Publication: AP0179
Issue 2

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INTRODUCTION

The information presented in this manual is intended for competent technical personnel to carry out service and product support for the ***GL2 and GL2-S*** consoles. We assume that the reader is familiar with the related electronic theory and audio terminology, and is able to carry out basic servicing, fault-finding and repair of audio equipment of this type. Service personnel should also be familiar with audio system and mains earthing and power requirements, and the associated handling precautions.

For further information on the operation and application of the ***GL2 or GL2-S*** please refer to the **GL2 USER GUIDE** publication AP0177 or the **GL2-S USER GUIDE** publication AP2326 supplied with each console.

Whilst we believe the information in this manual to be reliable we do not assume responsibility for inaccuracies. We also reserve the right to make changes in the interest of further product development.

SERVICE AND TECHNICAL SUPPORT

Under normal operating conditions the ***GL2 and GL2-S*** do not require user maintenance or internal calibration. Any service work required should be carried out by qualified technical personnel only.

We are able to offer further product support through our worldwide distribution network. To help us provide the most efficient service please would you quote the console serial number in any communication regarding this product.

SAFETY WARNING !

Mains electricity is dangerous and can kill. Mains voltage is present within the console power unit. Do not remove the rear cover or internal power unit with mains connected. Check your mains wiring and earthing before switching on. Refer service work to qualified service personnel only.

TECHNICAL DESCRIPTION

The ALLEN & HEATH ***GL2 and GL2-S*** offers the flexible solution to the many requirements of the live sound and recording environment; whether for conference sound ... in a club ... theatre .. or church ... for touring ... contract hire ... as well as stereo and multitrack recording. Both versions offer 6 Aux sends switchable in combinations of pre or post fader, a powerful 4-band 2-sweep equaliser, dedicated stereo channels, and comprehensive monitoring facilities combine in a compact all metal rack mount chassis to allow total and reliable control of the mixed sound whatever the application. The ***GL2*** offers 4 sub groups each with 100mm faders, inserts and balanced outputs. It has a unique switching arrangement which configures the console for Front-of-House or On-stage Monitor operation, or a combination of both. The ***GL2-S*** offers 3 individual stereo outputs each with level control, 6 full feature stereo inputs and 6 mono inputs.

CONSTRUCTION

All metal chassis for 19" rack mount in 11U space. Comprises a 16swg steel front panel housing individual channel circuit assemblies interconnected by means of a plug-on IDC harness and single soldered copper wire earth busbar. The connectors are rear (base) mounted for easy access and space saving in rack or plinth mounted applications. Access to the internal assemblies is by removal of the 18swg folded steel base. The channel assemblies may be removed for servicing. The internal power supply unit is a separate module which may be removed for servicing without the need to remove the console base. Although the ***GL2 and GL2-S*** is designed for rack or plinth mounting, the base is angled at the front and includes two rubber feet to allow the console to adjust for table-top operation using a suitable rear support. This provides a slope of 14 degrees which allows the rear connectors to clear the mounting surface whilst minimising the surface area used and providing a hidden or tamperproof connector system.

THE CIRCUIT COMPONENTS

GL2 and GL2-S consoles are manufactured using high performance industry standard linear op-amp, logic gate and discrete semiconductor circuit designs. The same high quality components as found in top range consoles are used. In particular the switches, potentiometers and 100mm faders have proven to be durable and problem free. When operated correctly the normal performance of the console introduces no noticeable audio signal degradation.

THE POWER SUPPLY AND CONSOLE EARTHING

The ***GL2 and GL2-S*** uses a universal low noise regulated linear DC supply system for all amplifier, logic and indicator subsystems. The internal power unit operates from single phase 50/60Hz AC mains input to provide the three regulated DC outputs required for console operation: +16V (0.5A), -16V (0.5A), +48V (0.05A). The +/-16V supplies are filtered into separate feeds for the audio and logic/indicator circuits on the individual circuit assemblies. A high quality low radiation toroidal transformer is wired to suit the local mains supply voltage: 100, 110, 120, 220, or 240 V.AC. The power unit rear panel green LED indicator monitors the pre regulator +/-16V.DC voltage while the console front panel **DC ON** indicator monitors post regulators. It is normal for the rear of the console to run slightly warm as the regulator ICs are insulated and bolted to the power unit chassis which acts as a heatsink. The console DC input wiring harness is soldered direct to the power unit circuit assembly. There is enough harness loop to allow removal of the power unit from the console for inspection and servicing. A ground (earth) lift switch is provided on the rear of the power unit to isolate the console audio 0V from mains earth to avoid earth loops in situations where multiple earth paths are present, for example in 19" racks where the console is in contact with earthed rack metalwork. The ***GL2 and GL2-S*** chassis metalwork is always connected to the mains power lead earth connection to ensure operator protection from mains shock. **DO NOT REMOVE THE CONSOLE POWER LEAD MAINS EARTH !** The console audio performance is optimised by using an internal distributed earthing system that separates audio and logic earths. A copper wire busbar is soldered across the circuit assemblies to provide a solid low impedance earth path for the connector 0V returns.

AUDIO INPUTS AND OUTPUTS

The channel mic and line inputs, and main group, L-R and Mono outputs are electronically balanced (differential). The SSM2142 differential output driver is used to balance the outputs. To use these with unbalanced equipment the -ve signal should be linked to 0V in the cable or input connector. All console outputs are low impedance and thus capable of driving several high impedance inputs simultaneously. All inputs and outputs except the group inserts are in phase.

THE PFL/AFL SYSTEM

The console PFL (AFL) switches send pre-(post)-fade signal to the pfl (AFL) mix busses. This is switched within the Phones/Monitor circuit by 4053 CMOS gates biased from a +/-7.5V DC supply generated locally from +/-16V. These gates are switched from the selected monitor source when the PFL or AFL DC buss is switched to 0V. Note that on ***GL2*** only PFL overrides any selected AFL source.

