

Laney

ALL TUBE AMPLIFIERS

USER MANUAL

JULY 1994

MODELS

**GH50L
GH100L
GH100S**

INTRODUCTION

Congratulations on your decision to purchase a Laney all tube amplifier.

Laney products are designed with ease of operation as a primary objective, however to ensure you derive the best from your new amplifier, it is important you take some time to read this user manual and to firstly familiarise yourself with the control functions and facilities available.

BEFORE SWITCHING ON

After unpacking your amplifier check that it is factory fitted with a three pin 'grounded' (or earthed) plug. Before plugging into the power supply ensure you are connecting to a grounded (earthed) outlet.

If you should wish to change the factory fitted plug yourself, ensure that the wiring convention applicable to the country where the amplifier is to be used is strictly conformed to. As an example in the United Kingdom the cable colour code for connections are as follows.

EARTH OR GROUND - GREEN/YELLOW
NEUTRAL - BLUE
LIVE - BROWN

GENERAL INFORMATION

Amplifiers should never be exposed to moisture or wetness under any circumstances since this would present a possible shock or fire hazard, and may cause possible damage to your new and valuable acquisition.

In the unlikely event that a fuse should blow it is imperative that you or your engineer, use a correctly rated replacement.

USING THIS MANUAL

This manual has been written for easy access of information. The front and rear panels of each unit are graphically illustrated, with each control or facility numbered. For a description of the function of each control feature, simply check each number with the explanations adjacent to each panel.

Your Laney tube amplifier has undergone a thorough two stage, pre delivery inspection, involving actual play testing as well as a tube burn in.

Tubes are the most important component in your Laney tube amp. However they are also the most fragile component. The glass envelopes and tube filaments can easily be damaged in transit without any apparent signs of damage to the box, amp or tubes. Tube damage is, however, quite simple to diagnose and even more simple to remedy, These procedures are explained later in this manual..

When you first receive your Laney Tube Amp, follow these simple procedures:

BEFORE SWITCHING ON

CHECK

Ensure that the amplifier is of the correct voltage for the country it is to be used in.

CONNECT

Connect speaker to amplifier - we recommend high quality speaker cable.

CONNECT

Connect instrument with high quality shielded instrument cable. Use of cheap cable will compromise the sound of your instrument and your amplifier.

STANDBY

Turn amp on - WITH STANDBY ENGAGED! This allows your output tubes to power up gradually ADDING SIGNIFICANTLY to the life of your tubes.

Disengage standby. If you experience fuse failure or if the amp fails to generate any sound, you are likely to have a damaged vacuum tube.

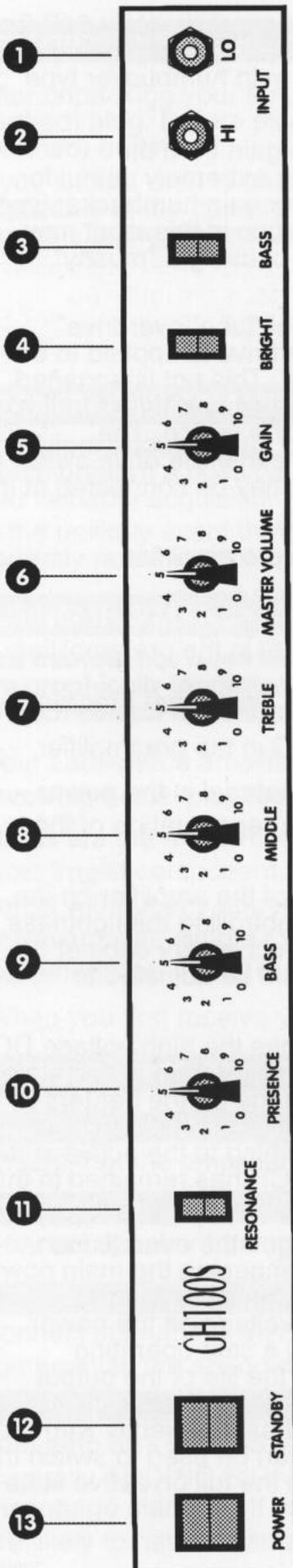
Model GH50L & GH100L control panel features.

The 50 watt GH50L and the 100 watt GH100L heads are identical in function, so all feature descriptions that follow apply to both models. The following descriptions relative to the front control panels are from RIGHT to LEFT.

