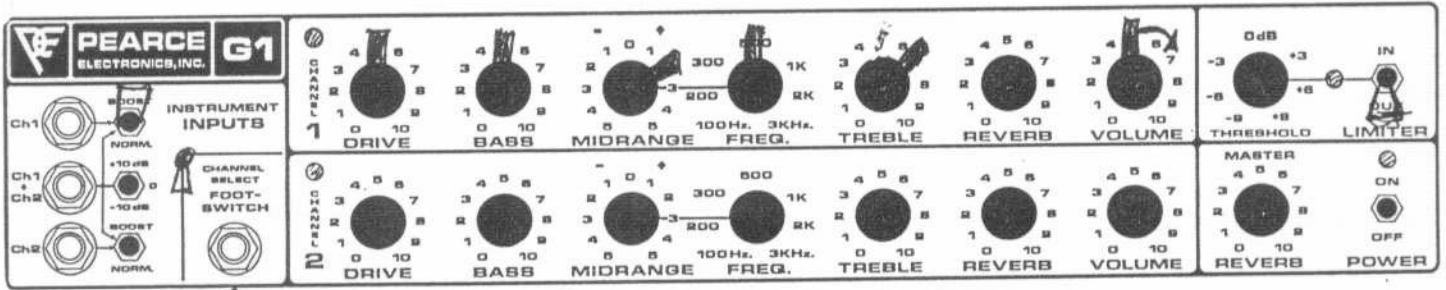


NOTES:

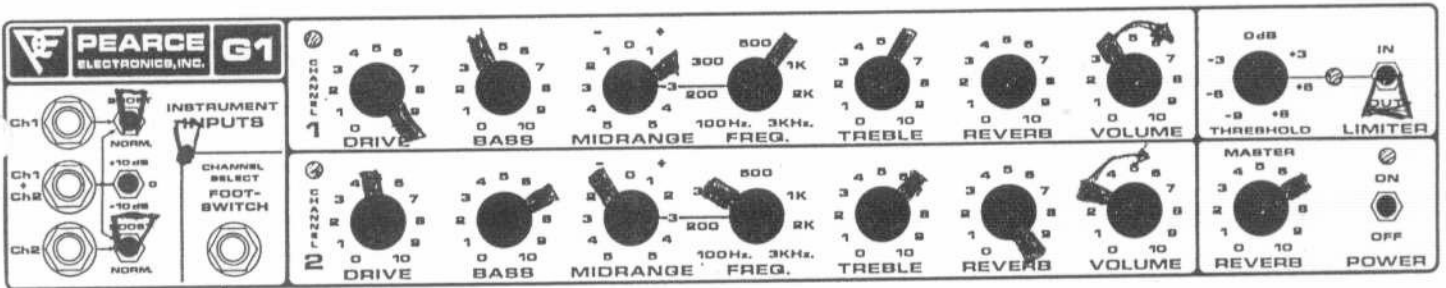
-G1 SOUND CHART-

for PEARCE
Model G1A and G1B

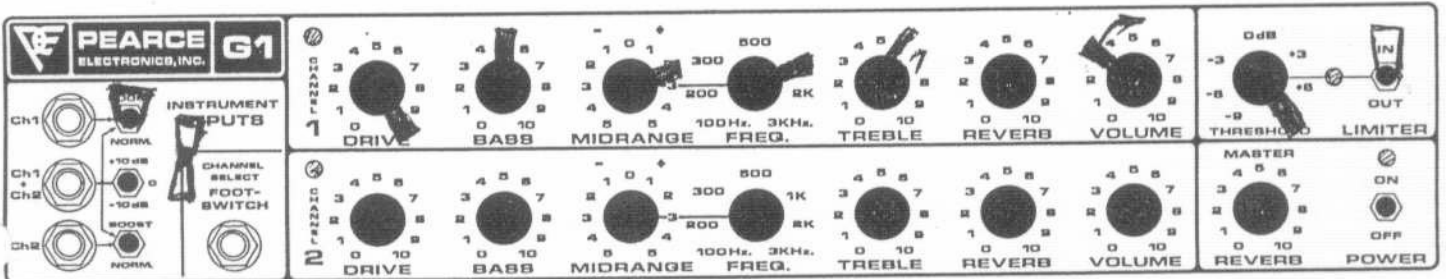
G1.5 Samples



NOTES: FS → CH1: Rock Rhythm/lead w/ humbucker in bridge pos. Fat switch out (Down). EFFECTS DEVICES:



NOTES: FS → CH1: Strat Fat lead tone - Fat switch IN (up) - Strat w/single coils Bridge, or bridge middle pos. CH2: HOT Blues tone - strat! or Les Paul type!



NOTES: FS → CH1: Maximum Rocket Roll → Fat switch out Xtra thick - fat switch in



255 Great Arrow Ave. - Unit 5
Buffalo, New York 14207
Phone: (716) 873-0226
Fax: (716) 873-2710

G1A CABINET REPLACEMENT

1. Unplug line cord from amp. Disconnect speaker wire from speaker (spring loaded push terminals).
2. Disconnect speaker plug from amp. Push speaker wire from bottom of "shelf board" & pull straight out on plug just enough to disconnect from amp.
3. Remove 4 screws w/nylon washers which hold the amp in cabinet (ala rack-mount). Slide amp straight out of cabinet front. Pull speaker wire the rest of the way out.
4. Using paper clip hook with 1/4" bend, pull grille frame out of cabinet. Start at a corner; the Hedloks work like extra-strong velcro. Once the first corner is loose, the others will detach easily.
5. Set the cabinet on its back and remove the 8 speaker bolts (#2 phillips). Remove speaker CAREFULLY - the warranty does not cover holes in the cone, etc.!
6. Align speaker in new cabinet with E-V logo in correct position. Tighten all 8 bolts loosely, then carefully tighten gradually in several rounds of 1-5-7-3-8-4-6-2 sequence. Speaker must be "torqued" evenly to avoid warping basket.
7. Install grille frame, speaker wire, amp unit, speaker plug & line cord in reverse order from steps 1 to 4 above. Speaker plug will insert more easily if you gently pull on speaker end of wire. Note that wire with yellow heat-shrink connects to positive (red) speaker terminal.
8. Sound check combo for buzzes & rattles from loose mounting, etc. Use a tone with a high concentration of bass frequencies to help isolate anything that needs tightening.



255 Great Arrow Ave. - Unit 5
Buffalo, New York 14207
Phone: (716) 873-0226
Fax: (716) 873-2710

DISASSEMBLY PROCEDURE ALL PEARCE RACK-MOUNT UNITS

10/16/90

TOP COVER REMOVAL:

1. Remove all screws from top cover - NOT the 3 screws on the top of the front panel or the 2 screws on each side of the front panel.
G2r & A2 - 17 total: 11-top, 6-sides.
B2p & A3 - 14 total: 8-top, 6-sides.
BC1 - 13 total: 7-top, 6-sides.
G2x - 11 total: 7-top, 4-sides.
2. Loosen top 2 screws on sides of front panel - leave screws in place. Now remove top cover - carefully to avoid scratches.

FRONT PANEL REMOVAL & Disassembly: (Remove Top Cover First)

