LIONHEART

L5-Studio

USER MANUAL

www.laney.co.uk

British Engineering from the
Black Country United Kingdom

Dear Player,

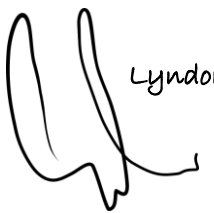
Thank you very much for purchasing your new Laney product and becoming part of the worldwide Laney family. Each and every Laney unit is designed and built with the utmost attention to care and detail, so I trust yours will give you many years of enjoyment.

Laney products have a heritage which stretches back to 1967 when I first began building valve amplifiers in my parents' garage.

Since then we have moved on from strength to strength developing an extensive range of guitar, bass, public address, multi instrument and keyboard amplification products along with a list of Laney endorsees that includes some of the world's most famous and respected musicians.

At the same time we believe we have not lost sight of the reason Laney was founded in the first place - a dedication to building great sounding amplification for working musicians.

Warm Regards,



Lyndon Laney Chairman & Founder

The L5-Studio's 5W Class A Single Ended output stage oozes classic, warm tube tones. The harder you drive it, the better it sounds. Plus with enough gain for contemporary tones, it also has a mean, spiteful side to it as well – making it ideal for any style of playing. Perfect for studio and practice use (using the 5W or 0.5W output), but equally at home on stage plugged into a Laney LT112, LT212 or L412 cabinet. The sound will blow you away. Utilising the T-USB technology first released in the IRT-Studio, the L5-Studio lets you combine the worlds of VALVE tone and digital flexibility in a way not previously available to players who were looking for vintage aesthetics, great valve tone all combined with modern features.

Every Lionheart product is extensively play tested by experienced guitarists before being shipped to our customers. Only when the unit is finished to our complete satisfaction is it assigned its own unique build number which is then hand stamped onto the rear mounted plaque.

Your L5-Studio should give you years of trouble-free amplification, however please take time to read this manual and familiarise yourself with the controls as it will allow you to get the best from your amplifier. We hope you enjoy using your L5-Studio as much as we enjoyed designing and making it.

Best wishes from all at Laney.

Important Safety Instructions

WARNING: When using electrical products, basic cautions should always be followed, including the following:

1. Read these instructions.
2. Keep these instructions safe.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. An apparatus with Class I construction shall be connected to a mains socket outlet with a protective connection. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
11. Only use attachments/accessories provided by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. The mains plug or appliance coupler is used as the disconnect device and shall remain readily operable. The user should allow easy access to any mains plug, mains coupler and mains switch used in conjunction with this unit thus making it readily operable. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Never break off the ground pin. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
16. If this product is to be mounted in an equipment rack, rear support should be provided.
17. Note for UK only: If the colours of the wires in the mains lead of this unit do not correspond with the terminals in your plug, proceed as follows:
    a) The wire that is coloured green and yellow must be connected to the terminal that is marked by the letter E, the earth symbol, coloured green or coloured green and yellow.
    b) The wire that is coloured blue must be connected to the terminal that is marked with the letter N or the colour black.
    c) The wire that is coloured brown must be connected to the terminal that is marked with the letter L or the colour red.
18. This electrical apparatus should not be exposed to dripping or splashing and care should be taken not to place objects containing liquids, such as vases, upon the apparatus.
19. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time.

The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures: According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss. Earplugs or protectors to the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss, if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

Duration Per Day in Hours	Sound Level dBA, slow response
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ or less	115

Intended to alert the user to the presence of high 'Dangerous Voltage' within the products enclosure that may be sufficient to constitute a risk of electrical shock to persons.

Intended to alert the user of the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

CAUTION: Risk of electrical shock - DO NOT OPEN. To reduce the risk of electrical shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified personnel.

WARNING: To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture. Before using this appliance please read the operating instructions.

If your appliance features a tilting mechanism or a kickback style cabinet, please use this design feature with caution. Due to the ease with which the amplifier can be moved between straight and tilted back positions, only use the amplifier on a level, stable surface. DO NOT operate the amplifier on a desk, table, shelf or otherwise unsuitable nonstable platform.

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 earth 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

NOTE

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

Your Laney amplifier has undergone a thorough two stage, pre-delivery inspection, involving actual play testing.