SPECIFICATION

0 dBu = 0.775 Volts RMS
0 dBV = 1 Volt RMS

INTERNAL OPERATING LEVEL: -2 dBu

INTERNAL HEADROOM: .... +23 dB

MAX OUTPUTS: .... balanced +27 dBu 600 ohms max load
unbalanced +21 dBu 2kohms max load

All console inputs and outputs are in-phase **except for the GROUP INSERTS on GL2**

METERS: .... Peak responding bargraph
0VU = +4dBu at XLR outputs

PEAK LEDs: .... Turn on 5dB before clipping

SIG LEDs: ***(GL2 only)*** .... dynamic responding Turn on at -20dBu

POWER REQUIREMENTS: .... 50/60Hz 40W max
Mains voltage set for local requirements.

PHANTOM POWER: .... +48V DC 50mA
Channel XLR inputs individually switched

CONSTRUCTION:
All metal chassis.
Standard 19" rack mount in 11U space.
Single front panel with individual removable circuit assemblies.
Removable base for service access.
Removable internal power supply unit.

FREQUENCY RESPONSE: 20Hz to 20kHz +0/-1dB

DISTORTION: . THD 0.01% Line in to mix out at 1kHz

CROSSTALK: . output mute better than 98 dB at 1kHz
channel mute better than 88 dB at 1kHz
fader shutoff better than 88 dB at 1kHz

NOISE: .... 22Hz to 22kHz
MIC EIN -127.5 dB into 150 ohms
LINE pre-amp at 0dB -88 dBu
MIX noise -85 dB ref 0VU

DIMENSIONS:
Width .... 19.0" standard 19" rack .... (483mm)
Height .... 19.2" 11U rack space .... (488mm)
Depth .... 3.5" .... (90mm)

WEIGHTS:
Unpacked .... 21lbs .... (10.5kg)
Packed .... 28lbs .... (13kg)

CONNECTIONS

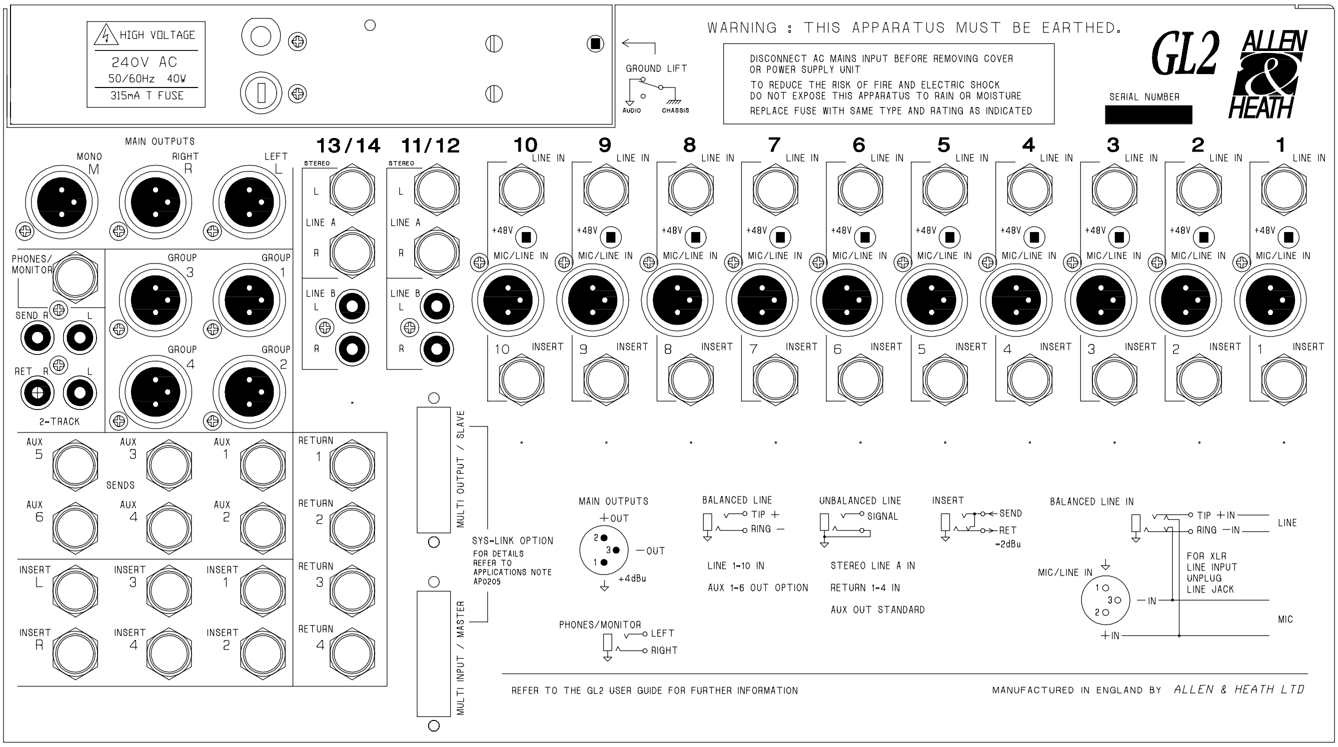
INPUTS:

MIC IN	XLR	pin 2 hot, 3 cold	balanced	2 kohms	variable -60 to -10dBu
LINE IN	XLR	pin 2 hot, 3 cold	balanced	10 kohms	variable -40 to +10 dBu
or	1/4" JACK	tip hot, ring cold	balanced	10 kohms	variable -40 to +10 dBu
STEREO IN A	1/4" JACK	tip hot, ring cold	unbalanced	20 kohms	variable -20 to +22 dBu
STEREO IN B	RCA PHONO		unbalanced	20 kohms	variable -20 to +22 dBu
RETURN IN	1/4" JACK	tip hot, ring gnd	unbalanced	>10kohms	variable -10 dBV min
2-TRACK RETURN	RCA PHONO		unbalanced	>6 kohms	-10 dBV
INSERT RETURN	1/4" JACK	tip send, ring ret	unbalanced	>6 kohms	-2dBu