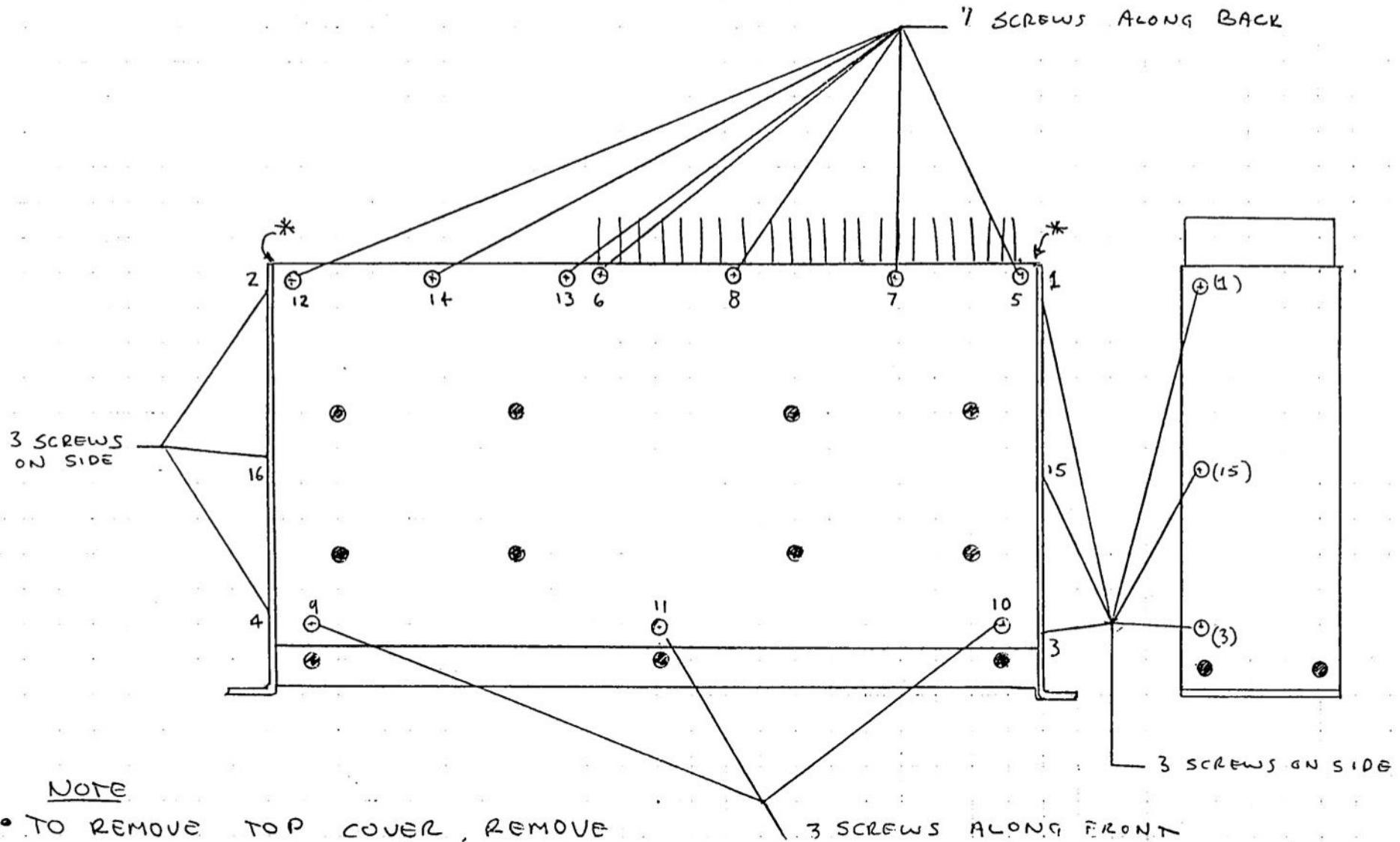
1. Remove the 3 screws holding the Preamp PC Board Guides to the bottom of the chassis - NOT the 3 screws on the bottom of the front panel. Next, remove the 2 screws on each side of the front panel. CAREFULLY slide the Preamp/Front Panel assembly STRAIGHT FORWARD to disengage the preamp-to-Power Supply connector(s).
2. The Ribbon Cable and Power Switch wires will still be connected - remove these next. CAREFUL again - the power switch is delicate.
3. Pull all knobs straight off. On the G2r, the shaft extensions may come off of the Program Selector Switches - make sure that these are set on reverb #9 when you remove them (they'll align easier).
4. Remove the 3 screws holding each PC Board guide to the front panel, then the nuts holding the jacks (and switches on BC1's and G1's) in. Pull the preamp PC Board straight back.

RE-ASSEMBLY PROCEDURE:

1. Re-press the program switch shaft extensions on and re-assemble the front panel in the reverse order from above. Install cables.
2. Replace the front panel assembly with the top 2 screws loose, as in disassembly step #2 above.
3. Turn the unit upside down & shake to remove any loose particles.
4. Hook up a pair of speakers (+ Amplifier for preamps) & perform a brief sound check to verify that all connections are completed.
5. Replace the top cover:
 - * Push top cover into place and align the back edge of the top cover with the back edge of the chassis.
 - * Start with the 2 screws which attach the cover to the chassis near the rear edge on the SIDES. DO NOT OVER-TORQUE the screws; they should be only lightly tightened.
 - * Follow up with the front-most two top cover screws, and continue until all top cover screws have been replaced. Any screws along the back edge which go into threaded inserts, rather than the flat Tinnerman nuts should be tightened more securely because of the different type of thread.
 - * Re-tighten the 2 front panel screws you loosened in Dis-Assembly step 2.

DONE!

G1 DISSASSEMBLY PROCEDURE - REMOVING TOP COVER (w/REVER)



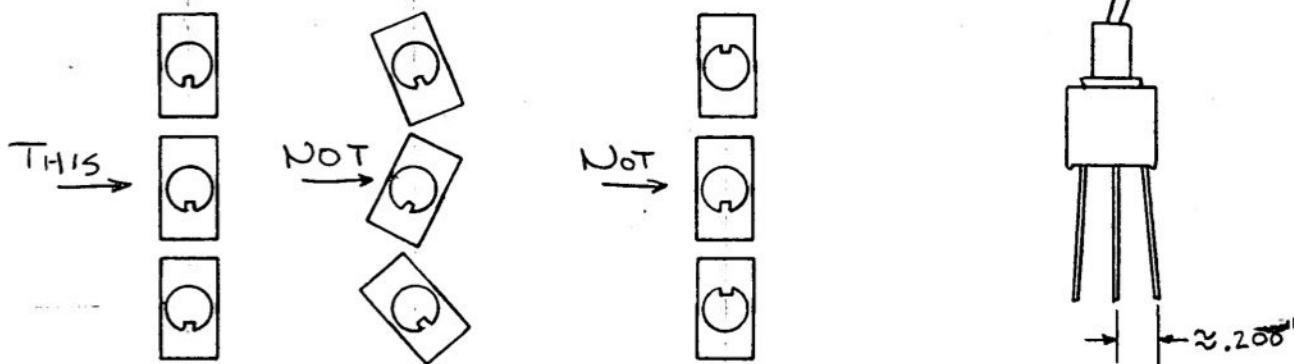
NOTE

- TO REMOVE TOP COVER, REMOVE SCREWS MARKED ⊕ (TOTAL 16 SCREWS -
- DO NOT REMOVE SCREWS MARKED ●
- ASSEMBLY SEQUENCE - AS MARKED (1-16) [ORDER OF DIS-ASSEMBLY NOT CRITICAL] DO NOT OVERT
- * • LINE A TOP W/ REAR EDGE P

G1 PREAMP P.C. BOARD ASSEMBLY INSTRUCTIONS

Additional Notes on Jacks and Switches

1. Install large flatwasher and 5/16" nut (supplied w/ switch) on to switches- Face locating boss on washer down - tighten nut securely.
2. Note orientation of notch on switch barrel - ALL notches must face toward bottom of finished amplifier unit. Switches must be installed straight in fixture - see below.
3. Using 1/4" lockwasher and 1/4-40x5/16" nut, tighten into fixture (reuse lockwashers and nuts supplied with fixture and not those that come with switches).
4. Bend switch terminals out slightly as shown below:

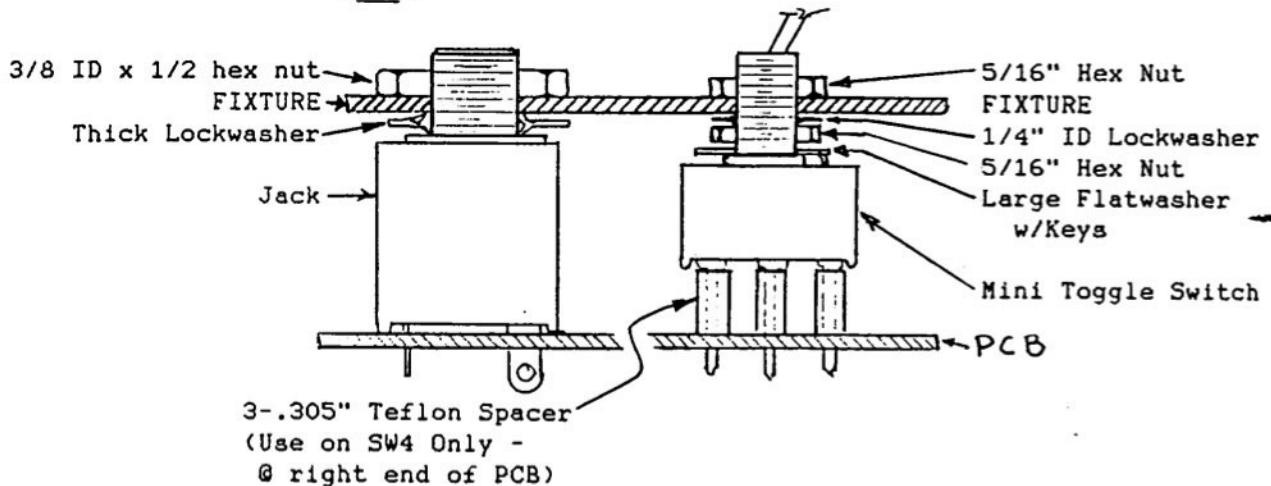


4. Install jacks into PCB, not fixture. Be sure that they are firmly seated on board. Add lockwashers to jacks and install fixture (w/ switches in place) on to jacks (also fits over some pot shafts). Tighten nuts on to jacks, check to make sure that jacks are not excessively twisted in their mounting holes. Press PCB firmly on to jacks after all jacks have been tightened; solder.

