



C2

TECHNICAL SALES DATA

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CALREC



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1.0 Principal Features & Introduction

CALREC



INTRODUCTION

The Calrec **C2** is a standard low-profile console design providing mono and stereo broadcast facilities in a small space ideal for outside broadcast vehicles or small studios.

PRINCIPAL FEATURES

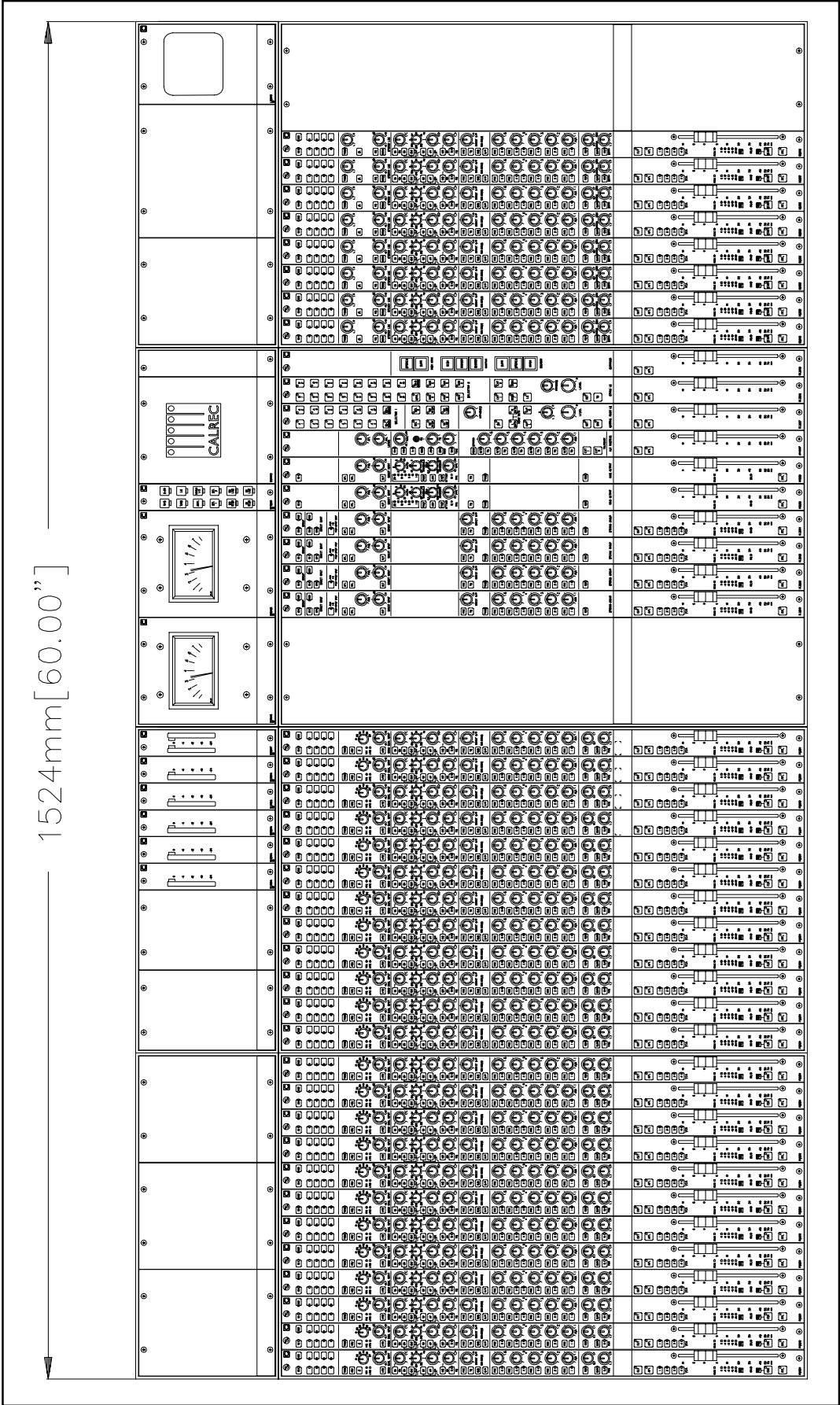
- **Mono, Stereo Mic/Line and Stereo Line Modules**
- **Very compact module configuration**
- **Can be configured from 12 to 48 channels**
- **Up to 8 Groups, Mono or Stereo**
- **5 Mono and 1 Stereo Auxiliaries**
- **1 or 2 Stereo Main Outputs with Dynamics**
- **30mm Wide Modules**
- **32dB Channel pre-fade headroom**
- **3-band Equaliser and 2-band filter on channels**
- **Mix-Minus system**
- **4 VCA Groups**
- **Surround option available**
- **Solid state routing switches**
- **Provision for extra dynamics, equalisers and a comprehensive range of metering in the upstand**
- **SLS/PA Mute system follows faders and main routing**
- **Stereo AFL and PFL**
- **Comprehensive Loudspeaker Monitoring System**
- **Channel bargraph metering**
- **Stereo Width and Front/Back pan on Stereo channels**
- **Talkback and Mix-Minus to channel direct outputs**



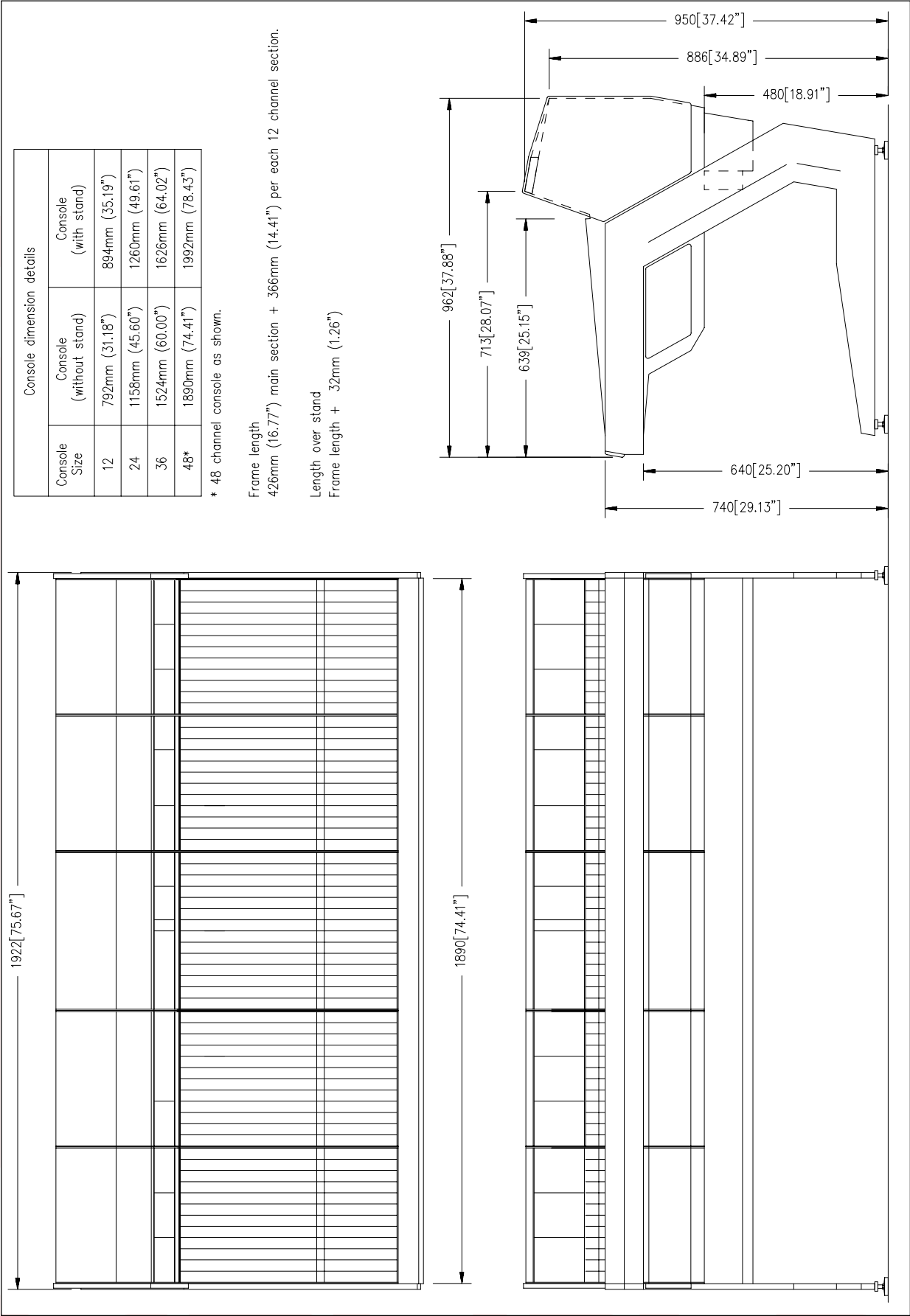
2.0 Console Layout

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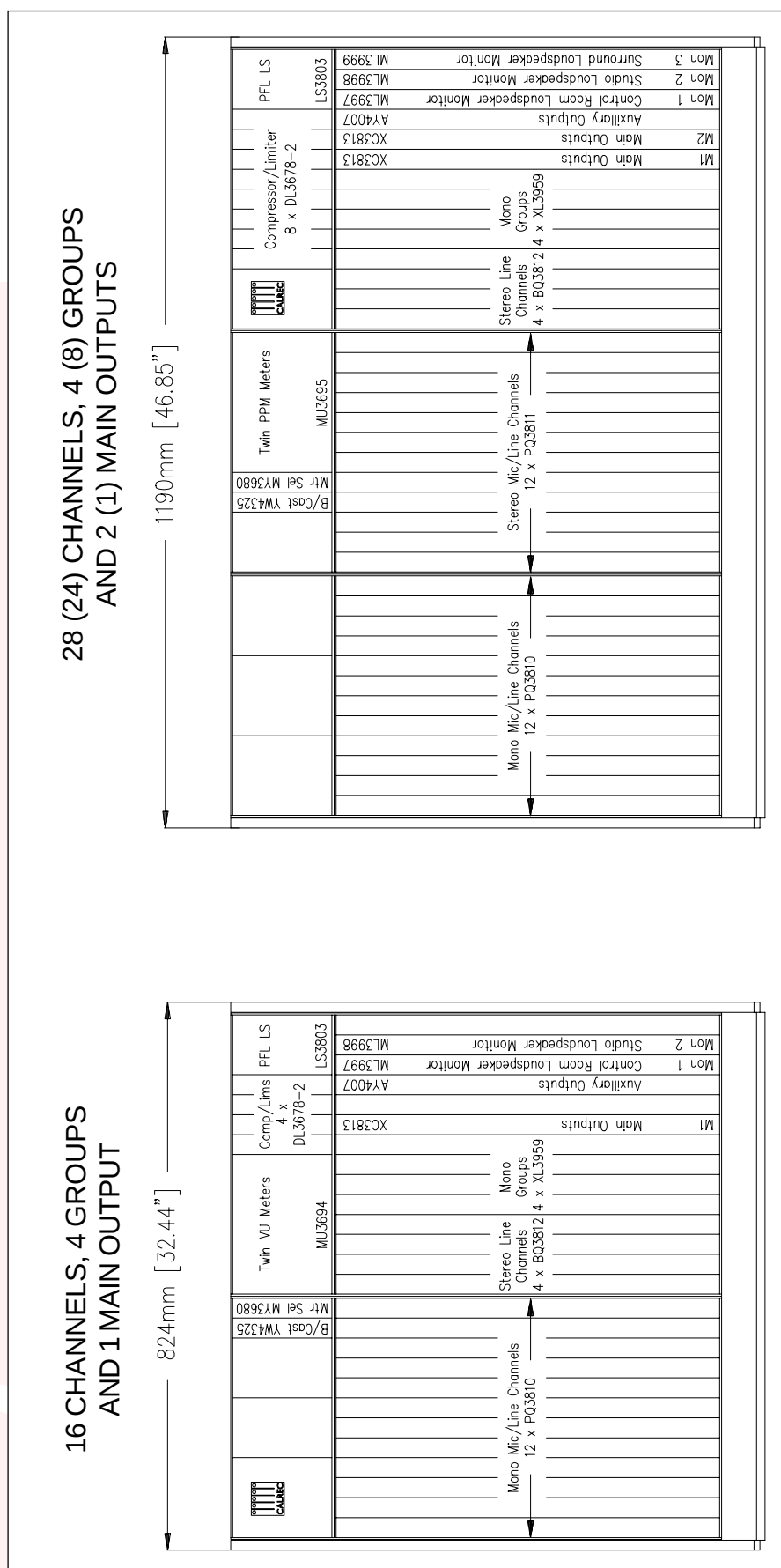
TYPICAL LAYOUT



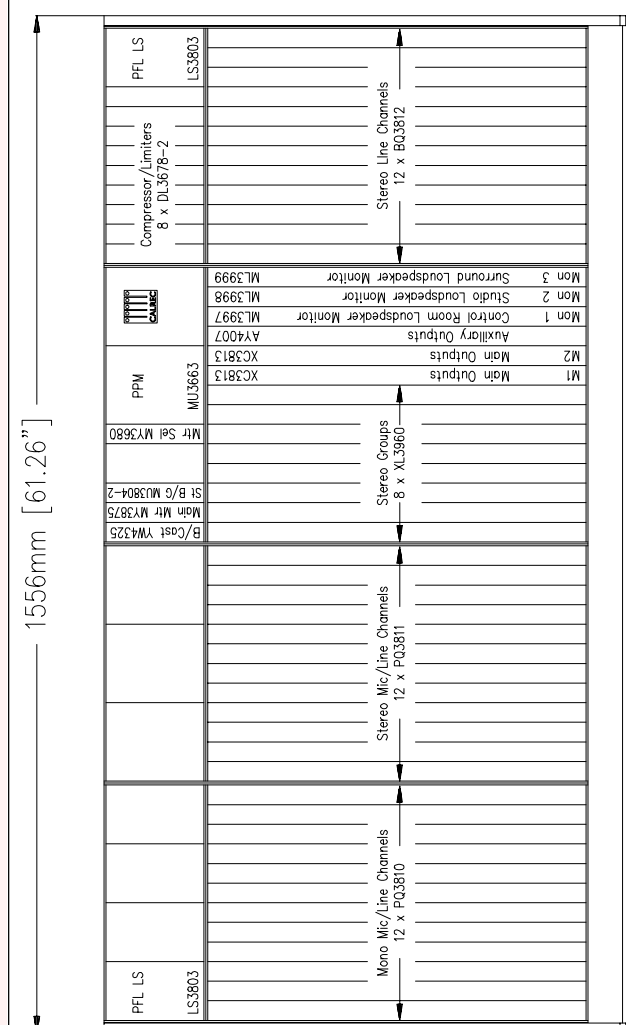
CONSOLE PLAN AND ELEVATION DETAIL DIMENSIONS