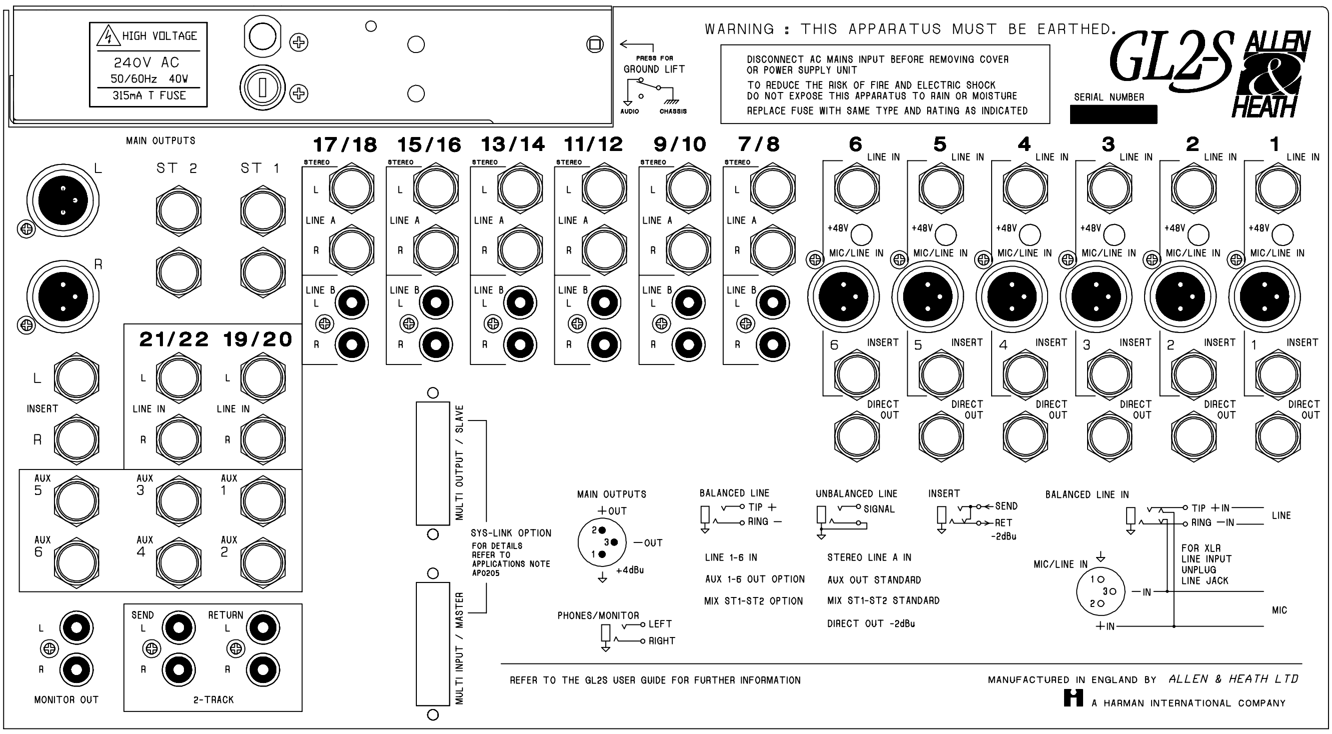
OUTPUTS:

L-R OUT	XLR	pin 2 hot, 3 cold	balanced	50 ohms	+4 dBu +27 dBu max
ST1/2 (*GL2-S* only)	1/4" JACK	tip hot, ring gnd	unbalanced	75 ohms	variable +21 dBu max
MONO OUT (*GL2* only)	XLR	pin 2 hot, 3 cold	balanced	50 ohms	+4 dBu +27 dBu max
GROUP OUT (*GL2* only)	XLR	pin 2 hot, 3 cold	balanced	50 ohms	+4 dBu +27 dBu max
DIRECT OUT	1/4" JACK	tip hot, ring gnd	unbalanced	75 ohms	-2 dBu . +21 dBu max
AUX OUT	1/4" JACK	tip hot, ring gnd	unbalanced	75 ohms	variable +21 dBu max
2-TRACK SEND	RCA PHONO		unbalanced	1 kohm	-10 dBV
INSERT SEND	1/4" JACK	tip send, ring ret	unbalanced	75 ohms	-2 dBu . +21 dBu max
MONITOR OUT (*GL2* only)	1/4" jack	tip left, ring right	unbalanced	100 ohms	variable +21 dBu max
MONITOR OUT (*GL2-S* only)	RCA PHONO		unbalanced	700 ohms	variable +15 dBu max
PHONES OUT	1/4" jack	tip left, ring right	for stereo headphones	8 to 400 ohms	