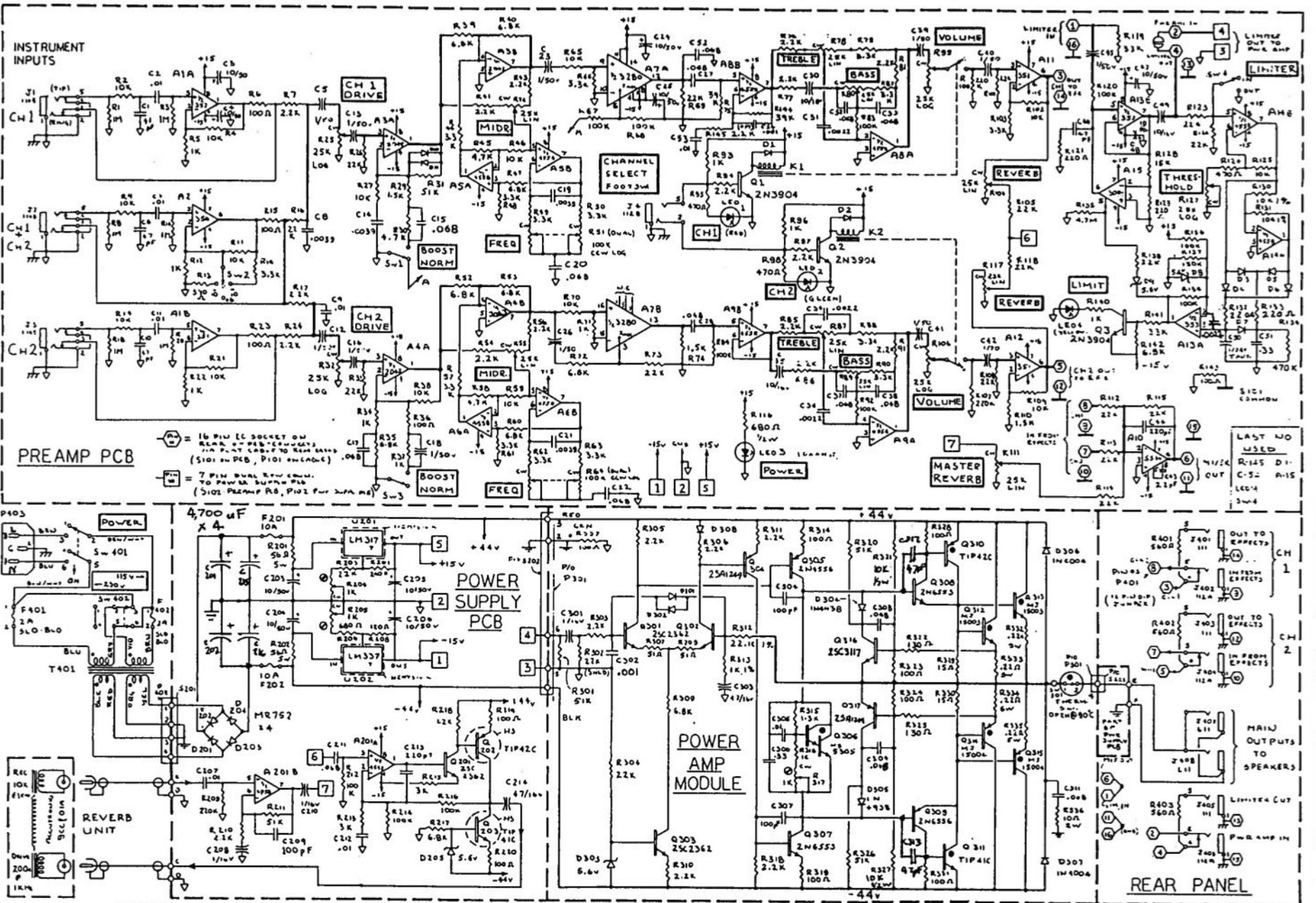
G1 PREAMP P.C. BOARD ASSEMBLY INSTRUCTIONS

1. Stuff and solder [S/S] all 1/4 w resistors (.5" centers).
2. S/S all 1N4148 [alt. 1N4938] (.4" ctrs.) and zener diodes (.5" ctrs.).
3. S/S IC sockets and 680 ohm 1/2 w resistor (.6" ctrs.).
4. S/S reed relays (2).
6. S/S disc and mylar caps.
7. S/S connectors on rear of PCB (2). 1-16 pin DIP, 1-14 pin dual row
8. Clean connector areas (2) on top side of PCB.
9. S/S controls:
 - a. all 23-001-1's (9)
 - b. all 23-001-2's (5)
 - c. all 23-002-1's (2)
 - i. solder 2 large mounting tabs on sides (3 tabs on 23-002-1)
 - ii. Inspect - be CERTAIN that pots are seated firmly against PCB top surface.
 - iii. solder remaining three terminals and clip (3 small term.'s only).
10. S/S electrolytic caps and tantalum cap.
11. S/S jacks and switches- use fixture provided- proper hardware is necessary.
SEE PAGE 2

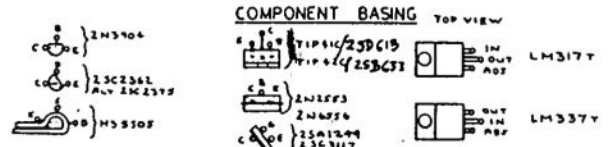
Be CERTAIN THAT JACKS ARE SEATED FIRMLY ONTO PCB



12. S/S transistors (3- 2N3904's).
13. Assemble spacers on LED leads (trim w/ dikes if not even), S/S LED's in PCB.
14. Install IC's in sockets.
15. S/S jumper wires (run wires on inside of terminals on R64, see stuff chart).
16. Solder fill all feed through holes (4).
17. Clean back side of PCB.



- NOTES**
1. ALL RESISTORS 1/4W 5%. C.F. UNLESS OTHERWISE MARKED.
 2. ALL DIODES IN4148 U.O.M. (ALTY IN4938)
 3. GROUNDS: \perp PCB GND \perp CHASSIS GND \perp POWER GND
 4. $\text{---} \parallel \text{---}$ = NON POLARISED ELECTROLYTIC
 5. $\text{---} \text{---}$ = PART MOUNTED ON MAIN HEATSLINK



FAIRCE
 44 FAIRFIELD ST
 BURLINGAME, CA 94010
 DATE: 201-80 APP: D.PEARCE REV: K.2-2C-88

SYSTEM SCHEMATIC DIAG.
 STEREO AMPLIFIER A/B VERSIONS
 DIAG NO: 91-001

XX-XXX-XX <--Dash Number	XX-XXX-XX <--Dash Number
^-----Number	^-----Number
↓-Category (*=self writing part #)	↓-Category (*=self writing part #)
	<u>Description</u>
1*	Resistor, 1/4 W., Carbon Film (-01=5%, -02=2%) (01-XXm-01 or -02; XX=value, m=multiplier (#of zeros))
2*	Resistor, 1/2 W., Carbon Film (see cat. # 01)
3*	Resistor, 1 W., Carbon Film (see cat. # 01)
4*	Resistor, 1/4 W., Metal Film, 1% (04-XXX-m1; XXX=value, m=multiplier)
5*	Resistor, 1/2 W., Metal Film, 1% (see cat. # 04)
6*	Resistor, 5 W., Wirewound (see cat. # 01 except -01=5%, -02=10%)
7*	Resistor, 2 W., Wirewound (see cat. # 01 except -01=5%, -02=10%)
8*	Resistor, 2 W., Wirewound, Fusible (UL) (-01=5%, -02=10%)
9	Fixed Resistors Not Otherwise Classified
0*	Capacitor, Ceramic Disc +/- 10%, 500 V min., Z5U
1*	Capacitor, Solid Tantalum, Radial Leads (-01=20%, -02=10%)
2*	Capacitor, Metalized Polyester, 5%, 50 V. min., 0.2" centers (12-XXm-01; XX=value, m=multiplier (pF))
3	Capacitor, Polyester, Polycarbonate, etc, not in cat. 12
4*	Capacitor, Non-Polarized Electrolytic, Radial Leads (14-XXm-vv; XX=value, m=multiplier (uF), vv=voltage)
5*	Capacitor, Electrolytic, Radial Leads, +/-20% (15-XXm-vv; XX=value, m=multiplier (uF), vv=voltage)
6*	Capacitor, Electrolytic, Axial Leads, +/-20% (16-XXm-vv; XX=value, m=multiplier (uF), vv=voltage)
7	Capacitor, Electrolytic, Large P.C.B./Computer Grade, etc
8	Not Assigned
9	Capacitors Not Otherwise Classified
0	Trimmer/Adjustable Resistor
1	Trimmer/Adjustable Capacitor
2	Variable Inductor
3	Control (Panel or P.C.B. Mount Potentiometer)
4	Diode, Bridge Rectifier, etc. (except LED - see cat.# 37)
5	Transistor - small signal, FET, UJT, etc.
6	Transistor - Power > 1 watt
7	Integrated Circuit - Analog/Digital, Power < 1 watt
8	Integrated Circuit - Power Amp, Voltage Regulator, etc. > 1 watt
9	Misc. Semiconductor not otherwise classified
0	Inductor, Fixed
1	Transformer - Power
2	Transformer - Audio Frequency
3	Transformer - High Frequency / switching / pulse
4	Relay
5	Motor, Solenoid, Actuator, etc.
6	Fan, Blower, etc.
7	LED, Lamp, etc.
8	Speaker, Transducer, Buzzer, etc. (E,I ---> sound)
9	Microphone, Reverb Unit, Phono Cartridge, etc. (sound ---> E,I)
0	Switch - Toggle, lever, Slide, etc.
1	Switch - Rocker
2	Switch - Rotary
3	Switch - Pushbutton, Keyboard, etc.
4	Switch - Foot Operated (purchased assembly)
5	Not assigned
6	Knob - Pot. or switch, purchased from stock, custom molded, etc.
7	Panel Hardware - front panel accessories, knob accessories, etc.
8	Not assigned
9	Miscellaneous Plastic parts