<p>1</p>  <p>LO INPUT</p>	<p>1 LO INPUT</p> <p>This input is attenuated down approximately 6dB from the HI INPUT. It is useful in obtaining output that is "tight" not "mushy" from high gain humbucker type pickups.</p>
<p>2</p>  <p>HI INPUT</p>	<p>2 HI INPUT</p> <p>This input provides maximum gain from the instrument to the pre amp. It is extremely useful for guitars with single coiled or low gain humbucker type pickups. Use of high gain pickups in this input may drive the preamp to severely, causing a "mushy" output.</p>
<p>3</p>  <p>DRIVE LEVEL</p>	<p>3 DRIVE LEVEL</p> <p>This pot controls the amount of 'tube' overdrive applied to the circuit. The overdrive is applied to the circuit just prior to the gain pot. This pot is engaged only when the DRIVE switch is on and this is indicated by an illuminated LED above the switch. The overdrive may be enabled by either the drive switch or remotely by footswitch which may be connected at the rear panel.</p>
<p>4</p>  <p>DRIVE SWITCH</p>	
<p>5</p>  <p>GAIN</p>	<p>5 GAIN</p> <p>Controls the input level of the pre amplifier.</p>
<p>6</p>  <p>MASTER VOLUME</p>	<p>6 MASTER VOLUME</p> <p>Controls the power amplifier input gain.</p>
<p>7</p>  <p>TREBLE</p>	<p>7 TREBLE</p> <p>Controls the high frequency EQ in the pre amplifier.</p>
<p>8</p>  <p>MIDDLE</p>	<p>8 MIDDLE</p> <p>Controls the mid frequency EQ in the pre amplifier.</p>
<p>9</p>  <p>BASS</p>	<p>9 BASS</p> <p>Controls the low frequency EQ in the pre amplifier.</p>
<p>10</p>  <p>PRESENCE</p>	<p>10 PRESENCE</p> <p>Controls the high frequency material in the power amplifier. It is derived from the regeneration of the output signal.</p>
<p>11</p>  <p>RESONANCE</p>	<p>11 RESONANCE</p> <p>Adjusts the 'damping' control of the amplifier on the speaker enclosure, thereby controlling the tightness of the bass response. This effect is very cabinet dependant so the switch should be adjusted to taste.</p>
<p>GH100L</p>	
<p>12</p>  <p>STANDBY</p>	<p>12 STANDBY</p> <p>This switch engages/disengages the high voltage DC to the tubes, switching the amplifier from a wait state to an active state. The AC voltage on the heaters is not effected by this switch so that an instant ON of the amplifier is noticed when switching to the active state, so long as the POWER SWITCH has remained in the ON position.</p>
<p>13</p>  <p>POWER</p>	<p>13 POWER</p> <p>This switch engages/disengages the overall main power to the amplifier. Upon engaging the main power to the amplifier, a time delay circuit with a duration of about 30 seconds keeps the voltage off the power tubes until they have reached a safe operating temperature, thus prolonging the life of the output tubes. This occurs independently of the STANDBY SWITCH. Once the amplifier has sufficiently warmed up, the STANDBY SWITCH can be used to switch the amp from an 'on wait' state to the full on active state.</p>

Model GH100S control panel features.

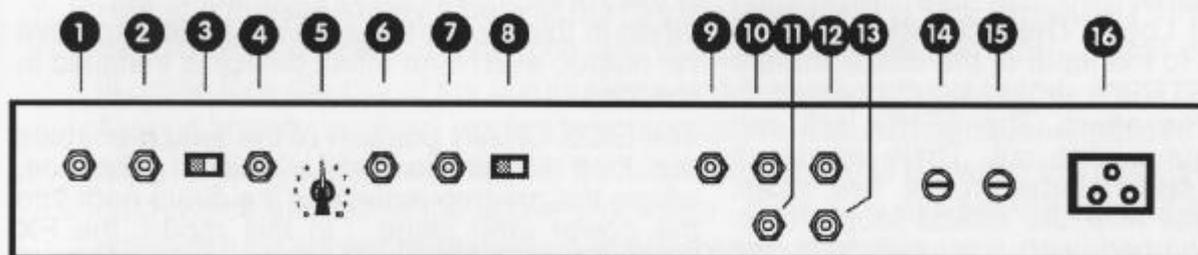
The following descriptions relative to the front control panel are from RIGHT to LEFT.