GL2 CONNECTOR PANEL



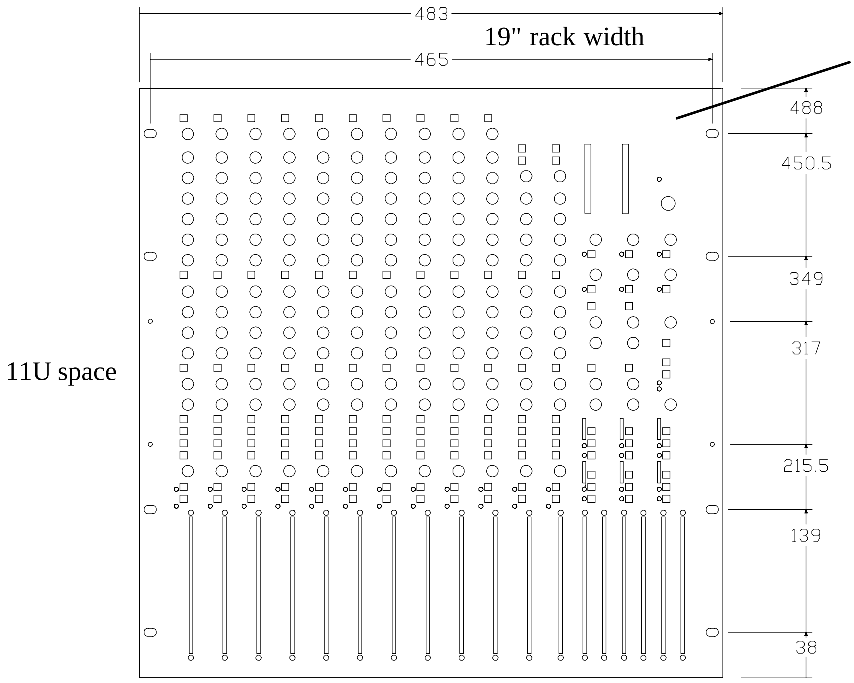
GL2-S CONNECTOR PANEL



INSTALLING THE CONSOLE

The ***GL2 and GL2-S*** fits into an 11U space in a standard 19" rack system. Alternatively the console may be adapted for flightcase, plinth or table top operation. Ensure adequate access for installing the connectors on the rear.

Avoid using the console close to strong sources of electromagnetic radiation (e.g. video monitors, high power electric cabling); this may cause degradation of the audio quality due to induced voltages in connecting leads and chassis.



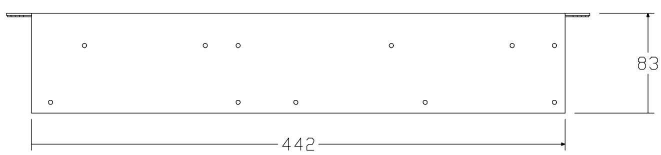
Provide adequate space behind the rear of the console power unit for ventilation. The panel may feel warm around the power unit. This is quite normal as the chassis acts as a heatsink for the internal power supply components.

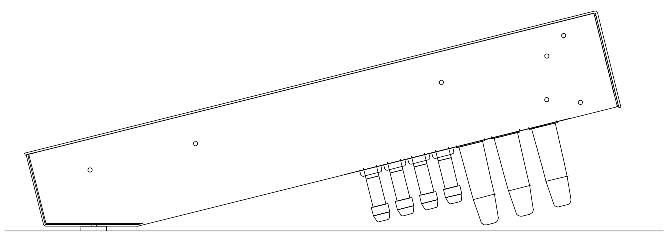
The two M3 base securing bolts each side align with mounting recesses in the rack system.

Mount the console using 4x M6 bolts each side for maximum strength. These should be provided by the supplier of the rack kit.

The height does not include the control knobs (add 20mm) or connector nuts (add 8mm).

The rack should allow a minimum side to side clearance of 450mm.





The ***GL2 and GL2-S*** has two support feet fitted to the front of the base to set the correct angle (14 degrees) for table top operation with adequate clearance for the connectors. Support the rear of the console to achieve this angle. Operation in this way prevents interference with the connectors and takes up the minimum of table space.

PRECAUTION !

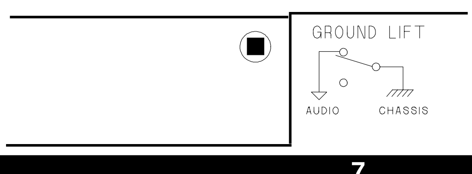
TO AVOID DAMAGE TO THE INTERNAL ASSEMBLIES DO NOT FIT SCREWS THROUGH THE HOLES IN THE SIDES OF THE CONSOLE. SECURE TO EXTERNAL BRACKETS OR FITTINGS THROUGH THE TOP PANEL RACK MOUNTING HOLES.

EARTHING THE AUDIO SYSTEM

It is well known that many audio installation problems are due to inadequate or incorrect earthing. To ensure the high level of performance for which the ***GL2 and GL2-S*** are designed please note the following:

The console chassis is connected to mains earth via the power cord. **FOR SAFETY REASONS NEVER REMOVE THE EARTH WIRE FROM THE MAINS PLUG**. The console audio 0V is connected to mains earth within the console power unit by the ground lift switch. To prevent mains born and external interference pick-up on the audio signal it is important that this audio 0V is connected to a good noise-free mains earth, either through the audio cable screens or by linking to a local earth. Multiple earth paths cause earth (ground) loops which may result in audible hum and interference. These may be avoided by making sure that there is only one path to earth from each piece of equipment, disconnecting audio cable screens at one end if necessary.

Selecting the ground lift switch on the rear of the console disconnects the console audio 0V from the chassis (mains) earth. This avoids ground loops in situations where the chassis metalwork is in physical contact with another path to earth, (often the case in 19" rack installations), or if audio 0V connects to mains earth elsewhere in the system.



Ground lift switch located on rear of the console power unit.

Press to disconnect audio 0V from mains earth.

INTERCONNECTIONS

Incorrectly or badly made interconnecting cables will cause performance and reliability problems, often difficult to locate. It is important that the cables are carefully chosen and made. In particular, check the soldering and insulation of the connectors.

Where possible use balanced connections for the channel INPUTs and GROUP, L-R and MONO outputs to minimise noise pick-up. Avoid running audio cables near to mains or lighting cables or thyristor dimmer units, power supplies etc. These may cause audible hum and buzz. The use of low impedance sources significantly reduces interference pick-up. Check the cables for correct wiring to avoid problems with phase reversal and unreliable connection. The ***GL2 and GL2-S*** follow the convention for XLR pin 2 and jack tip = signal hot (+).

Always use balanced cables when connecting to phantom powered microphones.