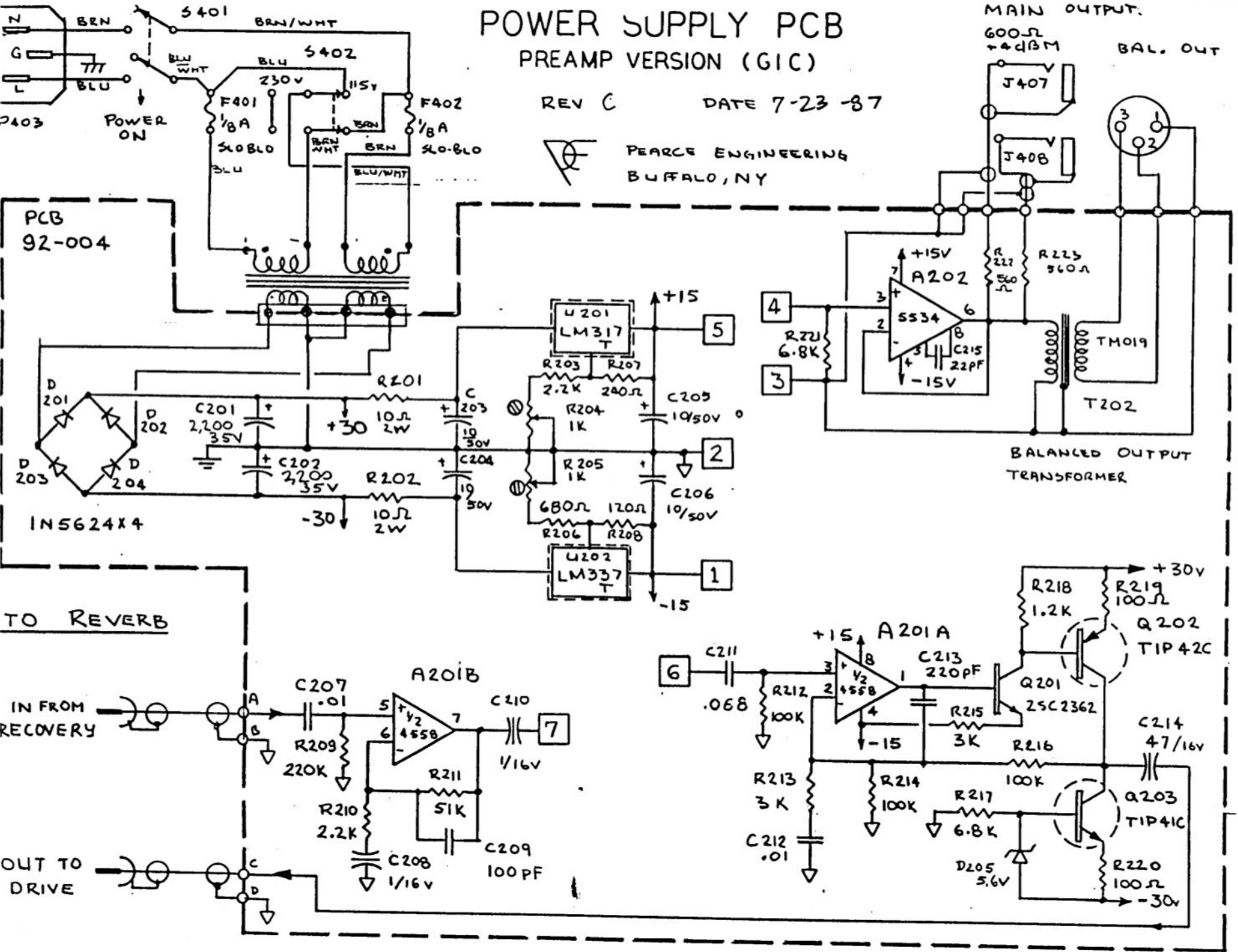
XX-XXX-XX <--Dash Number	XX-XXX-XX <--Dash Number
^-----Number	^-----Number
↓-Category (*=self writing part #)	↓-Category (*=self writing part #)
	<u>Description</u>
50	Connector - Wire Mounted - Male & Male pins
51	Connector - Wire Mounted - Female & Female pins
52	Connector - P.C.B. Mounted - Male
53	Connector - P.C.B. Mounted - Female
54	Component Socket - Transistor, I.C., etc.
55	Plug - Panel Mounted - Male (A.C. Line, Audio, etc.)
56	Jack - Panel Mounted - Female (A.C. Line, Audio, etc.)
57	Thermal / Pressure Switch, etc.
58	Fuse, Circuit Breaker, MOV, or other Protective Element
59	Not Assigned
60	Sheet Metal - Flat, Drilled & Punched
61	Sheet Metal - With Bends, Forming, Punching, etc.
62	Extrusions, Aluminum - Raw, Cut to Length
63	Extrusions - With Drilling, Punching, Anodizing, etc.
64	Cast Metal Parts - Misc.
65	Not Assigned
66	Enclosures, Chassis, etc. - Purchased
67	Cabinets, Wood - Speaker Enclosures, etc.
68	Cabinet Hardware - Corners, Handles, etc. for Wood Cabinets
69	Accessories - Covers, T-Shirts, Stickers, etc.
70*	Wire, Stranded Hookup (70-ONN-Xx; NN=ga., X=tracer color, x=color)
71*	Wire, Solid Hookup (71-ONN-Xx; NN=ga., X=tracer color, x=color)
72	Purchased Cable Assemblies - Power Cords, etc.
73	Insulation, Tubing, Heatshrink, etc (see also Cat. 83 & 86)
74	Chemicals, Lubricants, Solvent, Paint, etc.
75	Cable, Multiconductor - No connectors or Fabrication
76	Jumper Wires, Preformed, Cut to Length
77	Not Assigned
78	Not Assigned
79	Wire, Tubing, etc. not otherwise classified
80	Bolts - Machine Screws
81	Screws - Self Tapping, Wood, Plastite, etc.
82	Washers - Flat, Lock, etc. (see also Cat. 83)
83	Washers - Nylon, Fibre, etc. - Grommets (also see Cat. 73, 83)
84	Nuts - Hex, Tinnerman, etc (also see Cat. 85)
85	Misc. Metal Hardware - Spacers, Solder Lugs, Pennuts, etc.
86	Tape, adhesive - Mounting, Electrical, Shipping, etc.
87	Cable Ties, Mounting Clips, etc.
88	Fasteners Not Otherwise Classified
89	Subassembly, Subsystem, P.C.B. assy., etc. - Purchased
90	Layout, Assembly Drawing
91	Schematic Diagram
92	P.C. Board Artwork (this # used for actual P.C.B.)
93	P.C.B. Assembly Drawing ("Stuff Chart")
94	P.C.B. Drilling Diagram
95	Artwork - Front/Rear Panel, etc (this # used for screening process)
96	Shipping Carton, Packing Materials, bags, etc. (see also Cat. 86)
97	Publications - Owner's/Service Manual, Brochure, etc.
98	Subcontract Labor (Per sub-assembly)
99	Assembly, Subassembly, Labor Operation, Etc (made In-House)

POWER SUPPLY PCB PREAMP VERSION (GIC)

