

**USER MANUAL**

**LANEY**

**GRAPHIC BASS  
AMPLIFICATION**

**MODELS**

**G12015**

**G15010**

**G150**

**G300**

**G500**

**G1000**

**G12**



# LANEY GRAPHIC BASS AMPLIFICATION

## INTRODUCTION

Congratulations on the purchase of your new Laney amplifier.

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

## BEFORE SWITCHING ON

Your amplifier should be fitted with a three pin 'grounded' (or 'earthed') plug. Please make sure that the amplifier is powered from a 'grounded/earthed' outlet. If changing or fitting a plug yourself, ensure that the applicable wiring code is adhered to, for example in the UK the cable colour code for connections are as follows:

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

The amplifier should never be exposed to moisture or wetness under any circumstances since this would represent a possible shock or fire hazard, and may cause expensive damage to your valuable possession.

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

Details of the fuse required is printed on the rear panel of your amplifier, please take special care to use a 'time delay' fuse wherever stated, this information is also printed within this manual.

The following instructions and illustrations, are designed to guide you through your amplifier and generally help you to achieve your sound requirements.

## WARNING:

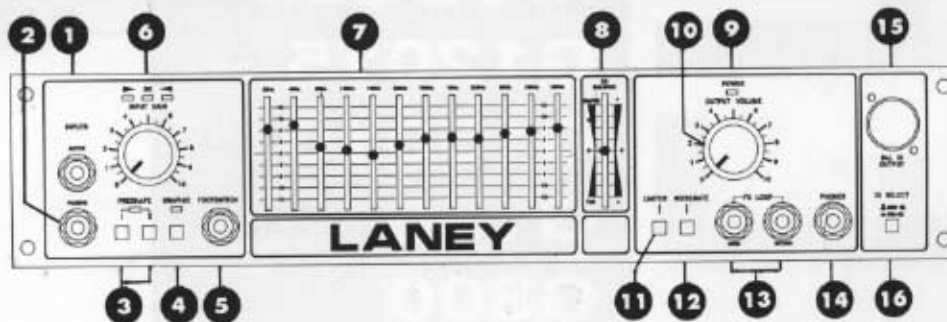
Graphic bass equipment is designed to professional specifications and will reward musicians accordingly. It is important that extreme care is taken when operating a graphic amplifier, and in particular models G500 and G1000, where very high volume levels can be reached that can and will damage your hearing, unless you use your amplifier sensibly.

Whilst power is of course a component part of bass sound reinforcement, the added benefits essential to professional musicians is that of obtaining superior sonic bass sounds without distortion. This is where, what is known as 'amplifier headroom' separates high tech products from the 'also rans'. Laney high powered bass amplification has masses of headroom available, that will enable you to hit high frequency notes and chords without suffering from distortion.

## MODEL: G12015 G15010 G150H

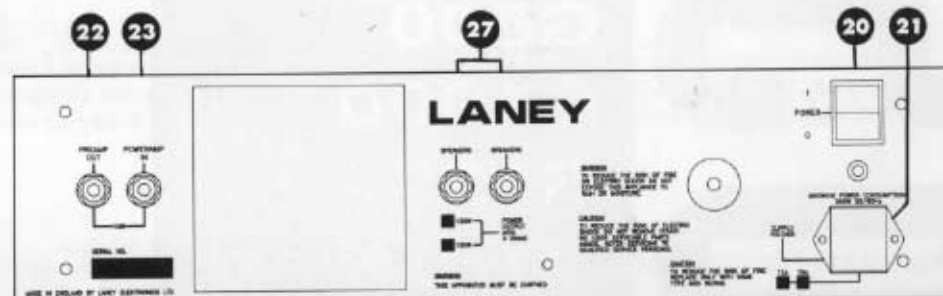
### PREAMPLIFIER

Fig 1.



### REAR PANEL

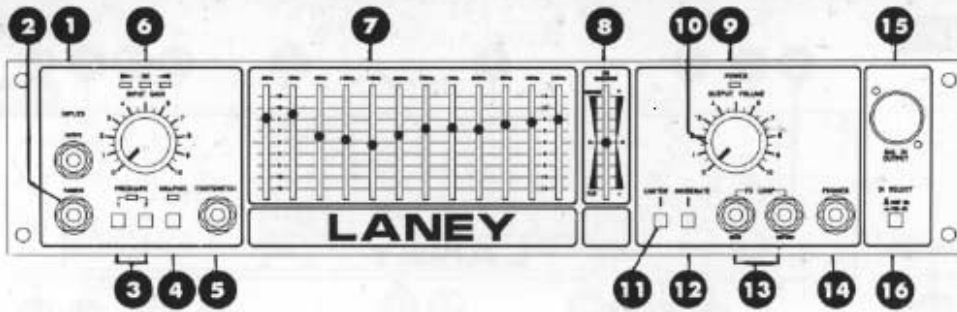
Fig 2.



**MODEL: G300H**

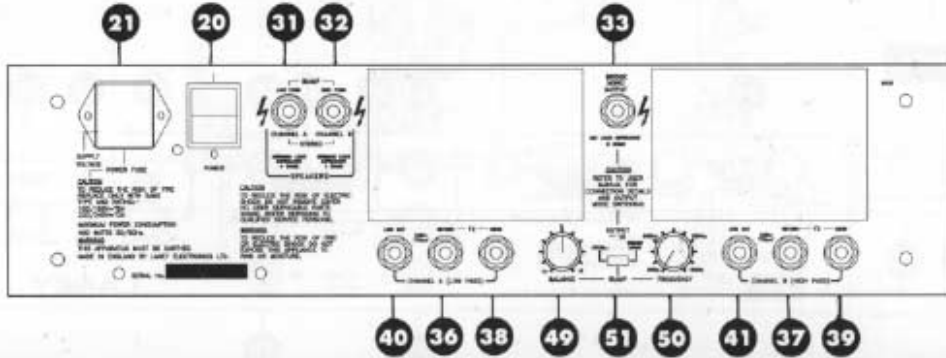
**PREAMPLIFIER**

Fig 3.



**REAR PANEL**

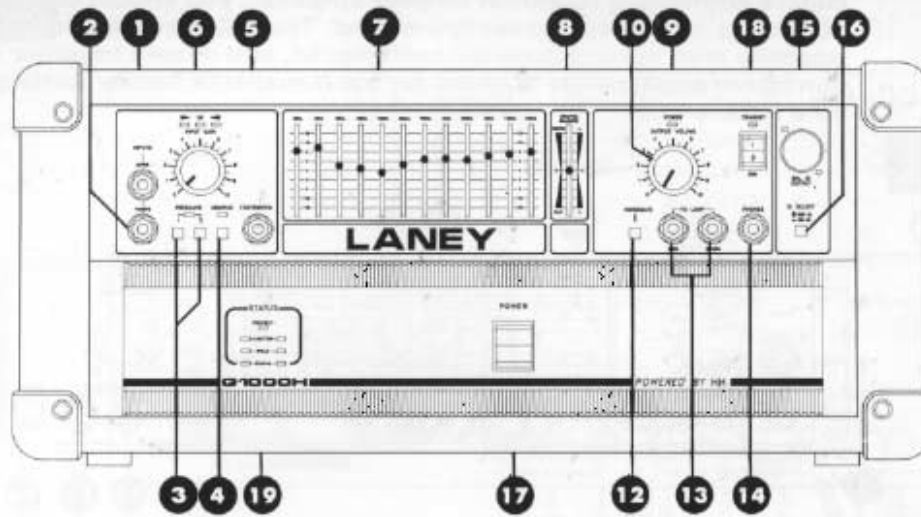
Fig 4.



**MODEL: G500 G1000**

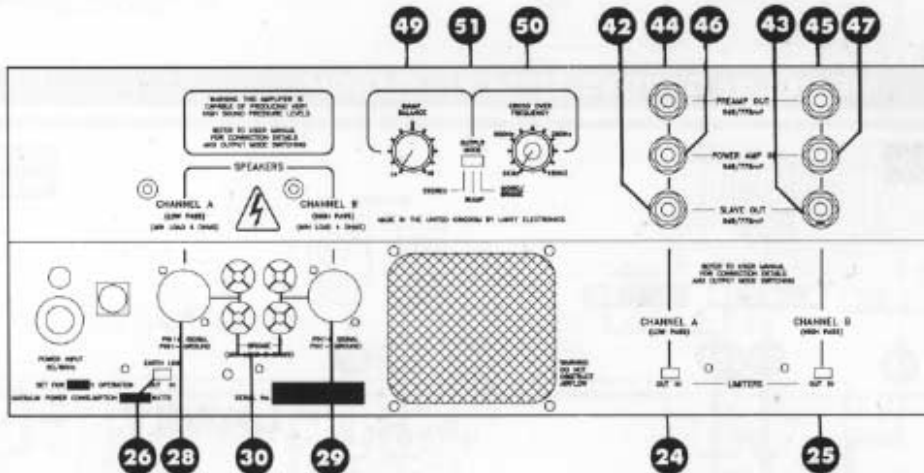
**PREAMPLIFIER**

Fig 5.



**REAR PANEL**

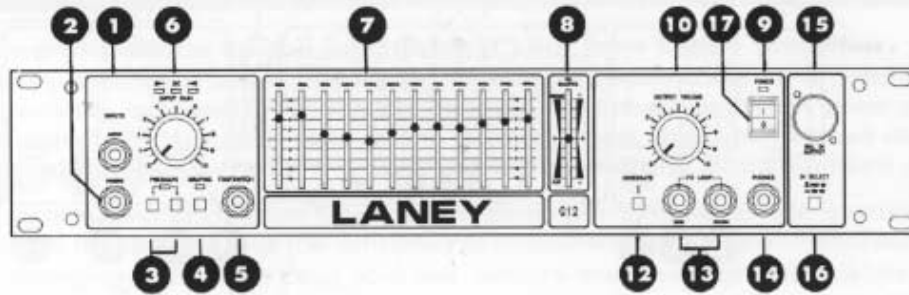
Fig 6.



# MODEL: G12 PREAMPLIFIER

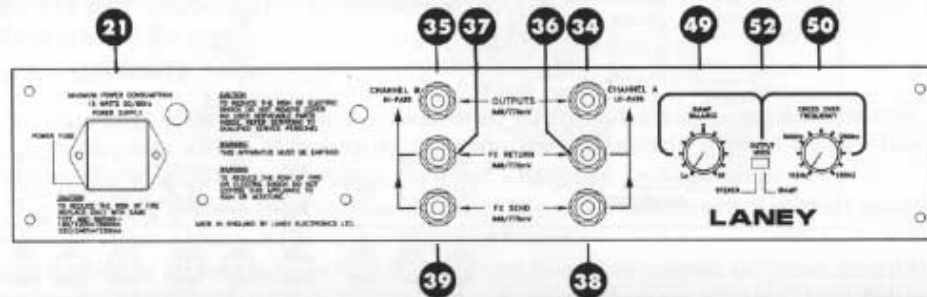
## PREAMPLIFIER

Fig7.



## REAR PANEL

Fig8.

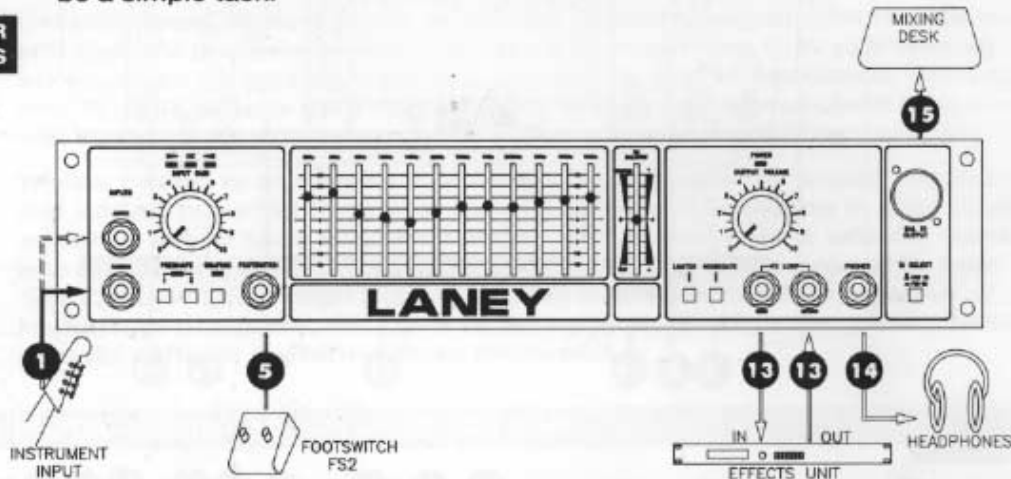


## SETTING UP

Before attempting to switch on your amplifier, you should ensure that all inter connecting cables are correctly inserted. The following diagrams show most possible inter connections for each model, and if used together with the numbered explanation of terms for each available facility, setting up should be a simple task.

## PREAMPLIFIER ALL MODELS

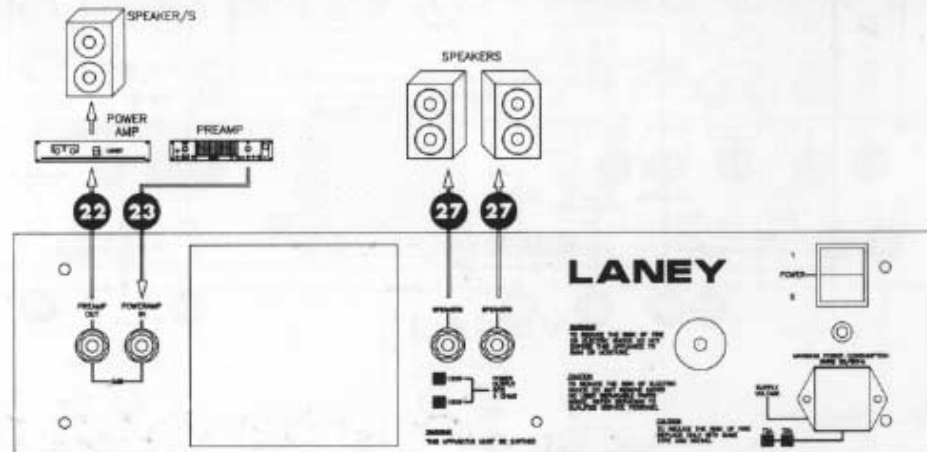
Fig9.



## MODELS: G12015 G15015 G150H

## REAR PANELS

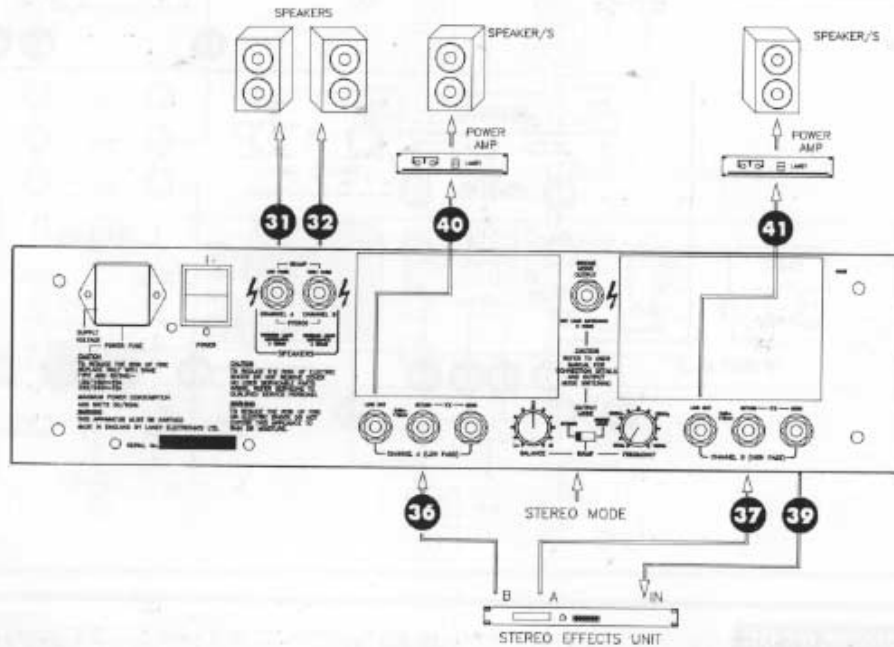
Fig10.



# REAR PANEL: MODEL G300H

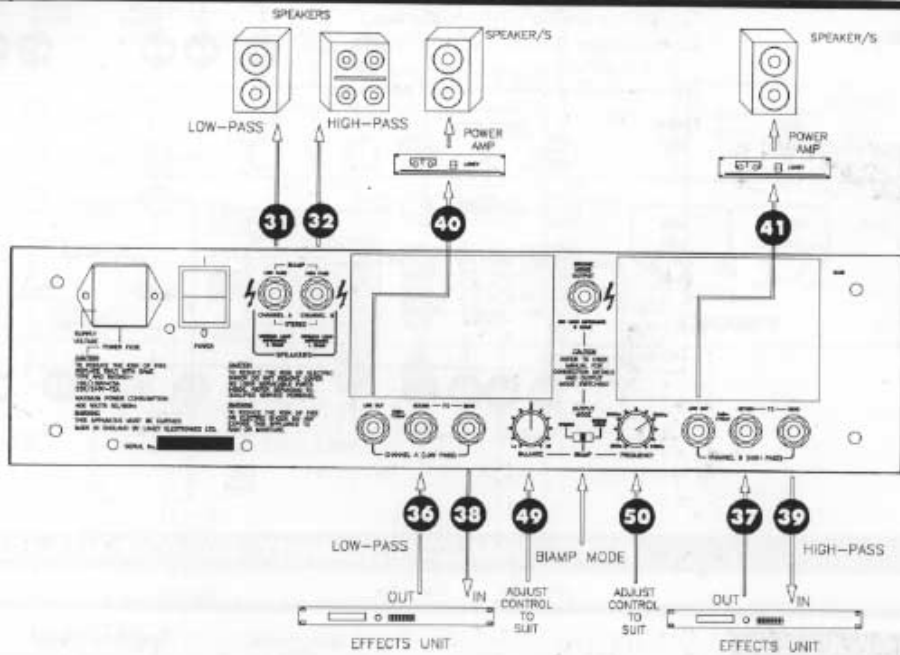
## STEREO MODE

Fig11.



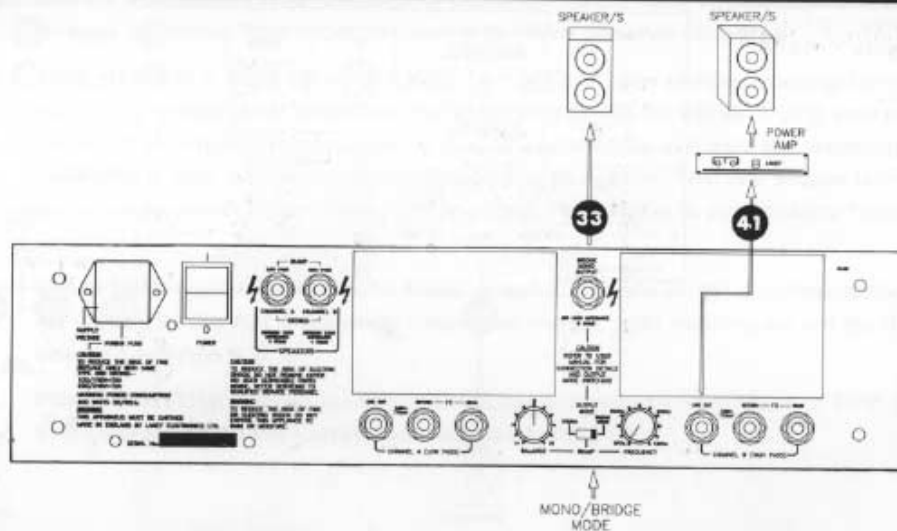
## BIAMP MODE

Fig12.



## BRIDGE MONO MODE

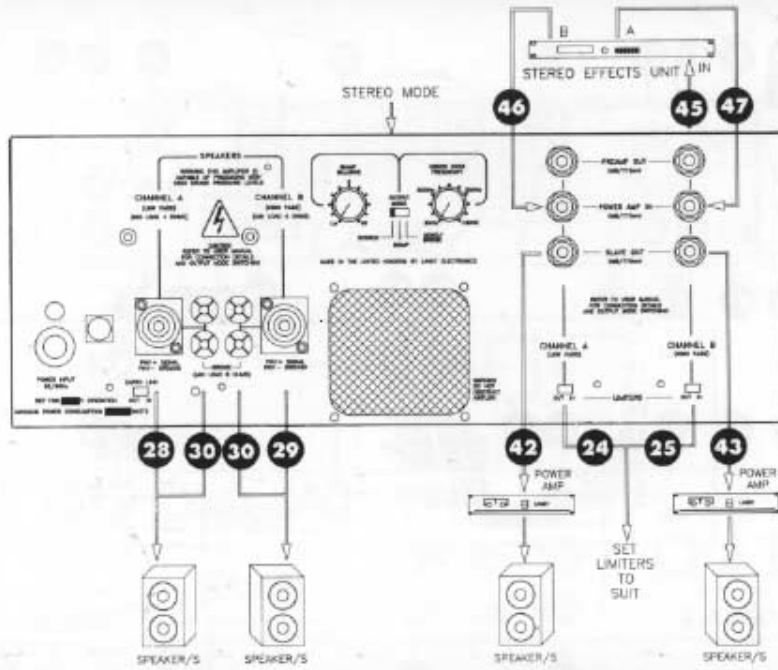
Fig13.



# REAR PANEL: MODELS G500H G1000H

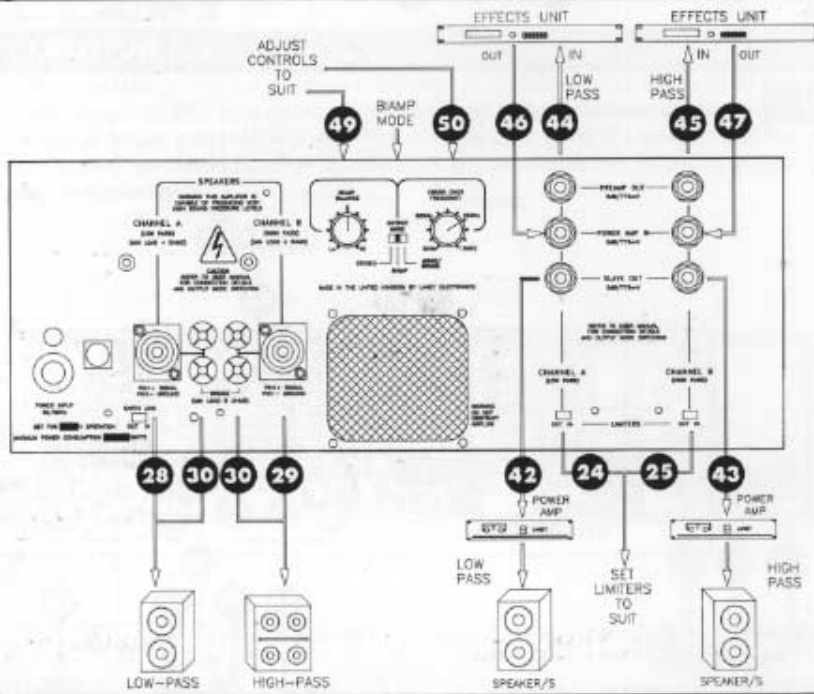
## STEREO MODE

Fig14.



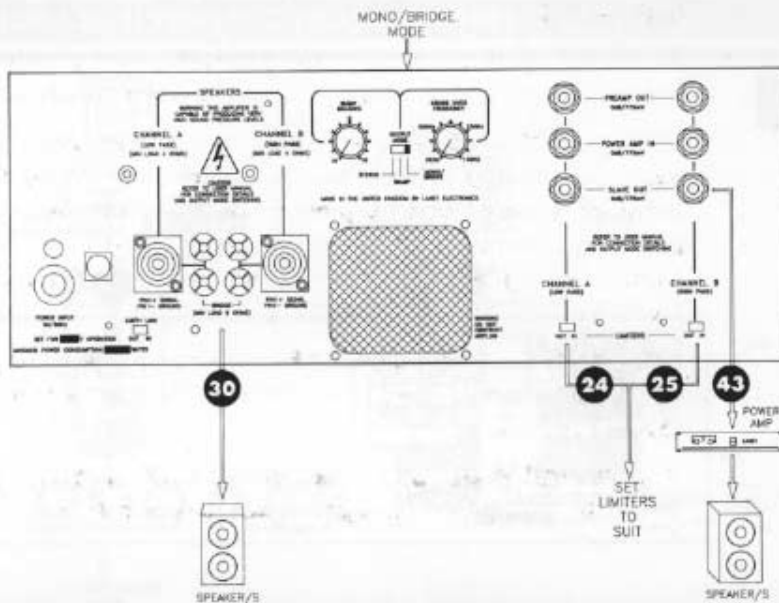
## BIAMP MODE

Fig15.



## BRIDGE MONO MODE

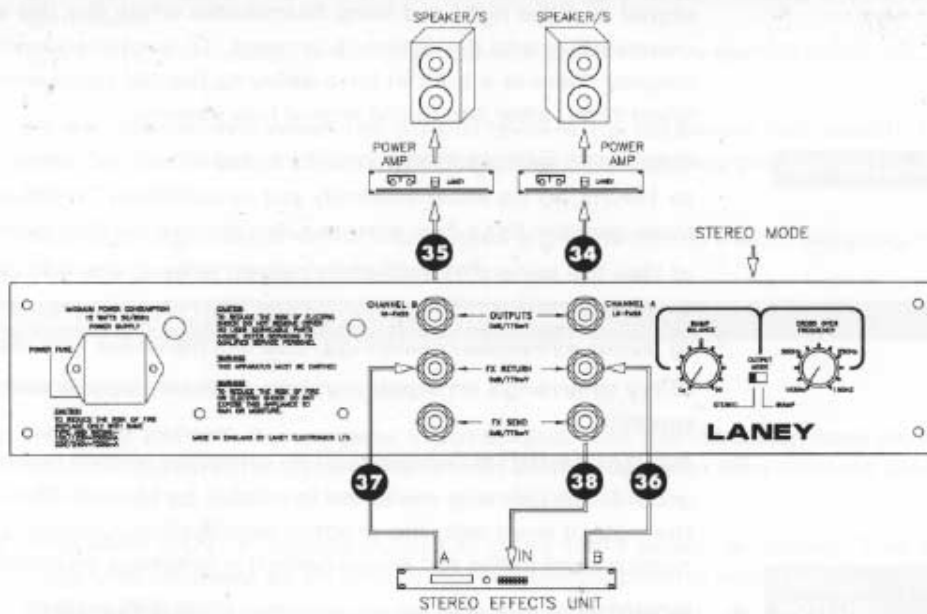
Fig16.



## REAR PANEL: MODEL G12

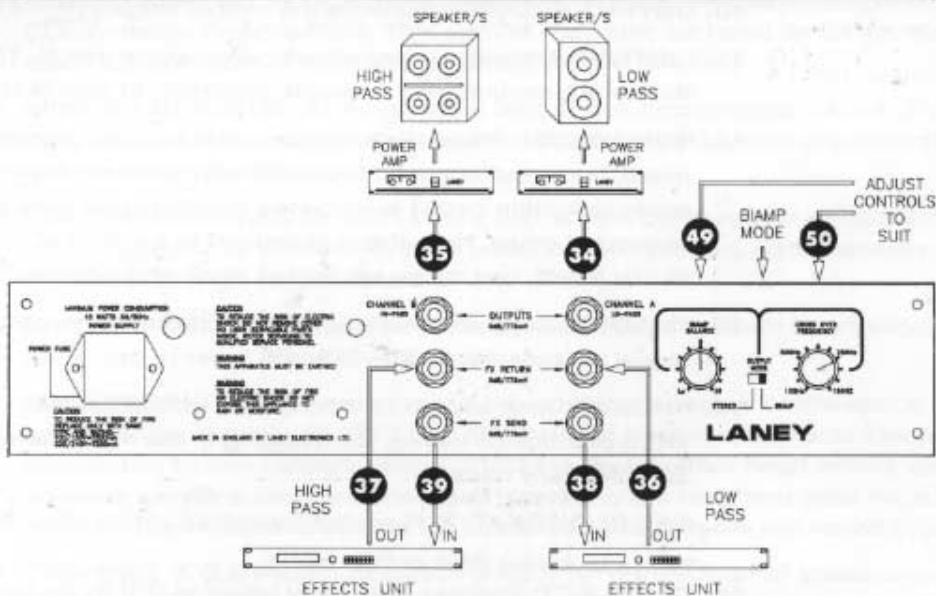
### STEREO MODE

Fig17.



### BIAMP MODE

Fig18.



## EXPLANATION OF TERMS; PREAMPLIFIER

### INPUT SECTION

- INPUT ACTIVE:** Low sensitivity input for instrument with active circuitry and high output.
- INPUT PASSIVE:** High sensitivity input for instrument with normal output. It should be noted that most instruments have passive circuitry.
- PRE SHAPE 1 & 2:** There are two 'factory set', pre shape, voicing circuits available within your amplifier. By selecting (push in) either 1 or 2 you will inject different levels of high frequency boost and middle cut into the existing eq. By pressing 1 and 2 together a third sound is available. The pre shape lamp illuminates when either switch is enabled. Pre shape is particularly helpful at low level use.
- GRAPHIC:** Switches in the 12 band graphic equaliser. When disenabled (out) the eq will be in the flat frequency response mode, with voicing as set by the pre shape switches 1 & 2.
- FOOTSWITCH:** Stereo footswitch socket for remote operation of PRE SHAPE (3) and GRAPHIC (5) via Laney footswitch model FS2.

6. **INPUT GAIN:** Controls the input level of the amplifier. This is supported by three indicator lamps. The amplifier INPUT GAIN should be set to operate with the centre OK lamp illuminated. The yellow lamp to the left indicates a weak input signal and the right red lamp illuminates when the pre amplifier is overloading and distortion is present. To avoid misleading flickering of the display there is a built in time delay to the OK lamp which stays illuminated for a short time, after the audio signal has ceased.

#### EQUALISATION

7. **GRAPHIC EQUALISER:** This 12 band EQ circuit allows frequencies, from 32Hz to 15KHz, to be independently cut or boosted. To obtain the best performance from graphic EQ a few simple rules should be observed:

- Use the sliders in a smooth curved shape, this will ensure a more natural sound.
- Avoid extremes of settings, this will minimise any resultant noise.
- Try to arrange an equal number of sliders above and below the centre zero position.

8. **EQ BALANCE:** Balances the pre amplifier output levels when the 12 band graphic equaliser is switched in or out, by (4 or 5). Raising the control increases the output level with the graphic switched in. Lowering the control increases the output level in the flat mode (with the graphics switched out).

#### OUTPUT SECTION

9. **POWER:** Illuminates when amplifier is switched on.

10. **OUTPUT VOLUME:** Controls the overall stage volume of the amplifier.

11. **LIMITER:** Activates a fast attack compressor circuit. This is auto triggered by the output section, and prevents distortion at high output levels.

12. **NOISEGATE:** When the amplifier is set for high gain and high output volume; noise, hum, and acoustic feedback may become apparent. When pressed in, the noise reduction circuit is activated when playing ceases, greatly reducing the unwanted noise. Note this is designed to be used at high gain volume levels, use at low levels, can cause unwanted noise and premature signal cut off.

13. **FX LOOP:** Send and Return jack sockets for connection (post EQ) of external signal processors. (0dBm 775 mV)

14. **PHONES:** Jack socket for connection of headphones. This may be used for silent practice or tuning. On plugging in the headphones the speakers are automatically muted.

15. **BAL DI OUTPUT:** XLR socket for output of low impedance balanced line signal, to mixing desk or PA system.

16. **DI SELECT:** Enables the signal taken at (15) to be selected either 'pre' or 'post' equalisation.

17. **POWER SWITCH:** Power on off switch for G12 pre amplifier G500 and G1000 heads. Pre amplifiers are usually part of a rack system where other mains connected units may be operated from the same power input supply line. This may result in induced mains hum, under these circumstances please refer to operation of EARTH LINK (26).

18. **STANDBY:** Illuminates when amplifier is switched to 'STANDBY'(Not G12).

**STANDBY SWITCH:** Enables the amplifier to be muted (STANDBY) during breaks of play, when your instrument may be left connected.

19. **STATUS:** The 7 status indicators provide the user with information on the following:

**PROTECT:** Illuminates when the output speaker protection relays are opened this occurs under the following conditions:

- At switch on for 2 seconds.
- At switch off, instantly.
- If the amplifier overheats due to inadequate ventilation or load mismatch. The amplifier will automatically reset on cooling down. (leave the amplifier switched on to ensure fan continues to cool)

OUTPUT SECTION:  
G12 G500 G1000  
ONLY



- d) If ultra low frequencies (less than 5Hz) occur at the speaker output terminals.
- e) In the unlikely event of the amplifier failing and producing DC at the output terminals.

**LIMITER:** Illuminates when the appropriate limiter is switched on via the back panel.

**PEAK:** Illuminates when the output level is 1.5 dB below 'clip point', i.e just prior to the onset of distortion. Note the amplifier may safely be used with this light flashing

**SIGNAL:** Illuminates when the output signal is 30 dB below clipping, thereby indicating when a signal is Present.

## EXPLANATION OF TERMS REAR PANEL

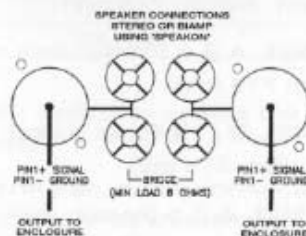
### GENERAL

- 20. **POWER:** Power on/off switch.
- 21. **POWER INPUT:** Euro power input socket with combination fuse carrier, replace fuses when appropriate with similar value to that marked alongside the carrier as instructions in the general notes.
- 22. **PREAMP OUT:** Provides output to drive extra power amplifier. This socket may also be used as an additional effects loop send when used with 23). (0dBm 775 mV)
- 23. **POWER AMP IN:** Input to power amplifier for use as a slave amplifier. (disconnects preamplifier). This socket may also be used as an additional effects loop return when used with 22). (0dBm 775 mV)
- 24. **LIMITER CHANNEL A:** Activates a fast attack compressor circuit. This is auto triggered by channel A (low pass) output section, and prevents distortion at high output levels.
- 25. **LIMITER CHANNEL B:** Activates a fast attack compressor circuit. This is auto triggered by channel B (high pass) output section, and prevents distortion at high output levels.
- 26. **EARTH LINK:** When switched out any 'hum loops' should be eliminated, (if none are present leave switched in).

### SPEAKER OUTPUTS

- 27. **SPEAKERS:** Two jack outputs are provided for speaker connections. On combination models G12015 and G15010 the built in speaker is already connected to one output. Model G150H is an amplifier head where various speaker systems can be connected providing the resultant load impedance is not less than 4 ohm. It should be noted that the outputs are wired in parallel.
- 28. **CHANNEL A (Lo Pass):** Speakon output for connection of speaker enclosure when in STEREO or BIAMP mode. In stereo mode a full range speaker enclosure should be connected, and in BIAMP mode a low frequency enclosure should be connected.

FIG 19.



- 29. **CHANNEL B (Hi Pass):** Speakon output for connection of speaker enclosure when in STEREO or BIAMP mode. In stereo mode a full range speaker enclosure should be connected, and in BIAMP mode a mid to high frequency enclosure should be connected. (SEE FIG 19)
- 30. **BINDING POSTS:** In BRIDGE mode speakers may only be connected via the binding posts. This enables the full output power of the amplifier to be used for mono operation. When in BRIDGE mode speakers should be connected as shown in FIG 21. (minimum load impedance 8 ohm) Although binding posts are mainly used for 'bridging' it is also acceptable to use them whilst in BIAMP or STEREO mode, for connections see FIG 20. Take care to avoid shorts between the terminals !!!!

Fig20.

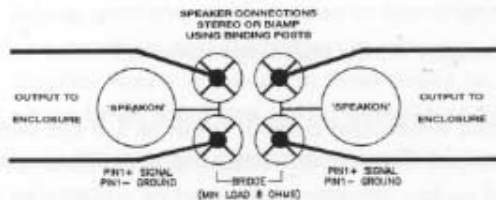
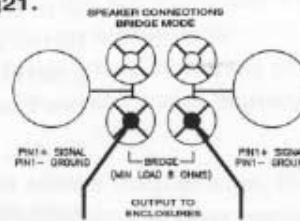


Fig21.



- 31. CHANNEL A (Lo Pass):** Jack output for connection of speaker enclosure when in STEREO or BIAMP mode. In stereo mode a full range speaker enclosure should be connected, and in biamp mode a low frequency enclosure should be connected. (minimum load 4 ohms).
- 32. CHANNEL B (Hi Pass):** Jack output for connection of speaker enclosure when in STEREO or BIAMP mode. In stereo mode a full range speaker enclosure should be connected, and in biamp mode a mid to high frequency enclosure should be connected. (minimum load 4 ohms)
- 33. BRIDGE OUTPUT (Mono):** Output for connection of enclosures when in BRIDGE mode only. Minimum resultant impedance should not be lower than 8 ohms.

## SIGNAL CONNECTORS.

All the following signal connectors are situated between the main preamplifier volume control and the power amplifiers and all operate at a nominal line level of 0dBm 775mV. When setting up effects processors adjust volume to normal playing levels and set processor level adjustments to suit. Note if the volume is subsequently adjusted any effect still being processed will continue to be produced at the previous level until completed.

- 34. CHANNEL A (Lo Pass):** Jack output for connection of power amplifier, for full range use, when in stereo mode. When in BIAMP mode connect to the power amplifier channel, that is to be used for low frequency enclosures. (0dBm 775 mV)
- 35. CHANNEL B (Hi Pass):** Jack output for connection of power amplifier for full range use when in stereo mode. When in BIAMP mode connect to the power amplifier channel, that is to be used for high frequency enclosures. (0dBm 775 mV)
- 36. FX RETURN CHANNEL A (Lo Pass):** Jack input for connection from external effects unit. (0dBm 775 mV)
- 37. FX RETURN CHANNEL B (Hi Pass):** Jack input for connection from external effects unit. (0dBm 775 mV)
- 38. FX SEND CHANNEL A (Lo Pass):** Jack output for connection to external effects unit. (0dBm 775 mV)
- 39. FX SEND CHANNEL B (Hi Pass):** Jack output for connection to external effects unit. (0dBm 775 mV)
- 40. LINE OUT CHANNEL A (Lo Pass):** Jack output for connection to additional power amplifier. (0dBm 775 mV)
- 41. LINE OUT CHANNEL B (Hi Pass):** Jack output for connection to additional power amplifier. (0dBm 775 mV)
- 42. SLAVE OUT CHANNEL A (Lo Pass):** Jack output for connection to Laney power amplifiers models SP300 SP500 or SP1000. (0dBm 775 mV)
- 43. SLAVE OUT CHANNEL B (Hi Pass):** Jack output for connection to Laney power amplifiers models. SP300 SP500 or SP1000. (0dBm 775 mV)
- 44. PREAMP OUT CHANNEL A (Lo Pass):** Jack output for connection to external effects unit. (0dBm 775 mV)

- 45. PREAMP OUT CHANNEL B (Hi Pass):** Jack output for connection to external effects unit. (0dBm 775 mV)
- 46. POWER AMP IN CHANNEL A (Lo Pass):** Jack output for connection from external effects unit. (0dBm 775 mV)
- 47. POWER AMP IN CHANNEL B (Hi Pass):** Jack output for connection from external effects unit. (0dBm 775 mV)

## BIAMPING

The output signal from a guitar or bass is quite complex and a challenge to the modern audio design engineer. This is of particular importance to a bass musician since amplifying low frequency signals is extremely power consuming, and causes loss of headroom within the power section. When this is extreme amplifiers and speakers can be working so hard processing the low frequencies, that there is little left for the highs with the result that the output is muddy and confused.

To overcome this problem Laney have included in all stereo bass amplifiers an electronic crossover system; this separates the high and low frequencies and routes them to separate amplifiers for individual Processing. This routine is called biamping.

Laney BIAMP systems have two controls, one to balance the output level from each amp section; and the other controls the hinge point where the frequencies are separated.

- 49. BALANCE:** Controls the output balance between CHANNEL A and CHANNEL B when in BIAMP mode. When setting up initially adjust this control to the mid point (zero).
- 50. FREQUENCY:** Use to set the hinge point for crossover frequency separation, when in BIAMP mode. In order to help you first set up, shown below are some examples of Laney bass stacks and the suggested crossover frequency settings you should initially use.

AMPLIFIER	ENCLOSURE (Lo Pass)	ENCLOSURE (Hi Pass)	CROSSOVER FREQUENCY
<b>G300H</b>	B115	B210	250Hz
	B215	B210	250Hz
	B115	B410	150Hz
	B215	B410	150Hz
	B410	B210	250Hz
<b>G500/1000H</b>	BS215	BS210	250Hz
	BS215	BS410	150Hz
	BS410	BS210	250Hz

- 51. OUTPUT MODE:** Switch to enable the amplifier to be used in one of three modes as follows:

**STEREO:** Set to stereo, when connecting full range or similar enclosures. When using SPEAKON connectors, set up as shown in FIG 19 and when using binding posts connect as FIG 20.

**BIAMP:** In the biamp mode, Lo Pass speaker enclosures should be connected to channel A output sockets, and Hi Pass to channel B. For connections see FIG 19 and FIG 20.

**BRIDGE:** Use when the full output power of the amplifier is required to be delivered in mono. In this mode the resultant speaker impedance should not be below 8 ohm. Connect as shown in FIG 21.

**52. OUTPUT MODE:** As (51) but only allows STEREO or BIAMP mode to be selected.

**IMPORTANT!!** This switch is mounted on model G12 pre amplifier and is designed to be used in conjunction with Laney models: SP300, SP500 or SP1000. When the power amplifier is required to be used in BRIDGE mode it is important that the mode switch (52) is set to STEREO. Bridge may then be selected with the switch mounted on the rear of the power amplifier.

## GENERAL NOTES

### REPLACING FUSES

Your amplifier leaves the Laney factory correctly fused. Fuses are fitted to protect the user from possible injury and your amplifier from possible permanent damage. Fuses can blow simply from old age, or because the wrong fuse is fitted. If after replacement failure occurs again, it is possible your amplifier or the power supply to it, has developed a fault.

Under these circumstances you are strongly recommended to consult your local dealer or a qualified engineer.

### POWER FUSE

Replacing the POWER fuse is a procedure that can safely be undertaken by the user.

In the unlikely event that you are required to replace a blown POWER fuse it is important to ensure that a fuse of the value and type recommended by LANEY is fitted.

Ensure fuse carrier when refitted, indicates correct supply voltage.

The POWER fuse is located on the rear panel of your amplifier within the power input socket.

#### 220 - 240 VOLT MODELS

G12	T250 mA	(Time delay)
G12015	T2 Amp	(Time delay)
G15010	T2 Amp	(Time delay)
G150H	T2 Amp	(Time delay)
G300H	T2 Amp	(Time delay)
G500H	T5 Amp	(Time delay)
G1000H	T10 Amp	(Time delay)

#### 100 - 120 VOLT MODELS

G12	T500 mA	(Time delay)
G12015	T5 Amp	(Time delay)
G15010	T5 Amp	(Time delay)
G150H	T5 Amp	(Time delay)
G300H	T5 Amp	(Time delay)
G500H	T10 Amp	(Time delay)
G1000H	T16 Amp	(Time Delay)

### INTERNAL SUPPLY FUSE

The internal supply fuse is located inside your amplifier on the printed circuit board. It is strongly recommended that this fuse is replaced by a qualified engineer.

#### ALL VOLTAGES

G12	F1 Amp	(Fast)
G12015	F3.15 Amp	(Fast)
G15010	F5 Amp	(Fast)
G150H	F5 Amp	(Fast)
G300H	F5 Amp	(Fast)
G500H	NOT USER SERVICEABLE	
G1000H	NOT USER SERVICEABLE	

Your Laney amplifier has been designed to be of high quality and reliability. Each unit is thoroughly examined and tested before leaving the factory. In the unlikely event that a fault should develop contact the dealer from whom you made your purchase and seek his assistance.

# LANEY

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