MAKE SURE THAT THE +48V SWITCHES ARE OFF (FLUSH WITH PANEL) WHEN THE CHANNEL INPUT XLRS ARE CONNECTED TO NON-PHANTOM POWERED OR LINE SOURCES.

If ground loops cause problems connect the cable screen at one end only as described below. Balanced outputs may be connected to unbalanced inputs and vice versa by linking the signal cold (-) to 0V ground as follows:

- Balanced output to Balanced input - Connect cable screen at destination only.
- Balanced output to Unbalanced input - Connect screen at source only. Link the -ve output to 0v at the output connector. On the ***GL2 and GL2-S*** the unbalanced 1/4" jack inputs automatically provide this link.
- Unbalanced output to Balanced input - Connect cable screen at destination only. Link the -ve input to 0V at the input connector. On the ***GL2 and GL2-S*** the unbalanced outputs automatically provide this link.

ADJUSTING THE LEVELS

Incorrect matching of the signal levels between equipment in the audio system is recognised as one of the most common performance related problems reported to service agents. The usual symptoms are excessive background noise, signal breakthrough or distortion.

For best performance it is important that the console signal levels are adjusted for “normal operating level”. If too high the signal peaks will be clipped resulting in a harsh distorted sound, and if too low the signal-to-noise ratio is reduced resulting in excessive background noise (hiss and hum) and signal breakthrough.

For best results operate the console with the output meters averaging ‘0’ or just below and allowing the occasional high level passage to rise into the red. This results in a nominal console output level of +4dBu with ample internal headroom of +23dB to allow for the peaks. It is advisable to use an attenuator pad if you are connecting the outputs to equipment which does not have input level controls and operates at a much lower level. Simply reducing the fader settings (and hence meter levels) to compensate may result in excessive background noise and breakthrough due to the reduced signal-to-noise ratio. The same applies to the console monitor output used to check the console signals through headphones or reference loudspeakers. The monitor amplifier should be matched to the console such that normal control room listening levels are achieved with the monitor **LEV** control set around position '5' to '7'. Operating at a lower position, say '2' or '3', degrades the output signal-to-noise ratio and may result in audible hum and noise.

The console PFL (pre-fade listen) / AFL (after-fade listen) system lets you listen to and check the level of signals at different points in the signal path without affecting the main outputs. Use the channel **PFL** switches to set up the input levels. This overrides the phones/monitor outputs with the pre-fader channel signal (in mono) and displays its level on the monitor meters. Adjust the channel **GAIN** controls for an average '0' reading on the meters. Use the aux, group and L-R **AFL** switches to check the post master fader mix levels. Adjust the channel faders for optimum mix level. The normal operating setting of the faders is at the '0' position, allowing 10dB of boost to the top of travel.

The red channel, group (***GL2 only)*** and L-R (***GL2 only)*** **PEAK** indicators give instant warning of potential signal overload. These illuminate 5dB before clipping. Reduce channel gain or fader settings as appropriate. Each Group fader on the ***GL2*** has a meter ladder showing signal presence (dynamic indication starting at -20dB), 0dB level, and peak (5dB below clipping).

OPTIONS

The ***GL2 and GL2-S*** presents a high degree of flexibility to satisfy most user applications without the need to reconfigure the internal assemblies. However, options are available to further extend the capabilities of the console. These require access to and reconfiguration of the internal assemblies and should only be carried out by authorised service agents or qualified technical personnel. These are detailed in the section: CIRCUIT BOARD OPTIONS. The *SYS-LINK* option is also available to link two or more consoles, or to link a ***GL2*** to a ***GL2-S*** or to a ***GL4*** console to extend the number of channels feeding the mix. This is detailed in the section: SYS-LINK EXPANDER OPTION.

WHEN A FAULT IS SUSPECTED ...

The console is the control centre of the typical audio installation, providing the link between microphones, instruments and other sound sources, processing devices, amplifiers etc. through a "highway" of interconnecting cables carrying audio signals, DC power and AC mains voltages. If a problem is reported it is often assumed that the console is at fault. Our experience has shown that most reported problems are related to faulty cables, equipment matching and control setting, or faulty external equipment, and not to the console itself which is designed for continued fault-free performance with no user maintainance. It is usual only to replace worn out electro-mechanical parts such as faders during the life of the console.

When a problem is reported it is necessary to isolate the location of the fault within the system. Only when tests have been made to eliminate faults in equipment connected to the console and in the interconnection cables, should you attempt to repair or report the console as faulty. A TROUBLESHOOTING CHART is included in this manual to assist you in identifying the more common fault conditions.

Note that only technically competent personnel should attempt service work on this console. Check also the validity of the manufacturers or selling agents warranty. Always quote the console serial number when reporting a fault.

IDENTIFYING THE FAULT

Fault diagnosis is often carried out remotely by telephone with the user who is often non-technical and needs to be talked through a series of simple tests to identify the symptoms and locate the problem. These include substitution of cables and equipment inputs and outputs. If the console is still suspected as faulty it is recommended that all its audio cables are unplugged and a single known good sound source is patched across the channels to test for correct operation by monitoring the output through headphones. This often eliminates problems with system earthing and matching with external equipment.

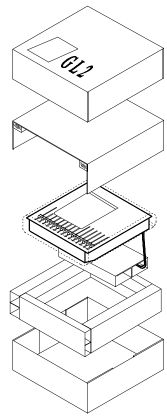
Faults may be of a permanent or intermittent nature. If intermittent try to induce the symptom by flexing cables, wiggling connectors, selective mechanical vibration or flexure, and thermal (hot, cold) cycling. Use substitution of known good circuits to aid identification of the faulty circuit.

SERVICE ACCESS AND PROCEDURES

Access to the internal assemblies is by removal of the base. The power unit may be removed for service without removing the base first. Individual circuit assemblies may be lifted for service or removed for replacement. Procedures for base, power unit and circuit assembly removal follow later in this manual.