REV C DATE 7-23-87

PEARCE ENGINEERING
BUFFALO, NY

MAIN OUTPUT:
600-Ω
+4dBm BAL. OUT



PCB
92-004

1N5624X4

TO REVERB

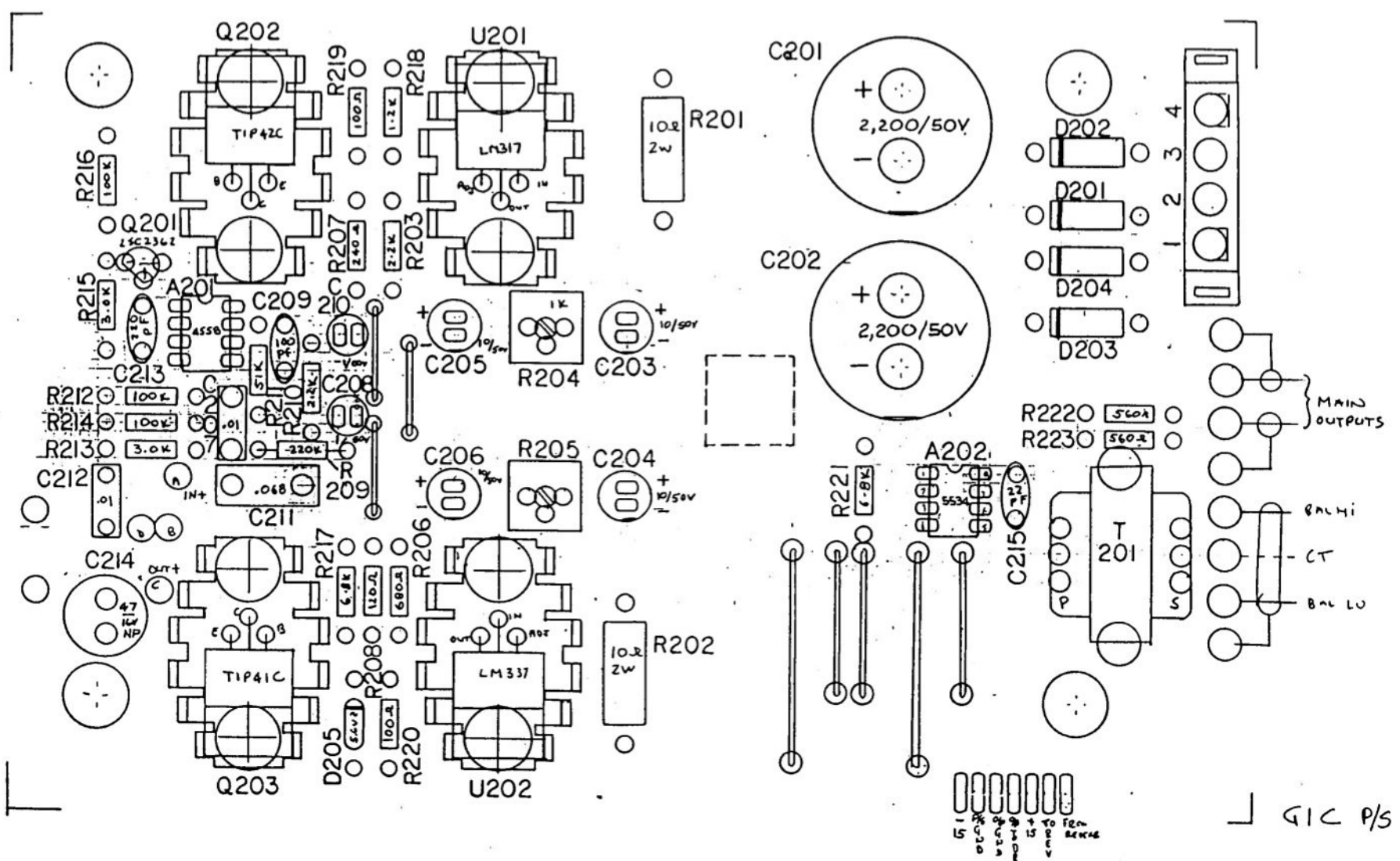
IN FROM
RECOVERY

OUT TO
DRIVE

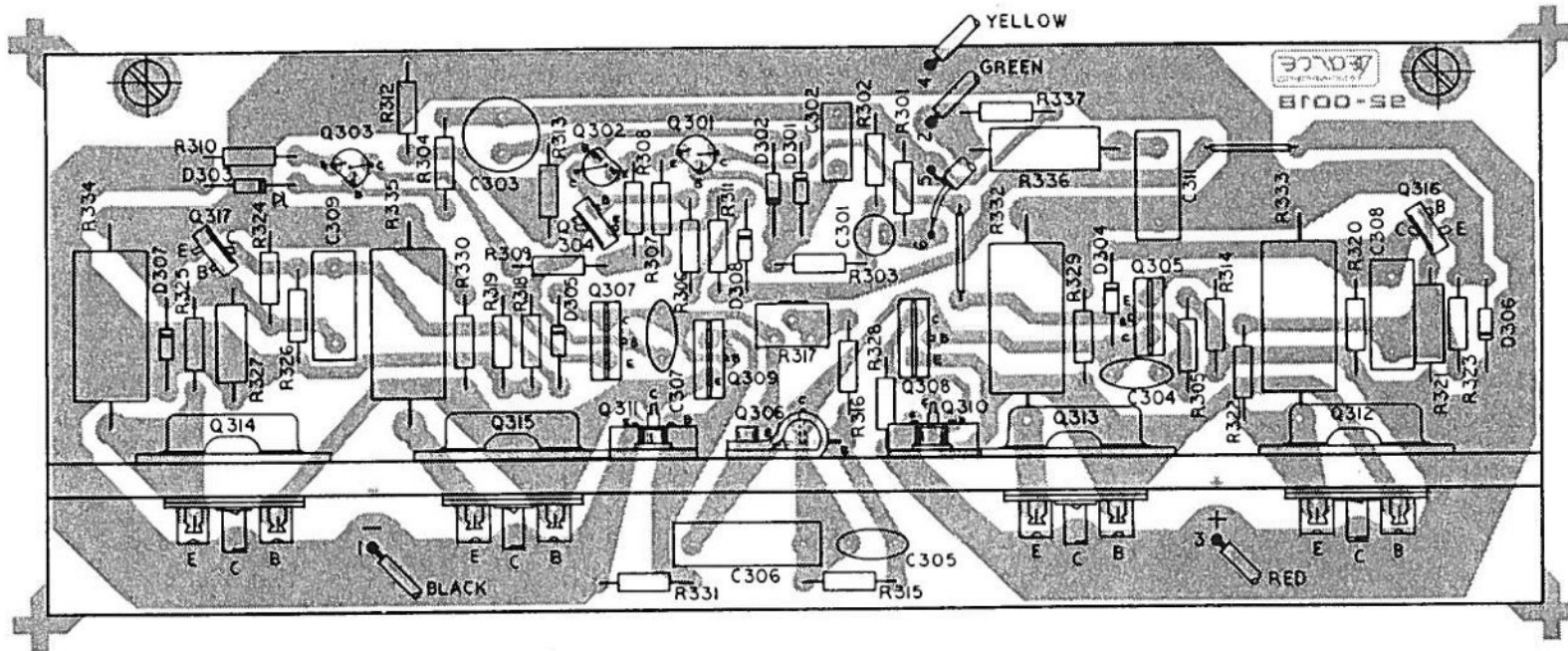
BALANCED OUTPUT
TRANSFORMER

Q202
TIP42C

Q203
TIP41C



92-004-02B



PCB PARTS LOCATION
GI POWER AMP PCB

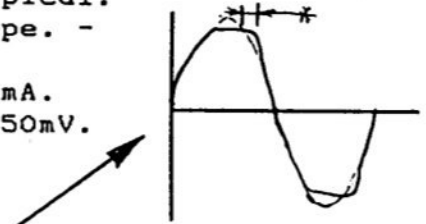
93-001B

1. SETUP / INITIALIZE

- Tighten power transistor sockets. (8 screws)
- Turn BIAS POT FULL CCW.
- Set Variac to "0", Set Variac Current meter to 1.5 A. range. Set 'scope to 1V/div., 5usec/div. Set signal generator to 1V range, set vernier to "0", set frequency to 20KHz.
- Plug in module connector (use "Purple" channel).
- Connect ground cliplead to standoff on module.
- Connect module output (purple/green wires) to 'scope & DVM.
- Leave output open (NO LOAD)

2. Check for OSCILLATIONS - SET BIAS - Check OUTPUT OFFSET

- Turn Variac up to 120V - SLOWLY.
- Current should read 400 mA max. / 300 mA typical.
- Set signal generator for full scale on 'scope. - check for oscillations @ crossover
- Turn bias pot CW until current increases 50mA.
- Check Output DC Offset - must be LESS THAN 50mV.

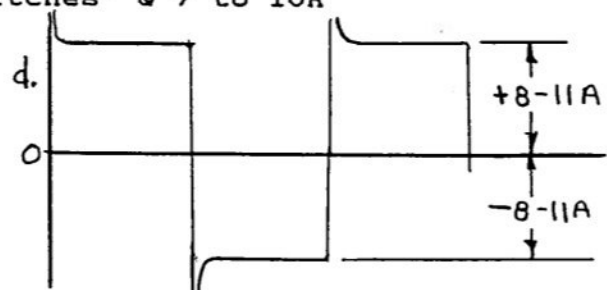
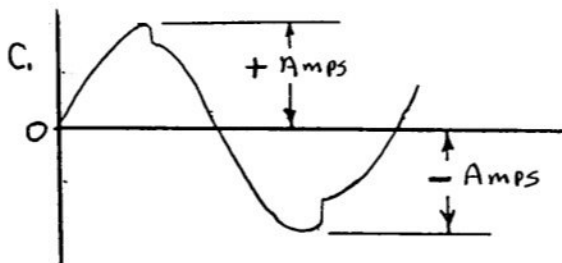


3. Check for "STICKING" @ 20 KHz

- Set Variac Current meter to 15 A. range.
- Plug module output into 4 Ohm load (2-8 Ohm. resistors)
- Set 'scope to 10V/div.
- Set signal gen. to 3V scale, adjust for slight clipping
- Check for "sticking" at clipping point - above is max.