- 1 LO INPUT** This input is attenuated down approximately 6dB from the HI INPUT. It is useful in obtaining output that is "tight" not "mushy" from high gain humbucker type pickups
- 2 HI INPUT** This input provides maximum gain from the instrument to the pre amp. It is extremely useful for guitars with single coiled or low gain humbucker type pickups. Use of high gain pickups in this input may drive the preamp to severely, causing a "mushy" output.
- 3 BASS** Boosts the bass frequencies.
- 4 BRIGHT** Adds brightness and sparkle to the upper frequencies.
- 5 GAIN** Controls the input level of the pre amplifier.
- 6 MASTER VOLUME** Controls the power amplifier input gain.
- 7 TREBLE** Controls the high frequency EQ in the pre amplifier.
- 8 MIDDLE** Controls the mid frequency EQ in the pre amplifier.
- 9 BASS** Controls the low frequency EQ in the preamplifier,
- 10 PRESENCE** Controls the high frequency material in the power amplifier. It is derived from the regeneration of the output signal.
- 11 RESONANCE** Adjusts the 'damping' control of the amplifier on the speaker enclosure, thereby controlling the tightness of the bass response. This effect is very cabinet dependant so the switch should be adjusted to taste.
- 12 STANDBY** This switch engages/disengages the high voltage DC to the tubes, switching the amplifier from a wait state to an active state. The AC voltage on the heaters is not effected by this switch so that an instant ON of the amplifier is noticed when switching to the active state, so long as the POWER SWITCH has remained in the ON position.
- 13 POWER** This switch engages/disengages the overall main power to the amplifier. Upon engaging the main power to the amplifier, a time delay circuit with a duration of about 30 seconds keeps the voltage off the power tubes until they have reached a safe operating temperature, thus prolonging the life of the output tubes. This occurs independently of the STANDBY SWITCH. Once the amplifier has sufficiently warmed up, the STANDBY SWITCH can be used to switch the amp from an 'on wait' state to the full on active state.

Model GH50L, GH100L & GH100S control panel features.

Rear Panel Features



Explanation of Features

1 Footswitch Jack*

Use this 1/4" jack to plug in an FS1 mono remote footswitch to control the overdrive on/off function from the floor.***(Not on GH100S)**

Effects loop

2 Laney tube heads have sophisticated 'effects loop' circuitry that is explained in detail later, on this page.

5 Effects Return Level

Rotary control for setting the effects return level. See (Use of Effects Loop for detailed information).

6 Slave In Jack

Use this 1/4" jack when stacking several Laney Valve heads together where this head is to be used as a SLAVE (remote). The EFFECTS LOOP SWITCH must be engaged in either the INSERT or SIDE CHAIN position in order to be able to use this jack.

7 Slave Out Jack

Use this 1/4" jack when stacking several Laney (only) Valve heads together where this head is to be used as the Master (main controller). This jack is always on regardless of the position of the EFFECTS LOOP SWITCH. Note: This jack should only be used for the stacking of LANEY valve heads together. Do not attempt to stack any amp other than a LANEY from this jack. DO NOT use this jack as a LINE OUT.

8 Bias Switch

This switch enables the amplifier to use either 6L6/5881 (standard fitted on GH50 & GH100L) or EL34 output tubes (standard on GH100S). Simply install a matched set of desired tubes and set the switch to the appropriate position. NOTE: Having the switch engaged to the wrong type of tube will severely damage the tubes and possibly the amplifier.

9 Speaker Outputs

10 A series of five 1/4" output jacks allows the user to correctly interface the output impedance of the amplifier to a speaker cabinet. In following the cabinet impedance information around the appropriate jack or jacks, correct operation and impedance matching of the amplifier is insured. Mismatched impedance will reduce the amplifiers performance and in some cases may cause serious unrepairable damage.

14 HT Fuse

This fuse protects the DC power within the amplifier. Use only the correct size and current fuse as specified on the panel. If a fuse blows or fails and a replacement of the same size and rating is installed and it in turn blows, the amplifier has suffered a malfunction, at this point check the output tubes and replace faulty one if required. Should tubes not be the problem the amplifier should be checked out by a qualified technician. Do not try using a fuse of greater value. Using a fuse that is too large in current rating may cause serious, unrepairable damage to the amplifier. Fuses are designed in to PROTECT, DO NOT take chances.

15 Power Fuse

This fuse protects the AC power of the overall amplifier. USE only the correct size and current fuse as specified on the panel. If a fuse blows or fails and a replacement of the same size and rating is installed and it in turn blows, the amplifier has suffered a malfunction internally and it need immediate service from a qualified technician. DO NOT TRY USING A FUSE OF GREATER VALUE. Using a fuse that is too large in current rating may cause serious, unrepairable damage to the amplifier and presents a serious fire hazard..

16 Power connector

This is where the Mains Power cable attaches.

USE OF THE 'EFFECTS LOOP' ON VALVE HEADS

Models GH50L, GH100L & GH100S

On the rear panel you can see the section labelled 'Effects Loop'. The jack labeled SEND should connect to the input of the effect and the one labeled RETURN should be connected to the output of the effect. The SEND jack can also be used as a Line out. There is also a three position switch between the two jacks, which determines how the effects loop works. The amp is shipped with this switch in the BYPASS position. The INSERT position of the switch enables the loop as a series interface, where the pre amp patches out into the effect, which then patches back into the power amp stage.