DESK LAYOUTS



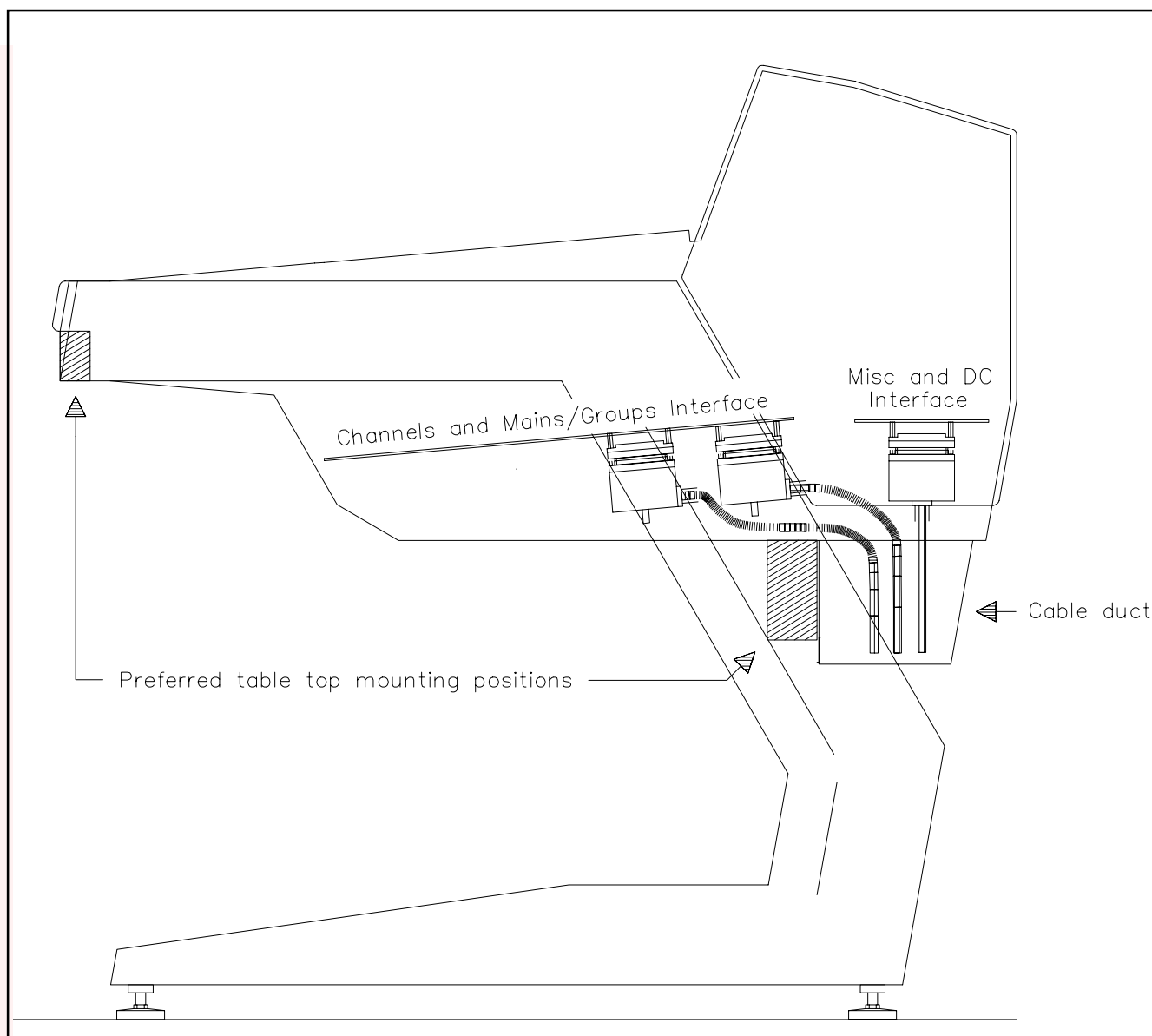
36 CHANNELS, 8 GROUPS AND 2 MAIN OUTPUTS



1922mm [75.67"]

PFL LS	4 Bond EQ	Exp/Gate 4 x DF-4041-2	Comp/Lims 4 x DL3678-2	B/Cast YW4325	SI B/C MU3804-2	SI B/C MU3804-2	Main Mtr MY3876	PPM MU3663	PPM MU3663	Mtr Sel MY3680	LS3803
Mono Mic/Line Channels 12 x PQ3810											
Stereo Mic/Line Channels 12 x PQ3811											
Stereo Groups 8 x XL3960											
Main Outputs M1 M2 Mon 1 Mon 2 Mon 3											
Stereo Line Channels 12 x BQ3810											
Mono Mic/Line Channels 12 x PQ3810											

LAYOUT OF CONNECTORS







3.0 Modules & Panels Description

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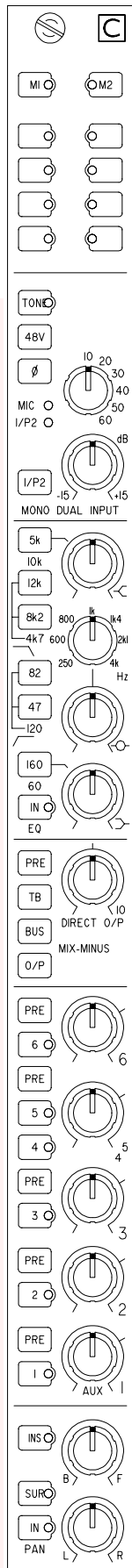
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MODULES**page**

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CALREC

PQ3810 MONO CHANNEL



Routing to :-

Tone

48V



Mic

I/P2

Gain

Trim

HF Filter

LF Filter

3 band equaliser :

HF shelf

MID Bell

LF shelf

EQ in/out button (includes filters) Red LED

Direct output gain control 10dB in hand.

Pre button

TB

2 main stereo outputs. Red LED's
up to 8 mono or stereo groups. Yellow LED's
Red button switches alignment tone to the channel
post mic gain control but pre the trim - Inhibited on air
Microphone phantom power
Phase reverse
Red LED. From input 1 (mic only)
Green LED. From input 2 (mic or line, internal option)
Rotary switch +10 to +60 dB in 10dB steps (Mic only)
+/- 15dB - extends mic range -5dB to +75dB gain
line range +/- 15dB

2 buttons : 12kHz, 8.2kHz, both 4.7kHz

2 buttons : 47Hz, 82Hz, both 120Hz

+/- 15dB at 10kHz or 5kHz with button

+/- 15dB frequency variable from 250Hz to 4kHz

+/- 15dB at 60Hz or 160Hz with button

selects pre-fader source (normally post-fader)
talkback button to direct output

Mix-Minus system :

Bus Selects channel signal (pre or post fader optional) to feed the Mix-Minus bus

O/P sends Mix-Minus bus, less own signal to direct output

Aux 6 Stereo output to aux 6 bus, selectable pre or post fader and an on switch. Follows channel pan

Aux 4/5 dual mono output to Aux 4 and 5 busses, individually selectable, but with a common level and pre/post controls
Aux 1-3 mono outputs to Aux 1-3 busses, with individual level, pre/post and on controls

Insert button selects insert circuit, can be pre or post fader (internal option)

Surr button selects odd numbered groups and mains to be left/right and even numbered groups and mains to be centre/surround
F/B front/back pan control - only works when surround selected
L/R left/right pan selected by IN button

Scribble Strip

Cut latching button cuts all pre and post signals except:
insert-send (if selected pre) and PFL

AFL latching button routes channel Left/Right signal in stereo (post F/B pan if selected) to the AFL mix which is fed to the monitor loudspeakers, automatically over-riding the normal feed
VCA VCA group select 1-4 puts the channel fader under additional control of the selected VCA Master fader

Includes AFL and Cut
(Isolate External VCA Control, fitted by special order)

Peak Red LED illuminates when the signal anywhere in the module is within 3dB of clipping

5 LEDs bar display shows pre EQ signal level relative to 0dBu
DIR button switches bar display to show Direct output level

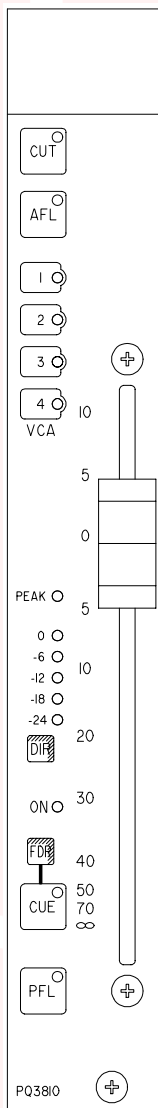
ON Green LED illuminates to show channel fader open

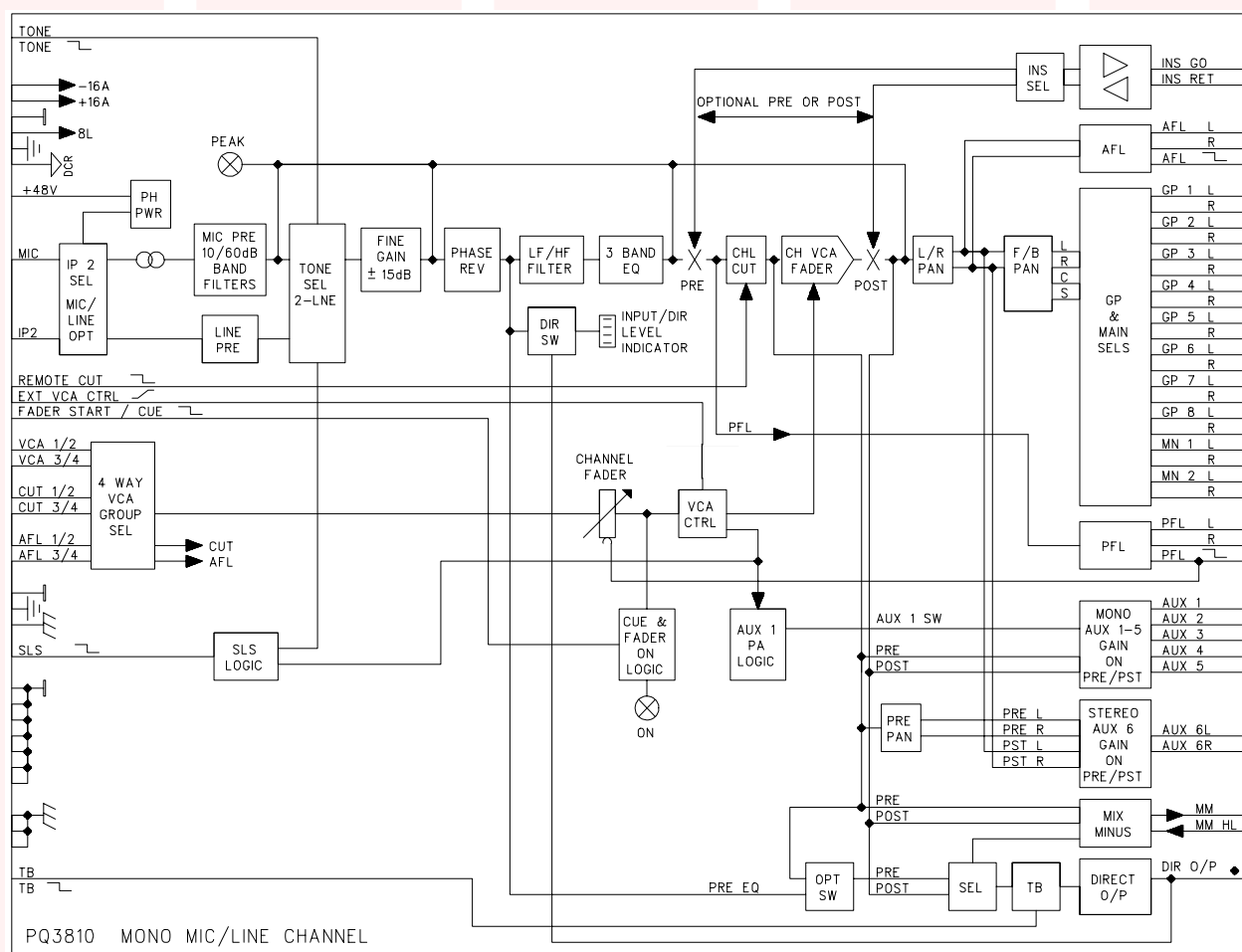
FDR button fires remote start/cue when fader is open

CUE button fires remote start/cue when pressed

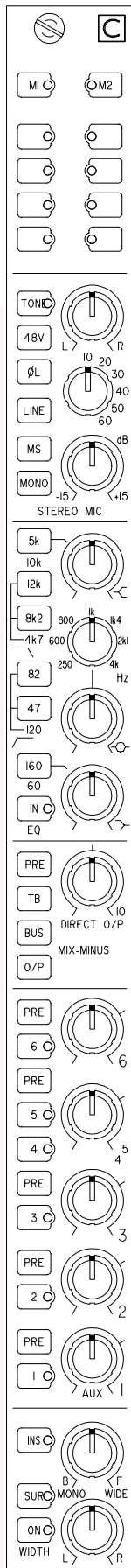
PFL latching button routes pre-fader channel signal to the small PFL loudspeakers (follows channel pan)

Fader with 10dB gain in hand and momentary PFL overpress

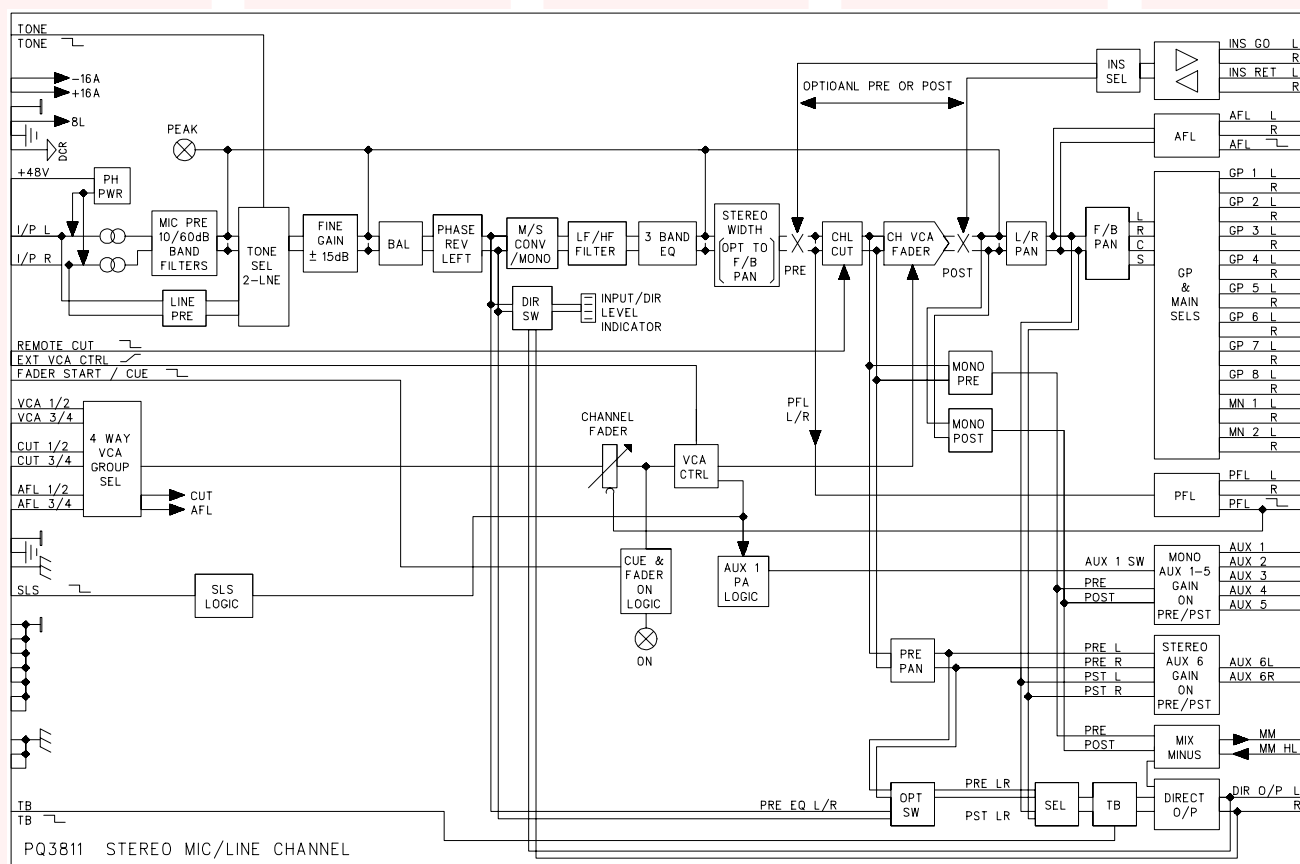




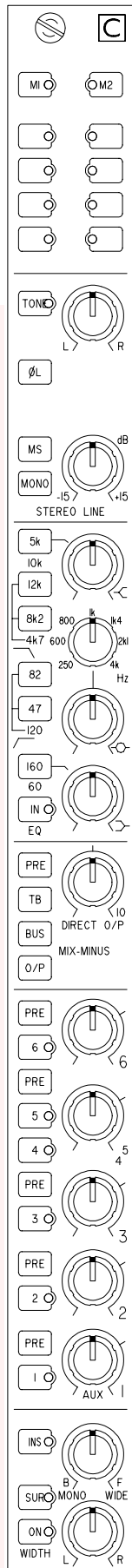
PQ3811 STEREO CHANNEL



Routing to :-	2 main stereo outputs. Red LED's up to 8 mono or stereo groups. Yellow LED's
L/R	input balance control +3/0/off
Tone	Red button switches alignment tone to the channel post mic gain control but pre the trim - Inhibited on air
48V	Microphone phantom power
Ø	Phase reverse left leg
LINE	inserts line input amplifier
Gain	Rotary switch +10 to +60 dB in 10dB steps (Mic only)
MS	button inserts LR/MS converter
Mono	switches both inputs to both outputs
Trim	+/- 15dB - extends mic range -5dB to +75dB gain line range +/- 15dB
HF Filter	2 buttons : 12kHz, 8.2kHz, both 4.7kHz
LF Filter	2 buttons : 47Hz, 82Hz, both 120Hz
3 band equaliser :	
HF shelf	+/- 15dB at 10kHz or 5kHz with button
MID Bell	+/- 15dB frequency variable from 250Hz to 4kHz
LF shelf	+/- 15dB at 60Hz or 160Hz with button
EQ in/out button	(includes filters) Red LED
Direct output gain control	10dB in hand. Pre button selects pre-fader source (normally post-fader)
TB	talkback button to direct output
Mix-Minus system:	
Bus	selects channel signal (pre or post fader optional) to feed the Mix-Minus bus
O/P	sends Mix-Minus bus, less own signal to direct output
Aux 6	Stereo output to aux 6 bus, selectable pre or post fader and an on switch. Responds to channel pan
Aux 4/5	dual mono output to Aux 4 and 5 busses, individually selectable, but with a common level and pre/post controls
Aux 1-3	mono outputs to Aux 1-3 busses, with individual level, pre/post and on controls
Insert	button selects insert circuit, can be pre or post fader (internal option)
Surr	button selects odd numbered groups and mains to be left/right and even numbered groups and mains to be centre/surround
F/B	front/back pan control - only works when surround selected
L/R	left/right pan selected by IN button
Scribble Strip	
Cut	latching button cuts all pre and post signals except : insert-send (if selected pre) and PFL
AFL	latching button routes channel Left/Right signal in stereo (post F/B pan if selected) to the AFL mix which is fed to the monitor loudspeakers ,automatically over-riding the normal feed
VCA	VCA group select 1-4 puts the channel fader under additional control of the selected VCA Master fader Includes AFL and Cut (Isolate External VCA Control, fitted by special order)
Peak	Red LED illuminates when the signal anywhere in the module is within 3dB of clipping
5 LEDs	bar display shows pre EQ signal level relative to 0dBu
DIR	button switches bar display to show Direct output level
ON	Green LED illuminates to show channel fader open
FDR	button fires remote start/cue when fader is open
CUE	button fires remote start/cue when pressed
PFL	latching button routes pre-fader channel signal to the small PFL loudspeakers (follows channel pan)
Fader with 10dB gain in hand and momentary PFL overpress	



BQ3812 STEREO LINE CHANNEL



Routing to :-

L/R

Tone

Ø

MS

Mono

Trim

HF Filter

LF Filter

3 band equaliser :

HF shelf

MID Bell

LF shelf

EQ in/out button

Direct output gain control 10dB in hand. Pre button selects pre-fader source (normally post-fader)

TB

Mix-Minus system :

Bus

O/P

2 main stereo outputs. Red LED's

up to 8 mono or stereo groups. Yellow LED's

input balance control +3/0/off

Red button switches alignment tone to the channel

pre the trim - Inhibited on air

Phase reverse left leg

button inserts LR/MS converter

switches both inputs to both outputs

+/- 15dB gain range

2 buttons : 12kHz, 8.2kHz, both 4.7kHz

2 buttons : 47Hz, 82Hz, both 120Hz

+/- 15dB at 10kHz or 5kHz with button

+/- 15dB frequency variable from 250Hz to 4kHz

+/- 15dB at 60Hz or 160Hz with button

(includes filters) Red LED

talkback button to direct output

selects channel signal (pre or post fader optional) to feed the Mix-Minus bus

sends Mix-Minus bus, less own signal to direct output

Aux 6 Stereo output to aux 6 bus, selectable pre or post fader and an on switch. Responds to channel pan

Aux 4/5 dual mono output to Aux 4 and 5 busses, individually selectable, but with a common level and pre/post controls

Aux 1-3 mono outputs to Aux 1-3 busses, with individual level, pre/post and on controls

Insert button selects insert circuit, can be pre or post fade (internal option)

Surr button selects odd numbered groups and mains to be left/right and even numbered groups and mains to be centre/surround

F/B front/back pan control - only works when surround selected

L/R left/right pan selected by IN button

Scribble Strip

Cut latching button cuts all pre and post signals except: insert-send (if selected pre) and PFL

AFL latching button routes channel Left/Right signal in stereo (post F/B pan if selected) to the AFL mix which is fed to the monitor loudspeakers, automatically over-riding the normal feed

VCA VCA group select 1-4 puts the channel fader under additional control of the selected VCA Master fader Includes AFL and Cut (Isolate External VCA Control, fitted by special order)

Peak Red LED illuminates when the signal anywhere in the module is within 3dB of clipping

5 LEDs bar display shows pre EQ signal level relative to 0dBu

DIR button switches bar display to show Direct output level

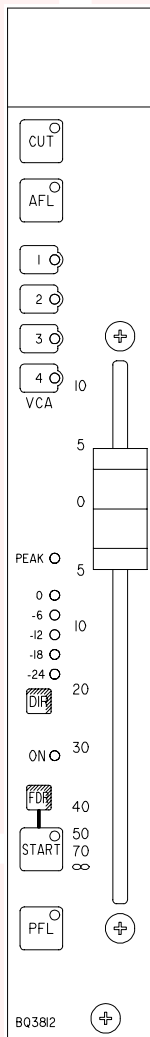
ON Green LED illuminates to show channel fader open

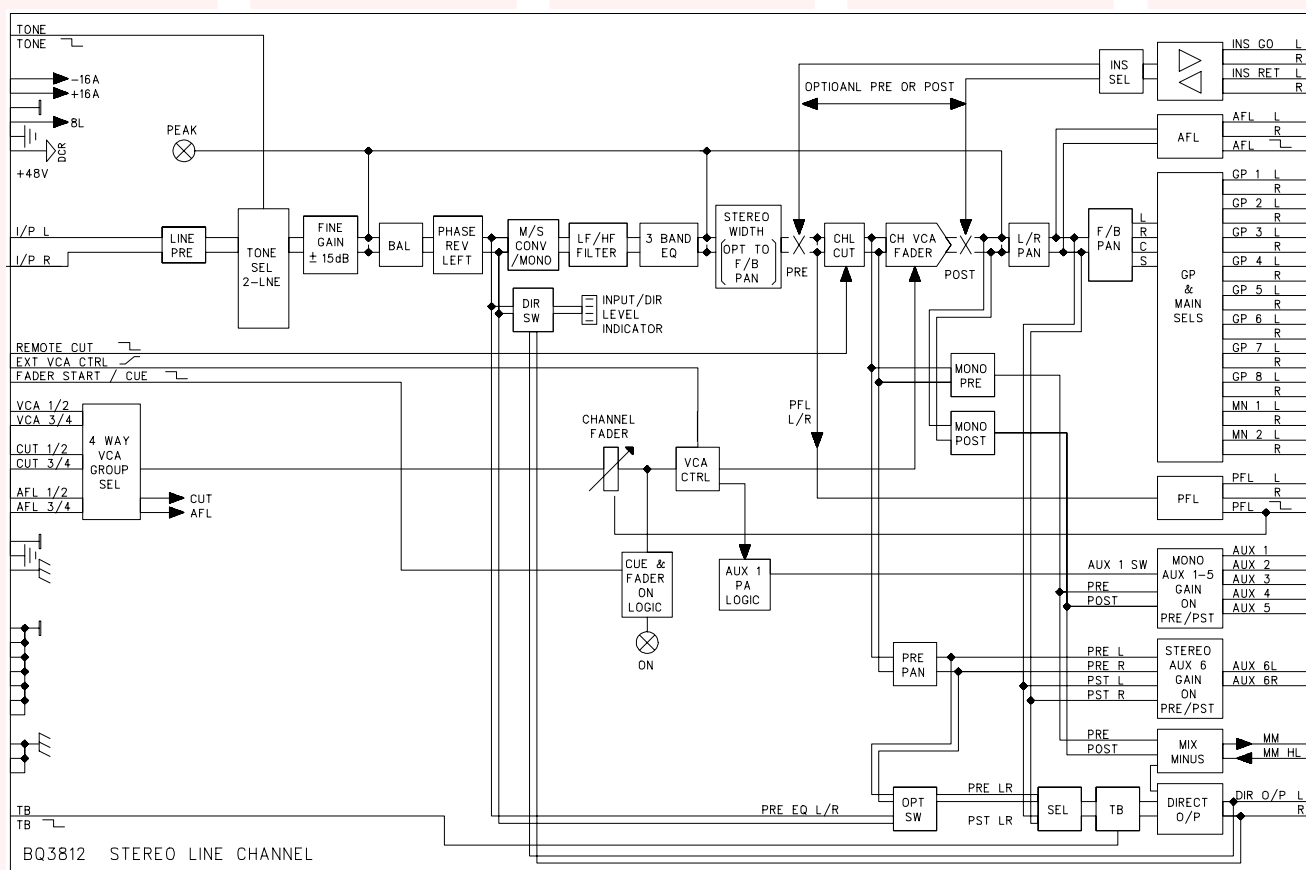
FDR button fires remote start/cue when fader is open

CUE button fires remote start/cue when pressed

PFL latching button routes pre-fader channel signal to the small PFL loudspeakers (follows channel pan)

Fader with 10dB gain in hand and momentary PFL overpress





XL3959 MONO GROUP



Group routing to 2 Main Stereo Outputs . Red LEDS

Group Direct input routing to 2 Main Outputs. Red LEDS
to Group Mixer Yellow LEDS

Aux 1-5 from Direct button switches Aux 1-5 to Group Direct input

Direct AFL latching button routes Direct input after fader signal exclusively to Monitor Loudspeaker

Direct PFL latching button routes Direct input pre fader signal to small PFL Loudspeaker(s)

Direct CUT latching button cuts Direct input signal

Direct PAN Control pans mono Direct input Signal between Left & Right outputs

Direct Gain control sets Direct input signal level, +10dB in hand

Direct output gain control

Direct output PRE fader button, normally post fader

TB Talkback button to Direct output - momentary

TONE button to Direct output. Inhibited ON AIR

Aux 6 Stereo Input post pan to Aux 6 Stereo bus, selectable PRE (button) or Post fader ON switch with Green LED

Aux 4/5 Shared Mono output to Aux 4 or Aux 5 as selected. Green LEDS Control can be PRE (button) or Post fader

Aux 1 - 3 3 Mono outputs to Aux 1-3 buss. ON switches. Green LEDS Controls can be PRE (button) or Post fader

Insert button. Yellow LED. Selects Insert circuit Pre or Post fader (internal switch)

Group Pan Control with IN button, Red LED

Scribble Strip

CUT latching button cuts Group output. Yellow LED
AFL latching button routes Group output signal exclusively to Monitor Loudspeakers following Group Pan Control

VCA Group Sel buttons 1-4. Green LEDS. Puts Group fader under additional control of nominated VCA Group fader. Includes CUT & AFL

PEAK Red LED. Illuminates when signal anywhere in circuit approaches within 3dB of clipping.

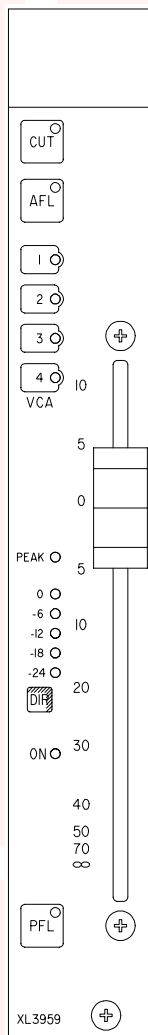
5 LED Bar graph 1 Red, 1 Yellow, 3 Green LEDS - shows pre fader signal level in group, to show Direct output level

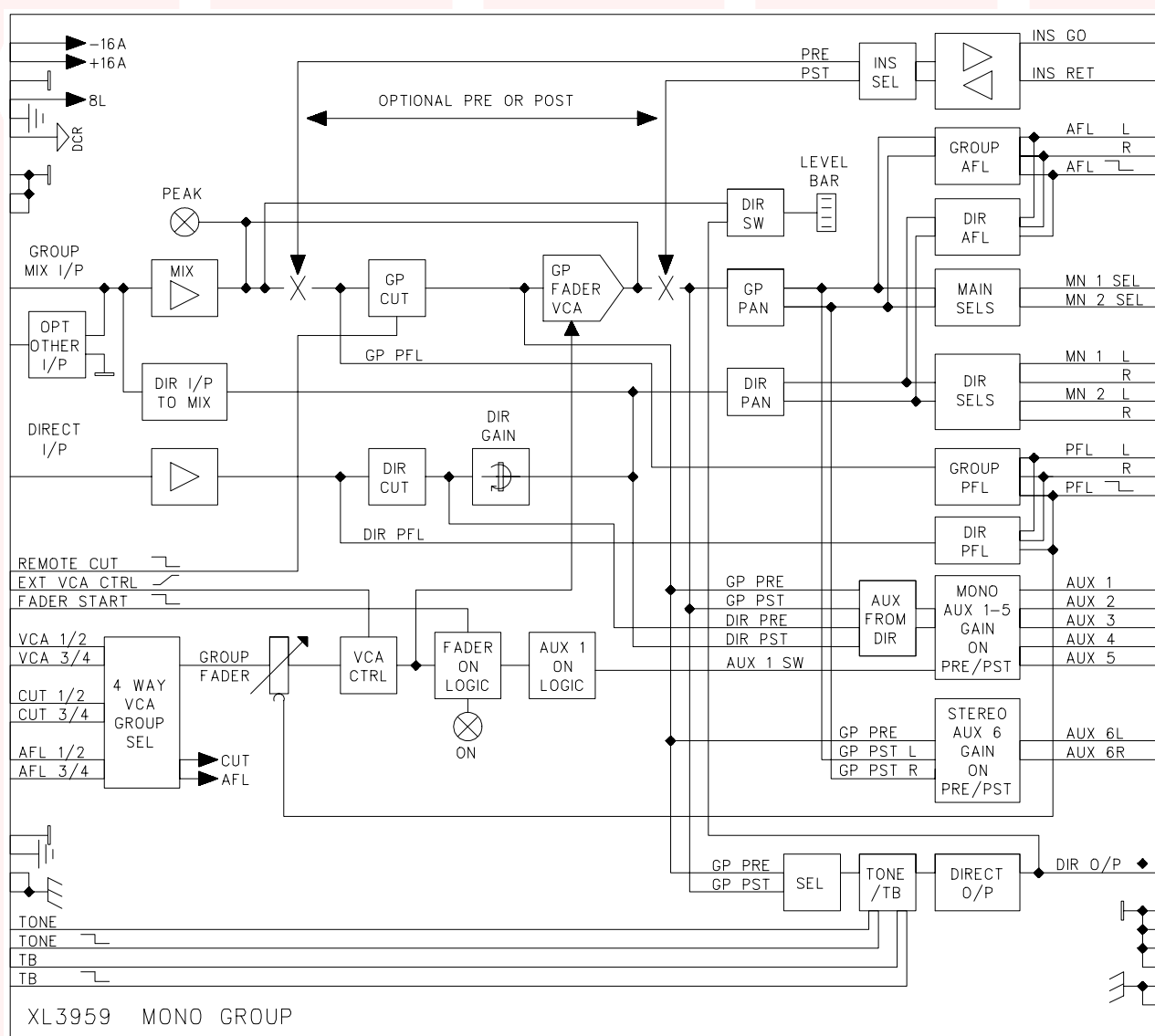
DIR button switches bar display to show Direct output level

ON Green LED when fader is open

PFL latching button routes Group pre fader signal to small PFL Loudspeaker(s)

FADER with +10dB in hand and momentary PFL overpress.





XL3960 STEREO GROUP



Group routing to 2 Main Stereo Outputs. Red LEDs

Group Direct input: Stereo routing to 2 Main Outputs. Red LEDs
to Group Mixer. Yellow LEDs

Aux 1-5 from Direct button switches Aux 1-5 to Group Direct input

Direct AFL latching button routes Direct input after fader signal exclusively to Monitor Loudspeaker

Direct PFL latching button routes Direct input pre fader signal to small PFL Loudspeaker(s)

Direct CUT latching button cuts Direct input signal

Direct PAN Control pans Stereo Direct input Signal

Direct Gain control sets Direct input signal level, +10dB in hand

Direct output gain control

Direct output PRE fader button, normally post fader

TB Talkback button to Direct output - momentary

TONE button to Direct output. Inhibited ON AIR

Aux 6 Stereo output to Aux 6 bus selectable PRE (button) or Post fader ON switch with Green LED

Aux 4/5 Shared Mono output to Aux 4 or Aux 5 as selected. Green LEDs Control can be PRE (button) or Post fader

Aux 1 - 3 3 Mono outputs to Aux1-3 buss. ON switches. Green LEDs. Controls can be PRE button) or Post fader

Insert button. Yellow LED. Selects Insert circuit Pre or Post fader (internal switch)

Scribble Strip

CUT latching button cuts Group output. Yellow LED

AFL latching button routes Group output signal exclusively to Monitor Loudspeakers following Group Pan Control

VCA Group Sel buttons 1 - 4. Green LEDs. Puts Group fader under additional control of nominated VCA Group fader. Includes CUT & AFL

PEAK Red LED. Illuminates when signal anywhere in circuit approaches within 3dB of clipping

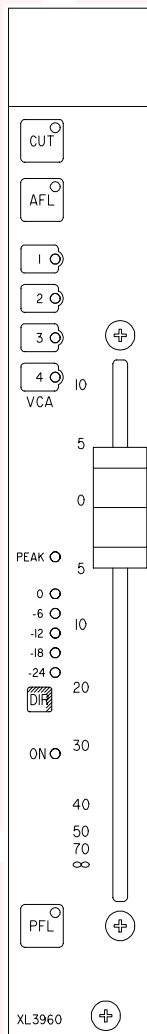
5 LED Bar graph 1 Red, 1 Yellow, 3 Green LEDs - shows pre fader signal level in group, to show Direct output level

DIR button switches bar display to show Direct output level

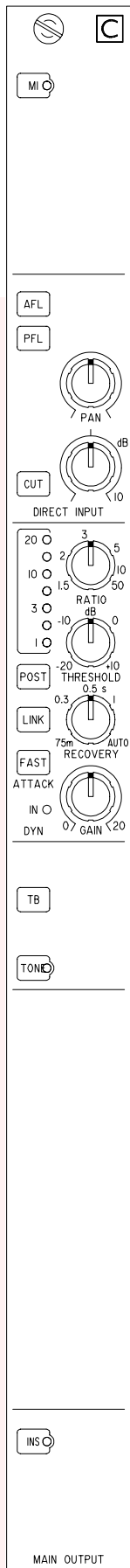
ON Green LED when fader is open

PFL latching button routes Group pre fader signal to small PFL Loudspeaker(s)

FADER with +10dB in hand and momentary PFL overpress



XC3813 MAIN OUTPUT



Routing to Main 1 on Main 2 only. Red LED

Direct AFL latching button routes Direct input after fader signal exclusively to Monitor Loudspeaker
 Direct PFL latching button routes Direct input pre fader signal to small PFL Loudspeaker(s)
 Direct CUT latching button cuts Direct input signal
 Direct PAN Control pans Stereo Direct input Signal
 Direct Gain control sets Direct input signal level, +10dB in hand

Main output Compressor, may be used as a Limiter (50:1 ratio)

20dB Gain reduction. Yellow bargraph

Normally Pre fader can be set Post fader

LINK can be linked to other MAIN output

ATTACK Normal 4m Sec @ 5:1 ratio or FAST 0.2ms @ 5:1 ratio

Dynamics IN button. Red LED

RATIO 1.5 to 50:1 variable control

THRESHOLD -20 to +10dBu. Variable control

RECOVERY 75m sec to 4 sec variable control

At fully clockwise position becomes AUTO 0.1 to 1.5 secs programme dependant

GAIN Make-up variable control 0 to +20dB

TB Talkback momentary button. Inoperative ON AIR

TONE latching button. Inoperative ON AIR

Insert button. Yellow LED. Selects Insert circuit Pre or Post fader (internal switch)

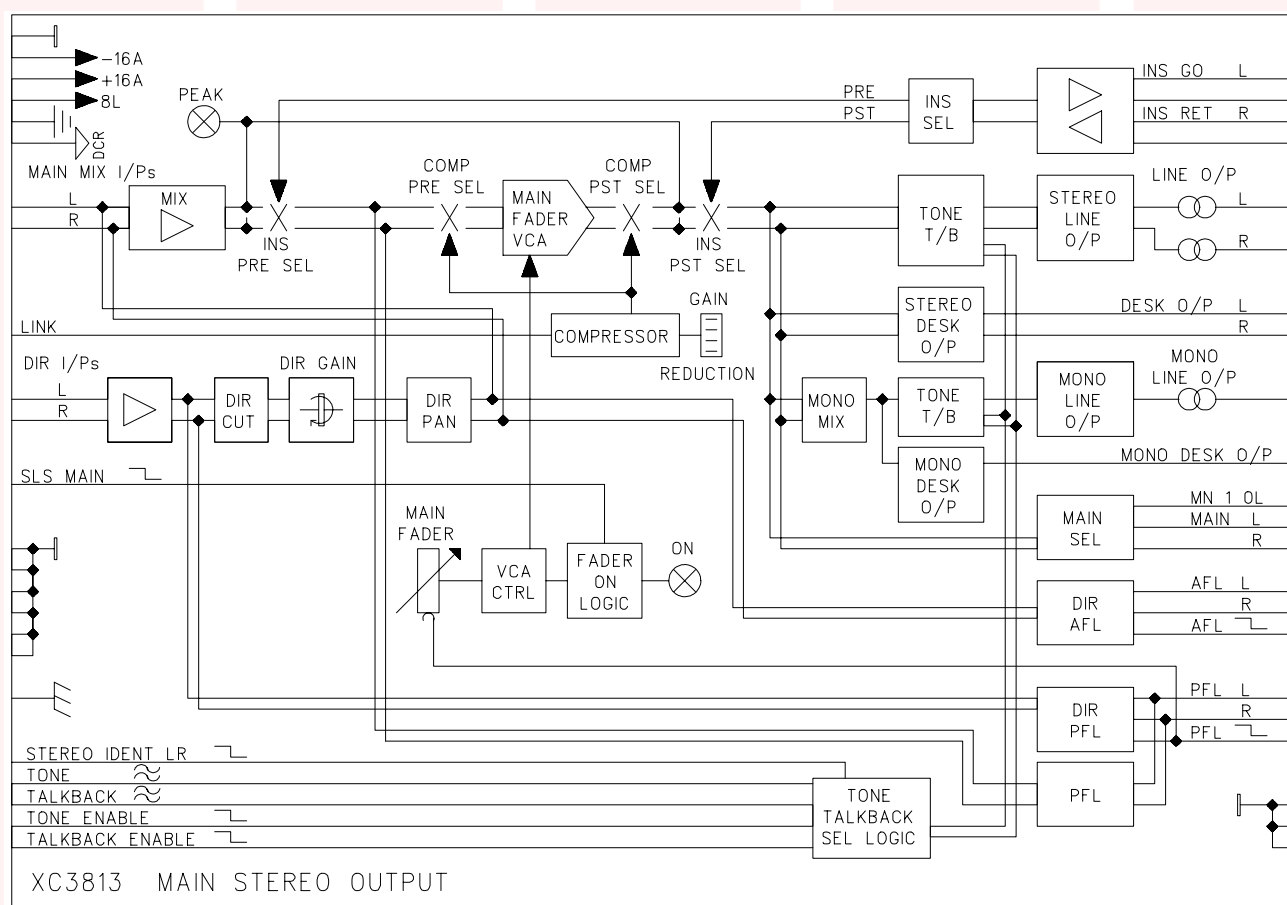
Scribble Strip

PEAK Red LED. Illuminates when signal anywhere in circuit approaches within 3dB of clipping

ON Green LED when fader is open

PFL latching button routes Main output pre fader signal to small PFL Loudspeaker(s)

FADER with +10dB in hand and momentary PFL overpress



AY4007 AUX OUTPUTS

AFL After fade listen trim control to Monitor Loudspeakers
PFL Pre fade listen level control to PFL Loudspeaker(s)

OSCILLATOR FREQUENCY 5 buttons 40, 100, 1K, 10K, 15K

IDENT button pulses tone to main outputs only to EBU or BBC GLITS specification (internal switch)

TONE button switches ON Oscillator. Red LED

TONE control +10dB on nominal 0dBu output

MIC Talkback microphone

TB Sets talkback level

REV TB Sets reverse talkback level to PFL Loudspeaker(s)

Aux 1 - 6 Outputs level controls +10dB in hand

Aux 1 - 6 Output CUT buttons. Yellow LEDs

Aux 1 - 6 TB - Talkback buttons (momentary)

Aux 6 MONO button. Joins L & R signals together

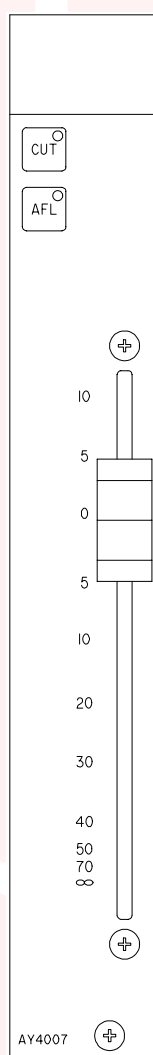
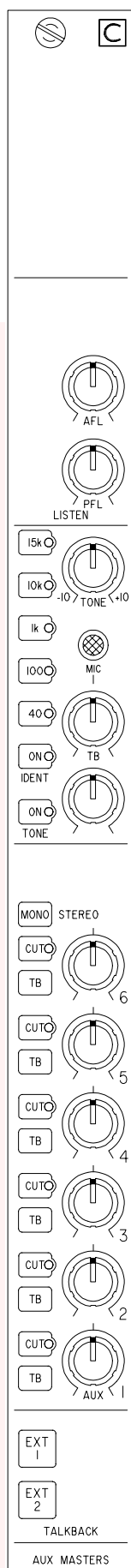
EXT 1 & 2 TALKBACK buttons to external connections

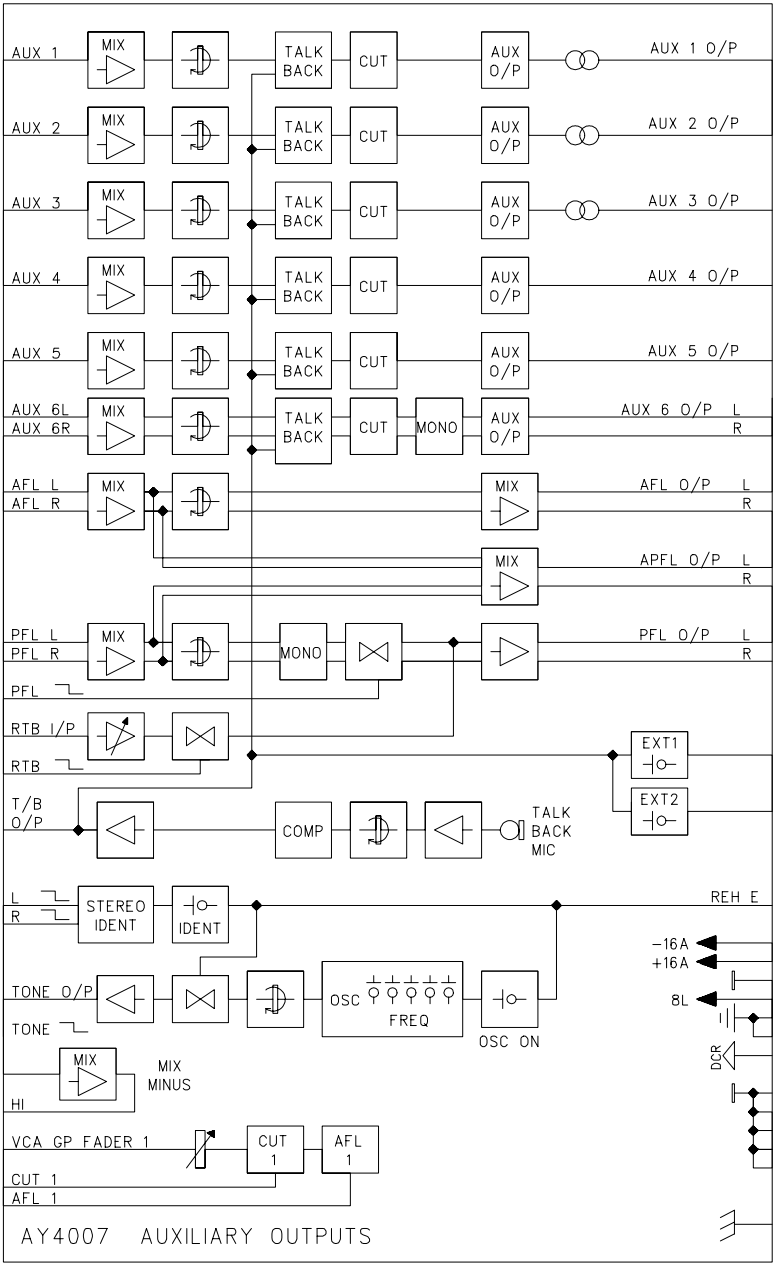
Scribble Strip

VCA Group 1 fader +10dB in hand

VCA Group 1 CUT button Yellow LED
CUTS channels & groups selected to VCA Group 1

VCA Group 1 AFL button (latching) Red LED sends the output signal from all channels & groups selected to VCA Group 1 exclusively to the Monitor Loudspeakers





ML3997 MONITOR 1 - CUBICLE LS

SELECTOR 1: 14 Way set of cancelling buttons. Green LEDs

12 External stereo inputs A1 - A12

Main 1 & Main 2 MONO LINE outputs Monitor

MAIN SELECTOR to control room Monitor Loudspeakers
6 way set of cancelling buttons. Yellow LEDs

Control room HEADPHONES Gain control

CONTROL ROOM LOUDSPEAKERS - or Phase Reverse right button. Red LED

L both Left to Both outputs

R both Right to Both outputs

L both + R Both mono mix to both outputs

CUT L cut left loudspeaker. Red LED

CUT R cut right loudspeaker. Red LED

L - R Balance control + 3dB

LEVEL control sets loudspeaker level

CUT button cuts loudspeakers. Red LED

DIM button reduces loudspeaker level -14dB. Red LED

Scribble Strip

VCA Group 2 fader

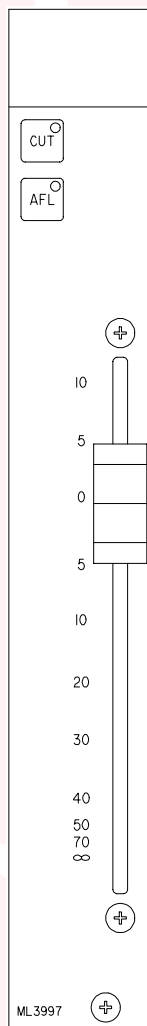
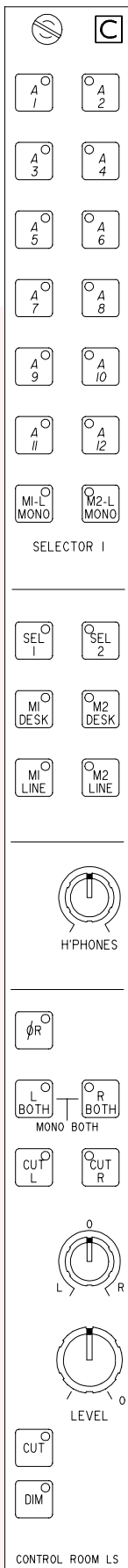
+10dB in hand

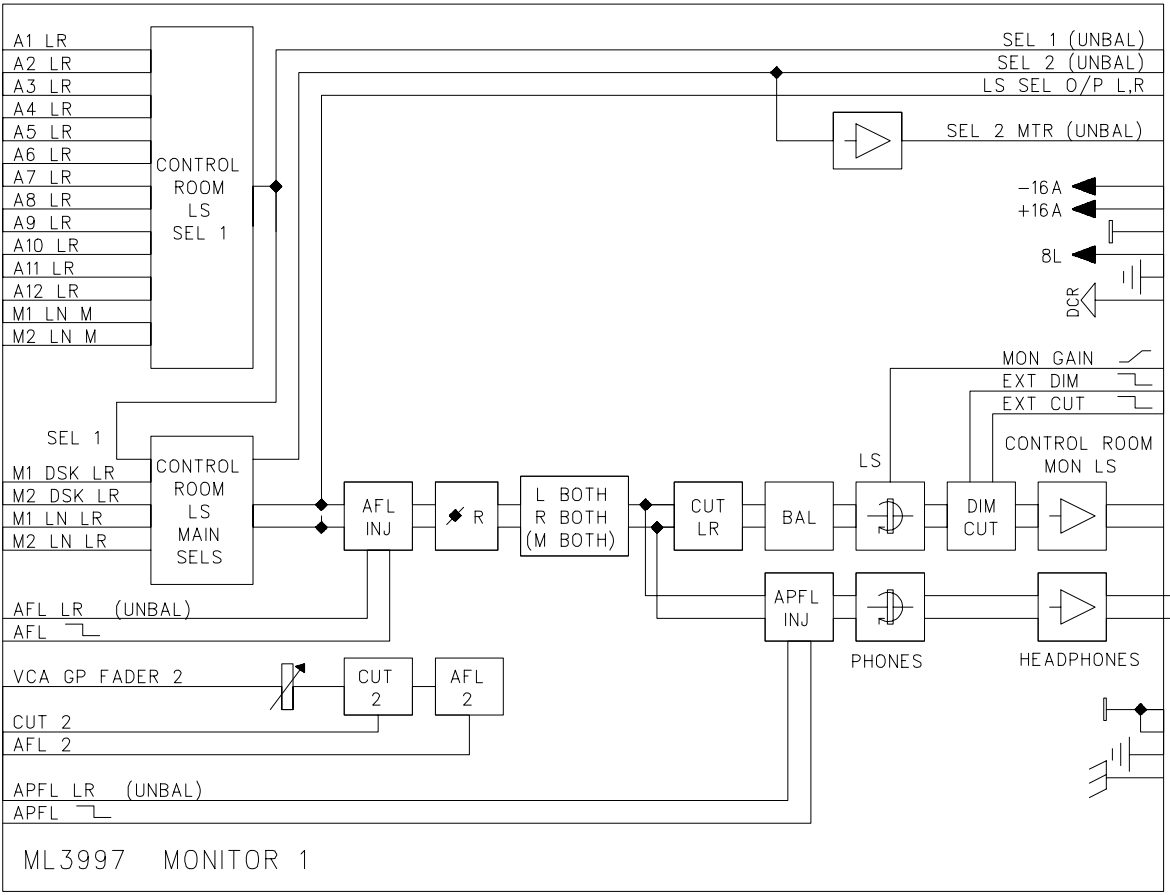
VCA Group 2 CUT button

Yellow LED. Cuts channels & Groups selected to VCA Group 2

VCA Group 2 AFL latching button

Red LED sends the output signal from all channels & groups selected to VCA group 2 exclusively to the Monitor Loudspeakers





ML3998 MONITOR 2 - STUDIO LS

SELECTOR 2 24 way set of cancelling buttons. Green LEDS

12 External stereo inputs B1 - B12
4 External Mono inputs B13 - B16

APFL & spare selections

Auxiliary 1 - 6 Monitor

Studio Loudspeaker selections:-
2 External Stereo inputs Ext 1 & Ext 2
Desk 1 & 2 Monitor inputs
LS Follow control room Monitor selection

Studio Headphones gain control
Studio Loudspeaker level control

CUT Cuts studio Loudspeaker.
Operates automatically when Microphone channel is open to Main Output. Red LED
TB Talkback to Studio Loudspeaker and Headphones - Loudspeaker inhibited ON AIR

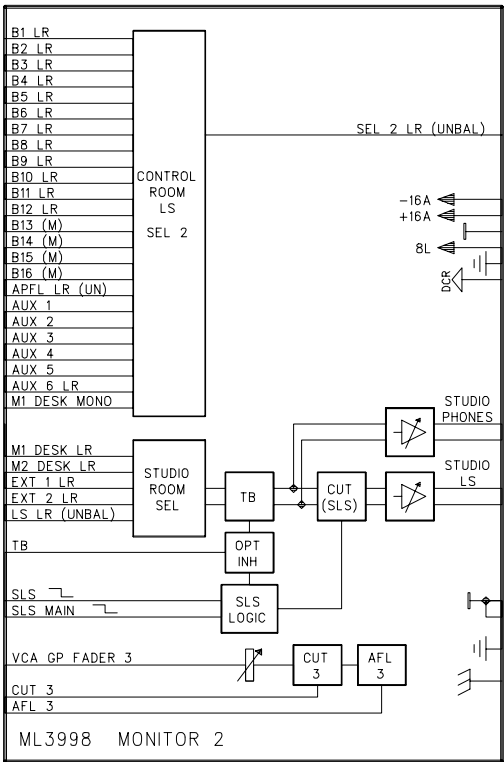
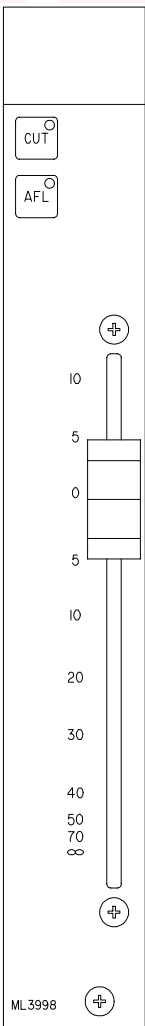
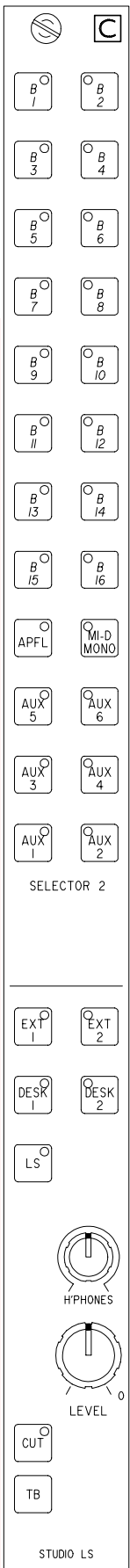
Scribble Strip

VCA Group 3 fader
VCA Group 3 CUT button

VCA Group 3 AFL latching button.

+10dB in hand
Yellow LED. Cuts channels & Groups
selected to VCA Group 3

Red LED. Sends the output signal from
all channels & groups selected to VCA
Group 3 exclusively to the Monitor
Loudspeakers



ML3999 MONITOR 3 - SURROUND

DESK MODE: 2 way selector - Normal Stereo or Surround

MONITOR SELECTOR ON SURROUND: Normal condition DESK Monitors the desk surround output. Monitor checks can be made at the ENCODER output (in stereo) and at the Monitor DECODER output as a comparison to the DESK output

DECODER MODE SELECTOR. The decoder can be remotely controlled to check SURROUND output (normal) and STEREO & MONO compatibility

Scribble Strip

VCA Group 4 fader

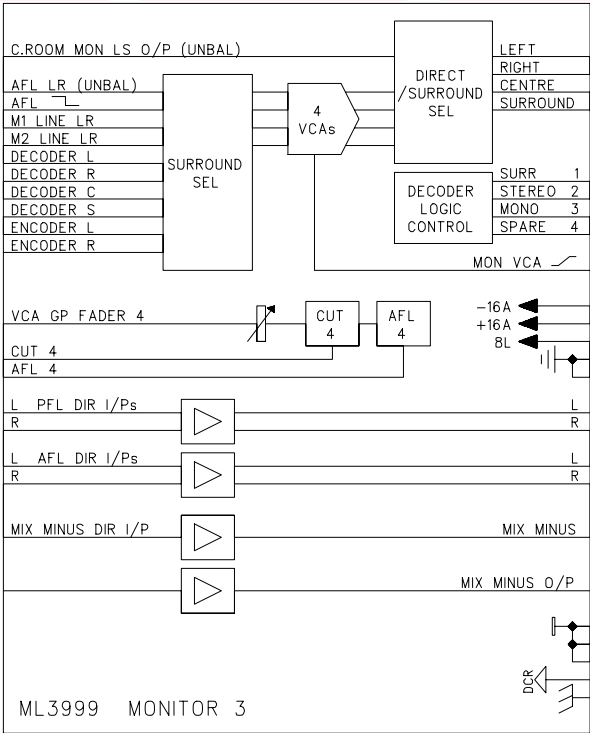
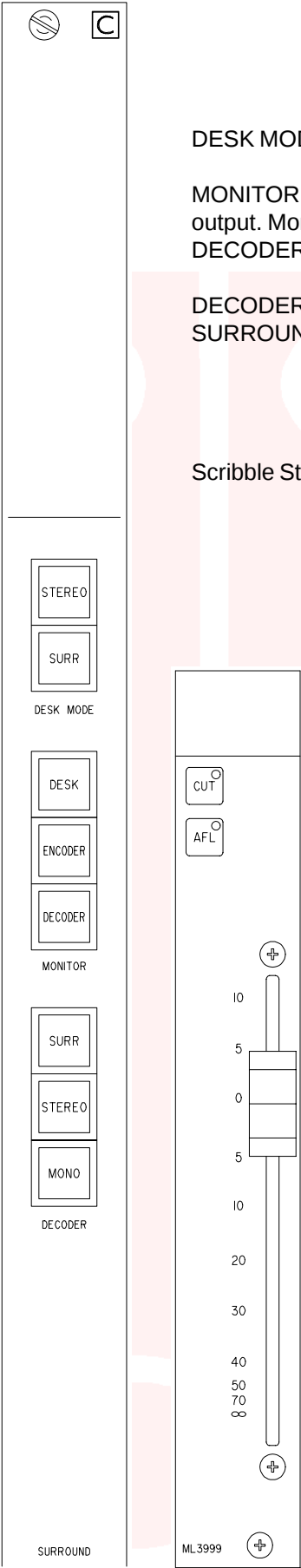
+10dB in hand

VCA Group 4 CUT button

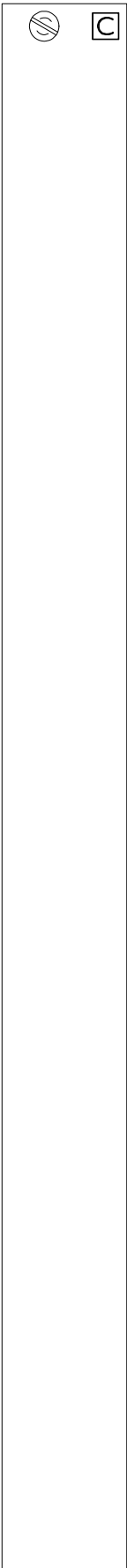
Yellow LED. Cuts channels & Groups selected to VCA Group 4

VCA Group 4 AFL button (latching)

Red LED. Sends the output signal from all channels & groups selected to VCA Group 4 exclusively to the Monitor Loudspeakers



ML4053 MONITOR 3 - NO SURROUND



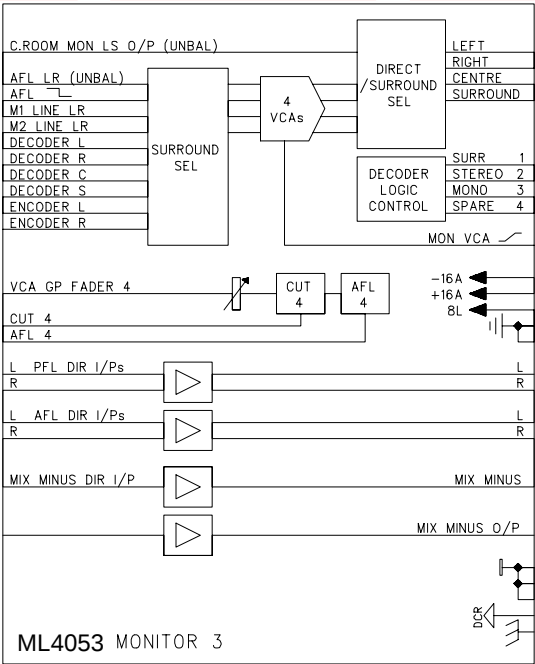
Scribble Strip

VCA Group 4 fader
VCA Group 4 CUT button

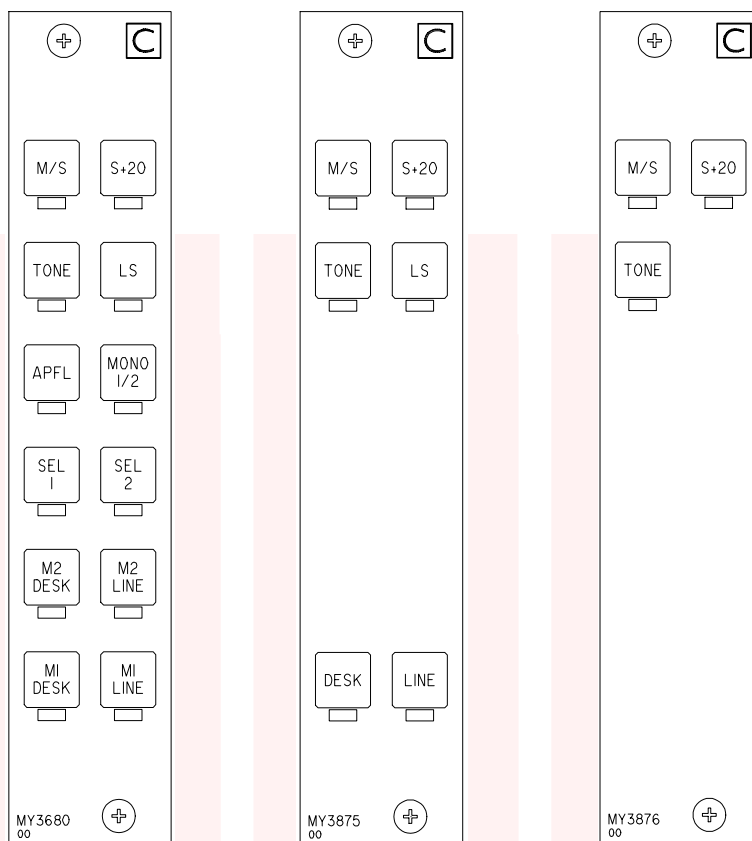
VCA Group 4 AFL latching button

+10dB in hand
Yellow LED. Cuts channels &
Groups selected to VCA
Group 4

Red LED. Sends the output
signal from all channels &
groups selected to VCA Group
4 exclusively to the Monitor
Loudspeakers



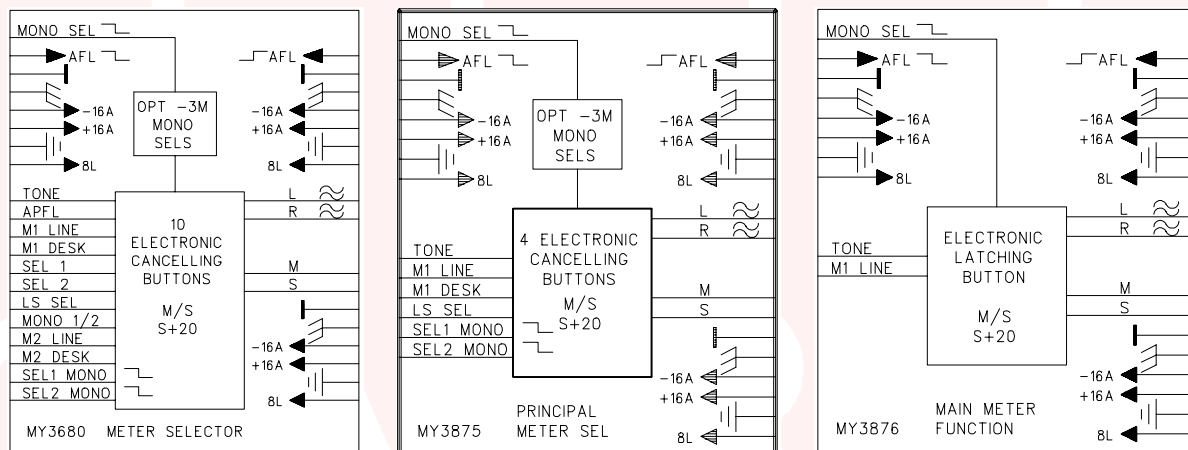
MY3680 ANCILLARY METER SELECTOR
MY3875 MAIN METER SELECTOR
MY3876 MAIN LINE METER SELECTOR



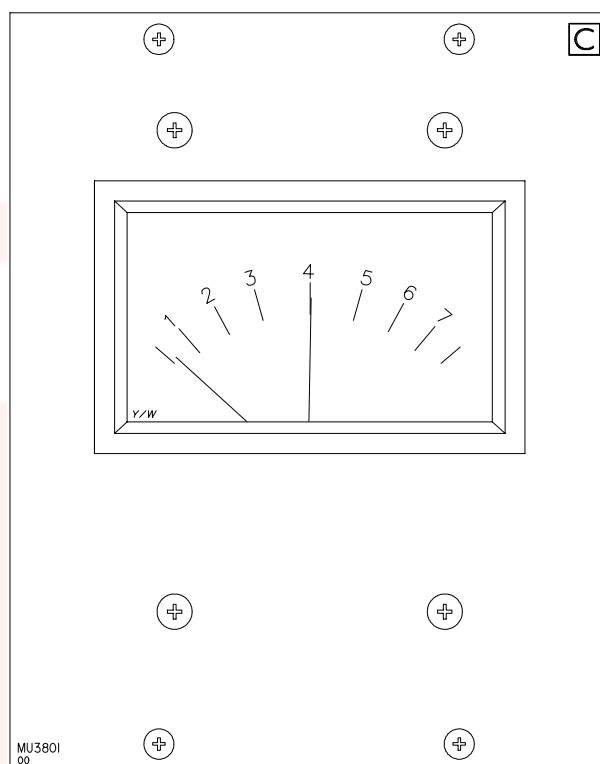
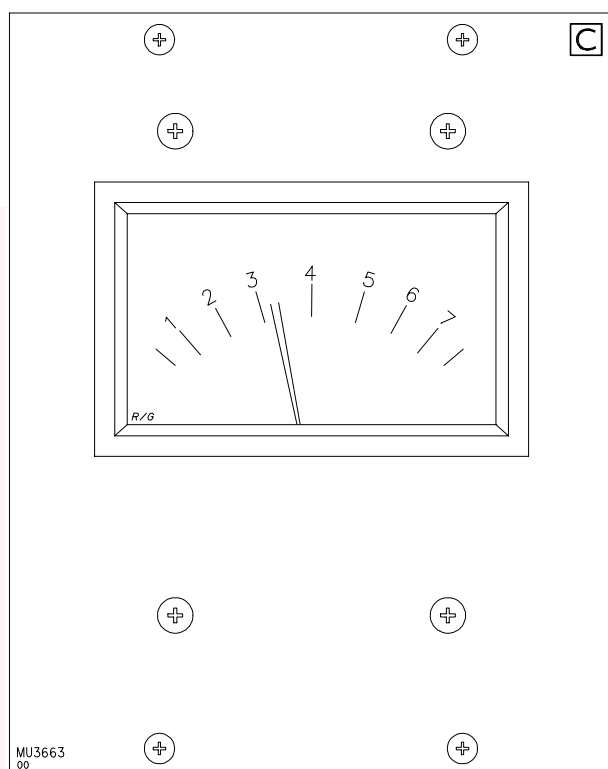
Selections from labelled sources.

Yellow LEDs - Electronic cancelling set (latching on MY3876).

M/S latching & S+20. Red LEDs.

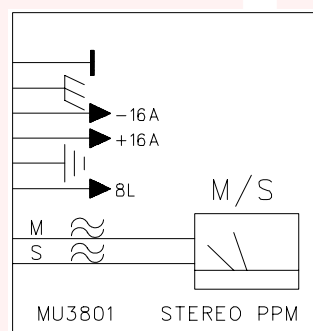
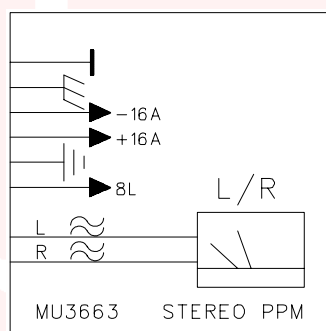


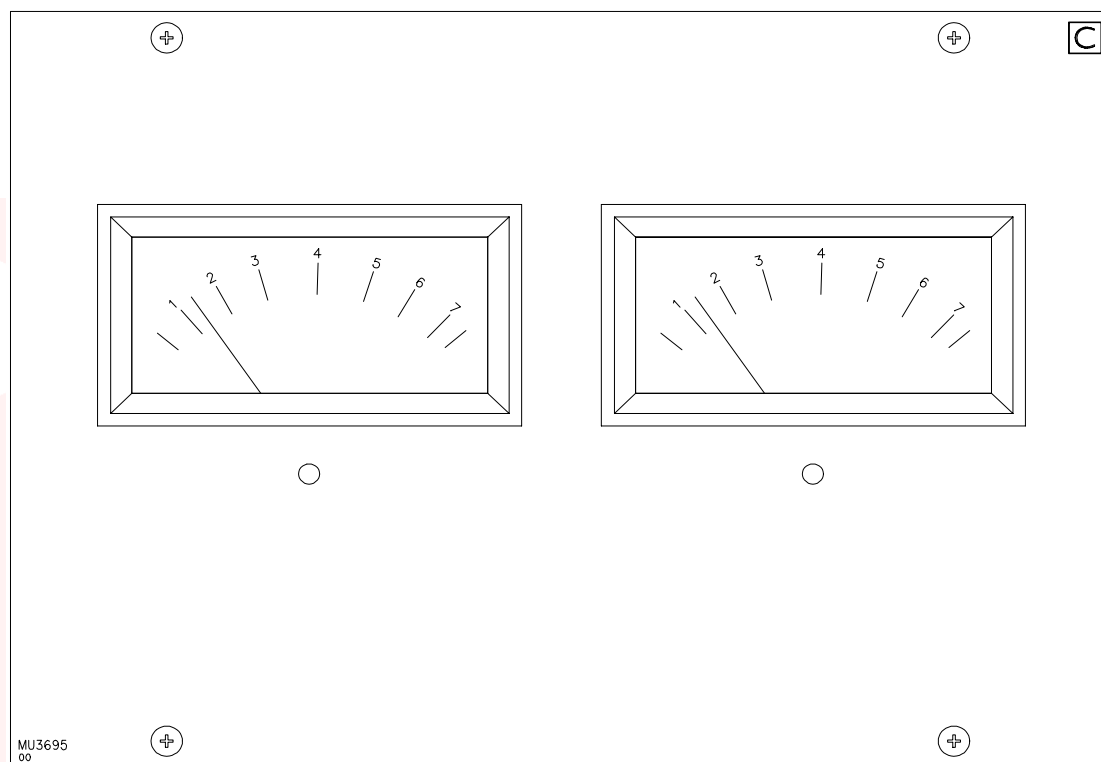
MU3663 L/R PPM METER MU3801 M/S PPM METER



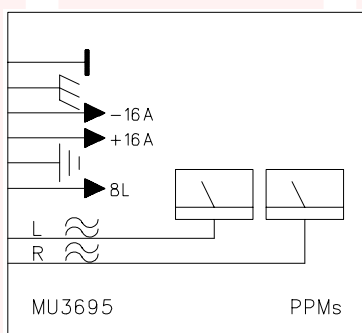
MU3663 Stereo PPM with Red/Green needles and illumination.
MU3801 Stereo PPM with White/Orange needles and illumination.

Internal PPM drivers.

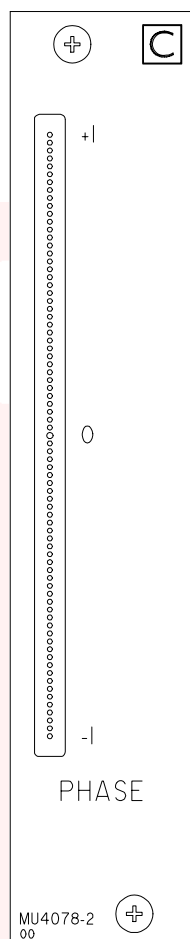


MU3695 TWIN MONO L/R PPM METERS

Mono PPMs with white needles and illumination.
Internal PPM drivers.



MU4078-2 PHASE METER BARGRAPH

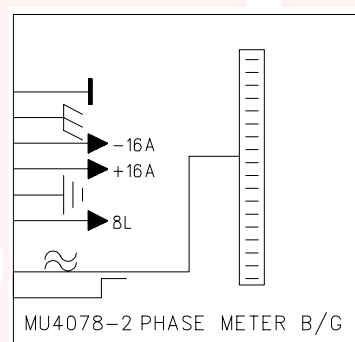


LED Bargraph.

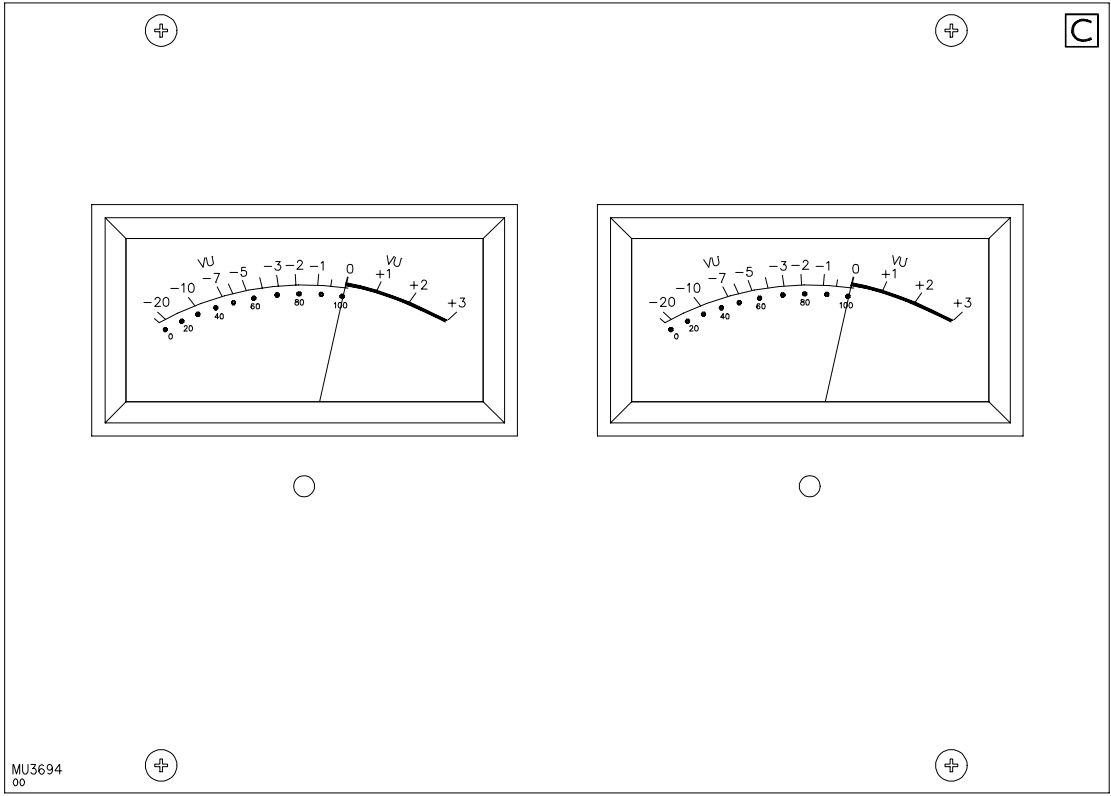
Upper section representing good phase coherence is GREEN.

Lower section representing poor phase coherence is RED.

Spot moves dynamically.

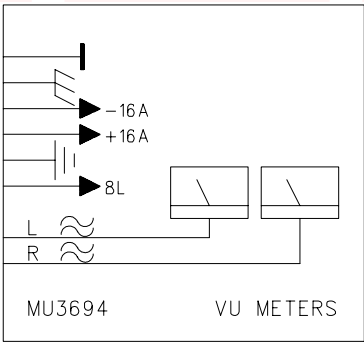


MU3694 TWIN MONO L/R VU METERS

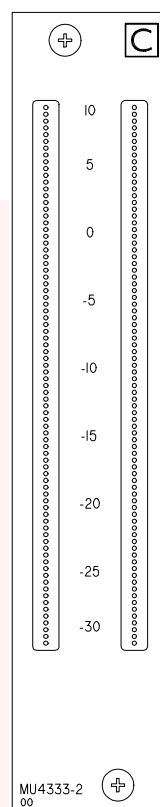
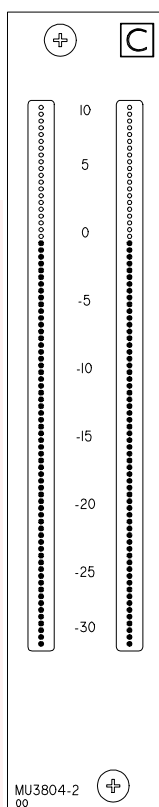
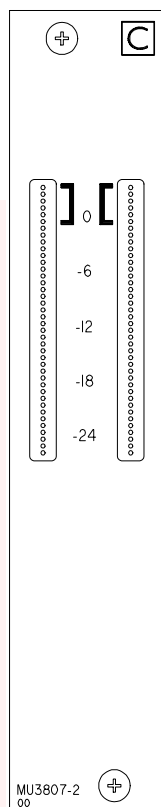


VU meters with illumination.

Internal buffer amplifiers.



MU3807-2 SMALL STEREO BARGRAPH
MU3804-2 LARGE STEREO BARGRAPH
MU4333-2 LARGE STEREO BARGRAPH - REVSD.COLS

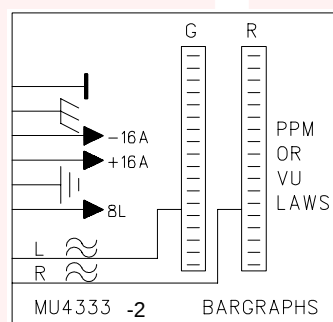
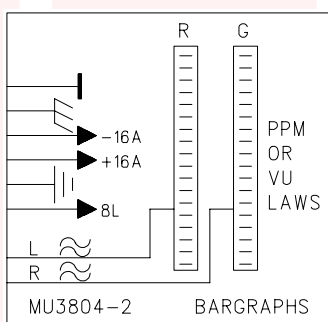
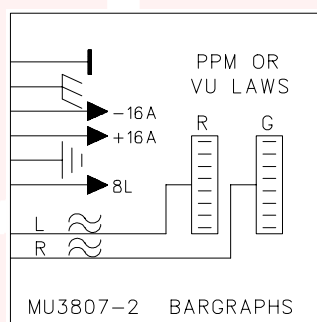


Twin LED bargraphs - 40 LED's each for good resolution.

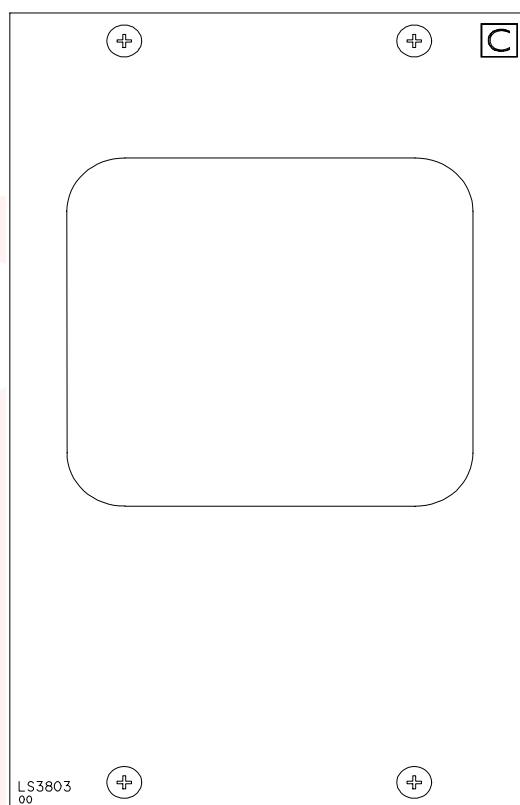
Left hand bar is RED.

Right hand bar is GREEN. (Reversed colours on MU4333)

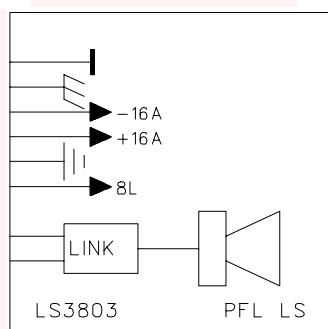
Bars brighten at 0dB representing +6 or +8 dBu for PPM or +4dBu (SCALE 0) for VU (set internally).



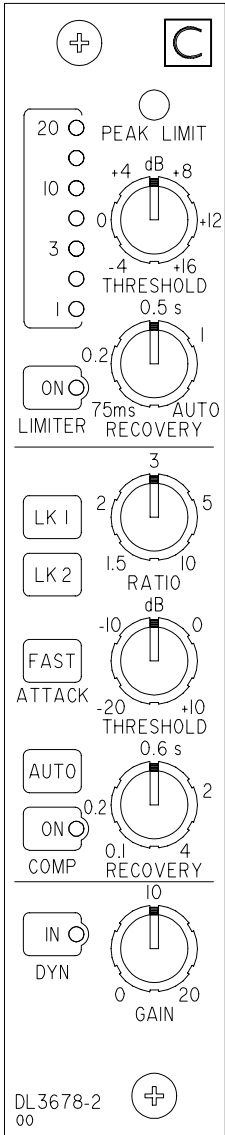
LS3803 PFL LOUDSPEAKER



Module can be set for Left, Right or Mono use.
Module can receive Reverse talkback plus an extra
intercom signal if required.



DL3678-2 COMPRESSOR LIMITER



Stereo Limiter

Ratio	fixed 100/1
Threshold	-4/+16dBu variable
Attack	fixed 100 u-secs
Recovery	0.075 to 4 secs variable with AUTO facility: 0.1 to 1.5 secs (programme dependent)
Peak Limit	Yellow LED indicator
Limiter	On button with Yellow LED indication

Stereo Compressor

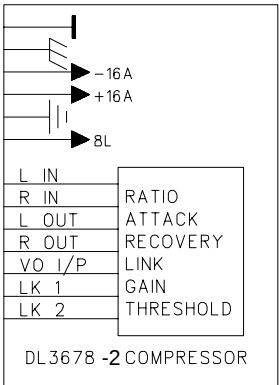
Ratio	1.5/10 variable
Threshold	-20/+10dB variable
Attack	Normal 4 msec @ 5:1 or FAST 0.2mS @ 5:1
Recovery	0.1 to 4 secs variable with AUTO facility: 0.1 to 1.5 secs (programme dependent)
Make-up Gain	0/20dB variable
Voice-over	Line level balanced input (may be used when compressor is Off)
Compressor	ON button with Yellow LED indicator

Compressor & Limiter

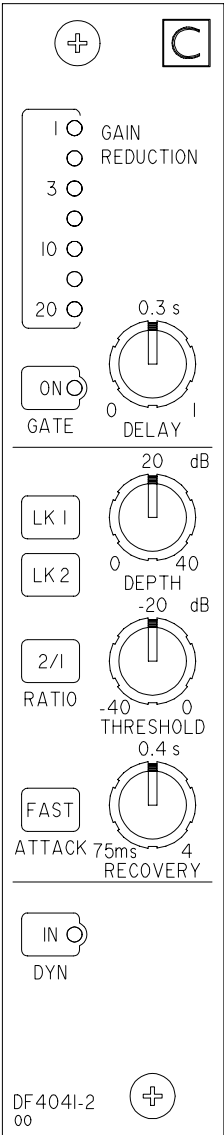
Bargraph	Up to 24dB gain reduction with enhanced resolution at lower reduction levels
Links	Button 1 & 2 to external buss or pairs etc - links side chains together.
DYN-IN	Button with Red LED indication - when OUT gives total bypass condition except that bargraph operates as a preview at reduced intensity

Balanced line input & outputs, 0dBu
Ignore right channel for mono use

The compressor and limiter normally respond to the higher of the left and right signals. An internal option allows the mono reduction of left and right (-3dB) to take control if the stereo coherence is such that this exceeds left or right. This renders it unnecessary to “under-drive” the stereo outputs to guard against the possibility of a higher than desired mono level.



DF4041-2 EXPANDER GATE



Stereo Expander

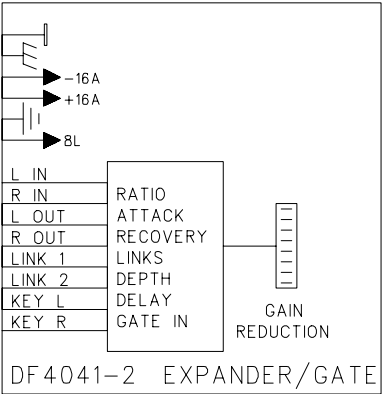
- Ratio: Normal, varies with level 1.5/1 to 5/1
Fixed 2/1 (button)
- Threshold: 0/-40dBu variable
- Attack: Normal 4 ms. FAST (button) 50 u-sec
- Recovery: 75ms to 4 sec variable
- Depth: 0/40dB variable (extent of expansion below threshold)
- Bargraph: Up to 20dB gain reduction
- Links: 1 & 2 to external busses or pairs

Stereo Noise Gate

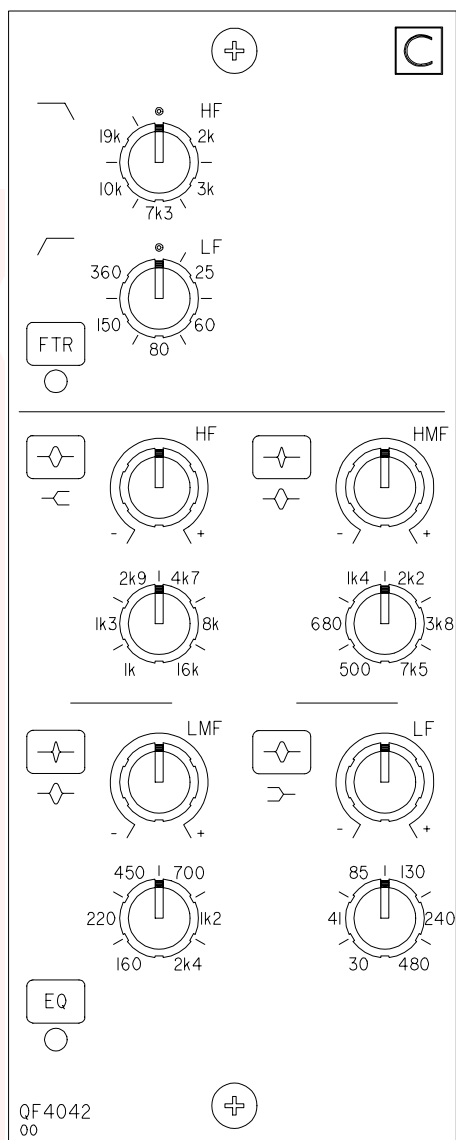
- Gate: Button with LED indication. All expander controls apply except Ratio becomes infinite
- Gate Delay: 0/1 sec variable - in addition to normal 6dB gate hysteresis

Expander & Noise Gate

- DYN-IN: Button with LED indication - when OFF gives total bypass condition except that bargraph operates as a preview at reduced intensity



QF4042 EQUALISER



Stereo Filters / Equaliser

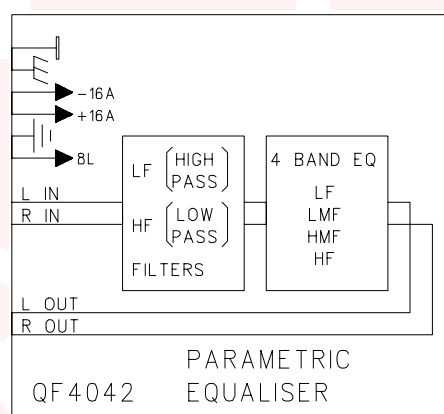
2 band parametric filters HF (low pass) 12dB/octave
 LF (high pass) 18dB/octave

4 band parametric equaliser $\pm 16\text{dB}$ max at selected frequencies

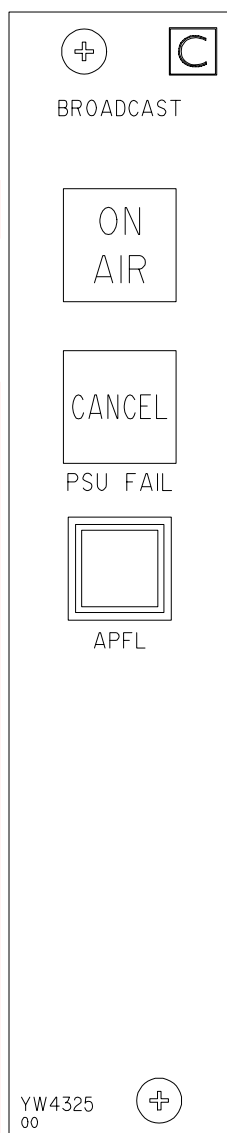
Exclusive lift/cut law allows fine control near centre and low noise in detent

LF & HF bands can be shelf or bell (Q 1.0)
 LMF & HMF bands can be normal Q (1.0) or high Q (3.5) bell

Separate Filters & EQ in buttons



YW4325 BROADCAST PANEL

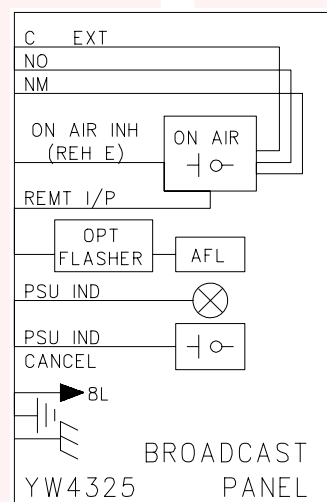


ON AIR - Large button with RED LED - Inhibits Tone and Talkback within the console and closes relay contacts to other areas

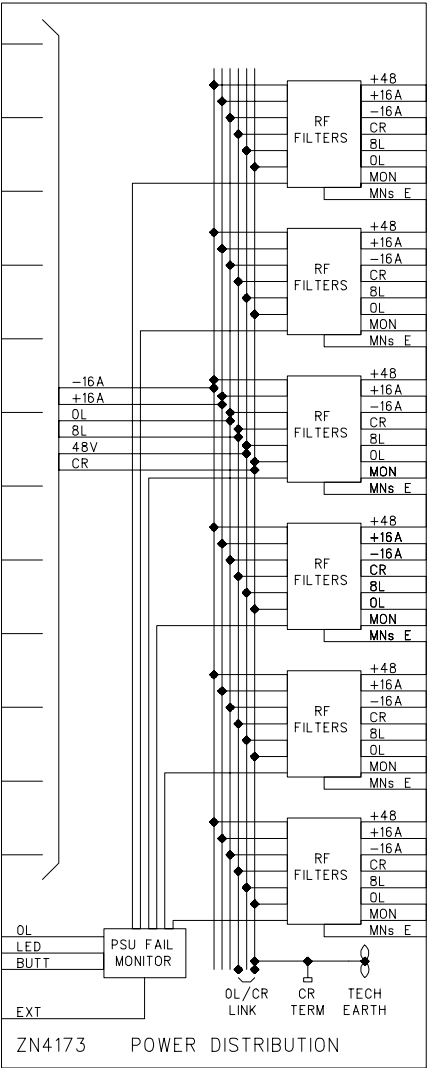
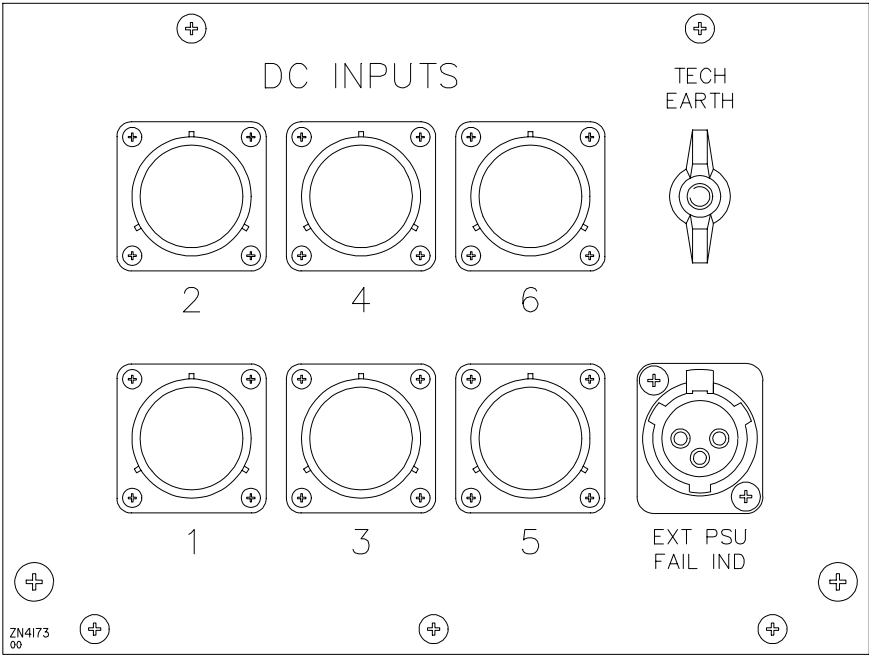
PSU FAIL / CANCEL - Red LED occults when a PSU or part of a PSU has failed. Occulting may be cancelled by button but will resume with a further failure or if the console is switched off and on again

APFL - Large RED LED - illuminated when ANY AFL selection is made - to avoid an operator being misled by their monitor loudspeakers

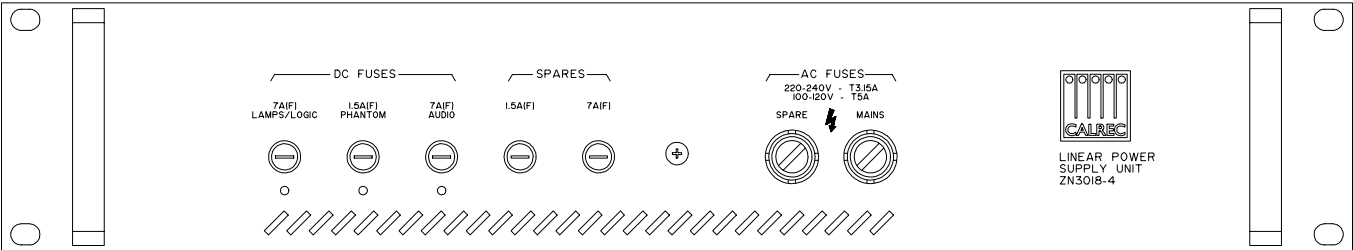
Also operates for PFL if PFL MON is selected



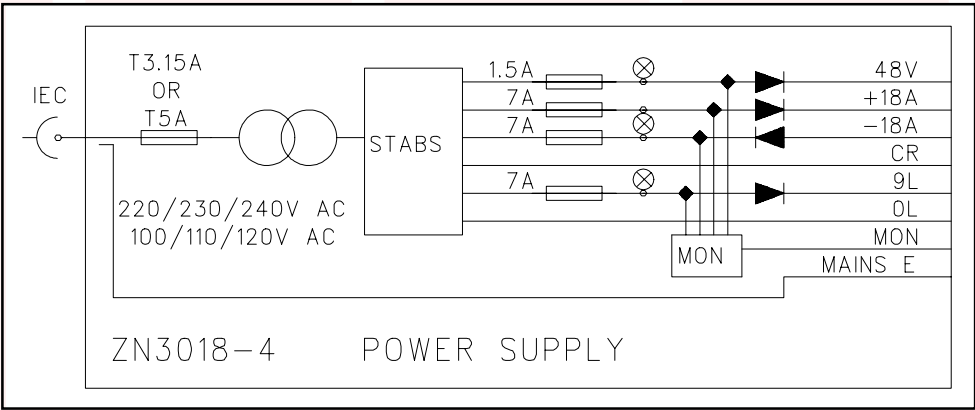
ZN4173 DC POWER INPUTS



ZN3018-4 POWER SUPPLY



A Calrec designed special unit to provide ± 16 volts audio power, 8 volts logic power (stabilised in modules at 5 volts where required) and 48 volts phantom power suitable for approximately 16 channels each in a typical console. It is recommended that there be one "Hot" spare in the system which in addition will share the load. The 2U units include a monitor of the 4 outputs and send a fault signal to the console in the event of failure. The units operate in parallel via internal diodes. The units are designed to operate at mains voltages 10% below that set.





4.0 Connections

CALREC

CONNECTIONS

All connections are Varicon 56-way . Audio connections are all balanced.

<u>Interface</u>	<u>Recommended</u>		
	<u>Level</u>	<u>Impedance</u>	<u>Min Load</u>
Microphone I/Ps			
VP56 - 1 per 6chs	-75/+5dBu	1.2 K Ω	-
Line I/Ps VP56 - 1 per 6chs (plus VP38s St Lne)	-24/+18dBu	10 K Ω	-
Insert Go VP56 - 1 per 12 chs	0dBu	<40 Ω	600 Ω
Insert Return VP56 - 1 per 12chs	0dBu	20 K Ω	-
Direct Outputs VP56 1 per 12chs	0dBu (+10)	<40 Ω	600 Ω
External Cuts/VCA ctrl/ Fader on - VP56 1 per 12chs (8 Grps)	5V/0V operate	-	-
Group Directs I/Ps VP56	0dBu	20 K Ω	-
Auxiliary Outputs VP56	0dBu	<40 Ω	600 Ω
Main Outputs/Mn Dir I/Ps/W			
Monitor VP 56	0dBu	20/20 K Ω	600 Ω
Monitor LS I/Ps VP56	0dBu	20 K Ω	-
Optional additional Monitor I/Ps VP56	0dBu	20 K Ω	-
Main D.C Interface (Cuts/ dims/tone/tb etc) VP56	5V/0V operate	-	-
Optional Compressor/ Limiter conns VP56	0dBu	20/20 K Ω	600 Ω

* Note - Recommended minimum loads of 600R can be 300R with reduced output levels.

5.0 Specification

CALREC

SPECIFICATION

Measurements are with 22-22KHz filters unless otherwise stated. All specifications are in the frequency range 40-15KHz unless otherwise stated. Measurements specified are with equaliser and dynamics out of circuit.
0dBu = 0.775 volts RMS dBq = CCIR QUASI-PEAK

Inputs

Microphones

Transformer balanced
Sensitivity

1k Ω
-10/-60dBu in 10dB steps
+/- 15dB Variable trim
32dB Above setting
Maximum input +12dBu

Input Headroom

Line

Electronic balanced
Sensitivity

20k Ω
+/-15dB Variable trim
Maximum input +32dBu

Monitor/Direct

Electronic balanced
Sensitivity

20k Ω
0dBu

Outputs

Main Line

Transformer balanced
Maximum output

0dBu into 600 Ω
+25dBu into 600 Ω
+28dBu into 10k Ω

Aux 1 - 3

Source impedance
Transformer balanced
Maximum output

25 Ω nominal
0dBu into 600 Ω
+22dBu into 600 Ω

Main Desk/Aux 4-6
Groups/Dir/Ins go/
Mon LS/Talkback

Source impedance
Electronic balanced
Maximum output

30 Ω nominal
0dBu into 600 Ω
+25dBu into 600 Ω
+28dBu into 10k Ω

Source impedance
Output balance

40 Ω nominal
-40dB at 1KHz

Output common mode :Transformer
:Electronic

-70dB
-50dB

Performance

Noise

Microphone (EIN)

-125dB
200 Ω , RMS

Distortion

Line/Group/Main
at +16dBu

< -83 dBu
<0.03%

Freq. Response

Any circuit

40Hz-10kHz
+/-0.5dB, 20Hz-20kHz

Input/Output
Balance

Microphone

<-75dB at 1kHz,
<-65dB at 10kHz

Crosstalk

Line level circuits
Fader cut-off

<40dB
<-90dB at 1kHz

Adjacent channel

<-85dB at 15kHz
<-85dB at 1kHz

Stereo path

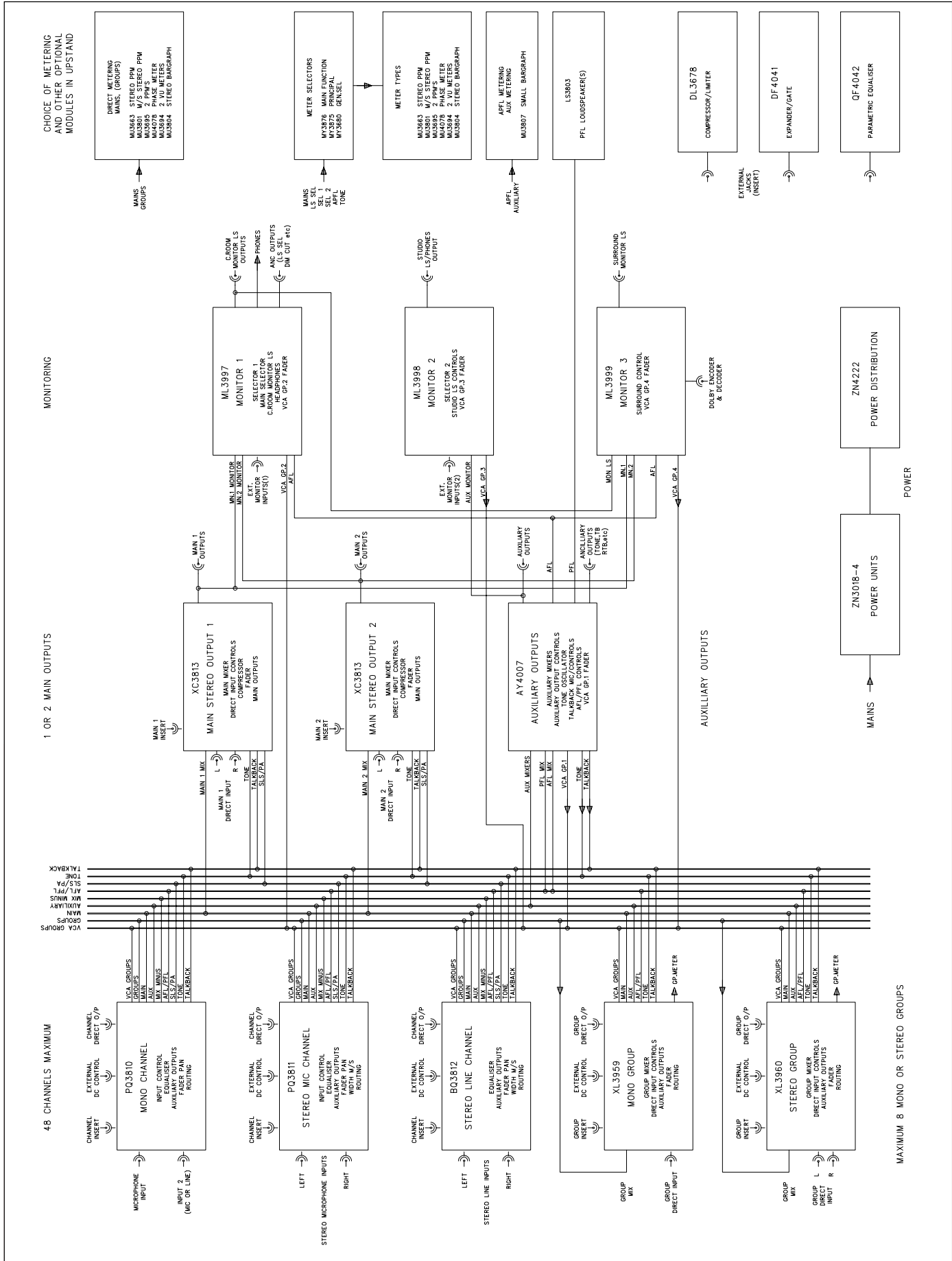
<-70dB at 10kHz
<-60dB at 10kHz

CALREC AUDIO RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.

6.0 General information

CALREC

SIMPLE BLOCK SCHEMATIC



Notes

A large, light pink watermark of the CALREC logo is centered on the page. It consists of five vertical bars with white circles at the top, and the word "CALREC" in large white capital letters at the bottom.