4. Check SHORT CIRCUIT CURRENT & THERMAL SWITCH Operation

- Set signal gen. to 1V range, set vernier to "0", freq. to 100Hz. Set 'scope to 2msec/div., 50mV/div. (= 5A/div.)
- Plug .01 Ohm load into 'scope; plug module output into load
- Slowly increase Signal Generator vernier - Watch for symmetrical waveform, with "glitches" @ 7 to 10A



- Set Signal Gen. vernier to max. (1 V.) - check flat part of waveform - must be +/- 8 to +/- 11 Amps.
- Monitor CASE TEMPERATURE of all 4 output transistors. Find hottest one - Thermal switch should pop when case temp reaches 120 - 150 deg C. Turn off & reject if over 150 deg C.
- Turn fan on. Disconnect .01 Ohm load. Connect output to 4 ohm load. Set 'scope to 10V/div. Set Signal Gen. to 0.3 V.
- Wait for output to return (on 'scope).

5. RESET BIAS for 50 mA INCREASE

(Set signal gen. vernier to "0", 1.5A scale on variac)

6. ATTACH GREEN DOT TO UNITS WHICH PASS

Set Variac to "0", "blip" signal gen. vernier (to discharge caps), disconnect module.

- [] Current drain: $I < 140$ mA, $I < 60$ mA (no input, no footswitch)
- [] All L.E.D.'s function (except limiter)
- [] Noise at output: 100 uV max. (DRIVE 1,2; VOLUME 1,2; MASTER REVERB, all @ 0)
- Limiter output voltage: $f = 500$ Hz., adj. for output = 4V (+12 dBV) w/limiter OUT
- [] @ +3 dB: +8 dBV (2.00 V.), +/- 1.5 dB
- [] @ 0 dB: 0 dBV (1.00 V.), +/- 1.5 dB
- [] @ -9 dB: -9 dBV (.355 V.), +1.0, -2.0 dB
- [] Limiter L.E.D. function

* NOTE: All following tests with input 10 mV, VOLUME @ max., unless stated otherwise. Start w/ VTVM on 1V scale, adjust DRIVE to obtain readings.

Center input gain switch

- [] + 10 dB, - 10 dB; each +/- 1.0 dB (start with center scale reading on meter)

CH1 CH2

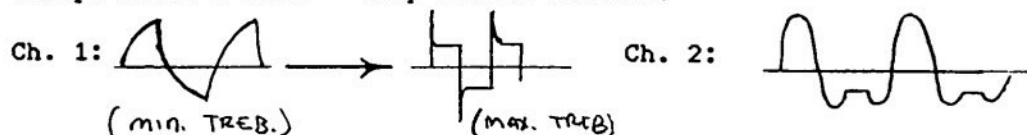
- [] [] Channel switch function (Operates LED, switches correct channel off)
- [] [] Channel input same as center input [+/- 1.0 dB] ($f = 1$ KHz, switch @ 0 dB)
- [] [] Basic EQ (5 KHz. relative to 500 Hz.) Ch.1: +8.5dB, Ch.2: +11dB, +2/-1.5dB
- [] [] TREBLE range: 30 dB min @ 5 KHz.
- [] [] BASS range: 30 dB min @ 50 Hz.
- MIDRANGE total range: 30 dB min
- [] [] $f = 500$ Hz. (adjust FREQ. for max effect - should be @ center)
- [] [] $f = 100$ Hz. (FREQ @ Min.)
- [] [] $f = 3$ KHz. (FREQ @ Max.)

- [] [] Gain ($V_{in} = 10$ mV, $f = 300$ Hz.): 2V (+6dBV) (Ch 1), 1.2V (+2dBV) (Ch 2) both +/-2dB; NORM mode, DRIVE & VOLUME @ 10, all tone controls @ 12:00

BOOST (relative to NORM setting): all +/- 1.5 dB

- [] [] 14 dB @ 300 Hz. Ch 1 | 18 dB @ 300 Hz. Ch 2
- [] [] 13 dB @ 3 KHz. " | 20 dB @ 3 KHz. "
- [] [] 13 dB @ 50 Hz. " | 14 dB @ 50 Hz. "

- [] [] Distortion waveform $f = 300$ Hz, $V_{in} = 33$ mV, BOOST on, all controls @ 12:00, except DRIVE @ max. - vary TREBLE control.



- [] [] Noise ("Ch1+Ch2" input): < 125 mV (Ch1), < 250 mV (Ch2) [BOOST mode, 1+2 switch @ 0 dB, all controls @ max. except BASS @ min.]
- [] [] Noise @ "Ch1" & "Ch2" inputs: (same limits; other chan. VOLUME @ 0)

G1B FINAL SET-UP & BURN-IN PREP

1. Check reverb plugs for shorting against reverb pan. Set top cover/reverb off to left side, reverb pan touching G1 chassis.
2. CHECK & CORRECT LEAD DRESS:
 - a. POWER SUPPLY PCB SCREWS TIGHT - (6) ?
 - b. Push speaker ground wire down on P/S PC Board (near caps).
 - c. Speaker wires away from blue & brown AC wires.
 - d. Speaker jacks straight +/-30 deg./wires away from contacts?
 - e. Wires to 115/230 switch neat?
 - f. Power switch wires pushed down?
 - g. Ribbon cable straight & taught with zig-zag?
3. TRIM POWER SUPPLIES & POWER AMP BIAS
 - a. SET VARIAC TO 0. Connect Power & Spkr wires. - 'scope @ .1V/div. - 2msec/div. - line trig. Fluke DVM @ 200mV AC.
 - a. R-S DVM @ 20V DC - Connect to GND & +15V on P/S PC Board.
 - b. G1 Power ON, Turn Variac up to 120V (1.5A scale)
 - c. Set Voltage trimmers for +15 V & -15V, +/- 10mV. (DVM to -15V)
 - d. Set Pwr Amp bias by turning trimmer full CCW, then set for 50mA increase on variac current meter.
4. CHECK REVERB SECTION, BUTTON UP
 - a. CAREFULLY set reverb cover in place. DO NOT contact power amp.
 - b. Install 4 screws in corners of cover - RR, LR, LF, RF.
 - c. Set both VOLUME, DRIVE & REVERB @ 0, MASTER REVERB @ 10. Reverb recovery OK if buzz = 4.5mV to 12mV
 - d. Set signal gen. to 30mV @ 500Hz. - Both REVERB & VOLUME @ 10. "Blip" each DRIVE control - check for reverb decay on 'scope Decay = reverb drive OK. If not - STOP, return for regrooving.
 - e. Install remainder of screws (12). Tighten top 2 screws on front panel. CHECK ENTIRE UNIT FOR MISSING or LOOSE SCREWS.
 - f. Disconnect signal generator, set both VOLUME @ 0 - Take final reading on reverb buzz. POWER off, unplug AC & speaker wires.
 - g. Check for/correct loose knobs & general fit of chassis.
5. SETTINGS for BURN-IN

Ch1: BOOST mode, DRIVE @ 6, BASS @ 10, MID @ 0, FREQ @ 500, TREBLE @ 0, REVERB @ 10, VOLUME @ 5

Ch2: NORM mode, DRIVE @ 0, BASS @ 0, MID @ 0, FREQ @ 500, TREBLE @ 10, REVERB @ 10, VOLUME @ 5

POWER OFF, Ch1+Ch2 switch @ 0dB, THRESHOLD @ +3, LIMITER OUT

SOUND TEST PROCEDURE

1. Connect line and speaker cord, connect instrument to Ch1+Ch2 input.
2. Power on and observe that channel LED's are both lit.
3. Insert channel switch and test for LED operation.
4. a. Select channel 1, test +10db/0/-10db switch on center input (Start w/ VOLUME at about "2").
b. Test Ch. 1 Norm/Boost switch. Listen - is distortion OK?
c. Check "Ch1" instr. input - same gain as "Ch1+Ch2" @ 0 dB.
5. Turn drive, bass, midrange, mid freq., treble, reverb, and volume controls while playing several open strings. Listen to be sure that all controls are functioning properly and that pots are not dirty.
6. Repeat steps #4b, #4c and #5 for channel 2.
7. Turn limiter on (threshold @ -9dB, VOLUME @ 10) and check for smooth limiting ,and limiter LED function.
8. Turn MASTER REVERB control to max. and make sure hum is within acceptable limits. Also make sure master reverb pot functions properly and is not dirty.
9. Test main loop (Limiter Out/Pwr Amp In):
a. Disable signal flow by plugging cord into bottom jack.
b. Check loop by plugging other end of cord into top jack.
10. Use procedure in step #9a and 9b to test channel 1 Effects loop and then channel 2 loop - BE SURE that PROPER CHANNEL IS ON, and that INSTRUMENT CORD IS IN APPROPRIATE INPUT.
11. Insert speaker cable in other speaker output jack - test. (other Main Output jack on preamps)
12. On amps and preamps with balanced out, use external Hi/Low impedance transformer and another power amp to check.