The FX RETURN LEVEL control situated to the immediate right of the RETURN jack acts as an overall level control for the combined preamp + effect signal. Keeping this control at "5" adds enough gain to make up for any insertion loss generated by the effect, so this is essentially "unity Gain". Pushing this level to around "7" or "8" adds just a few more dB of gain, but adds enough headroom to the return section, which by the way is tube-coupled, to enable the amp to sustain quite nicely with the effect engaged.

If the FX RETURN LEVEL control is set to "0" when in this mode, the amp will appear to have no output, even if no effect device is installed in the loop.

The SIDE CHAIN position of the switch enables the loop to function as a parallel interface, where the preamp maintains its direct path into the power amp stage. In this mode, the FX RETURN LEVEL control acts as a "blend" control, blending the effect into the preamp-power amp signal path. If the level control is set to "0" in this mode, dry only signal will result.

Engaging either of the two effect loop modes will enable the function of the SLAVE IN JACK. This jack permits the user to stack up to five LANEY heads as slaves off one primary master head acting as the main preamp.

Finally, if the switch is engaged in the BYPASS position, the loop is rendered inactive, as are the SLAVE JACKS and the FX RETURN LEVEL.

IN USE TROUBLE SHOOTING

SYMPTOM 1

Amp connections have been performed correctly and selector switches are set properly but power light fails to power up.

SOLUTION

Check time delay POWER FUSE and replace if necessary.

POWER	VOLTAGE	POWER FUSE
100 & 50 Watt	100 - 130	5 Amp time delay
	210 - 240	2 Amp time delay

SYMPTOM 2

Power light illuminates, no sound output.

SOLUTION

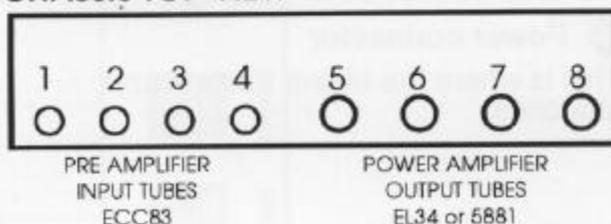
Check secondary HT fuse and replace if blown.

50 & 100 Watt	1 Amp time delay
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SYMPTOM 3

Secondary fuse (1 amp time delay) blows repeatedly. This is a strong indication of a damaged output tube. The chart below shows the tube layout and the function each tube performs.

CHASSIS TOP VIEW



TUBE FUNCTIONS

1. First gain stage.
2. 2nd gain stage.
3. 3rd Gain stage
4. Driver tube.
- 5 & 6. 2 x 5881 or (2 x EL34 in GH50L)*
- 5 & 8. 4 x 5881 or (4 x EL34 in GH100L)*.
- 5 - 8. 4 x EL34 or (4 x 5881 in GH100S)*.

* Fitted as standard.

IN USE TROUBLE SHOOTING (Cont)

SOLUTION No 3

Replace the secondary fuse and turn on the power WITH THE STANDBY ENGAGED. View the OUTPUT TUBES. If one tube fails to light up, replace that tube. If both output tubes are lit dimly, look directly at the output tubes and disengage the standby. If one of the tubes flashes brightly or glows red hot in comparison to the adjacent tubes, replace that particular tube. A simple way to verify that the tube is damaged is to switch the position of the bad output tube and follow the above procedure. If the tube exhibits the same symptom in a different tube socket position, you can be certain that the tube is damaged.

If the output tubes check out ok, another cause of a blown secondary fuse is a damaged Driver Preamp Tube No. 4. Replace the Driver Preamp No. 4 first and follow the above procedure. If the symptom persists, consult a qualified engineer, do not fit higher rated fuses.

SYMPTOM 4

No pre-amp boost. (GH50L & GH100L only)

SOLUTION 4

Replace pre-amp tube No. 1 & 2.

SYMPTOM 5

Slow loss of power.

SOLUTION 5

Check first for damaged output tube (glowing, flashing or dead) by using the procedures described in symptom 3. Next check driver pre-amp tube No.

All of these trouble shooting procedures can be performed quickly, without the aid of any sophisticated test gear. We suggest that you always maintain spare tubes for emergency purposes.

Keep your Laney free of dirt, dust and moisture to prevent performance failures. Use this simple rule: Never subject your tube amp to weather conditions that would not be comfortable to you. For example, taking your amp from a hot stage to a cold winter car trunk is not recommended. It is advisable that the amp be allowed to cool down before it is moved.

Should other customer service be necessary, contact your authorized Laney dealer or call Laney service direct.