Service work is best carried out with the console inverted on a clean work surface suitably covered to protect the console cosmetics. Ensure adequate lighting. Remove all debris such as solder, component legs and wire clippings from inside the console, and check your work carefully before replacing the base. Test for correct operation.

If the console is to be sent by carrier we advise that you check the packing for suitability first. Use the purpose designed ALLEN & HEATH packing if it is still intact. This packing is illustrated here for reference.



PRECAUTIONS

- Check the console for correct mains voltage connection before switching on.
- Disconnect the mains input before removing the base or power unit. Apply caution when testing the console or power unit with base removed.
- Handle the console and its internal assemblies with care to avoid damage to the components or cosmetics. Do not lift or balance the panel on the circuit assemblies with the base removed.
- Do not plug or unplug the internal IDC connectors with power applied.
- Check the connectors for correct alignment and seating.
- If replacing or removing the power unit, check the console DC harness wiring for correct connection to the power unit circuit board.
- Check the copper wire earth busbar for correct solder connection to all the circuit boards.
- Use a good small tip soldering iron for circuit board work to avoid track or pad damage.

TROUBLESHOOTING CHART

The following chart is a guide to the more common fault conditions which may be reported by the user. These assume that the user has identified thje console itself as suspect. For other console related fault conditions contact an authorised *ALLEN & HEATH* service agent.

CONSOLE DEAD - POWER INDICATORS OFF:

No AC mains to the console.
Check that AC mains is present and switched to the console.

Power supply fuse blown.
Replace with correct antisurge type and rating.

Power unit component fault.
Contact service agent.

CONSOLE DEAD - PANEL DC INDICATOR DIM OR OFF, REAR POWER INDICATOR NORMAL:

Regulated DC supply rail/s failed

Short circuit on DC power rails.
Use an ohmmeter to test for shorts across the console DC rails.

CONSOLE DEAD - PANEL DC INDICATOR DIM, REAR POWER INDICATOR DIM:

Incorrect mains input voltage.

Pre-regulator power unit fault.
Contact service agent.

GROUP, L-R OR MONO OUTPUT DEAD:

REV or MONITOR MODE switches not correctly set.
Check switch settings for intended application.

SIGNAL DEAD OR DISTORTED:

Insert not correctly wired, or processing equipment not switched on.
This may be checked by unplugging the insert.

Worn or faulty Insert jack socket.
With nothing plugged into an Insert the signal is routed through the jack switching contacts. Check this by plugging in an unwired 3-pole jack plug and shorting tip (send) to ring (return).

Internal IDC connector misaligned or not pressed on.
Check and reseat.

Component fault.
Trace the signal through the channel path.

LOW LEVEL POOR QUALITY SIGNAL:

'One legged' signal connection.
Check the cables for correct wiring. For balanced signals both the + and - signal should be connected to the related input or output + and - terminals. For unbalanced signals the - terminal should be linked to ground. GL2 and GL2-S unbalanced jack connectors do this automatically. Operating with either the + or - signal unconnected will result in 6dB less level ad a loss of signal quality.

FADER INTERMITTENT OR NOT OPERATIONAL:

Fader mechanically worn or broken.
Replace fader.

Fader track contaminated with dirt or liquid residue.
Replace fader. Do not clean the track with spray or other electrical cleaner.

EXCESSIVE NOISE (HISS), BREAKTHROUGH or DISTORTION:

Incorrect level matching, for example connecting to a sensitive amplifier.
The main outputs are professional 'high' level = +4dBu. For connection to low level equipment an attenuator pad after the output is recommended. Optimum performance is achieved with the faders and meters operated around the '0' mark. Operating the output faders at low settings to compensate for sensitive equipment degrades signal to noise performance. The console PFL system and PEAK indicators allow comprehensive checking of the console levels.

Balanced output incorrectly wired - excessive hiss but signal present.
For balanced operation check that both + and - pins are connected.
For unbalanced operation check that the - pin is linked to 0V in the plug.

EXCESSIVE NOISE (HUM):

Console 0V not connected to mains earth via a suitable cable connection.
The console chassis metalwork is connected to mains earth via the power unit to ensure operator safety. A ground lift switch is provided to allow optimum system earthing in a way that best avoids audible earth (ground) loops. If the 0V to mains earth path is not made within the console or system then audible hum or buzz may result.

Earth (ground) loop formed due to multiple earth paths.

External AC hum field induction.
Console or audio cable positioned too close to the power supply unit or other AC mains equipment and cables.

Internal AC hum field induction.
The power unit toroidal transformer should be rotated to the position which minimises audible hum on the main console outputs. A mu-metal shield may be fitted to reduce this.

EXCESSIVE NOISE (BUZZ):

External computer interference or breakthrough.
Keep the console and audio cable harnesses away from computer equipment and associated cables, thyristor dimmer units and lighting equipment.

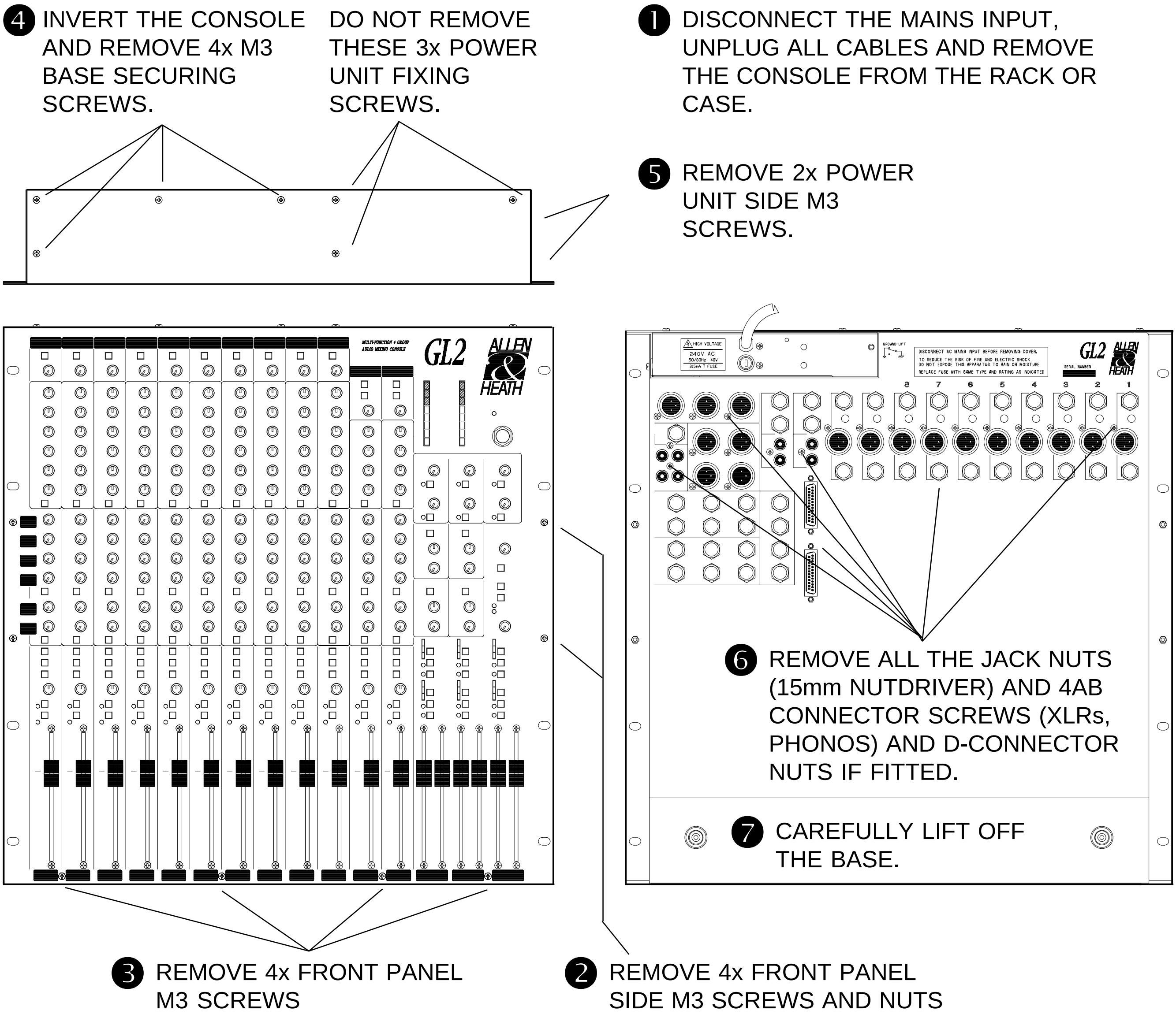
EXCESSIVE NOISE (CLICKS, THUMPS, CRACKLES, POPS):

Control clicks and thumps may be due to a poor local mains voltage supply or due to excessive circuit DC offset voltages.

Continuous crackles and pops may be due to noisy ICs, transistors or resistors.

REMOVING THE BASE

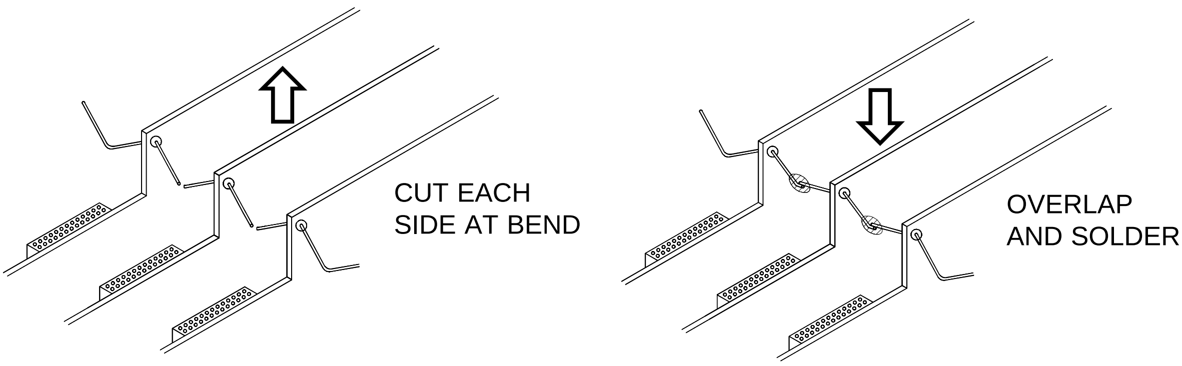
Access to the internal assemblies of the ***GL2 and GL2-S*** is by removal of the chassis base from the front panel assembly. The procedure detailed below also applies to the ***GL2-S.*** Only the power unit may be removed with the base in place: see section REMOVING THE POWER UNIT. Proceed in the sequence as follows:



REPLACING A CHANNEL ASSEMBLY

If it is necessary to remove a channel assembly for service or replacement proceed as follows: Pull off the associated knobs. Remove the potentiometer nuts using an 11mm nutdriver. Avoid scratching the control panel. Remove the ribbon cable harness. Cut the solid wire earth busbar either side of the channel to be removed as shown below. Remove the associated fader or desolder the fader wires as required.

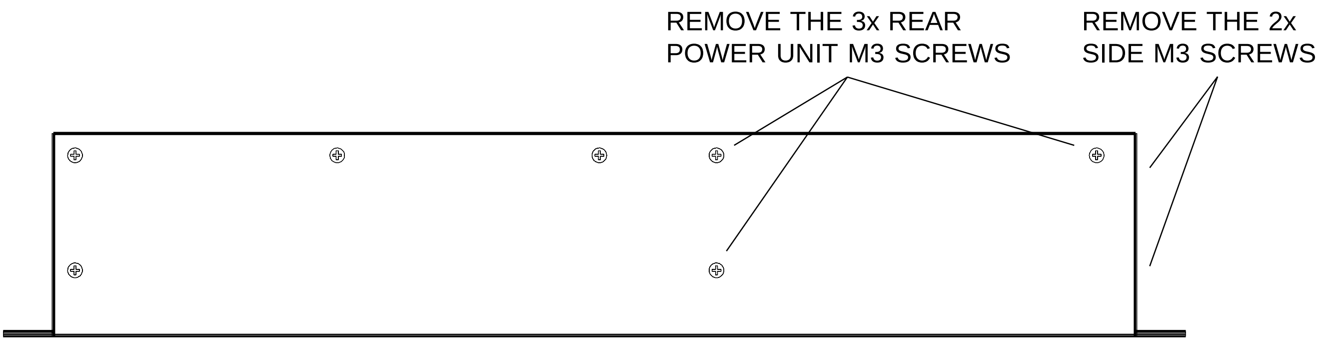
When replacing the assembly make sure that the potentiometers, switches and LED indicators are correctly aligned with the slots in the control panel. Check also the correct assignment of the Group and Stereo assemblies. Reconnect the earth busbar by overlapping the wire where cut and soldering together. Use sufficient solder to ensure good joints.



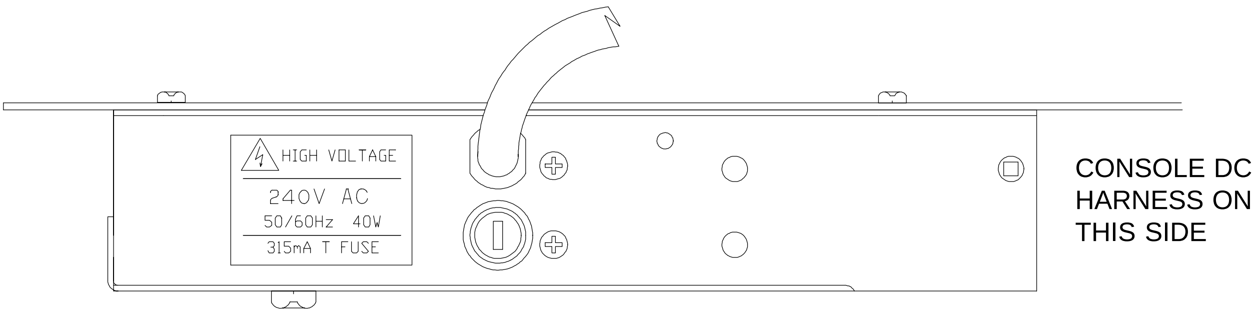
REMOVING THE POWER UNIT

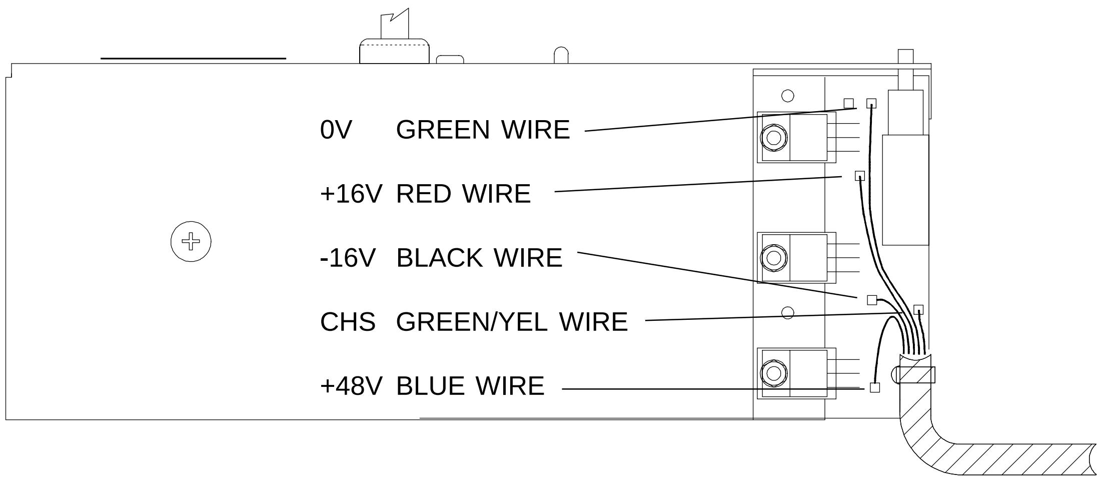
The power unit is common to both the ***GL2 and GL2-S.*** The power unit may be removed for servicing with the base in place.

PRECAUTIONS ! Disconnect the console from the mains supply before removing the power unit. Servicing of the power unit should only be carried out by technically competent personnel.
DANGER - HIGH VOLTAGE !



LIFT THE POWER UNIT OUT OF THE BASE. BE CAREFUL NOT TO TRAP THE ATTACHED CONSOLE DC HARNESS WHEN REMOVING OR REPLACING THE POWER UNIT.





The console internal DC harness connects the power unit output to the channel assemblies. The harness runs between channels 8 and 9 and along the ribbon cable recess to the Master circuit assembly. The wires are soldered to the power unit to ensure low impedance connections for power distribution. The harness allows enough service loop for the power unit to be lifted clear of the console for service work. To replace the unit it is necessary to desolder the wires.

PRECAUTION ! Check that the console DC harness wires are soldered to the correct power unit pins before switching the console on. Ensure good solder joint. Re-tin the pins if necessary.

PRECAUTION ! Check that the power unit is set for the correct local mains voltage supply before switching the console on.