GR1

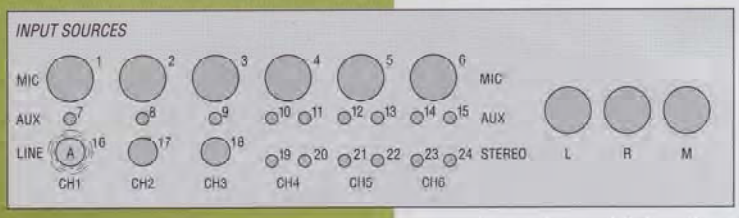
WHEN YOU'RE MIXING WITH PROFESSIONALS



ALLEN & HEATH

24 Input
3 Buss Professional
Zone Mixer

THE EASY *to* USE, COMPACT, MULTI-INPUT ZONE MIXER.



The GR1 has been designed to cater for the sound distribution requirements of Clubs, Pubs, Theatres, Hotels, Conference Facilities and Government Institutions. It conforms to all the necessary Health and Safety requirements to BS standards.

The design has been successful in achieving an extremely easy to use, compact unit. Operation requires no technical knowledge - all critical options are internal and tamper proof.

In a 1U high rack mount unit there are three adjustable and assignable output zones fed by a combination of 24 inputs.

INPUTS

The GR1 has six input channels. On the front panel each channel has separate level and pan controls, an input source select switch and Peak reading LED indication. All six channels have Mic input capability with Phantom Power. Phantom Power can be removed from individual Mic inputs using an internal link option. There is global Phantom Power switch on the rear panel. The Mic gain trims are accessible on the back panel. The first three channels are switchable to a Mono Line input source, the last three have dual selectable Stereo Line input sources. Channel 1 has a mute switch as an alternative to a Line input (internally this is connected to the alarm input for diagnostics and installation setup).

The output of each input channel can be assigned individually to either the Mono buss, Left Buss, Right Buss, or exclusive to the Direct output. This connection can be used for recording or a separate amplification to another zone. The Direct output signal can be sourced from either the pre or post level control. Assigning the channel to the individual busses allows a fully independent three zone Mono mixer. Under normal operating conditions the direct output provides post level FX sends or sources for an additional Multi zone unit.

OUTPUTS



The three main outputs are configured as one split Stereo Buss and one independent and assignable Mono Buss. The Mono Buss can be selected internally to be a combination of either the Mono buss, channel feeds or a sum of the main Stereo output. The Stereo Buss has individual level controls for left and right outputs. Three Independent Mono outputs are therefore possible. All outputs have a balanced XLR with an internal level adjustment of +4dBu, 0dBu, or -10dBV (300mV). Three output meters are provided for the Left, Right and Mono busses. Optimum output level is therefore easy to adjust from the front panel controls. The headphone output allows the operator to monitor the Mono or Stereo buss. The on/off power switch is on the front panel. The green power LED will always indicate whether power is available to the unit - regardless of whether the unit is turned on. Safety rulings require that the emergency system always has power. Note that if phantom power is required for an emergency microphone or pre recorded line level input then a back-up Power supply can be used.



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MONO INPUTS

Both the Mic XLR and the 1/4" jack Line input connectors are balanced with the line input having automatic ground compensation for unbalanced connections. All Mono line inputs are level selectable between +4dBu, 0dBu, and -10dBV. Each channel has an additional unbalanced Auxiliary input. A line input can be plugged into the Mic XLR input by setting the internal links to provide an additional 20dB attenuating pad.

STEREO INPUTS

Channels 4 to 6 have a dual Stereo source selector in addition to the Mic input. Both the Mic XLR and Left/Right 1/4" jack input connectors are balanced and are level selectable between +4dBu, 0dBu, and -10dBV (300mV). The Stereo Auxiliary inputs are unbalanced. The mono switch, accessible from the front panel, sums both the left and right signals from the selected stereo source.

Mic input channel six has been designated the 'Emergency' channel. If selected as such then a logic state on the control input will automatically shut off (mute) all other inputs to the three main outputs. The various methods of controlling this circuit meet the requirements of the professional emergency announcement systems. Connections for external alarm input and output signals are provided on the rear panel. Internal links select either Mic channel 6 or the alarm source.



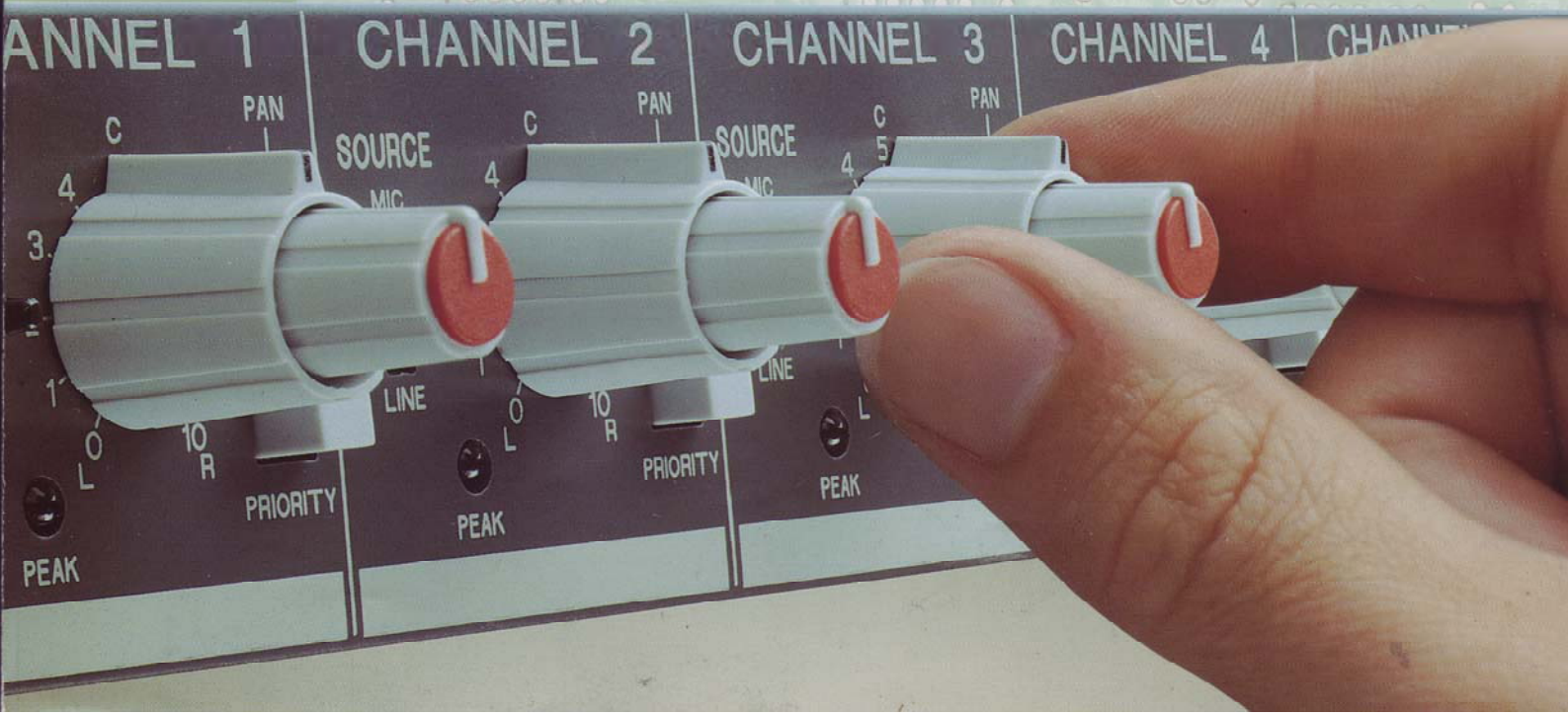






COMPRESSOR/LIMITER

The GR1 includes a sophisticated top quality compressor/limiter on Left, Right and Mono output busses. The Left and Right busses can be linked for stereo operation. Internal trimmers set the threshold levels ranging from -30dB to +15dB. The compressor ratios can be set individually between 2:1 and 10:1 (limiter). The Limiter can be used to safeguard the external amplifiers and speakers from overload.



BACK PANEL

All Mic inputs, Mono and Stereo Line inputs, Left, Right and Mono buss outputs are electronically balanced. Inserting an unbalanced line will not reduce the input or output gain. The Left, Right and Mono buss outputs are internally link selectable for +4dBu, 0dBu or -10dBV (300mV) operation.

DC control voltage input is via a 15 pin D-type connector. The unbalanced AUX inputs are via a 15 pin D-type. The A&H SYS-LINK connectors allow expansion at a later date. There is an internal ground lift link which is useful for minimising ground loops in complex rack systems.

REMOTE CONTROL

Channel levels, the Left, Right and Mono output levels can all be controlled by a remote device. This allows for wall mounted volume controls from the unit. Remote levels are standard OV to -9V DC. Each controlled parameter must be selected internally. A channel or output that has been selected for remote is no longer controlled from the front panel.

The Alarm input is governed by an opto-isolated remote DC logic signal.



Designed to meet safety standards

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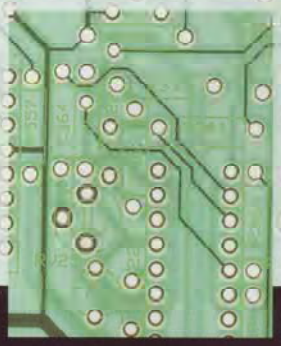
Versatile

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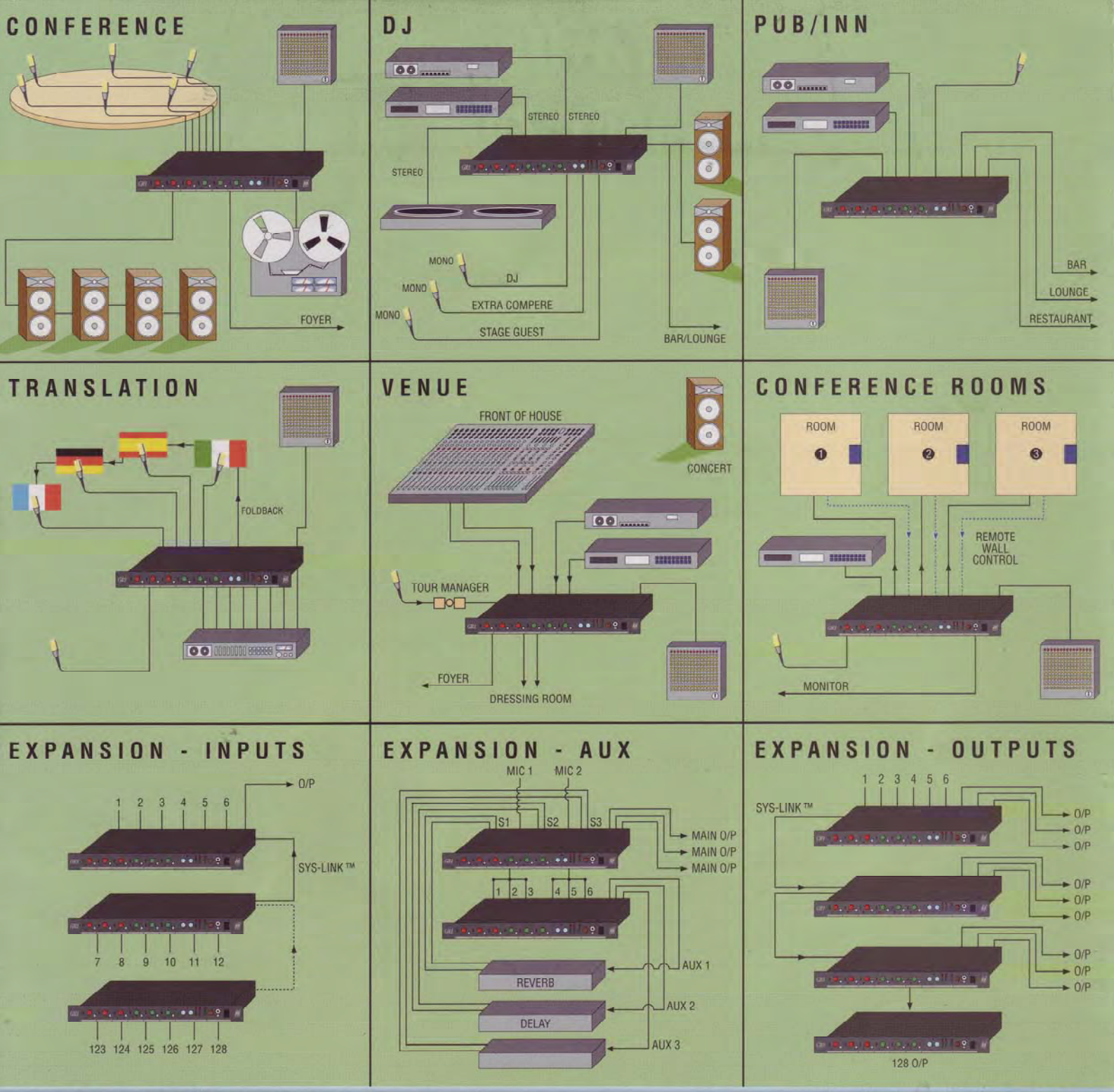
Easy to operate

DUCKING

The GR1 boasts a very flexible channel 'Ducking' feature. This facility is often used to ensure the signal on one input is heard in preference to all the other inputs. For example a commentary microphone input can override or 'Duck' the level on the other inputs when the commentator or DJ speaks. The first three inputs activate the 'Ducking' mechanism. The 'Priority' switch on the front panel lets the selected audio signal activate the circuit whilst inhibiting the effect of the gain reduction or 'Duck' level. The selected channel would normally then become the announcers microphone channel. Note that channels 4, 5 and 6 are normally affected by the ducking circuit unless disbled by removing the internal link option. The ducking control circuit can be adjusted by using internal jumpers. The gain reduction (depth) can be set to -18dB, -12dB, and -6dB. The release time is can be set to either fast or slow.






CONFERENCE
FOYER
DJ
STEREO
STEREO
STEREO
MONO
DJ
MONO
EXTRA COMPERE
MONO
STAGE GUEST
BAR/LOUNGE
PUB/INN
BAR
LOUNGE
RESTAURANT
TRANSLATION
FOLDBACK
VENUE
FRONT OF HOUSE
CONCERT
TOUR MANAGER
FOYER
DRESSING ROOM
CONFERENCE ROOMS
ROOM
1
ROOM
2
ROOM
3
REMOTE
WALL
CONTROL
MONITOR
EXPANSION - INPUTS
O/P
1 2 3 4 5 6
SYS-LINK™
7 8 9 10 11 12
123 124 125 126 127 128
EXPANSION - AUX
MIC 1
MIC 2
S1
S2
S3
MAIN O/P
MAIN O/P
MAIN O/P
1 2 3 4 5 6
REVERB
AUX 1
DELAY
AUX 2
AUX 3
EXPANSION - OUTPUTS
1 2 3 4 5 6
SYS-LINK™
O/P
O/P
O/P
O/P
O/P
O/P
O/P
O/P
O/P
128 O/P


ANNEL 1
CHANNEL 2
CHANNEL 3
CHANNEL 4
CHANNEL 5
PAN
C
SOURCE
MIC
LINE
PRIORITY
PEAK
MONO





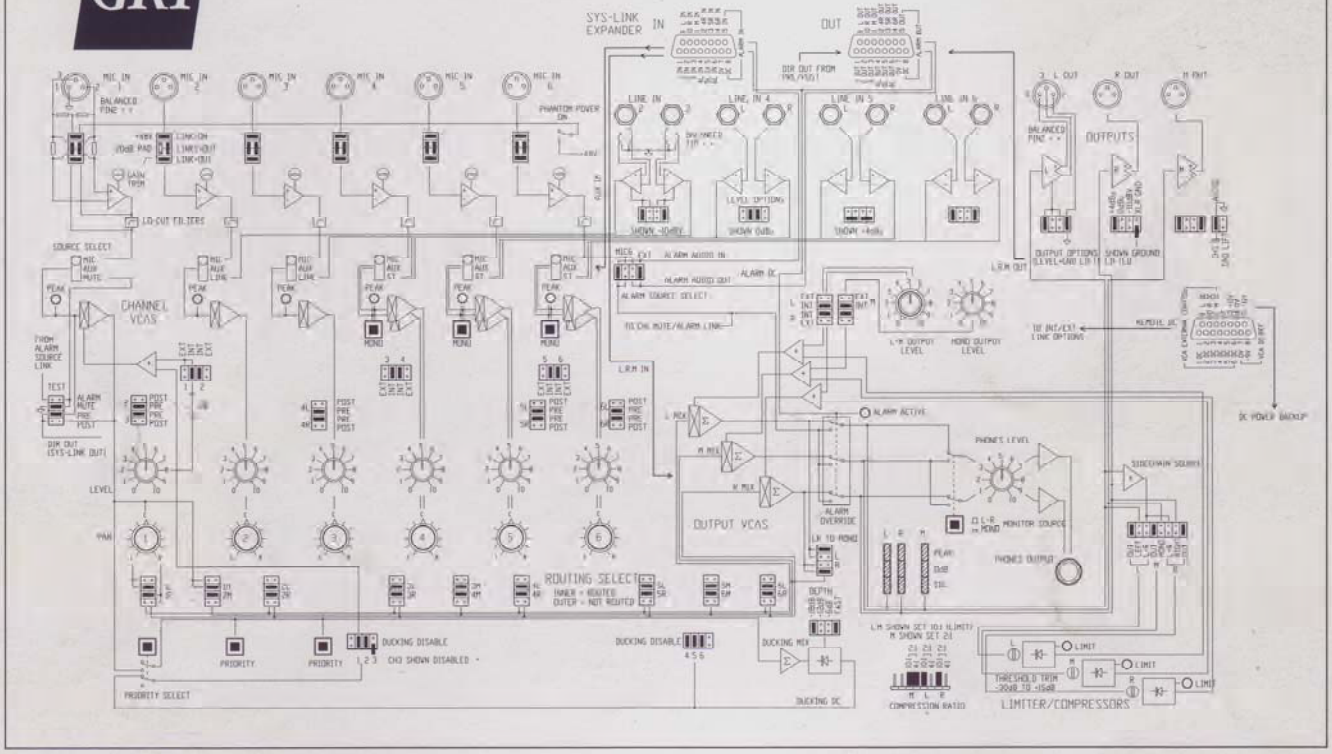
INPUTS

MIC IN	x6	XLR	pin2 +, 3 -	balanced	2kohms	variable +66 to +12dBu
			pad selected		10kohms	variable -35 to +Rdbu
Mono Line In	x2	1/4" JACK	tip +, ring -	balanced	10kohms	-10dBV, 0dBu, +4 dBu
Stereo line In	x3	1/4" JACK	tip +, ring -	balanced	10kohms	-10dBV, 0dBu, +4 dBu
Aux In (SYS-LINK)		15 way D female		unbalanced	50ohms	-2dBu
L, R, M In (SYS-LINK)		15 way D female		unbalanced	50ohms	-2dBu
Alarm & DC In (SYS-LINK)		15 way D female		unbalanced	50ohms	-2dBu
Remote VCA DC In		15 way D male		0V=max, -9V DC=off		
Backup DC In		15 way D male		max +16V, -16V, +48V DC, min +12V, -12V, +12V DC		

OUTPUTS

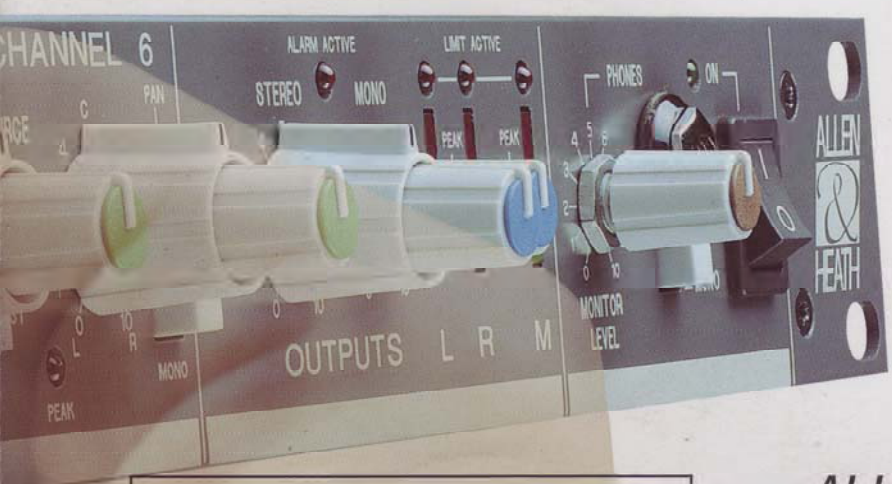
PHONES OUT	1/4" JACK	tip L, ring R	for stereo headphones 8 to 400 ohms		
Remote VCA DC ref	15way D male	0V, -9V reference voltage for remote VCA control			
L, R, M Out	XLR	pin2 +, 3 -	balanced	50 ohms	-10dBV, 0dBu, +4 dBu
Direct Out (SYS-LINK)	15 way D female	unbalanced	50ohms	-2dBu	
L, R, M Out (SYS-LINK)	15 way D female	unbalanced	50ohms	-2dBu	
Alarm & DC Out (SYS-LINK)	16 way D female	unbalanced	50ohms	-2dBu	

GR1 Specifications



A&H reserve the right to change specifications without notice

Internal Headroom	+23dB
Maximum Output Level	Balanced +26dBu into 600ohms Unbalanced +21dBu into 2kohms
Frequency Response	+/-1dB 20Hz to 30kHz
Distortion	THD better than 0.04%
Crosstalk	Channel shutoff > -90dB at 1kHz Channel pan > -75dB at 1kHz Interchannel > -80dB at 1 kHz
Noise 22Hz -22kHz	MIC EIN -128dB into 150 ohms Line preamp at 0dB gain -90dBu Mix Noise (all routed) > -80dBu
Meters	Individual bargraphs for L, R, M outputs Peak - on 5dB before clipping 0dB Signal - dynamic indication from -20dB
Channel Peak	On 5dB before clipping
Ducking	Depth -6dB, -12dB, or -18dB (internal link) Release, fast or slow (internal link) Control - from CH1, 2, & 3, PRIORITY switches Individual channel ducking disable (internal links)
Compressor/Limiters	L, R, M individually controlled Ratio 2:1 soft compression (internal links) 4:1 compression
Power Supply	Internally regulated +/-16V +48V DC Phantom Power Global +48V on switch, individual channel links
Power Consumption	25VA max
main Power requirements	Factory wired for 100, 110, 120, 220, or 240V.AC 50/60Hz mains input Fuse T315mA (220-240V.AC) T630mA (10 0-120V.AC)
DC Power Backup	External DC power supply or batteries +/-12 to 16V DC at 300mA +12V to +48V DC Phantom Power
Dimensions	Width 482mm (19") Height 44mm (1.75") 1U Depth 202mm (10.3:)
Unpacked Weight	4.5kg
Packed Weight	5kg



DEALER

ALLEN & HEATH

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