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

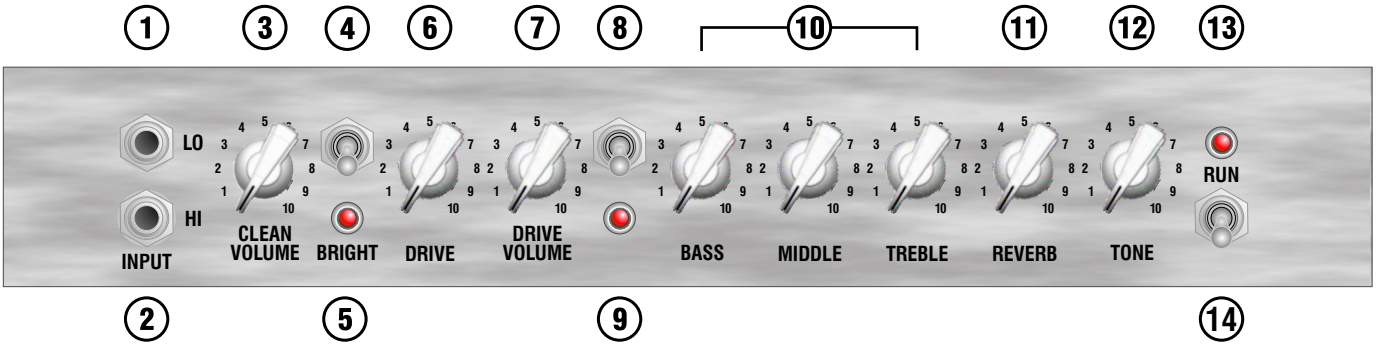
(i) Ensure that the amplifier is the correct voltage for the country it is to be used in.

(ii) Connect your equipment with a high quality shielded cable. You have probably spent considerable money on your amplifier and equipment - don't use poor quality cable, it won't do your gear justice.

Please retain your original carton and packaging so in the unlikely event that some time in the future your amplifier should require servicing you will be able to return it to your dealer securely packed.

Care of your Laney amplifier will prolong it's life.....and yours!

Front Panel Controls



1 HI INPUT: 'HI' stands for high gain. This input is designed for the connection of low output guitars making it well suited for single coiled or low gain humbucker type pickups. The use of high gain pickups in this input may drive the preamp too hard causing a "mushy" sound. Only use good quality guitar cable.

2 LO INPUT: 'LO' stands for low gain, (approximately 50% attenuated when compared to the Hi input) and is designed for high output guitars. Ideal in obtaining an output that is "tight" not "mushy" from high gain humbucker type pickups. Also use this input for the cleanest full range sound with extended low end response. Only use good quality guitar cable.

3 CLEAN VOLUME: Sets how loud the clean channel is. Try cranking it up a little to drive the power tubes harder for that real retro sound and feel that only a quality tube amplifier can deliver. Also experiment with the level/overdrive interaction by using your guitar volume control.

4 BRIGHT: Adds brightness and life to the treble frequencies of your guitar when using the clean channel. Adds edge and picking emphasis when using the drive channel. The switch has more effect at low Clean Volume/Drive control settings. Use in conjunction with the Treble and Tone controls for optimum performance. Switch up to enable.

5 BRIGHT LED: This led will illuminate when the Bright switch is activated.

6 DRIVE: Sets the level of tube pre-amp drive or how dirty your sound is. This control should be used in conjunction with the Drive Volume (7). Setting a low Drive and a high volume will give a clean pre-amp sound with tube output stage overdrive.

With a medium Drive Level and Drive Volume you will get a crisp bluesy lead tone, again with the ability to drive the output stage at higher Drive Volume settings. A higher level on the Drive control and a low setting on the Drive Volume will give a punchy hard rock lead tone, again with the ability to drive the output tubes at higher Drive volume settings. Having set the Drive and Drive Volume controls to achieve your desired sound, try backing off your guitar volume and tone controls for lots of other cool sounds. Good tube amplifiers have the unique ability to produce a wide range of sounds by using only your guitar controls, playing weight and style.

(7) **DRIVE VOLUME:** Sets how loud the Drive channel is. It is useful to experiment with Drive Levels and Drive Volumes. If you want a very open, warm and semi over-driven sound try reducing the amount of Drive and increasing the Drive Volume. This reduces pre-amp gain, but pushes the output stage harder giving a very desirable "retro" style distortion.

(8) **DRIVE SWITCH:** Switch up (ON) to enable the Drive channel and allow for the drive to be switched on/off via an FS2 foot switch.

(9) **DRIVE LED:** This led will illuminate when the Drive is activated via switch (8) or the included Laney FS2 remote foot-switch.

(10) **BASS, MIDDLE, TREBLE:** A traditional set of passive tone controls, having the advantage of always sounding musical due to their unique interactive nature. This gives players a more natural set of tools to create their ideal sound.

TIP *Set them at midway (5) for a good starting point.*

(11) **REVERB:** Controls the level of the on-board reverb effect. Reverb can be turned on and off with the FS2 foot-switch.

(12) **TONE:** The tone control works in a similar fashion to the Tone control you probably have on your guitar, except that it uniquely works at the other end of the amplification signal chain. This has the ability to not only control the overall top end response, but also reduce upper end harmonics on the output stage and pre-amplifier overdrive sounds. This will give you bright cutting sounds at high settings and smooth rounded sounds at lower settings.

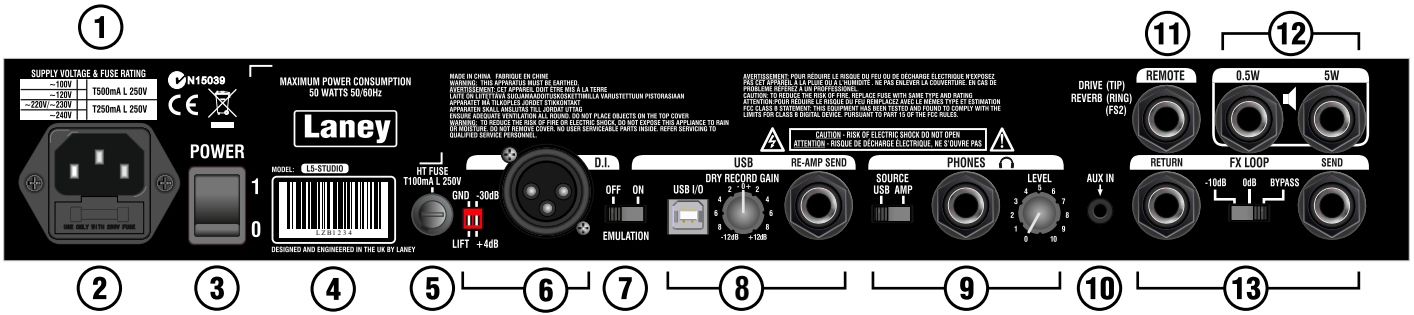
TIP *Set to midway (5) for a good starting point.*

(13) **POWER LED:** This led will be lit when the amplifier is switched on.

(14) **RUN SWITCH:** Disconnects the HT voltage (switch down position), but not the heater lines. This keeps the tubes warm so are ready to go instantly.

TIP Switch to standby (down position) for short breaks when you don't want to wait for the tubes to warm up again.

Rear Panel Controls



1 **POWER INLET SOCKET:** Connect to your power source. Make sure the specified voltage is correct for your country!

2 **POWER FUSE:** This drawer contains the main safety fuse for the unit. USE ONLY THE CORRECT SIZE AND RATING OF 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 needs immediate service from a qualified technician. DO NOT TRY USING A FUSE OF HIGHER RATING. This may cause serious, irreparable damage to the amplifier and presents a serious fire hazard. The mains fuse ratings are detailed in the specification section at the rear of this manual.

3 **POWER:** Main power switch for unit.

4 **SERIAL NO:** Displays the model and serial number of the unit.

5 **HT FUSE:** This fuse protects the DC power to the tubes within the amplifier. USE ONLY THE CORRECT SIZE AND RATING FUSE AS SPECIFIED ON THE PANEL. If the HT 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. Firstly check the output tubes and replace faulty ones if required. If the tubes aren't the cause of the problem, the amplifier should be checked out by a qualified technician. DO NOT TRY USING A FUSE OF HIGHER RATING. Again, this may cause serious, irreparable damage to the amplifier. Fuses are designed to protect, do not take chances.

6 **DI**: Sourced from either pre or post output section and can be used with or without a speaker load. This connector provides balanced direct feed primarily go to a PA sound desk. It carries an adjacent ground lift switch to remove any hum loop problems. To allow suitable levels to be sent to the desk there is also a+4dB/-30dB send level switch.

7 **EMULATION:** This provides continuous 4x12 cabinet emulation to the Phones and switchable emulation for USB and the D.I. output.

8 **USB:** A standard USB 2.0 audio in/out connector is provided for recording purposes.

For further explanation of USB and associated controls, see page 11.

9 **PHONES:** A stereo jack is provided which can be used for headphones or a stereo feed to a PA system. A Source switch allows you to listen to the full amplifier or stereo return from the USB. A level control is included for comfortable listening.

TIP *Ensure the Phones level is turned to minimum before connecting headphones to avoid unexpected levels.*

10 **AUXILIARY INPUT**: This input allows the connection of backing tracks (or any line level audio signal) to be mixed in post FX loop.

⑪ **REMOTE:** Provided for the connection of the included Laney FS2 footswitch. This allows you to remotely switch between the clean/drive channel and switch the on-board reverb On/Off.

TIP *The Drive switch must be in the up (ON) position in order to be switched remotely.*

⑫ **SPEAKER CONNECTORS**: An 8-16 ohm cabinet can be connected directly to these sockets. Please note mismatched impedance will reduce the amplifiers performance and in some cases may cause damage to your amplifier. The 0.5W attenuated socket provides the same sound and feel as the 5W output, but with the maximum output set to around 0.5W.

TIP *Don't use the 5W and the 0.5W outputs at the same time.*

Unlike many valve amplifiers, the L5-Studio is designed to run either with or without speakers connected.

⑬ **FX LOOP:**

RETURN: A mono jack socket to connect to the output of an external FX unit. This can also be used as a slave in for the power amp. As the FX Loop is an insert type, a connector in the Return socket will mute the pre-amp signal.

ATTENUATION SWITCH: Selects the FX Loop mode of operation:

-10dBu - For connection of FX units with a -10dBu nominal output level. As this is intended for devices with a lower output level, this switch increases the gain of the FX Loop by 10dB.

0dBu - For connection of FX units with a 0dBu nominal output level.

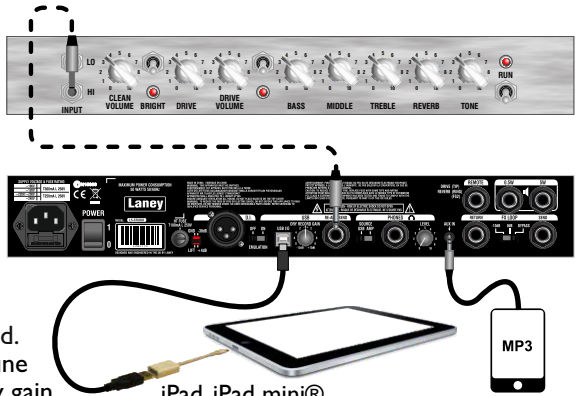
Bypass - Removes the FX Loop from the signal path.

FX SEND: Mono jack socket for connection to the input of an external FX unit.

USB: The USB 2.0 audio I/O connector supporting the following:
1. Ability to simultaneously record the RAW untreated sound to channel 1 (left) and the full amplifier sound to the channel 2 (right).
2. Ability to play back USB stereo information to headphones for monitoring.

TIP *Link from the Headphone output back into the Auxiliary input with a 3.5mm to 6.5mm stereo jack lead allowing simultaneous USB play back.*

TIP *This feature will also allow external DSP effects on your DAW to use the RAW signal as a left input then the effected signal sent directly back to the Aux input for mixing with the amp "through" signal all via USB and without affecting your direct sound.*



iPad, iPad mini®
Tablet or Laptop or Android® device

3. Re-Amp Send socket allows for the recorded RAW channel to be sent back to the amplifier input for re-processing via a standard mono instrument jack lead. For the best level match, use the HI input on the amplifier front panel. To fine tune the level, use the Dry Recording Gain control. A good starting position for unity gain is the12 o'clock position. High output pickups or lots of gain produced by FX pedals before the amp may require a slight reduction in level via the Dry Recording Gain Level control to prevent overloading of the input stage in your DAW.

Record out via USB: To run into iPad or iPad mini connect via a Camera USB adaptor, PC/MAC connects via standard A-B USB cable, for use with the likes of Garage Band ®, Audacity ®, MixPad Audio Mixer ®, Pro Tools and similar. It should be noted that the audio output of an iPad or iPad mini is disengaged and returned via the USB. This can be picked up via a rear panel monitor switch on the amplifier headphones in stereo, or if required, routed into a PA system/powered cabinets.

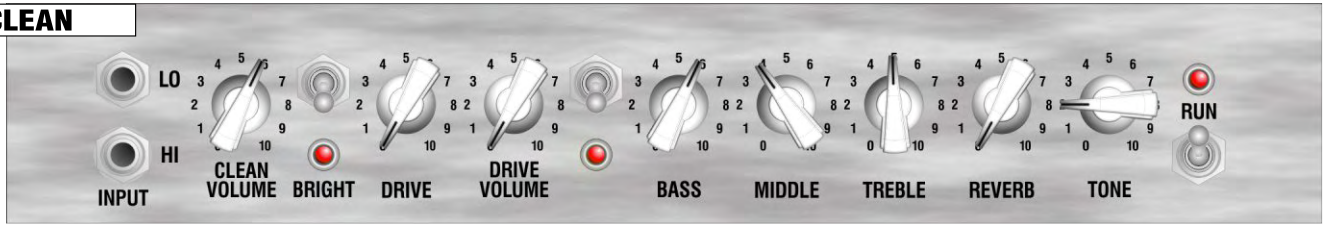
Re-Amp Facility: During recording the amplifier processed signal is sent to the right hand channel. The left hand channel carries the guitar signal totally unprocessed. On an iPad using Garage Band if the track is recorded in stereo then copied with one track panned left and the other track panned right, then both raw and processed signals are available independently.

This allows for the re-amplifying of a sound that may have been over processed initially. To re-amp via Garage Band on the iPad, solo the original channel and record a new one with the link in place from the rear re-amp socket and the guitar input. The newly processed signal will now appear on the right channel with the guitar direct signal again on the left. Other effects may be added into the link cable but the guitar original sound will not be recorded. It will instead record to the left channel the sound directly after the effects with no amplifier and the fully processed signal after the amplifier and effects on the right.

Further explanation, videos, etc can be found at www.laney.co.uk

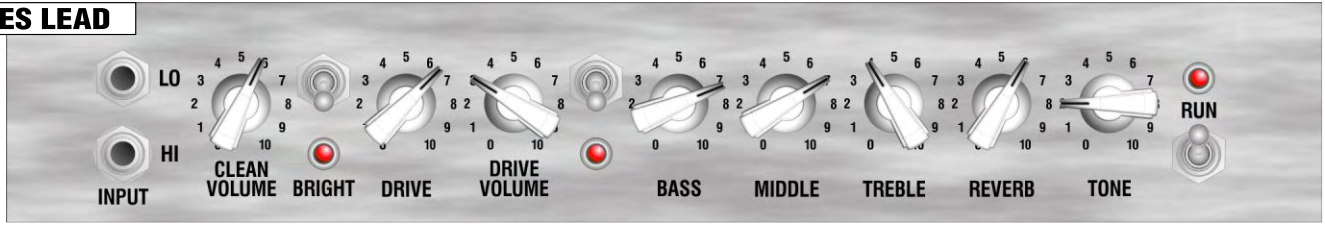
Suggestions only, experiment!

CLEAN



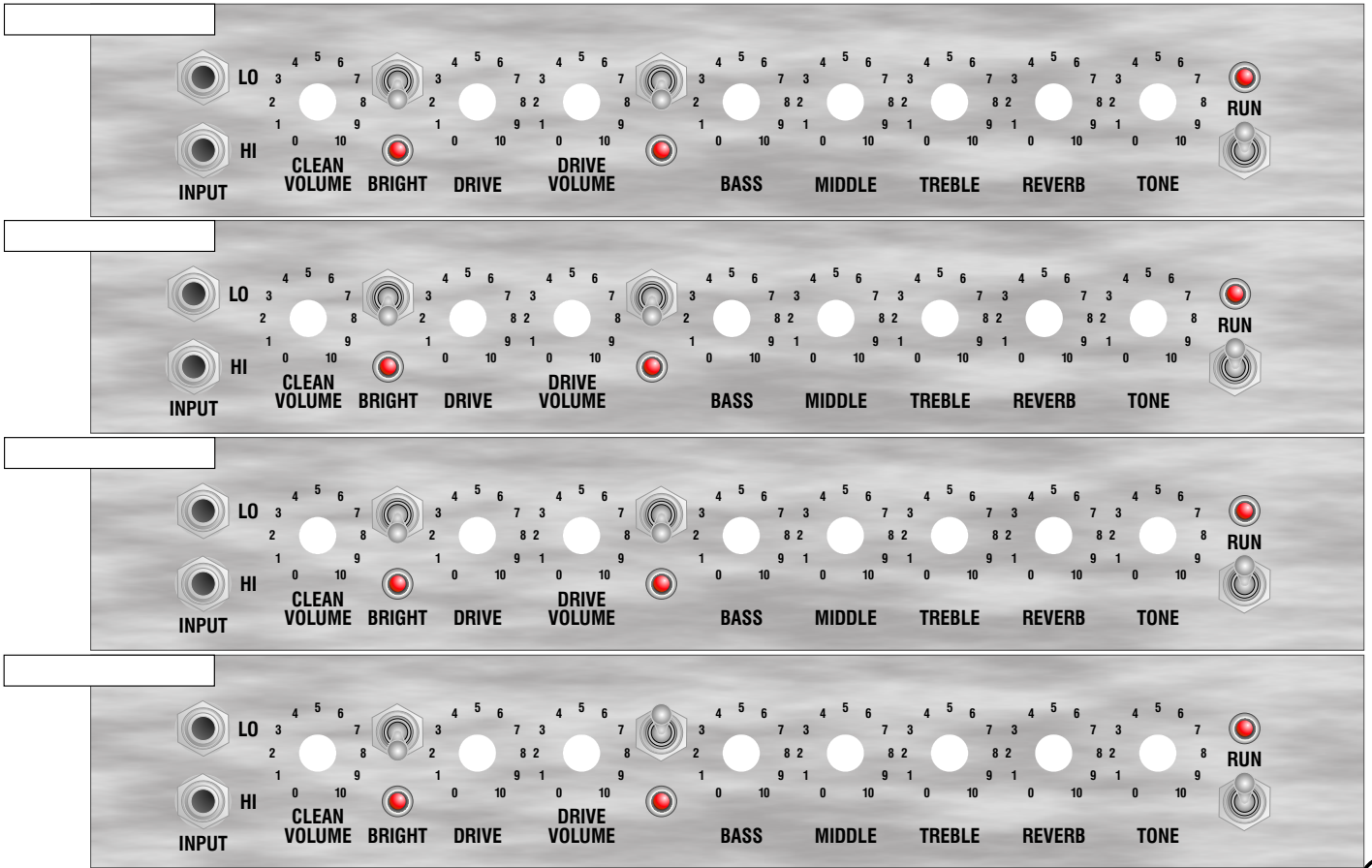
BLUES

BLUES LEAD



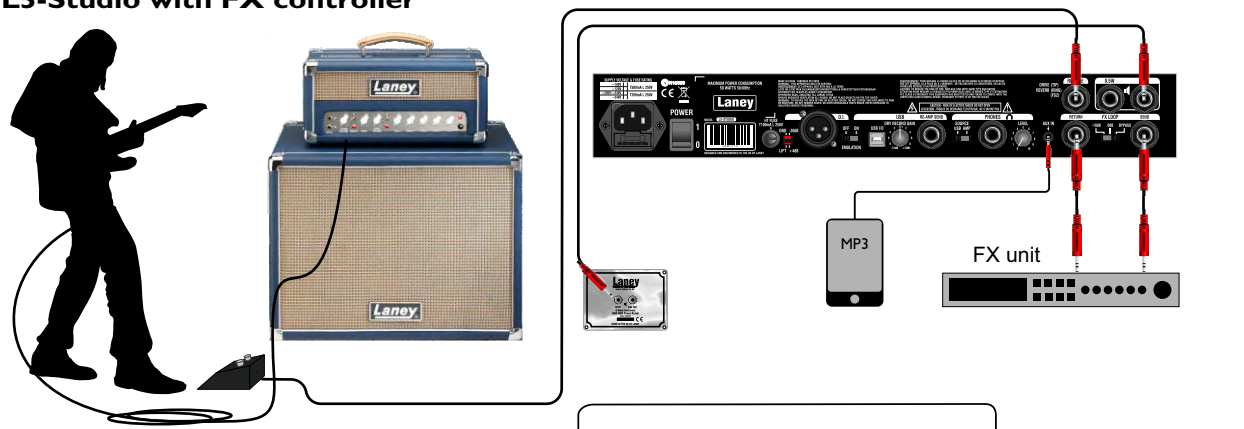
ROCK

Store your own cool sounds.

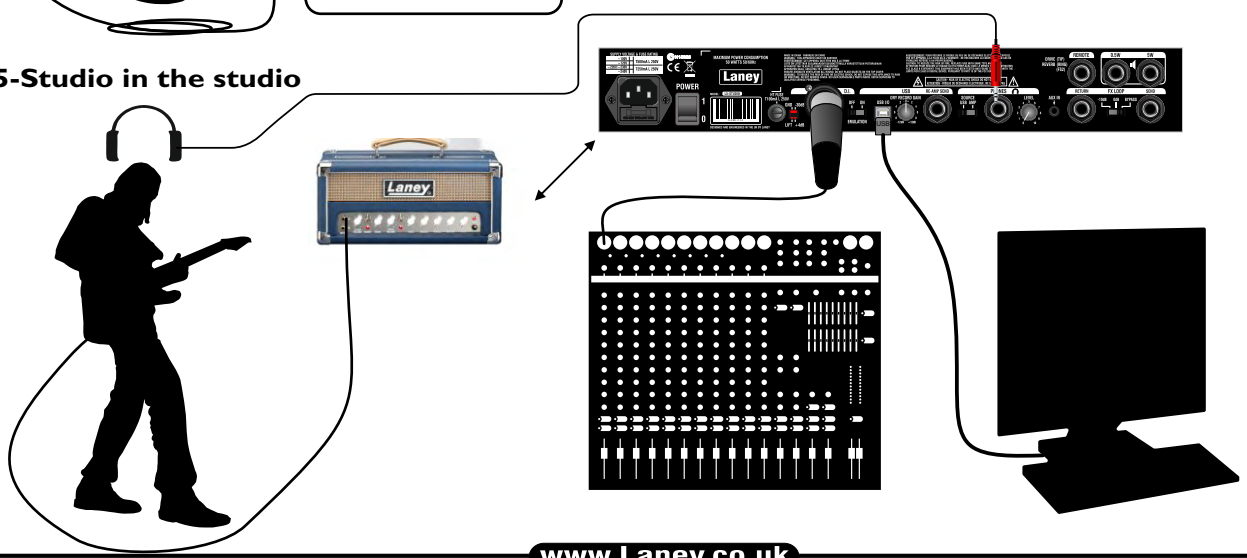


Sample Systems

L5-Studio with FX controller



L5-Studio in the studio



- **Tube amplifiers** generally sound much warmer/sweeter than solid state transistor amplifiers, but they also need a little more respect due to the fragile glass tubes themselves. The L5-Studio uses top quality tubes, which should give you years of trouble free service. However like all tube amps, it is important to treat it with a certain amount of care.

- **Tubes are fragile glass components** and can easily be damaged if not treated with respect.

- **Make sure the impedance** of your cabinets matches your amplifier. Improper impedance matching will result in reduced output power output and compromised sound at best, with amplifier failure/premature tube failure at worst.

- **Allow the amplifier to warm up** to room temperature before switching it on. If you don't the sudden thermal shock can crack the cold glass tube housing plus any moisture is bad news around high voltage electronics.

- **Allow the amplifier to cool down** before moving it. Hot tubes are more susceptible to damage than cool ones. A tubes life expectancy is based upon a number of factors which include operating temperature, how hard and how often it is played, vibration due to travel etc. Although there isn't a specific interval for replacement, tubes should be changed if you notice any degradation of performance.

- **Typical problems** with pre-amp tubes can be a crackly noise, hiss, hum and microphony. Other symptoms include sound lacking in punch, extreme highs or lows and low level hum. Internal failure of the tube can also blow the HT fuse. See the diagram on page 17 to see how to check the tube grade fitted. Exact replacement pre-amp and output tubes are available from Laney via your dealer.

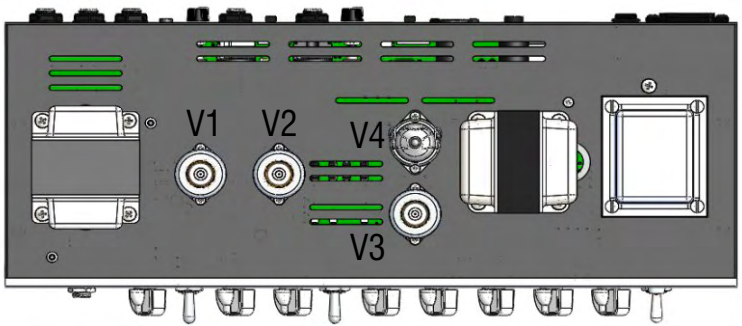
- **To change a tube** switch off the unit and unplug from the mains supply. Wait for the tubes to cool down. Lay amplifier down on its front face and remove the protective grille held in place with four screws. You should now be able to access the amplifier chassis. Pre-amp tubes are protected with a screen can. To remove gently twist the screen can anti clockwise and then pull up. The tube can then be gently pulled out. Take care when pushing the new tube in to make sure the pins are all aligned properly. Output tubes have a spring retainer which must be pulled away before the tube will come out.
- **Amplifier connection.** In order to avoid damage, it is advisable to establish and follow a pattern for turning on and off your equipment. Connect and power up all system parts, (effects processors, FX pedals etc.) **BEFORE** turning on your guitar amplifier. Many products have large transient surges at turn on and off which can cause damage to your speakers. By turning on your guitar amplifier **LAST** and making sure its Volume controls are set to minimum any transients from other equipment will not reach your loudspeakers.

Similarly when turning off your system always turn down the Volume controls on your guitar amplifier and then turn off its power before turning off other equipment.

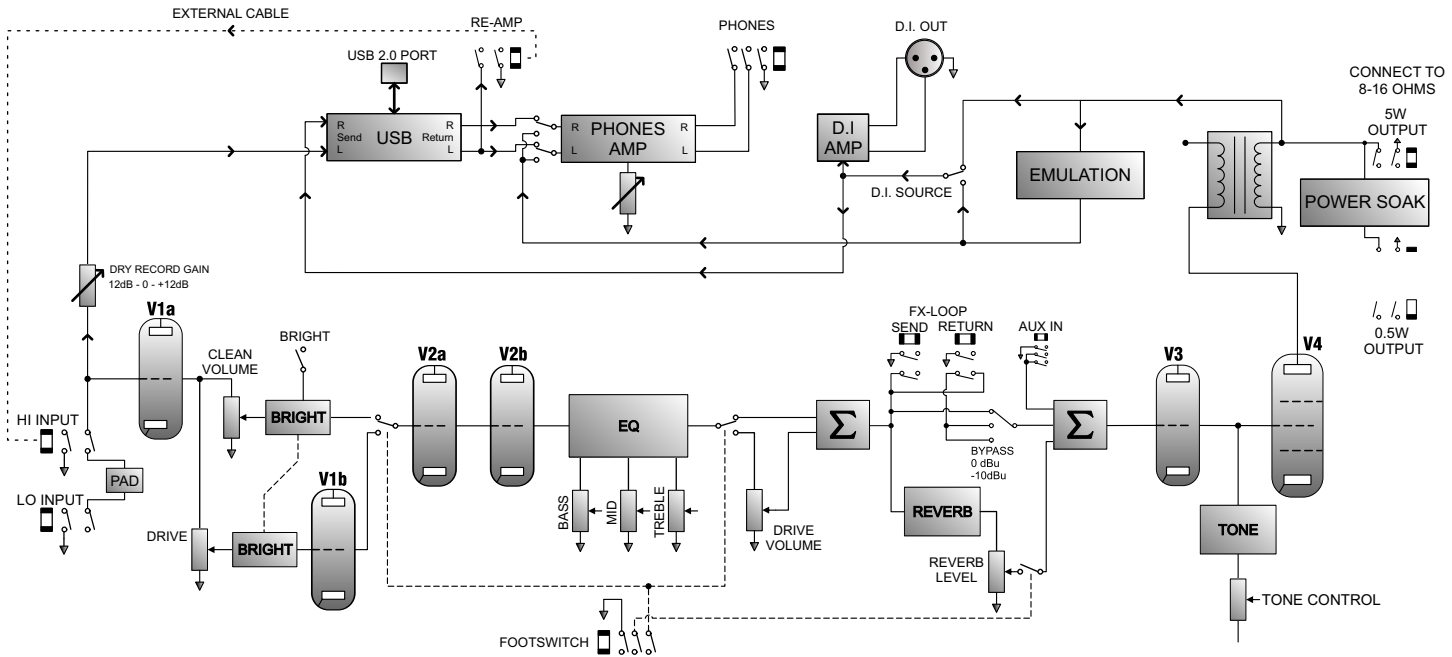
Cables: never use shielded or microphone cable for any speaker connections as this will not be substantial enough to handle the amplifier load and could cause damage to your amplifier system.

Caution: Professional loudspeaker systems are capable of generating very high sound pressure levels. Use care with placement and operation to avoid exposure to excessive levels that can cause permanent hearing damage.

Servicing: The user should not attempt to service this product. Refer all servicing to qualified service personnel.



V1	ECC83	005570
V2	ECC83	005550
V3	ECC83	005570
V4	EL84	005563



Always switch off and disconnect power cord when not in use.

Specifications

Nominal supply voltage	~100V, ~120V, ~220V, ~240V. 50/60Hz Pre-set Factory Option.
Mains Fuse	(~100, ~110>120V = T500mA L 250V) (~220V>240V = T250mA L 250V).
HT Fuse	T100mA L 250V.
Power Consumption	50W.
Output Power Rating	5W and 0.5W attenuated.
Features	Oversized power supply and output transformer for that powerful sound and long term reliability.
	The best available specially selected tubes throughout, (3*ECC83 Preamp Tubes, 1*EL84 Power Tube).
	FX Loop: Send/Return with switchable attenuation any bypass.
	Single Ended Class A Valve tone.
	Sealed gold contact relays used in all signal switching for minimum effect to your sound.
	Laney designed high quality Reverb with adjustable level.
	FS2 For Clean/Drive Channel & Reverb ON/OFF -included.
	USB I/O for use in the Studio.
	D.I: Fully balanced (post output stage) Direct Output with switchable cab emulation.
	EQ: Passsive Bass, Middle and Treble, Tone Boost & Cut (active on top end of signal).
Input Resistance	1M Ohm.
Size (H*W*D)mm's	189*419*183.
Unit Weight	7.8 Kg (Shipping Weight 10 Kg).
	Slip cover included.

In the interest of continued development, Laney reserves the right to amend product specification without prior notification.

FCC Compliancy Statement

This device complies with Part 15 of the FCC rules.

Operation is subject to the following two conditions:

1) This device may not cause harmful interference

2) This device must accept any interference received, that may cause undesired operation.

Warning: Changes or modification to the equipment not approved by Laney can void the user's authority to use the equipment.

Note: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

---

This product conforms to the requirements of the following European Regulations, Directives & Rules:
CE Mark (93/68/EEC), Low Voltage 2006/95/EC, EMC (2004/108/EEC),
RoHS (EU2002/95/EC), WEEE (EU2002/96/EC)

In order to reduce environmental damage, at the end of its useful life, this product must not be disposed of along with normal household waste to landfill sites. It must be taken to an approved recycling centre according to the recommendations of the WEEE (Waste Electrical and Electronic Equipment) directive applicable in your country.

(USB2.0 is compatible with Windows XP ® operating system, Windows 7 ® operating system & Windows 8 ® operating system. Also compatible with Mac ® & iPad ® 1-3 via camera USB adaptor, iPad ® 4 & iPad Mini ® via Lightning-USB camera adaptor cable and Android® devices.)

Model number:	
Serial number:	
Place of purchase:	
Date of purchase:	

Please complete for future reference.

www.laney.co.uk