255 Great Arrow Ave. - Unit 5
Buffalo, New York 14207
Phone: (716) 873-0226
Fax: (716) 873-2710

G1.5 MOD - Specs/Description

The Pearce G1.5 Modification is a direct result of the requests of many guitarists, including Ronnie Montrose and Allan Holdsworth. Quite a few players have said "The tone is great, but I want something with more gain, tighter bass" and so on. We at Pearce listen to our customers, and have come up with the G1.5 Mod. The mod is available built-in or retrofitted on G1A, G1B, and G1C models. It consists of the following:

1. More overall gain is available on channel 1 in Boost mode. However, the gain is "shifted" to the earlier stages, so you must use a higher setting of the VOLUME control to achieve the same loudness. The volume may be set all the way up for maximum stage volume. Because of the extreme amount of gain available, the noise is also noticeably higher than stock.
2. Pre-distortion EQ with less bass on channel 1 in Boost mode. This provides tighter, less "muddy" bass under overdrive conditions.
3. The addition of a "fat" switch (effective on channel 1 in Boost mode only) to boost the pre-distortion low end gain. This provides the opposite of 2. above for a fatter, smoother overdrive.
4. The channel 2 Boost/Norm switch completely bypasses distortion circuitry in Norm mode for 20dB of increased clean headroom. In Boost mode, channel 2 behaves the same as a stock unit.
5. Frequency range of the MIDRANGE control is doubled compared to stock units on both channels (the range now 200 Hz. to 6 KHz.). Since the front panel labeling is not changed, you must double the panel setting - (ex: knob set at 500 Hz. is actually 1 KHz).
6. The MIDRANGE control has a wider bandwidth than stock on both channels. This provides a less "peaky" effect with large boosts or cuts.
7. The frequency of the TREBLE control is increased by 1 1/2 times on both channels.
8. The TREBLE control on channel 2 is changed from peaking to shelving. 7. and 8. cause the treble control to have more effect in what is usually called the "presence" range (5-10KHz.) and less effect in the upper midrange (1-3KHz.)

G1.5 MOD - PREAMP P.C.B. TEST

Rev A 10-18-88

- Current drain: I+<140 mA, I-<60 mA (no input, no footswitch)
 - All L.E.D.'s function (except limiter)
 - Noise at output: 100 uV max. (DRIVE 1&2, VOLUME 1&2, MASTER REVERB all @ 0)
 - Limiter L.E.D. function
 - Limiter output voltage: f=500 Hz., adj. for output=4V (+12 dBV) w/limiter OUT
 - @ "+3 dB": +8 dBV (2.51 V.), +/- 1.5 dB Use Ch2 in NORM Mode for input
 - @ "0 dB": 0 dBV (1.00 V.), +/- 1.5 dB
 - @ "-9 dB": -9 dBV (.355 V.), +1.0, -2.0 dB
- ** NOTE ** UNLESS STATED OTHERWISE, for ALL FOLLOWING TESTS: Check for NO distortion
Start w/meter on 300mV scale/Ch1, 1V/Ch2, adjust DRIVE for full-scale reading, then read relative. VOLUME @ max. - Input 3 mV/Ch1, 10mV/Ch2**

Center input gain switch: +10 dB, -10 dB; each +/- 1.0 dB

CH1 CH2

- Channel switch function (Operates LED, switches correct channel off)
- Channel input same as center input [+/- 1.0 dB] (f=500Hz, switch @ 0 dB)
- Basic EQ (5 KHz. rel. to 500 Hz.) Ch.1: +9.5dB, Ch.2:+11.5dB, +2/-1.5dB
- TREBLE range: 30 dB min @ 6KHz/Ch1, 5 KHz/Ch2.
- BASS range: 30 dB min @ 50 Hz.

MIDRANGE total range: 30 dB min

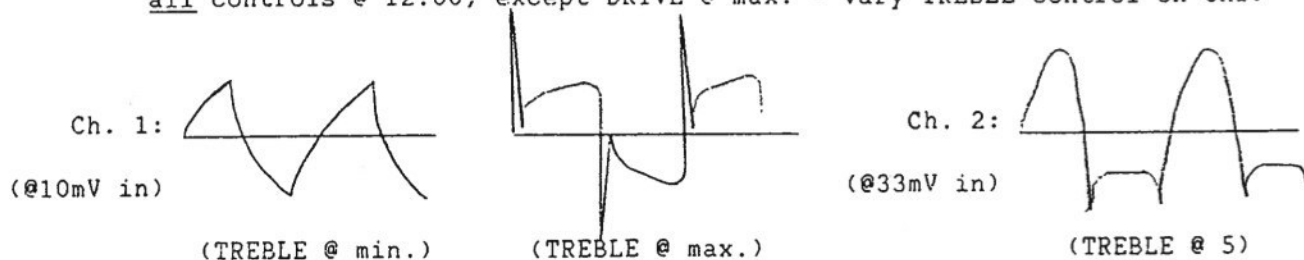
- f=1KHz. (adjust FREQ. for max effect - should be @ center)
- f=200Hz. (FREQ @ Min.)
- f=6KHz. (FREQ @ Max.)
- Gain @ f=300Hz, 10.0mV in: -4.0dBV (.63V) Ch1, -1.5dBV (.84V) Ch 2
both +/-2dB; NORM mode, DRIVE & VOLUME @ 10, all tone controls @ 12:00

BOOST Switch (relative to NORM setting, FAT sw. OFF): all +/- 1.5 dB

- | | | | | |
|--------------------------|--------------------------|-----------------------|--|-----------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | 22.5 dB @ 300 Hz. Ch1 | | 21.5 dB @ 300 Hz. Ch2 |
| <input type="checkbox"/> | <input type="checkbox"/> | 31.0 dB @ 3 KHz. " | | 23.5 dB @ 3 KHz. " |
| <input type="checkbox"/> | <input type="checkbox"/> | 17.0 dB @ 50 Hz. " | | 16.5 dB @ 50 Hz. " |

FAT Switch: 17.0 dB +/- 2.0 dB @ 100 Hz.
(Ch1 Boost mode only) Calibrate 0dB @ ON, measure OFF drop in dB

Distortion waveform f=300 Hz, V in=10mV/Ch1, 33mV/Ch2, BOOST on,
all controls @ 12:00, except DRIVE @ max. - vary TREBLE control on Ch1.



- Noise ("Ch1+Ch2" input): < 1.0V Ch1, < 500mV Ch2
BOOST mode, Ch1+Ch2 sw. @ 0 dB, ALL CONTROLS @ max. except BASS @ min.
- Noise (@ "Ch1" & "Ch2" inputs): (same limits; other chan. VOLUME @ 0)



255 Great Arrow Ave. - Unit 5
Buffalo, New York 14207
Phone: (716) 873-0226
Fax: (716) 873-2710

1.7 MOD - Specs/Description

The Pearce 1.7 Modification is the direct result of requests of many guitarists, including Ronnie Montrose, Allan Holdsworth and David Torn. Quite a few players have said "The tone is great, but I want something with more gain, more bite, tighter bass" and so on. We at Pearce are constantly striving to improve our products by listening to our customers, and this lead us directly to the 1.7 Mod. The mod is available built-in or retrofitted on G1A, G1B, and G1C models. It consists of the following:

1. More overall gain is available on channel 1 in Boost mode. Because of the extreme amount of gain available, the noise is also somewhat higher than stock units at high settings of the DRIVE control.
2. The pre-distortion EQ has less bass (on channel 1 in Boost mode). This provides tighter, less "muddy" bass under overdrive conditions.
3. The channel 2 Boost/Norm switch completely bypasses distortion circuitry in Norm mode for 20dB of increased clean headroom. In Boost mode, channel 2 behaves the same as a stock unit.
4. Frequency range of the MIDRANGE control is doubled compared to stock units on both channels (the range now 200 Hz. to 6 KHz.). Since the front panel labeling is not changed, you must double the panel setting - (ex: knob set at 500 Hz. is actually 1 KHz).
5. The MIDRANGE control has a wider bandwidth than stock on both channels. This provides a less "peaky" effect with large boosts or cuts.
6. The frequency of the TREBLE control is increased by 1 1/2 times on both channels.
7. The TREBLE control on channel 2 is changed from peaking to shelving. 7. and 8. cause the treble control to have more effect in what is usually called the "presence" range (5-10KHz.) and less effect in the upper midrange (1-3KHz.)

61.7 MODIFICATION

2/1/89

PARTS CHANGES:1 OF 2

<u>SCHEMATIC REF</u>	<u>OLD VALUE</u>	<u>NEW VALUE</u>
C13	1 μ 50V NP	.022
R31	51K	100K
R26	22K	100K
R27	10K	22K
R29	1.5K	1K
C14	.0039	.0056
C15	.068	1 μ 50V NPo
C8	.0039	.001
C9	.01	.001
R44	3.3K	2.2K
R39, R40	6.8K	10K
R41, R43, R54, R56	2.2K	.5" JUMPER
R66	3.3K	4.7K
R67	100K	33K
C53	.01	.0039
R145	2.2K	4.7K
R144	39K	100K
R76	2.2K	1K
C31	.0022	.001
R103	3.3K	1K
C20, C22	.068	.022
Z52	6.8K	10K
R53	6.8K	10K
R57	3.3K	2.2K
R85	2.2K	1K
C36	.0022	.001
SW1	SPDT	DPDT
SW3	SPDT	DPDT

PARTS TO ADD:

<u>NEW VALUE</u>	<u>WHERE ADDED</u>
12K	PIN 3(A3) TO NEW CH1 BOOST SW
10K	SERIES WITH D11 & PIN 2 OF A3A
470pf CAP	PARALLEL WITH R31
1MEG	C15 TO GROUND
10 μ f NP	SERIES W/PIN 1 A3A & R39
470pf CAP	PARALLEL WITH R40

G1.7 MODIFICATION (CONT'D.)2 OF 2PARTS TO ADDWHERE ADDED

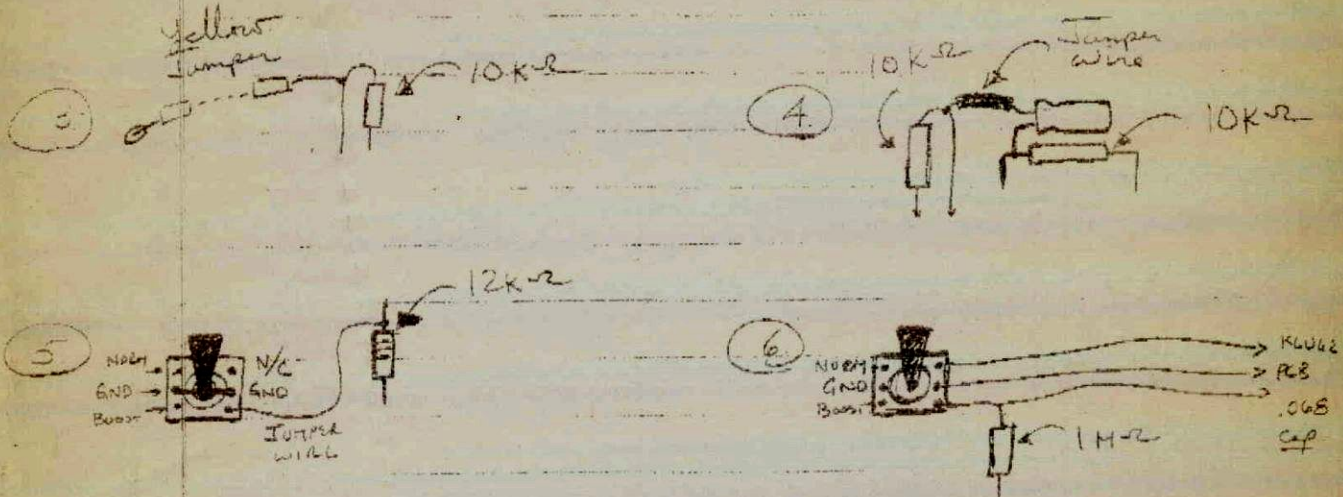
10K	PIN 7 A3B TO 'A' R67
3.3K / .047 μ PARALLEL	FROM R10B TO GROUND
470pf	PARALLEL WITH R53
1 μ f NPO	SERIES WITH PIN 1 A4B & R70
1 MEG	C28 TO GROUND
1/2 SW3	BREAK CONN C28 TO PIN 5 A9B
	WIPER TO PIN 5 A9B
	'BOOST' POS. TO C28
	'NORM' POS. TO R70 / 1 μ JUNCTION
1/2 SW1	WIPER TO GND
	'BOOST' TO NEW 12K
	('NORM' - N.C.)

OMIT (REMOVE) R68, C34

G1.7 Mod

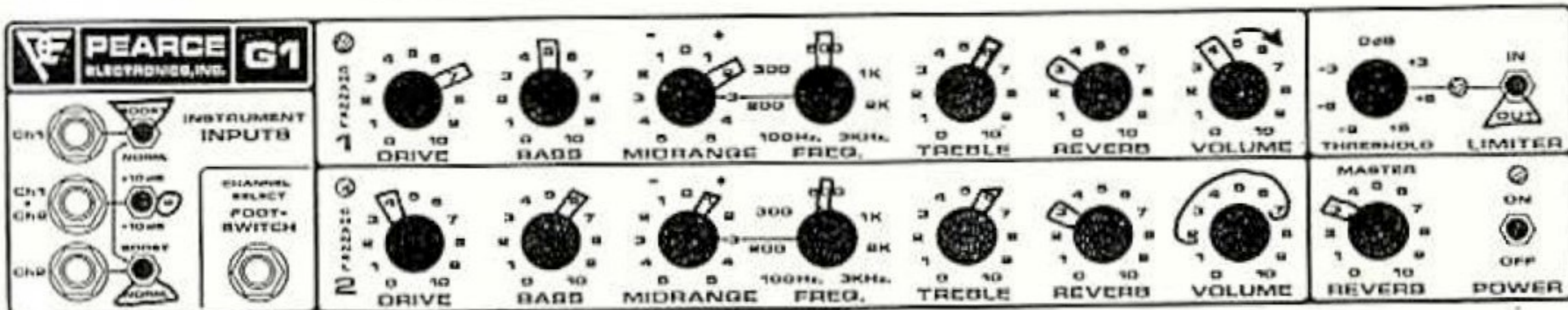
KLUGE STUFFING @ Panel

- 1) Drill holes - (5)
- 2) Cut Traces - (1) on Front ; (2) on Rear



G1.7 MOD

SOUND EXAMPLES



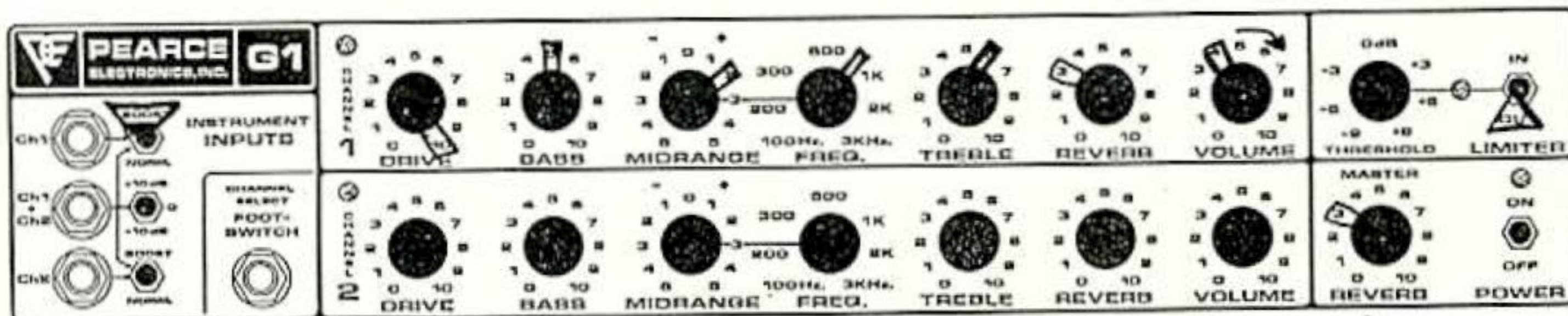
NOTES:

Ch1: Rock RHYTHM - LEAD WITH HUMBUCKER IN BRIDGE POSITION

EFFECTS DEVICES:

Ch2: Full bodied clean sound; loads of headroom!

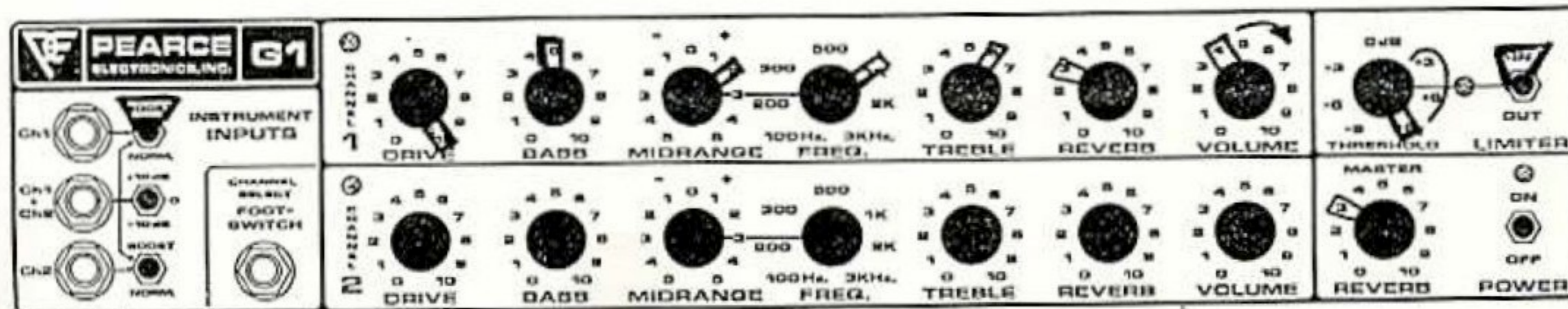
* IN ALL CASES INCREASE TREBLE CONTROL FOR MORE PRESENCE.



NOTES:

Ch1: STRAT LEAD TONE - STRAT W/SINGLE COILS - BRIDGE POSITION

EFFECTS DEVICES:



NOTES:

Ch1: MAXIMUM Rock n' Roll

EFFECTS DEVICES: