SERIES 30

USER GUIDE

Soundcraft

BROADCAST

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Introduction

The Series 30 console is a fully modular broadcast production console with an expandable number of stereo or mono inputs, clean feeds and monitoring outputs.

The console is based on a main frame and a wide selection of audio and control modules which may specified in any configuration to suit individual requirements. The frame is designed with four 'zones'. The zone nearest to the operator accommodates the fader modules, remote controls or other special switch modules, and this section is designed to allow automated faders to be fitted if required. The remaining three zones accommodate a choice of plug- in modules in two sizes, with corresponding modular motherboards and connector panels, allowing the greatest possible flexibility of console layout.

Input channels are available as mono or stereo versions with Auxiliary Sends, comprehensive Equalisation, Hi-pass and Lo-pass filters, ducking (voice-over) and optional remote machine start facilities.

Comprehensive Talkback and Monitoring facilities may be specified and the meterbridge may be fitted with a range of PPM and VU meters or standard modular bargraph and phase meters.

The plug-in modules are provided with built-in module lifting handles, simplifying maintenance and servicing and enabling rapid module replacement.

Precautions and Safety Instructions

General Precautions

Avoid subjecting the mixing console to conditions of excessive heat or cold, or installing it in positions where it is likely to be subject to vibration, dust or moisture. Do not use any liquids to clean the fascia of the unit: a soft dry brush is ideal. Use only water or ethyl alcohol to clean the trim and legend strips. Other solvents may cause damage to paint or plastic parts.

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. For the same reason, always site the console power supply away from the unit .

Caution! **In all cases, refer servicing to qualified personnel.**

Power supplies & cables

Always make sure that the power supplies have been set to the same source voltage as the mains supply.

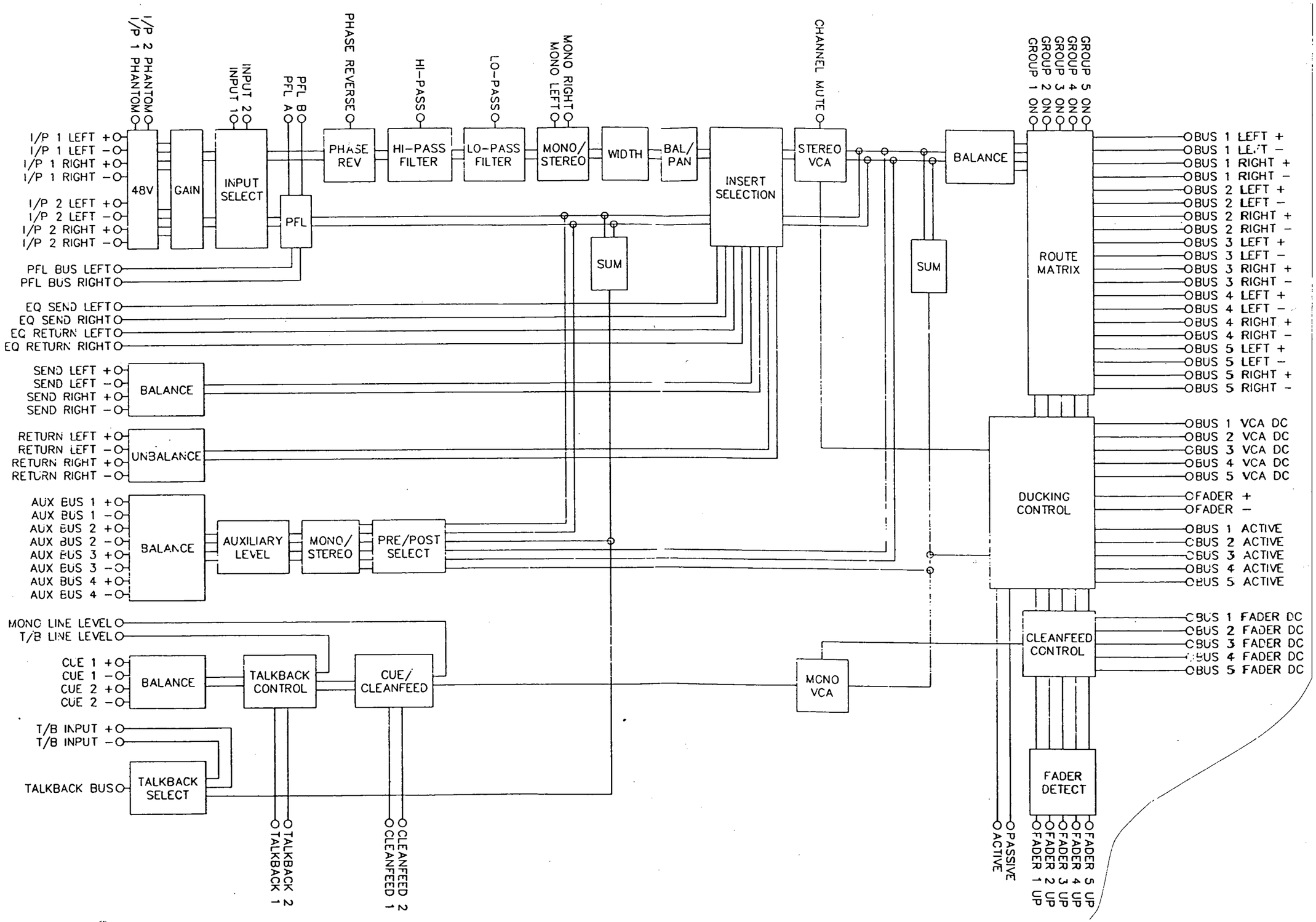
Always use the power supplies and power cables specified for the mixer: the use of alternative supplies may cause damage and voids the warranty; the extension of power cables may result in malfunction of the mixing console.

Warning! **Always switch the power supplies off before connecting or disconnecting the console power cables, removing or installing modules, and servicing. In the event of an electrical storm, or large mains voltage fluctuations, immediately switch off the PSU and isolate from the mains.**

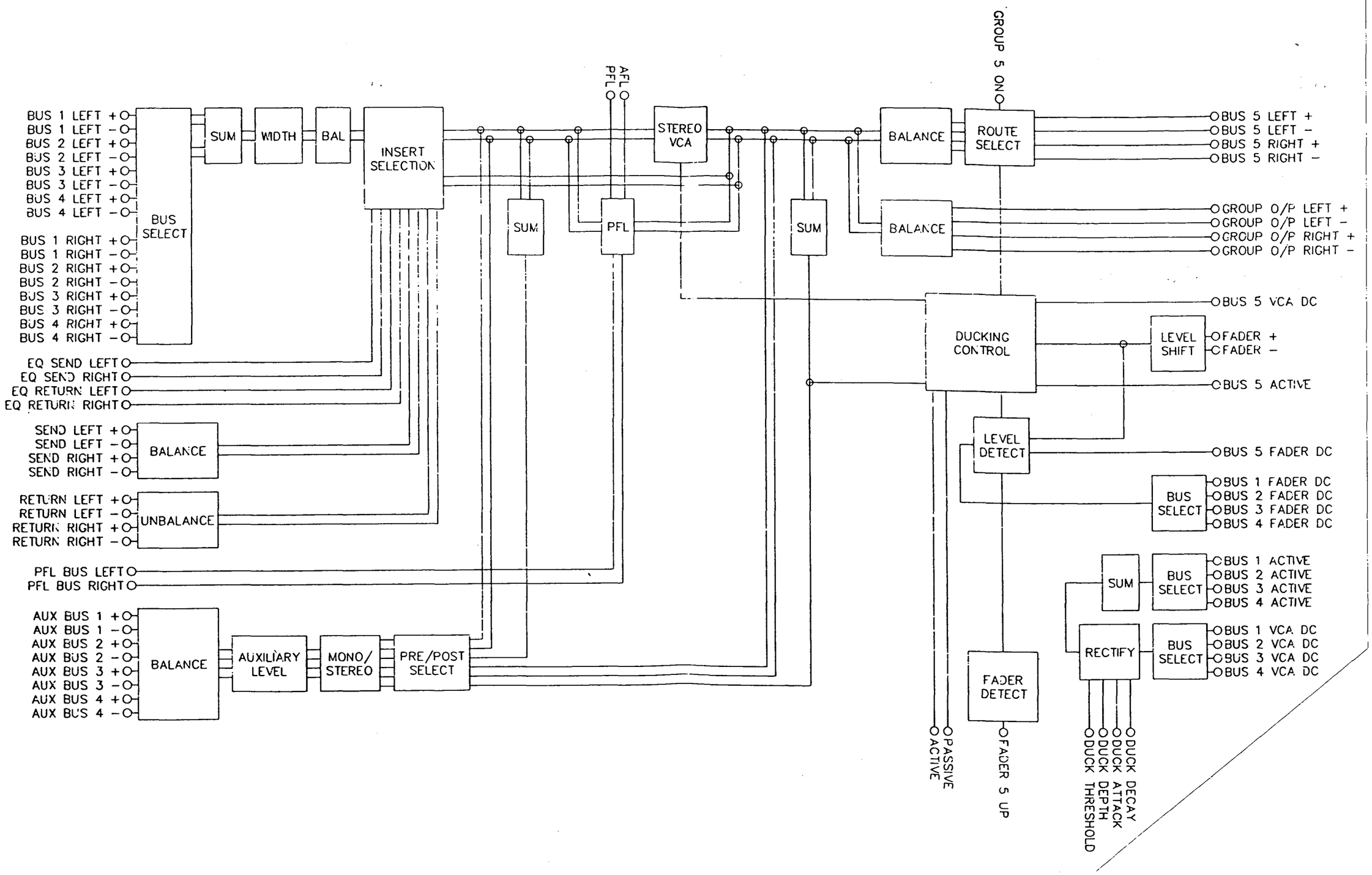
2 Module & System Block Diagrams

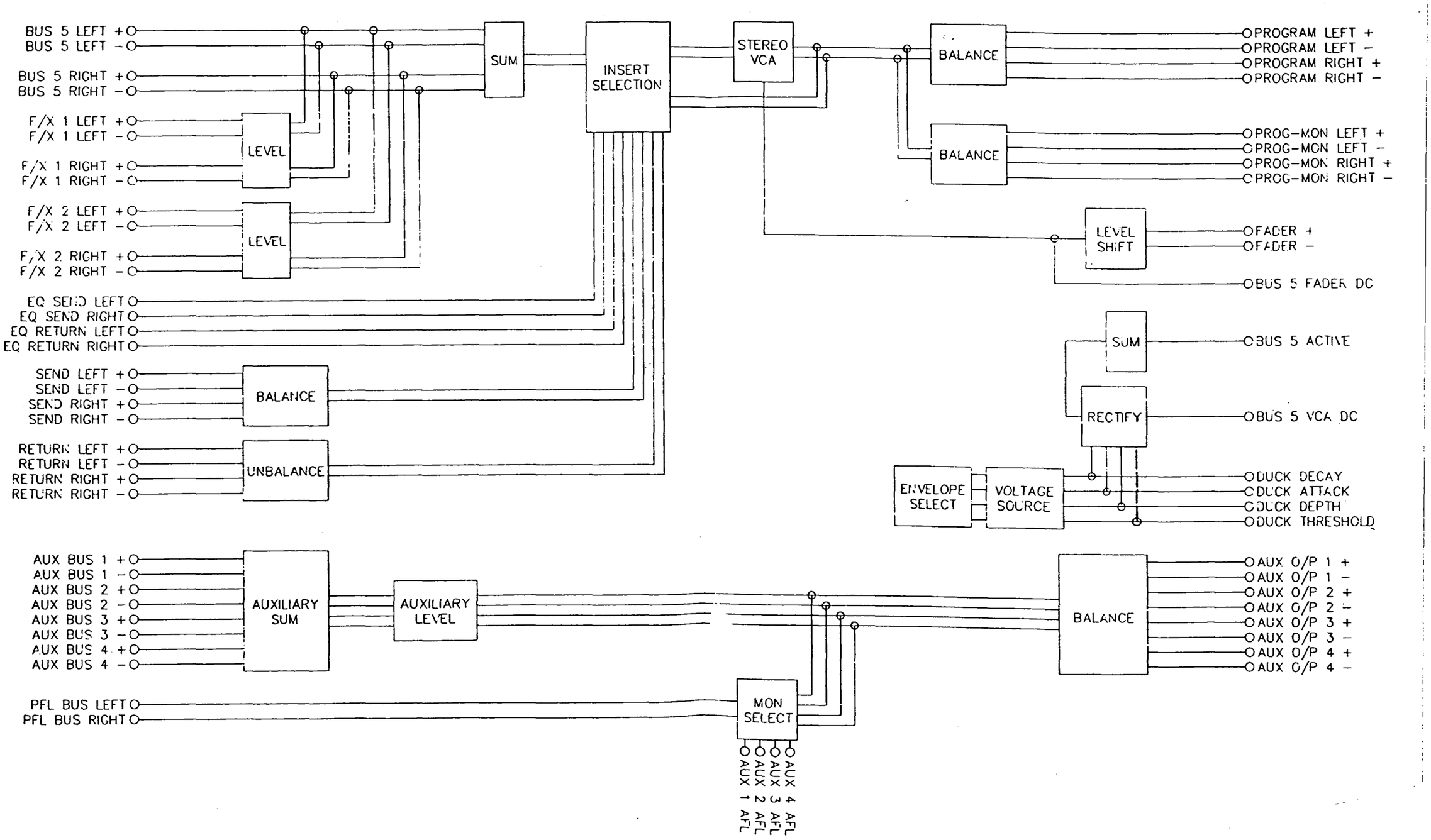
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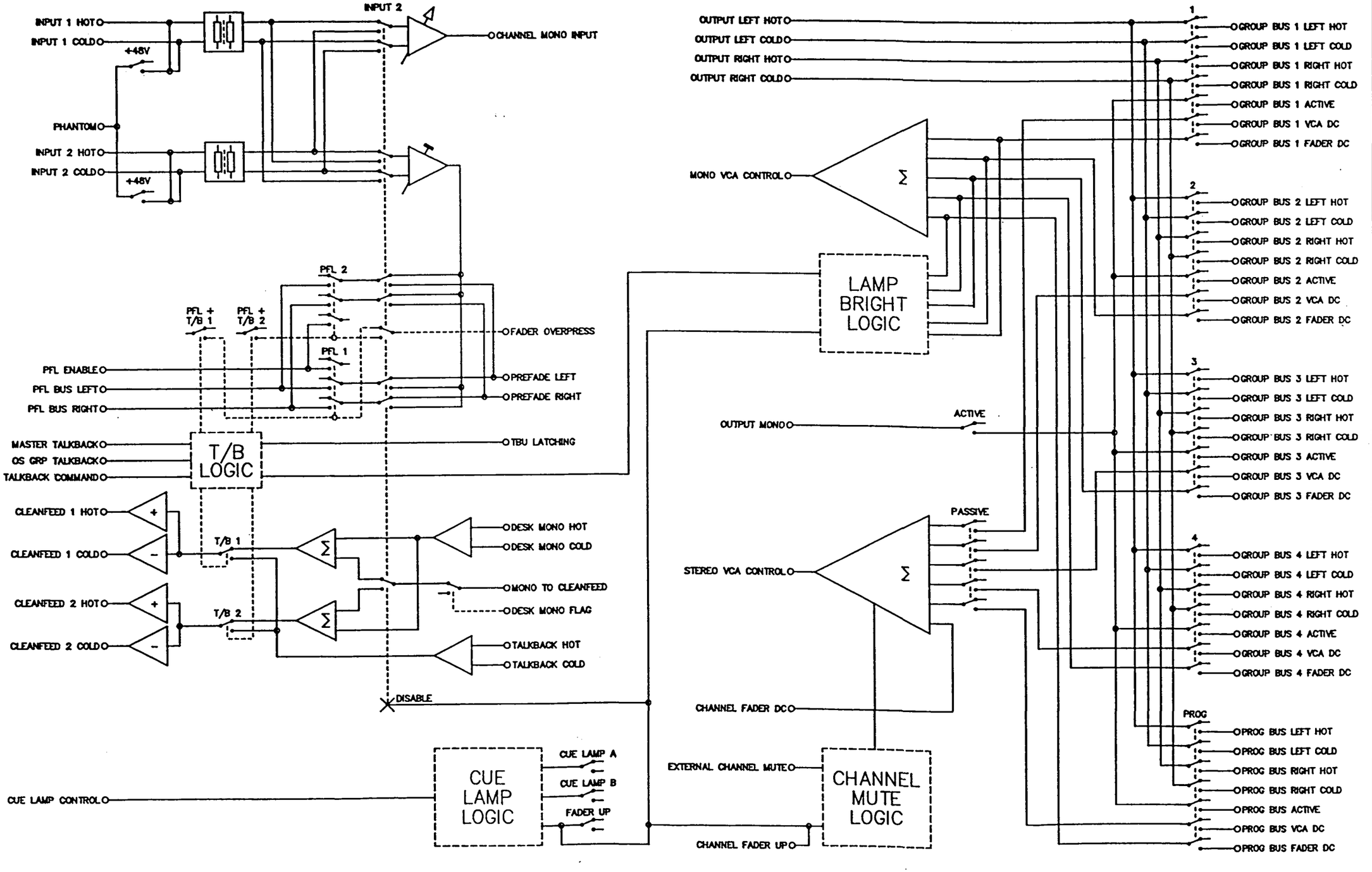
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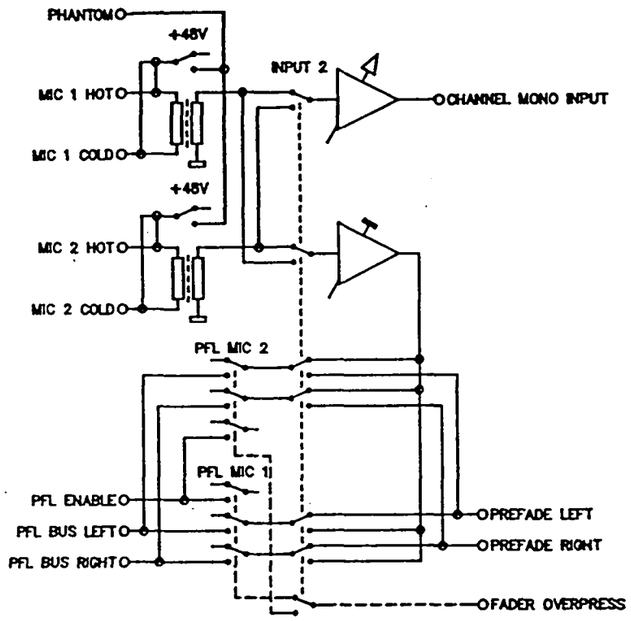
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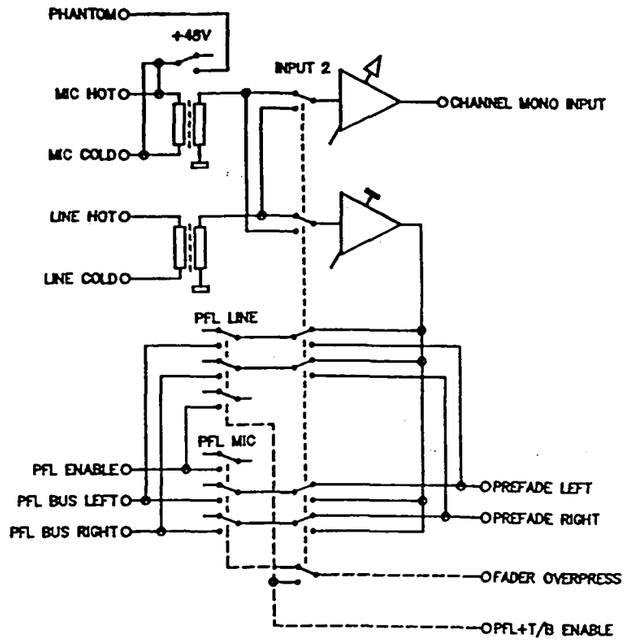


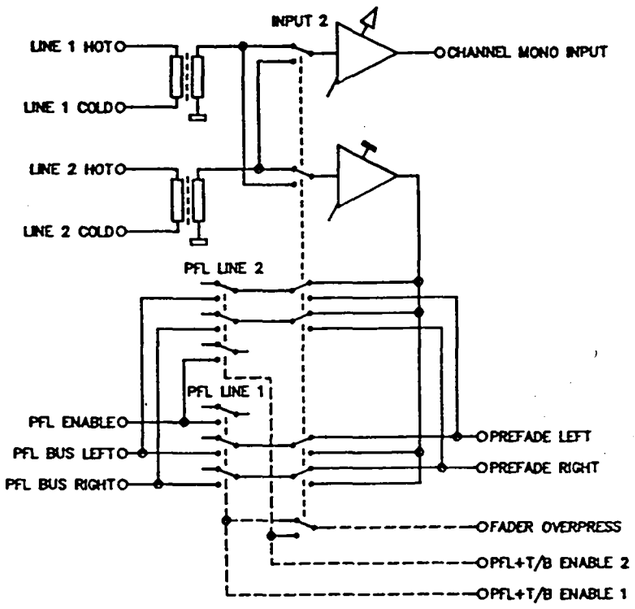

BUS 5 LEFT +
BUS 5 LEFT –
BUS 5 RIGHT +
BUS 5 RIGHT –
F/X 1 LEFT +
F/X 1 LEFT –
F/X 1 RIGHT +
F/X 1 RIGHT –
F/X 2 LEFT +
F/X 2 LEFT –
F/X 2 RIGHT +
F/X 2 RIGHT –
LEVEL
LEVEL
SUM
INSERT SELECTION
STEREO VCA
BALANCE
BALANCE
PROGRAM LEFT +
PROGRAM LEFT –
PROGRAM RIGHT +
PROGRAM RIGHT –
PROG–MON LEFT +
PROG–MON LEFT –
PROG–MON RIGHT +
PROG–MON RIGHT –
LEVEL SHIFT
FADER +
FADER –
BUS 5 FADER DC
EQ SEND LEFT
EQ SEND RIGHT
EQ RETURN LEFT
EQ RETURN RIGHT
SEND LEFT +
SEND LEFT –
SEND RIGHT +
SEND RIGHT –
BALANCE
SUM
BUS 5 ACTIVE
RETURN LEFT +
RETURN LEFT –
RETURN RIGHT +
RETURN RIGHT –
UNBALANCE
RECTIFY
BUS 5 VCA DC
ENVELOPE SELECT
VOLTAGE SOURCE
DUCK DECAY
DUCK ATTACK
DUCK DEPTH
DUCK THRESHOLD
AUX BUS 1 +
AUX BUS 1 –
AUX BUS 2 +
AUX BUS 2 –
AUX BUS 3 +
AUX BUS 3 –
AUX BUS 4 +
AUX BUS 4 –
AUXILIARY SUM
AUXILIARY LEVEL
BALANCE
AUX O/P 1 +
AUX O/P 1 –
AUX O/P 2 +
AUX O/P 2 –
AUX O/P 3 +
AUX O/P 3 –
AUX O/P 4 +
AUX O/P 4 –
PFL BUS LEFT
PFL BUS RIGHT
MON SELECT
AUX 1 AFL
AUX 2 AFL
AUX 3 AFL
AUX 4 AFL


INPUT 1 HOT
INPUT 1 COLD
+48V
PHANTOM
INPUT 2 HOT
INPUT 2 COLD
+48V
INPUT 2
INPUT 1
CHANNEL MONO INPUT
PFL 2
PFL + T/B 1
PFL + T/B 2
FADER OVERPRESS
PFL 1
PFL ENABLE
PFL BUS LEFT
PFL BUS RIGHT
PREFADE LEFT
PREFADE RIGHT
MASTER TALKBACK
OS GRP TALKBACK
TALKBACK COMMAND
T/B LOGIC
TBU LATCHING
CLEANFEED 1 HOT
CLEANFEED 1 COLD
T/B 1
DESK MONO HOT
DESK MONO COLD
MONO TO CLEANFEED
DESK MONO FLAG
CLEANFEED 2 HOT
CLEANFEED 2 COLD
T/B 2
TALKBACK HOT
TALKBACK COLD
DISABLE
CUE LAMP CONTROL
CUE LAMP LOGIC
CUE LAMP A
CUE LAMP B
FADER UP
OUTPUT LEFT HOT
OUTPUT LEFT COLD
OUTPUT RIGHT HOT
OUTPUT RIGHT COLD
MONO VCA CONTROL
LAMP BRIGHT LOGIC
ACTIVE
OUTPUT MONO
PASSIVE
STEREO VCA CONTROL
CHANNEL FADER DC
EXTERNAL CHANNEL MUTE
CHANNEL MUTE LOGIC
CHANNEL FADER UP
1
GROUP BUS 1 LEFT HOT
GROUP BUS 1 LEFT COLD
GROUP BUS 1 RIGHT HOT
GROUP BUS 1 RIGHT COLD
GROUP BUS 1 ACTIVE
GROUP BUS 1 VCA DC
GROUP BUS 1 FADER DC
2
GROUP BUS 2 LEFT HOT
GROUP BUS 2 LEFT COLD
GROUP BUS 2 RIGHT HOT
GROUP BUS 2 RIGHT COLD
GROUP BUS 2 ACTIVE
GROUP BUS 2 VCA DC
GROUP BUS 2 FADER DC
3
GROUP BUS 3 LEFT HOT
GROUP BUS 3 LEFT COLD
GROUP BUS 3 RIGHT HOT
GROUP BUS 3 RIGHT COLD
GROUP BUS 3 ACTIVE
GROUP BUS 3 VCA DC
GROUP BUS 3 FADER DC
4
GROUP BUS 4 LEFT HOT
GROUP BUS 4 LEFT COLD
GROUP BUS 4 RIGHT HOT
GROUP BUS 4 RIGHT COLD
GROUP BUS 4 ACTIVE
GROUP BUS 4 VCA DC
GROUP BUS 4 FADER DC
PROG
PROG BUS LEFT HOT
PROG BUS LEFT COLD
PROG BUS RIGHT HOT
PROG BUS RIGHT COLD
PROG BUS ACTIVE
PROG BUS VCA DC
PROG BUS FADER DC

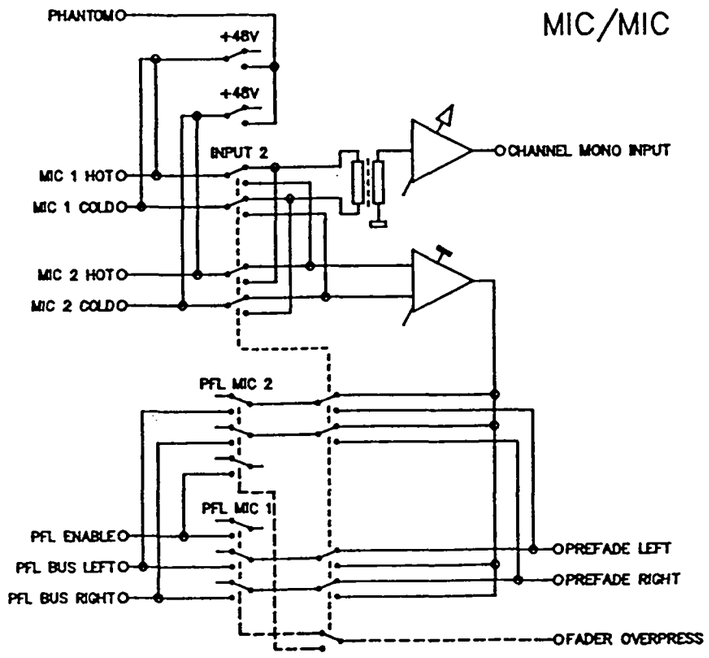
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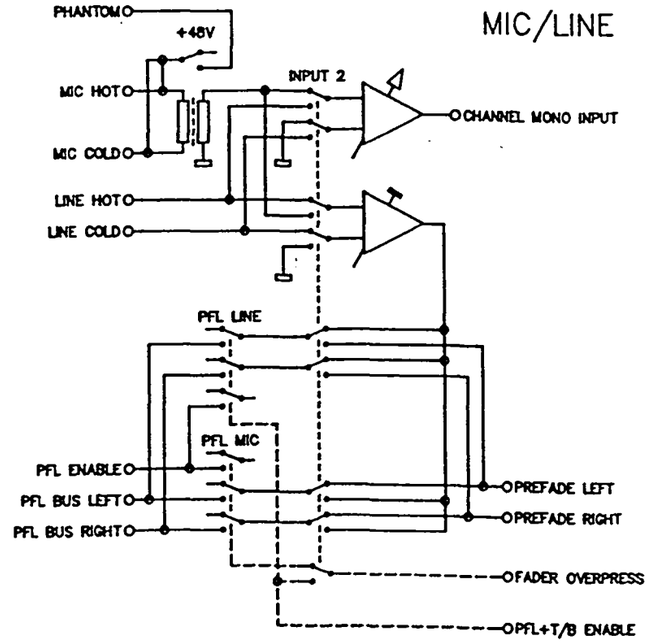




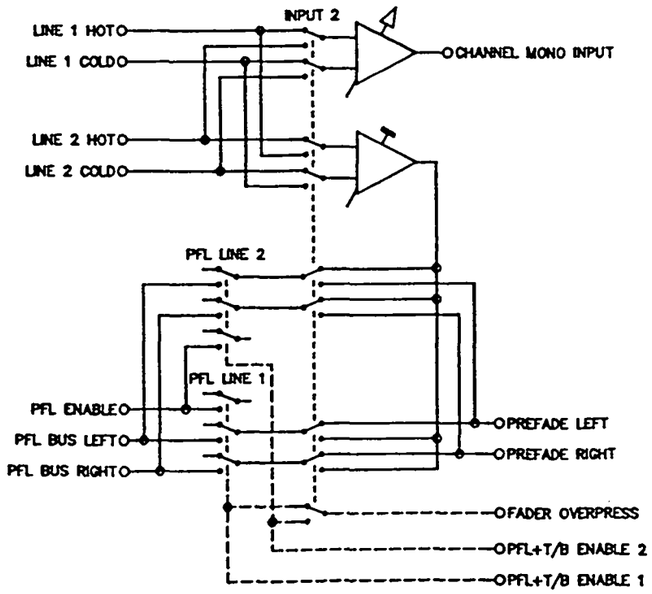
MIC/MIC



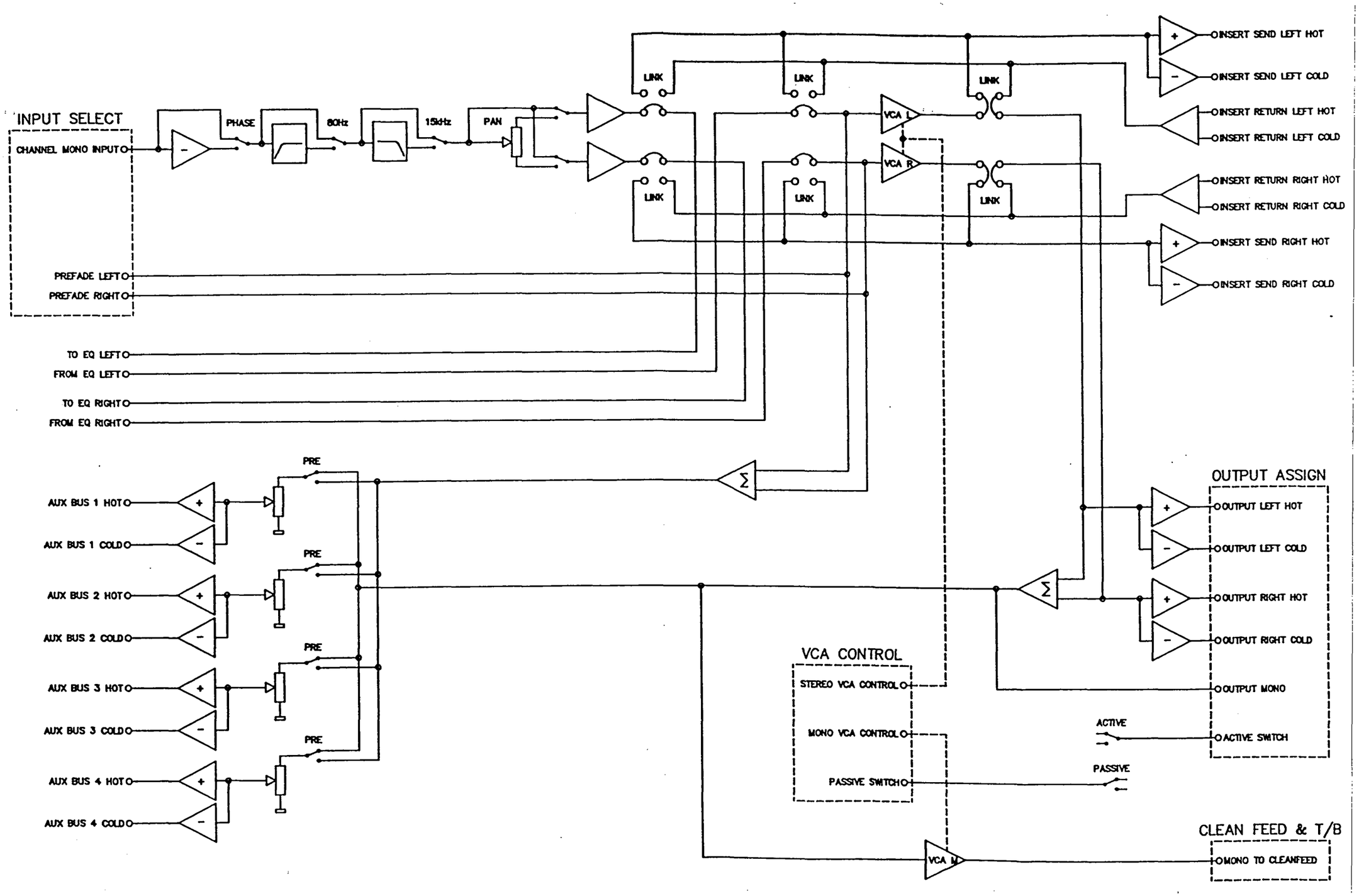
MIC/LINE



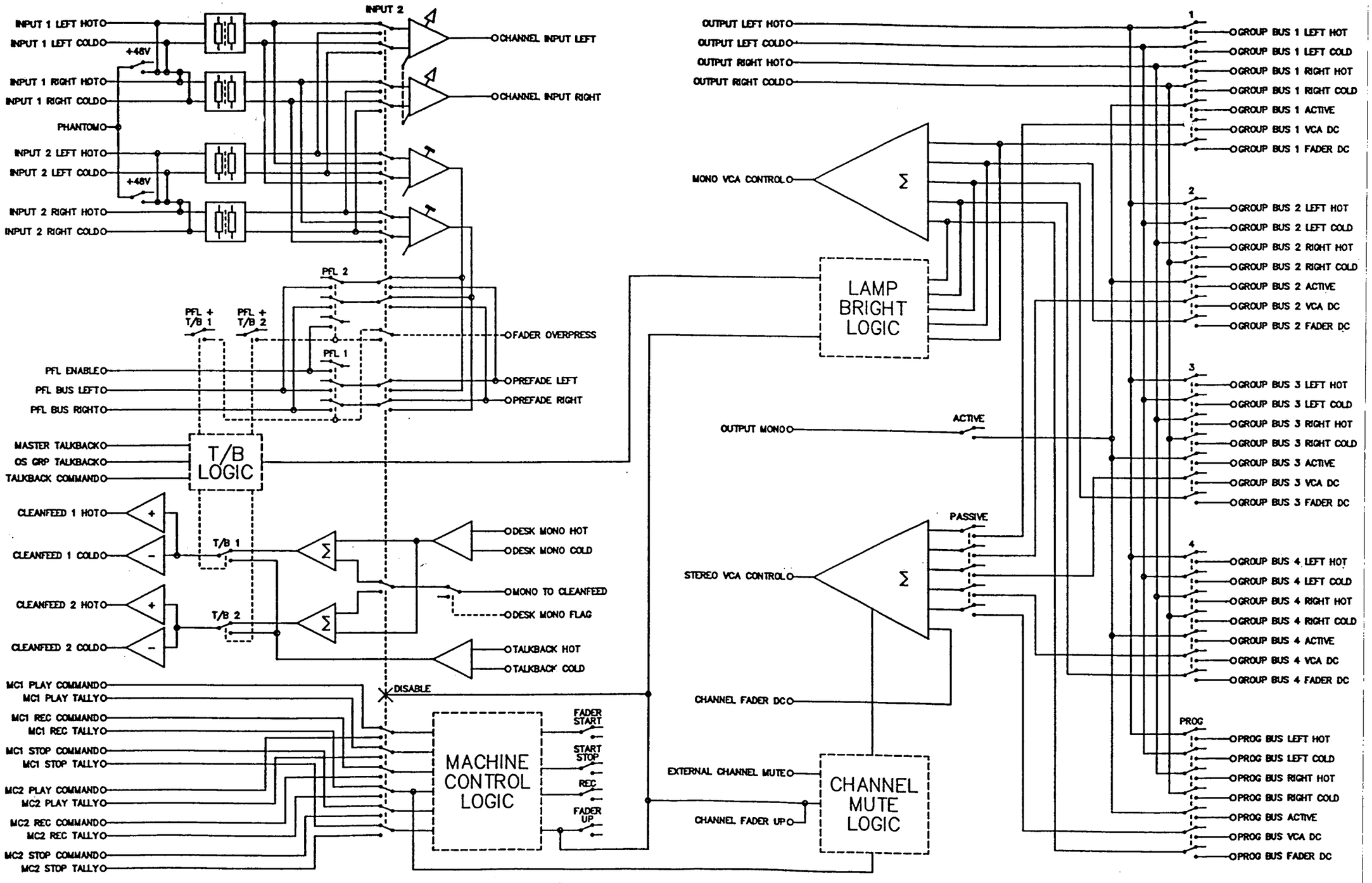
LINE/LINE

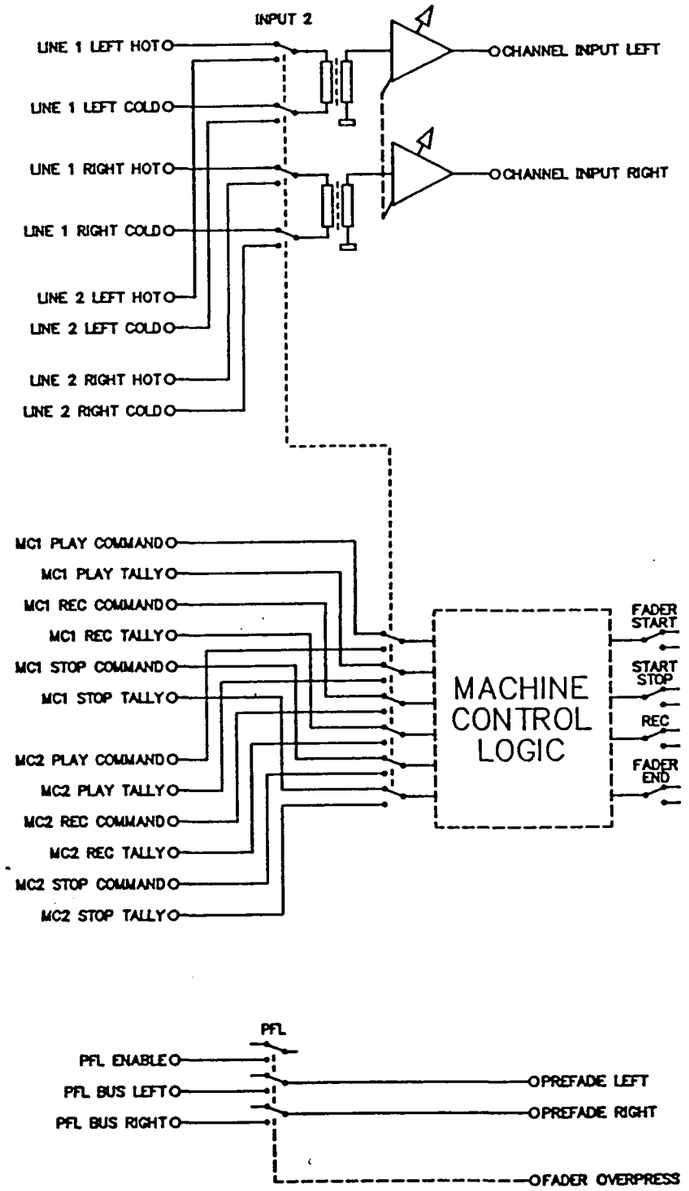


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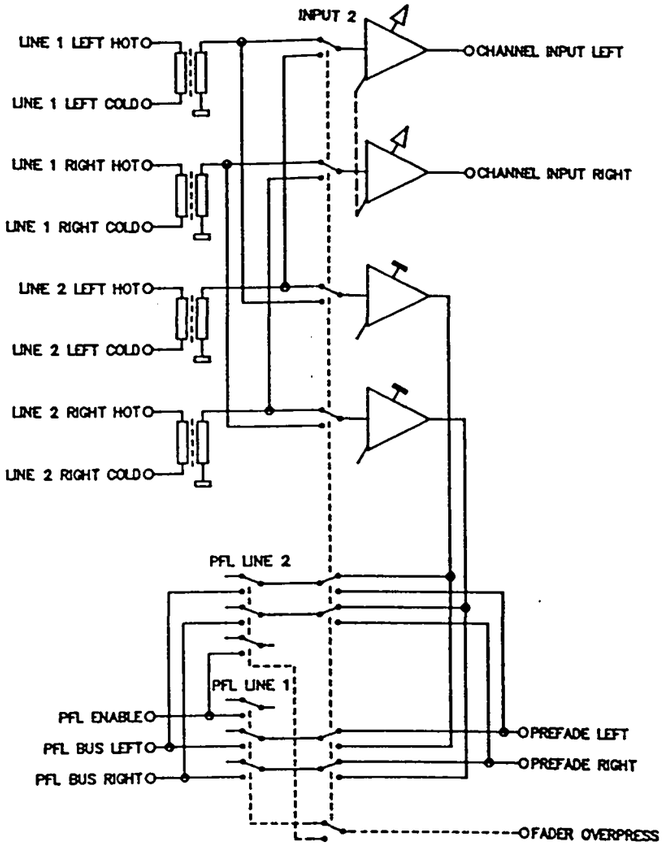


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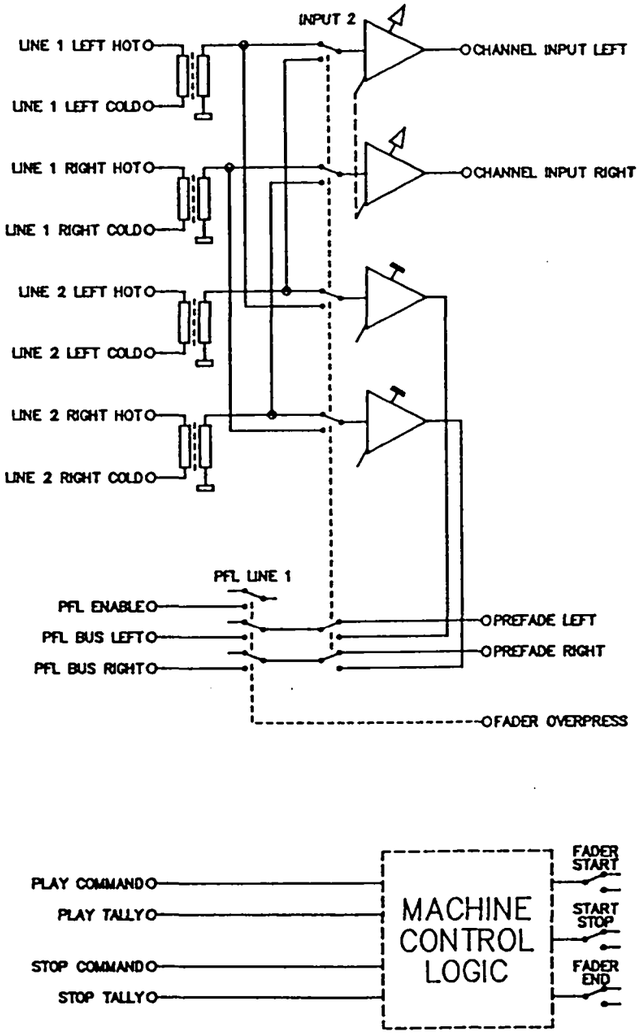




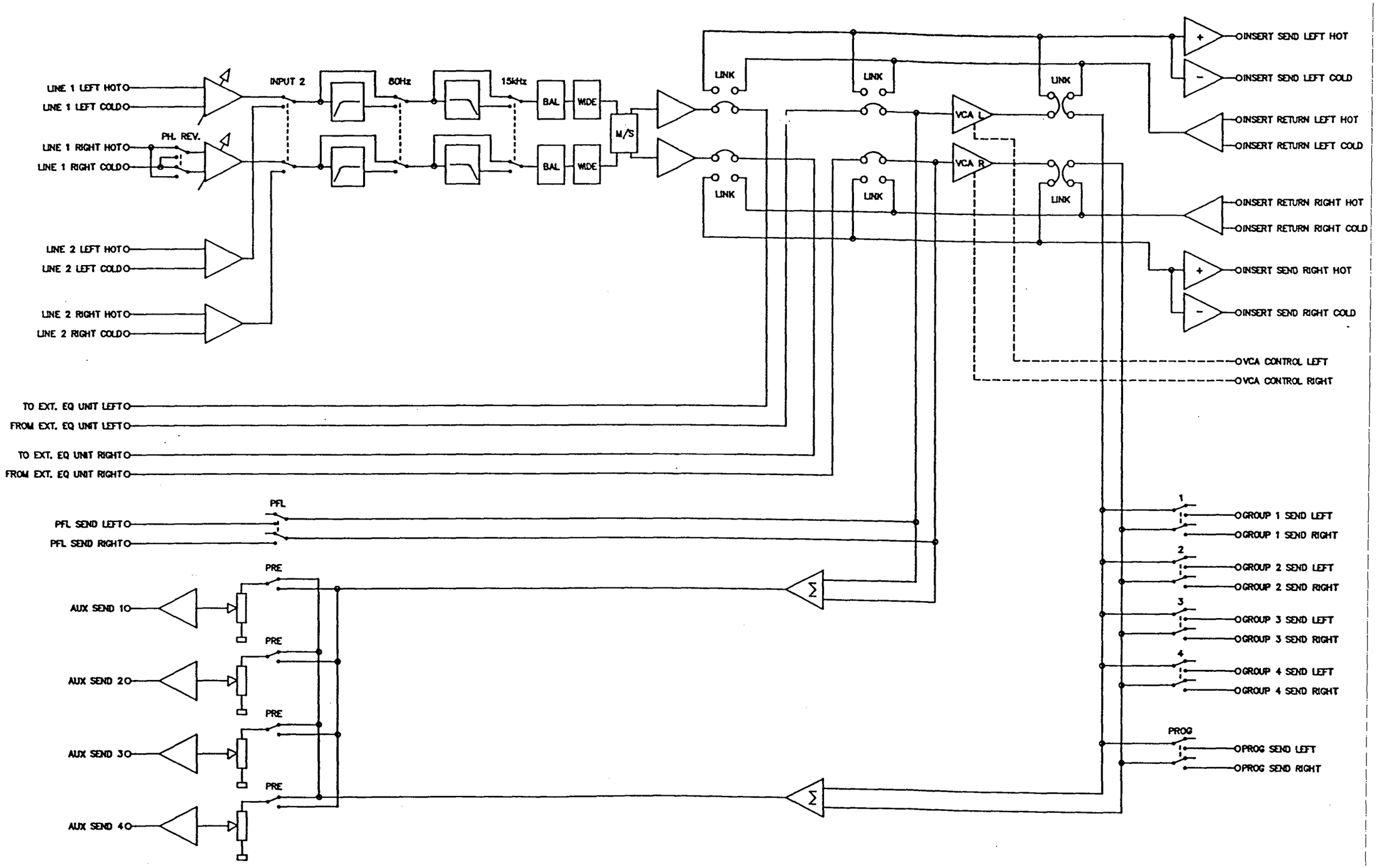
LINE/LINE (EQUIPMENT)

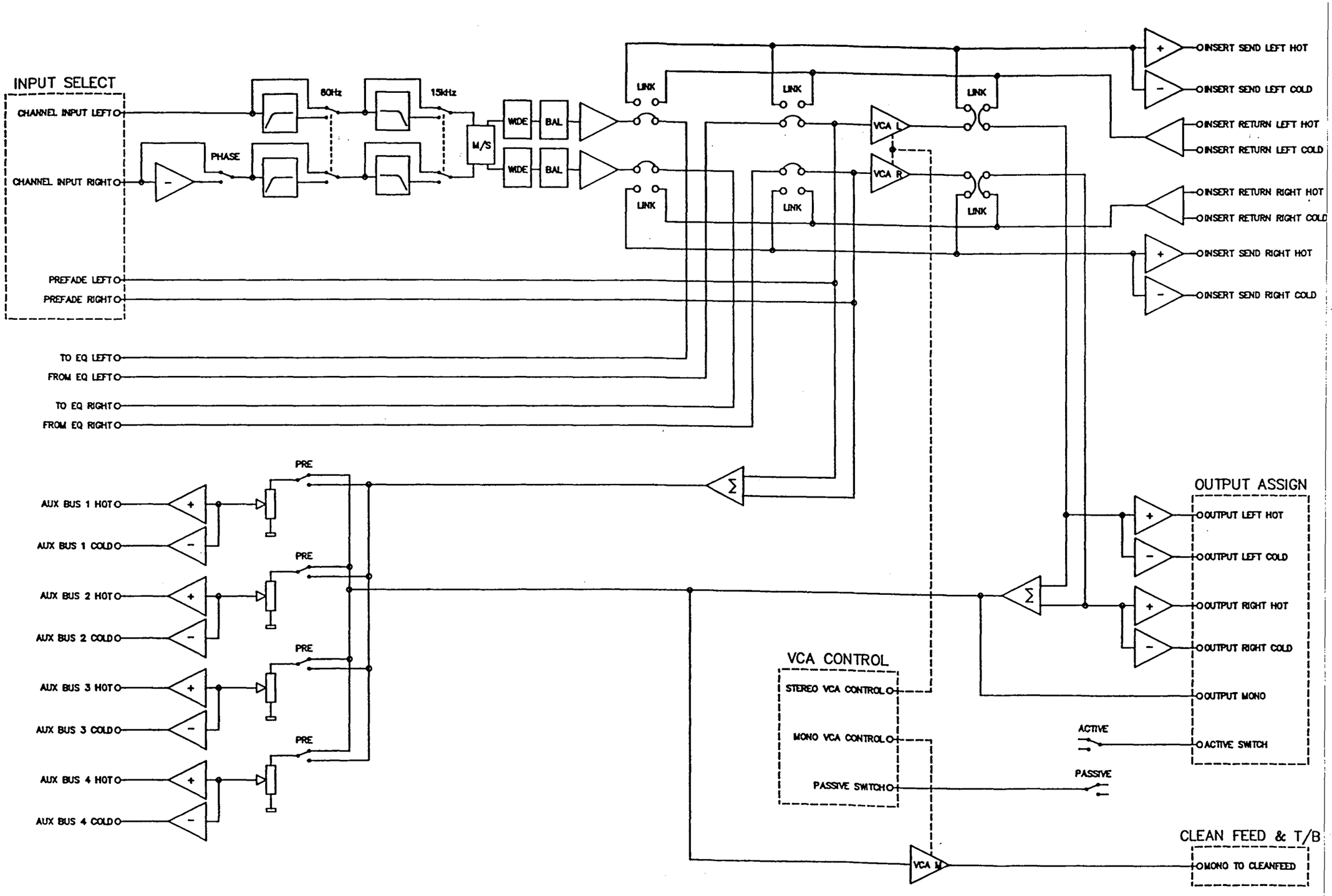


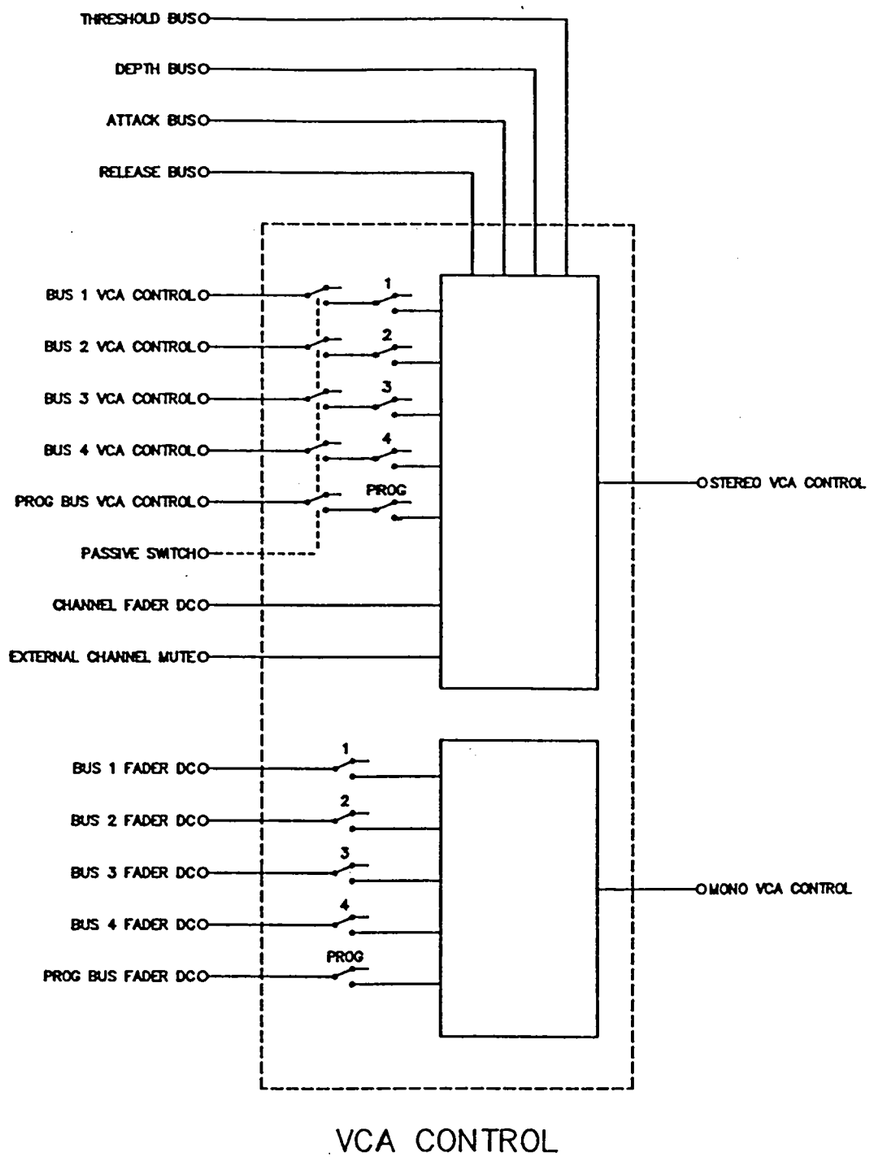
LINE/LINE (OUTSIDE SOURCE)



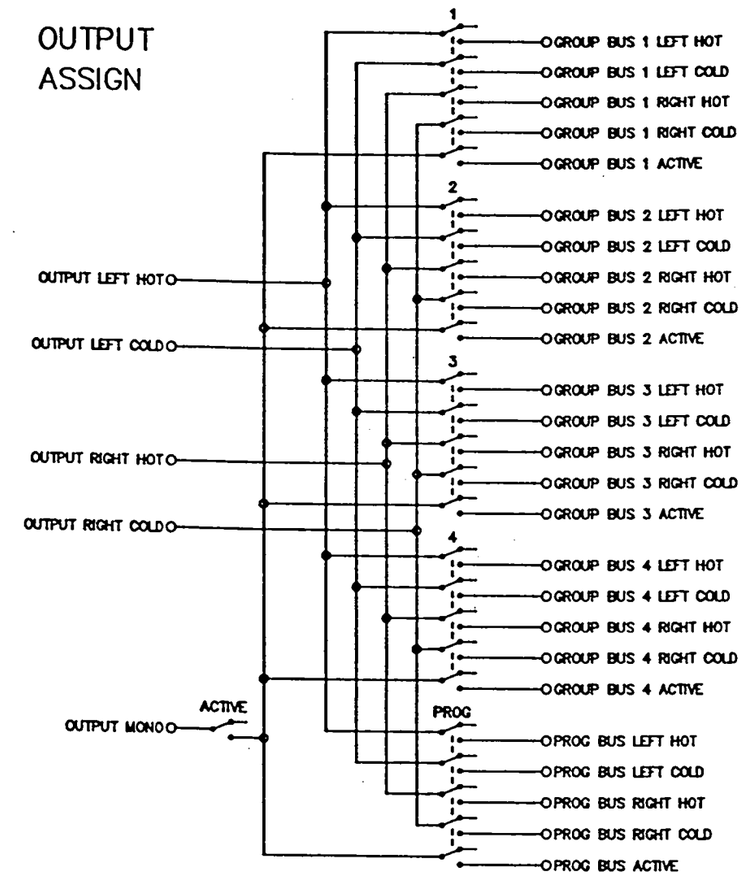
LINE/LINE (O-S/EQUIPMENT)

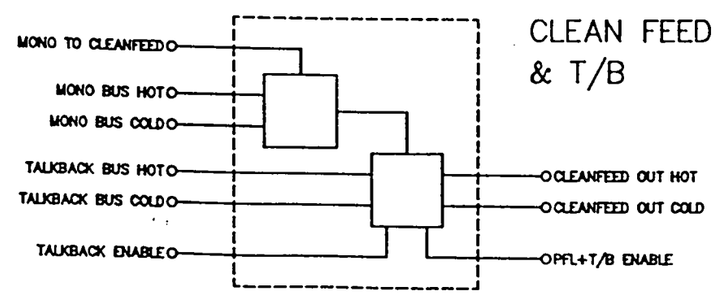

LINE 1 LEFT HOT
LINE 1 LEFT COLD
LINE 1 RIGHT HOT
LINE 1 RIGHT COLD
PHL REV.
LINE 2 LEFT HOT
LINE 2 LEFT COLD
LINE 2 RIGHT HOT
LINE 2 RIGHT COLD
INPUT 2
80Hz
15kHz
BAL
WIDE
BAL
WIDE
M/S
LINK
LINK
LINK
LINK
LINK
LINK
VCA L
VCA R
INSERT SEND LEFT HOT
INSERT SEND LEFT COLD
INSERT RETURN LEFT HOT
INSERT RETURN LEFT COLD
INSERT RETURN RIGHT HOT
INSERT RETURN RIGHT COLD
INSERT SEND RIGHT HOT
INSERT SEND RIGHT COLD
VCA CONTROL LEFT
VCA CONTROL RIGHT
TO EXT. EQ UNIT LEFT
FROM EXT. EQ UNIT LEFT
TO EXT. EQ UNIT RIGHT
FROM EXT. EQ UNIT RIGHT
PFL
PFL SEND LEFT
PFL SEND RIGHT
PRE
AUX SEND 1
PRE
AUX SEND 2
PRE
AUX SEND 3
PRE
AUX SEND 4
Σ
Σ
1
GROUP 1 SEND LEFT
GROUP 1 SEND RIGHT
2
GROUP 2 SEND LEFT
GROUP 2 SEND RIGHT
3
GROUP 3 SEND LEFT
GROUP 3 SEND RIGHT
4
GROUP 4 SEND LEFT
GROUP 4 SEND RIGHT
PROG
PROG SEND LEFT
PROG SEND RIGHT


INPUT SELECT
CHANNEL INPUT LEFT
CHANNEL INPUT RIGHT
PHASE
80Hz
15kHz
M/S
WIDE
BAL
WIDE
BAL
LINK
LINK
LINK
LINK
LINK
LINK
VCA L
VCA R
INSERT SEND LEFT HOT
INSERT SEND LEFT COLD
INSERT RETURN LEFT HOT
INSERT RETURN LEFT COLD
INSERT RETURN RIGHT HOT
INSERT RETURN RIGHT COLD
INSERT SEND RIGHT HOT
INSERT SEND RIGHT COLD
PREFADE LEFT
PREFADE RIGHT
TO EQ LEFT
FROM EQ LEFT
TO EQ RIGHT
FROM EQ RIGHT
PRE
AUX BUS 1 HOT
AUX BUS 1 COLD
AUX BUS 2 HOT
AUX BUS 2 COLD
AUX BUS 3 HOT
AUX BUS 3 COLD
AUX BUS 4 HOT
AUX BUS 4 COLD
OUTPUT ASSIGN
OUTPUT LEFT HOT
OUTPUT LEFT COLD
OUTPUT RIGHT HOT
OUTPUT RIGHT COLD
OUTPUT MONO
ACTIVE SWITCH
ACTIVE
PASSIVE
VCA CONTROL
STEREO VCA CONTROL
MONO VCA CONTROL
PASSIVE SWITCH
CLEAN FEED & T/B
MONO TO CLEANFEED



VCA CONTROL

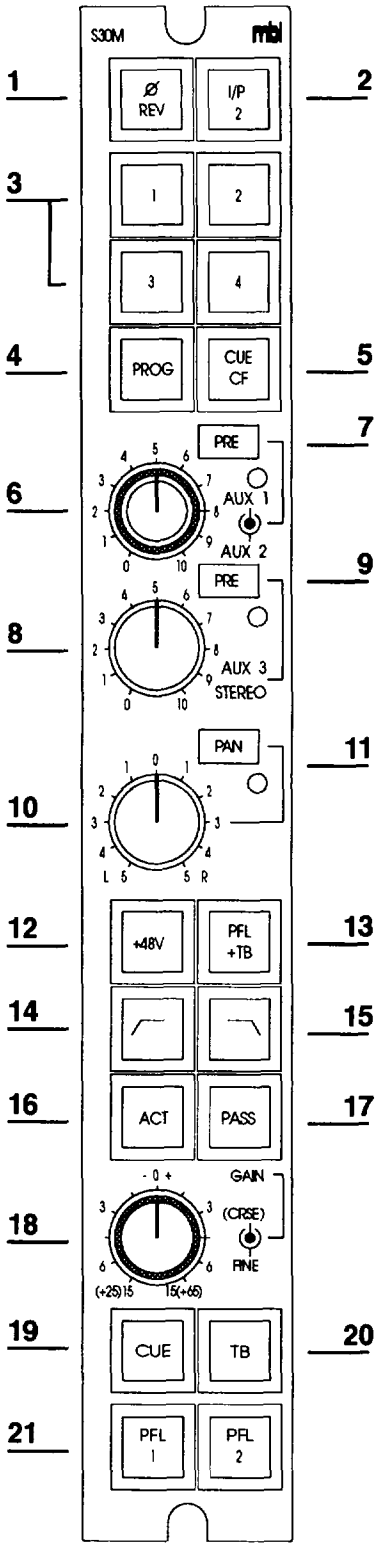




CLEAN FEED
& T/B

3 Module Descriptions & Operation

Mono Mic/Line Input Module S30/M/F



1 **PHASE REVERSE** inverts the polarity of the selected input to compensate for conflicting microphone postition or to compensate for crossed wiring. Phase Reverse should normally be OFF.

2 **INPUT 2** selects the alternative LINE input to the channel. Input 1 is selected when the switch is not illuminated.

3 Four **GROUP SELECT** switches route the channel signal to one or more of the stereo Group busses, subject to the position of the PAN control, enabling a number of channels to be controlled by a single Group module and routed to the main output using a single Group fader.

Selected switches illuminate at half brightness until the respective Group and Main fader is raised, creating a complete signal path.

4 The **PROGRAM** switch routes the channel signal directly to the main stereo Program output, subject to the position of the PAN control.

5 **CUE/CF** selects the source of the channel CLEAN FEED output from either the desk cue bus (desk Mono output or cue selector) or module internal cleanfeed. The CLEAN FEED is produced by mix minus techniques with VCA compensation from group and main output faders to ensure that the subtracted signal is always at correct level.

6 Individual controls feed the channel signal to three Auxiliary Sends. **AUX 1** and **AUX 2** are mono sends which are switchable pre/post fader (see 7 below). Aux 1 is controlled by the upper knob of the pair and Aux 2 is controlled by the lower knob.

7 The **PRE** switch selects the source of the Aux Sends 1 and 2 to Pre Fade (switch pressed) or to Post Fade (switch released).

8 **AUX 3** is a stereo send, also switchable pre/post fader and fed from the output of the PAN control.

9 The **PRE** switch selects the source of the Aux Send 3 to Pre Fade (switch pressed) or to Post Fade (switch released).

10 The **PAN** control determines the position of the channel signal across the stereo image of the Group and Program busses, with a drop of 3dB in the detented centre position. Rotation fully anticlockwise feeds the signal to the Left busses, and rotation fully clockwise feeds the signal to the Right.

11 The **PAN** switch places the PAN control in circuit. When the switch is released the channel signal is fed equally to left and right.

12 Pressing **+48V** turns on the phantom power supply to the microphone input.

13 Selecting **PFL + TB** (Prefade Listen + Talback) automatically enables the prefade status when the TALKBACK switch is pressed, to facilitate communication with outside sources. The switch illuminates at half brightness until the TALKBACK switch is selected to full brightness.

14 A switch to insert a **HI-PASS FILTER** into the channel path. The filter has a preset -3dB turnover frequency of 80Hz and a slope of 18dB/octave.

15 A switch to insert a **LO-PASS FILTER** into the channel path. The filter has a preset -3dB turnover frequency of 16kHz and a slope of 18dB/octave.

16 When **ACT** (ACTIVE) is selected and the channelsignal exceeds the threshold level at an output, the ducker is activated to provide a voice-over facility, attenuating any channels set to PASSive according to Master module control settings. The channel is isolated from the action of the ducker when both ACT and PASS are released.

17 When **PASS** (PASSIVE) is selected the channel is attenuated by any ACTIVE channel signal. The attenuation level is set on the Master Output Module. The channel is isolated from the action of the ducker when both ACT and PASS are released.

18 The dual concentric **GAIN** control adjusts the gain of the two channel inputs. The upper (coarse) control varies gain over a range of +25 to +65dB and operates on the Mic input only. The lower (fine) control provides an additional ± 15dB gain adjustment for the Mic input and ± 15dB gain trim for the Line input.

19 The **CUE** switch operates a switch closure to activate an external cue lamp. This facility may be combined with a fader switch for automatic operation when the fader is open.

20 **TB** (Talkback) is a momentary action switch which replaces the module Cue/Cleanfeed output with Talkback. Operation of any talkback switch will Dim or Cut monitor loudspeakers as selected on the Loudspeaker module. Console engineer Talkback can be initiated either from individual channel TB switch or controlled as a group from the S30/TB Talkback Control module to simplify talkback to any number of outside source destinations.

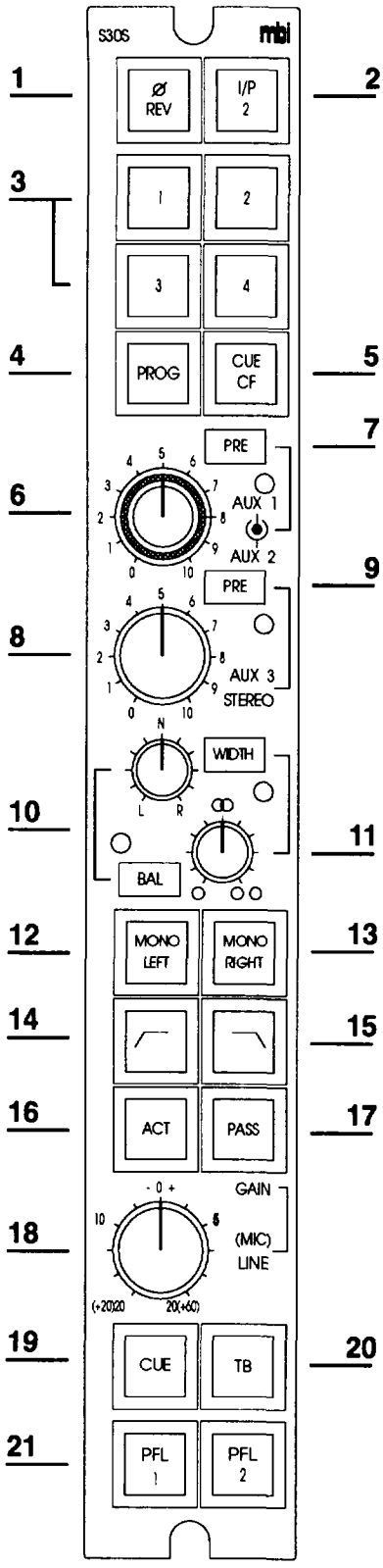
A Talkback group is set up as follows:

- Press MEM on the Talkback Control module. The switch will illuminate to show that it is active.
- Press *and hold* one of the nine talkback group switches. While holding the switch, press the TB switch on any input channels which you wish to add to the group. The channel TB switch will illuminate at half brightness to show that it is selected to a group.
- Release the Talkback Control group switch and repeat the operation to set up further groups if required. Note that input channels may only be selected to one group at a time, and this will be the last group selected. Deselect the MEM switch when group set-up is complete.
- Channels may be cleared from a group by pressing *and holding* CLR on the Talkback Control module, followed by pressing the TB switch on any channels which are to be removed from the group.

The Talkback group is selected by pressing the appropriate Talkback Control group switch. Talkback will be activated on any channels assigned to the group, and the channel TB switches will illuminate accordingly. Note that only one Talkback group may be active at any time.

21 Prefade Monitoring (**PFL**) is provided for both channel inputs. **PFL1** routes the channel prefade signal to the monitoring system, and this will correspond to the selected input source. **PFL2** enables prefade monitoring of input 2, even if this is not selected to the channel. The switches have two modes of operation: The switch action is *momentary* as long as the switch is held depressed, and *latching* if the switch is pressed fleetingly (less than 500 mS). The PFL switch illuminates when it is enabled.

Stereo Mic/Line Input S30/S/F



1 **PHASE REVERSE** inverts the polarity of the right side of the selected input to compensate for conflicting microphone postition or to compensate for crossed wiring. Phase Reverse should normally be OFF.

2 **INPUT 2** selects the alternative LINE input to the channel. Input 1 (Mic) is selected when the switch is not illuminated. Note that +48V phantom power is permanently available on the Mic input.

3 Four **GROUP SELECT** switches route the channel signal to one or more of the stereo Group busses, subject to the position of the PAN control, enabling a number of channels to be controlled by a single Group module and routed to the main output using a single Group fader.

Selected switches illuminate at half brightness until the respective Group and Main fader is raised, creating a complete signal path.

4 The **PROGRAM** switch routes the channel signal directly to the main stereo Program output, subject to the position of the WIDTH and BALANCE controls.

5 **CUE/CF** selects the source of the channel CLEAN FEED output from either the desk cue bus (desk Mono output or cue selector) or module internal cleanfeed. The CLEAN FEED is produced by mix minus techniques with VCA compensation from group and main output faders to ensure that the subtracted signal is always at correct level.

6 Individual controls feed the channel signal to three Auxiliary Sends. **AUX 1** and **AUX 2** are mono sends which are switchable pre/post fader (see 7 below). Aux 1 is controlled by the upper knob of the pair and Aux 2 is controlled by the lower knob.

7 The **PRE** switch selects the source of the Aux Sends 1 and 2 to Pre Fade (switch pressed) or to Post Fade (switch released).

8 **AUX 3** is a stereo send, also switchable pre/post fader and feeds the channel signal to the stereo bus, subject to the position of the WIDTH and BALANCE controls.

9 The **PRE** switch selects the source of the Aux Send 3 to Pre Fade (switch pressed) or to Post Fade (switch released).

10 The **BALANCE** control adjusts the position of the channel signal within the stereo image of the Group and Program busses when the **BAL** switch is pressed (LED illuminated). The control provides ± 12dB adjustment to left (anticlockwise) or right (clockwise).

11 The **WIDTH** control enables the stereo image to be smoothly varied from MONO (anticlockwise) through normal STEREO (centre) to enhanced WIDE stereo (clockwise) when the **WIDTH** switch is pressed (LED illuminated).

12 **MONO LEFT** feeds the LEFT signal equally to both left and right channel outputs.

13 **MONO RIGHT** feeds the RIGHT signal equally to both left and right channel outputs. Pressing both MONO LEFT and MONO RIGHT feeds a mono sum of left and right to both outputs, with a compensating 6dB drop in level.

14 A switch to insert a **HI-PASS FILTER** into the channel path. The filter has a preset -3dB turnover frequency of 80Hz and a slope of 18dB/octave.

15 A switch to insert a **LO-PASS FILTER** into the channel path. The filter has a preset -3dB turnover frequency of 16kHz and a slope of 18dB/octave.

16 When **ACT** (ACTIVE) is selected and the channelsignal exceeds the threshold level at an output, the ducker is activated to provide a voice-over facility, attenuating any channels set to PASSive according to Master module control settings. The channel is isolated from the action of the ducker when both ACT and PASS are released.

17 When **PASS** (PASSIVE) is selected the channel is attenuated by any ACTIVE channel signal. The attenuation level is set on the Master Output Module. The channel is isolated from the action of the ducker when both ACT and PASS are released.

18 The **GAIN** control adjusts the gain of the selected channel input. Mic gain is variable over a range of +20 to +60dB while Line gain may be trimmed ± 20dB.

19 The **CUE** switch operates a switch closure to activate an external cue lamp. This facility may be combined with a fader switch for automatic operation when the fader is open.

20 **TB** (Talkback) is a momentary action switch which replaces the module Cue/Cleanfeed output with Talkback. Operation of any talkback switch will Dim or Cut monitor loudspeakers as selected on the Loudspeaker module. Console engineer Talkback can be initiated either from individual channel TB switch or controlled as a group from the S30/TB Talkback Control module to simplify talkback to any number of outside source destinations.

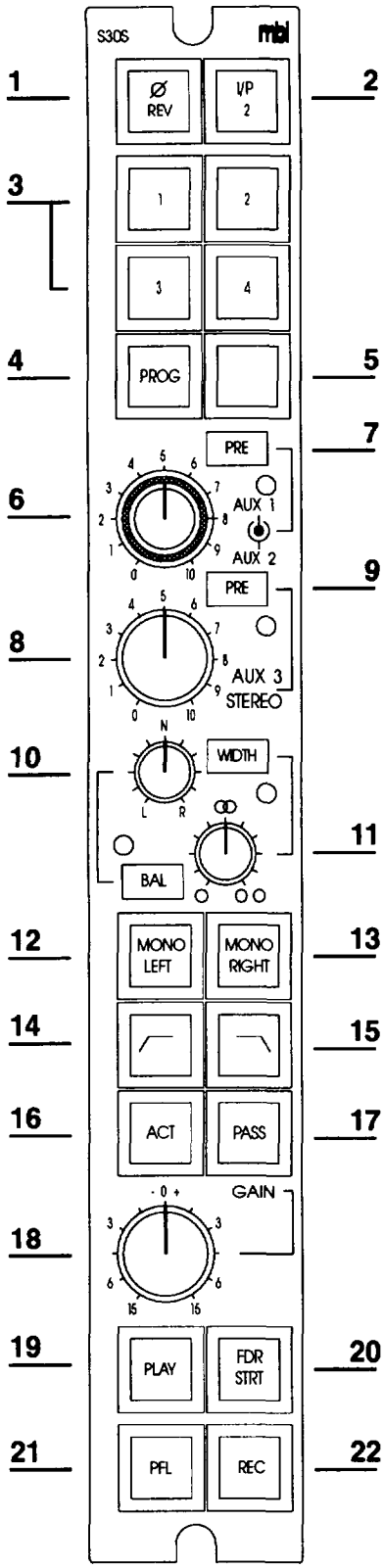
A Talkback group is set up as follows:

- Press MEM on the Talkback Control module. The switch will illuminate to show that it is active.
- Press *and hold* one of the nine talkback group switches. While holding the switch, press the TB switch on any input channels which you wish to add to the group. The channel TB switch will illuminate at half brightness to show that it is selected to a group.
- Release the Talkback Control group switch and repeat the operation to set up further groups if required. Note that input channels may only be selected to one group at a time, and this will be the last group selected. Deselect the MEM switch when group set-up is complete.
- Channels may be cleared from a group by pressing *and holding* CLR on the Talkback Control module, followed by pressing the TB switch on any channels which are to be removed from the group.

The Talkback group is selected by pressing the appropriate Talkback Control group switch. Talkback will be activated on any channels assigned to the group, and the channel TB switches will illuminate accordingly. Note that only one Talkback group may be active at any time.

21 Prefade Monitoring (**PFL**) is provided for both channel inputs. **PFL1** routes the channel prefade signal to the monitoring system, and this will correspond to the selected input source. **PFL2** enables prefade monitoring of input 2, even if this is not selected to the channel. The switches have two modes of operation: The switch action is *momentary* as long as the switch is held depressed, and *latching* if the switch is pressed fleetingly (less than 500 mS). The PFL switch illuminates when it is enabled.

Stereo Dual Line Input S30/S/J/A



1 **PHASE REVERSE** inverts the polarity of the right side of the selected input to compensate for conflicting microphone postition or to compensate for crossed wiring. Phase Reverse should normally be OFF.

2 **INPUT 2** selects the alternative LINE 2 input to the channel. Line Input 1 is selected when the switch is not illuminated.

3 Four **GROUP SELECT** switches route the channel signal to one or more of the stereo Group busses, subject to the position of the PAN control, enabling a number of channels to be controlled by a single Group module and routed to the main output using a single Group fader.

Selected switches illuminate at half brightness until the respective Group and Main fader is raised, creating a complete signal path.

4 The **PROGRAM** switch routes the channel signal directly to the main stereo Program output, subject to the position of the WIDTH and BALANCE controls.

5 This switch has no function on this module.

6 Individual controls feed the channel signal to three Auxiliary Sends. **AUX 1** and **AUX 2** are mono sends which are switchable pre/post fader (see 7 below). Aux 1 is controlled by the upper knob of the pair and Aux 2 is controlled by the lower knob.

7 The **PRE** switch selects the source of the Aux Sends 1 and 2 to Pre Fade (switch pressed) or to Post Fade (switch released).

8 **AUX 3** is a stereo send, also switchable pre/post fader and feeds the channel signal to the stereo bus, subject to the position of the WIDTH and BALANCE controls.

9 The **PRE** switch selects the source of the Aux Send 3 to Pre Fade (switch pressed) or to Post Fade (switch released).

10 The **BALANCE** control adjusts the position of the channel signal within the stereo image of the Group and Program busses when the **BAL** switch is pressed (LED illuminated). The control provides ± 12dB adjustment to left (anticlockwise) or right (clockwise).

11 The **WIDTH** control enables the stereo image to be smoothly varied from MONO (anticlockwise) through normal STEREO (centre) to enhanced WIDE stereo (clockwise) when the **WIDTH** switch is pressed (LED illuminated).

12 **MONO LEFT** feeds the LEFT signal equally to both left and right channel outputs.

13 **MONO RIGHT** feeds the RIGHT signal equally to both left and right channel outputs. Pressing both MONO LEFT and MONO RIGHT feeds a mono sum of left and right to both outputs, with a compensating 6dB drop in level.

14 A switch to insert a **HI-PASS FILTER** into the channel path. The filter has a preset -3dB turnover frequency of 80Hz and a slope of 18dB/octave.

15 A switch to insert a **LO-PASS FILTER** into the channel path. The filter has a preset -3dB turnover frequency of 16kHz and a slope of 18dB/octave.

16 When **ACT** (ACTIVE) is selected and the channelsignal exceeds the threshold level at an output, the ducker is activated to provide a voice-over facility, attenuating any channels set to PASSive according to Master module control settings. The channel is isolated from the action of the ducker when both ACT and PASS are released.

17 When **PASS** (PASSIVE) is selected the channel is attenuated by any ACTIVE channel signal. The attenuation level is set on the Master Output Module. The channel is isolated from the action of the ducker when both ACT and PASS are released.

18 The **GAIN** control adjusts the gain of the selected channel input by± 20dB.

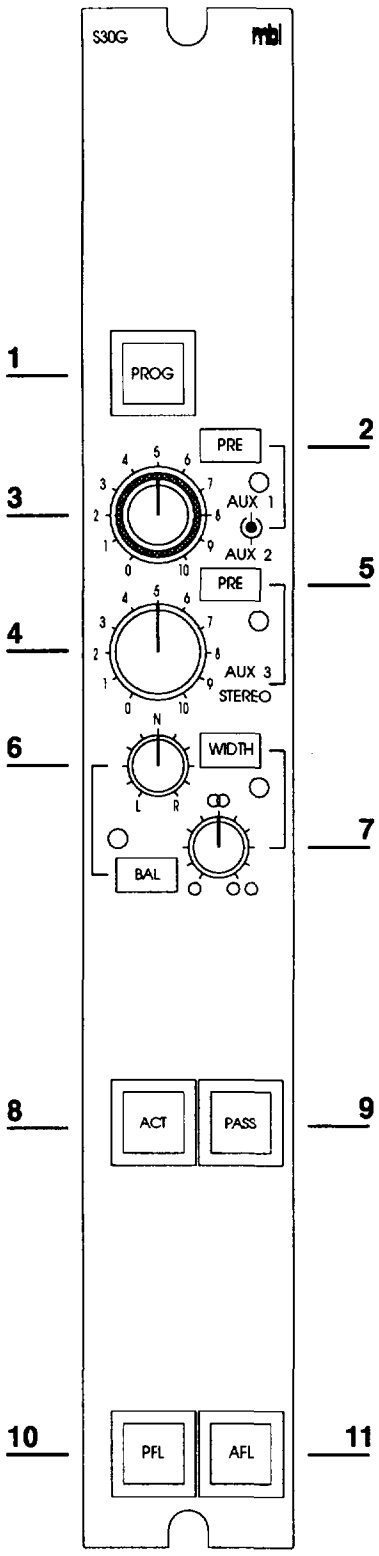
19 Pressing the **PLAY** switch operates a momentary switch closure for control of an external machine. The internal illumination will normally be connected as a tally of the machine PLAY switch (see also FDR STRT below).

20 Selecting **FDR START** (Fader Start) enables a fader switch to generate machine start/stop pulses as the fader is opened and closed. The FDR STRT switch illuminates at half brightness when enabled, and lights at full brightness when the fader switch operates.

21 Stereo Prefade Monitoring (**PFL**) is provided for the selected channel input. The switch has two modes of operation: The switch action is *momentary* as long as the switch is held depressed, and *latching* if the switch is pressed fleetingly (less than 500 mS). The PFL switch illuminates when it is enabled.

22 Pressing the **REC** switch and **PLAY** switch simultaneouslyoperates a momentary switch closure for control of external machine Record status. The internal illumination will normally be connected as a tally of the machine RECORD switch. If the machine is already in PLAY, pressing REC and PLAY together enables RECORD mode in the same way.

Stereo Group Output S30/G/B



1 The **PROG** (Program) switch routes the group signal directly to the main stereo Program output, subject to the setting of the BALANCE and WIDTH controls. The switch illuminates at half brightness when selected, and lights at full brightness when the Program fader is raised.

The direct group output is permanently available, subject to the BALANCE and WIDTH controls, ducker and talkback functions.

2 The **PRE** switch selects the source of the Aux Sends 1 and 2 to Pre Fade (switch pressed and LED illuminated) or to Post Fade (switch released).

3 Individual controls feed the Group signal to three Auxiliary Sends. **AUX 1** and **AUX 2** are mono sends which are switchable pre/post fader. Aux 1 is controlled by the upper knob of the pair and Aux 2 is controlled by the lower knob.

4 **AUX 3** is a stereo send, also switchable pre/post fader and feeds the channel signal to the stereo bus, subject to the position of the WIDTH and BALANCE controls.

5 The PRE switch selects the source of the Aux Send 3 to Pre Fade (switch pressed) or to Post Fade (switch released).

6 The **BALANCE** control adjusts the position of the group signal within the stereo image of the Program busses when the **BAL** switch is pressed (LED illuminated). The control provides ± 12dB adjustment to left (anticlockwise) or right (clockwise).

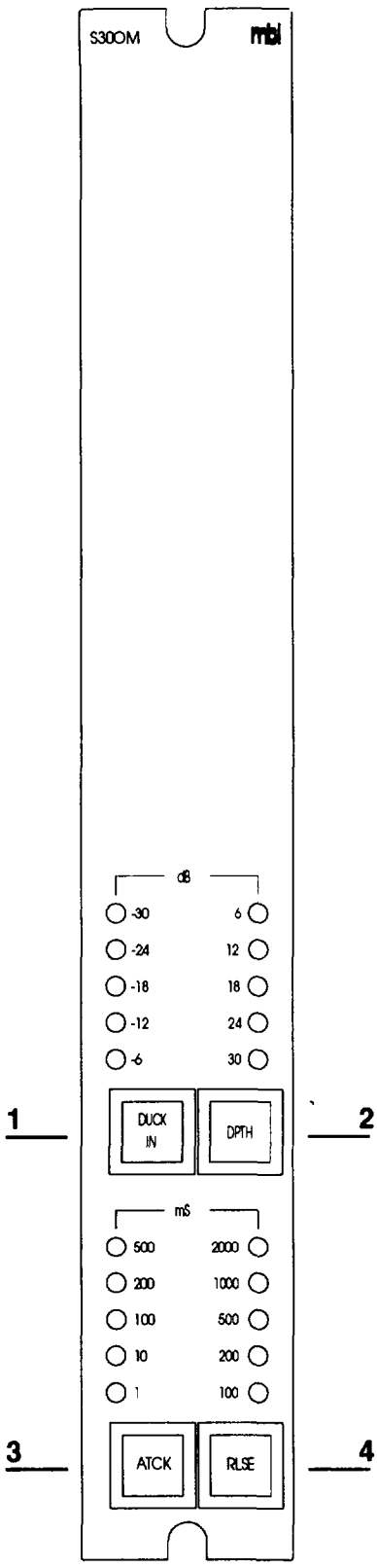
7 The **WIDTH** control enables the stereo image to be smoothly varied from MONO (anticlockwise) through normal STEREO (centre) to enhanced WIDE stereo (clockwise) when the **WIDTH** switch is pressed (LED illuminated).

8 When **ACT** (ACTIVE) is selected and the group signal exceeds the threshold level, the ducker is activated to provide a voice-over facility, attenuating any channels or groups set to PASSive according to Master module control settings. The group is isolated from the action of the ducker when both ACT and PASS are released.

9 When **PASS** (PASSIVE) is selected the group is attenuated by any ACTIVE channel signal. The attenuation level is set on the Master Output Module. The group is isolated from the action of the ducker when both ACT and PASS are released.

10 The **PFL** switch enables stereo prefade monitoring of the group signal . The switch has two modes of operation: The switch action is *momentary* as long as the switch is held depressed, and *latching* if the switch is pressed fleetingly (less than 500 mS). The PFL switch illuminates when it is enabled.

11 The **AFL** switch enables stereo monitoring of the post fade signal. The switch has two modes of operation: The switch action is *momentary* as long as the switch is held depressed, and *latching* if the switch is pressed fleetingly (less than 500 mS). The AFL switch illuminates when it is enabled.



Master Output S30/OM

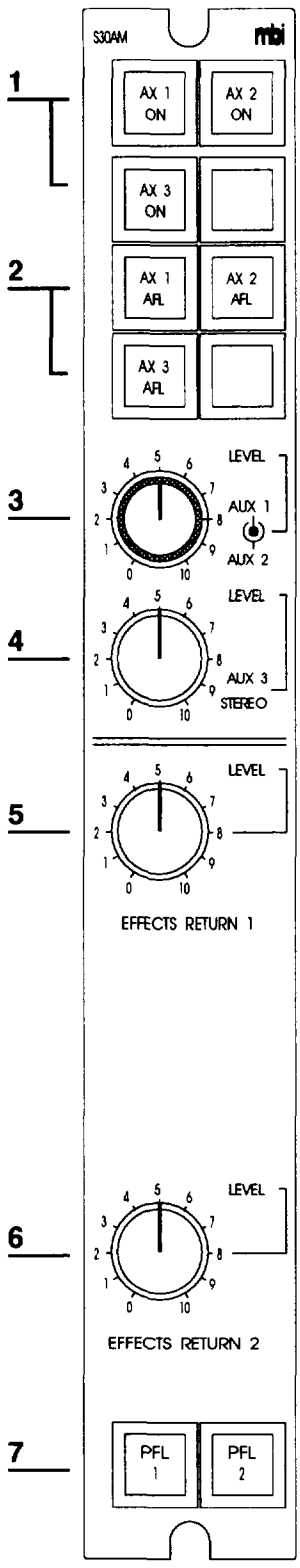
The Master Module contains the summing amplifiers for the Program output and the master functions of the ducking (voice over) system.

1 DUCK IN enables the ducking system. The LED bargraph above the switch monitors the attenuation effect on any channels or groups selected to PASSIVE. The switch illuminates at half brightness when enabled, and changes to full brightness when and ACTIVE channel or group signal triggers ducker operation. The three other switches on the module illuminate at full brightness when DUCK IN is selected.

2 DPTH (Ducking Depth) sets the degree of attenuation which will be applied to any channels or groups selected to PASSIVE. Press the DPTH switch repeatedly until the required level is selected on the LEDs above the switch.

3 ATCK (Attack) sets the attack response for the ducker circuit, from 1mS (fastest) to 500mS. Press the ATCK switch repeatedly until the required setting is shown on the LEDs above the switch.

3 RLSE (Release) sets the release time for the ducker circuit, from 100mS (fastest) to 2000mS. Press the RLSE switch repeatedly until the required setting is shown on the LEDs above the switch.



Auxiliary Master S30/AM/B

The Auxiliary Master module contains the summing amplifiers for the two mono (Aux 1 & 2) and one stereo (Aux 3) busses.

Two stereo Effect Returns are provided which feed the PROGRAM bus directly.

1 Individual switches, **AX 1, 2, 3** enable the Auxiliary ouputs, illuminating when the output is ON.

2 Individual switches **AX 1 AFL, AX 2 AFL** and **AX 3 AFL** allow post fade monitoring of each Auxiliary Send signal via the Headphone or Loudspeaker modules.

3 A dual concentric control adjusts the output **LEVEL** of Aux 1 (upper knob) and Aux 2 (lower knob).

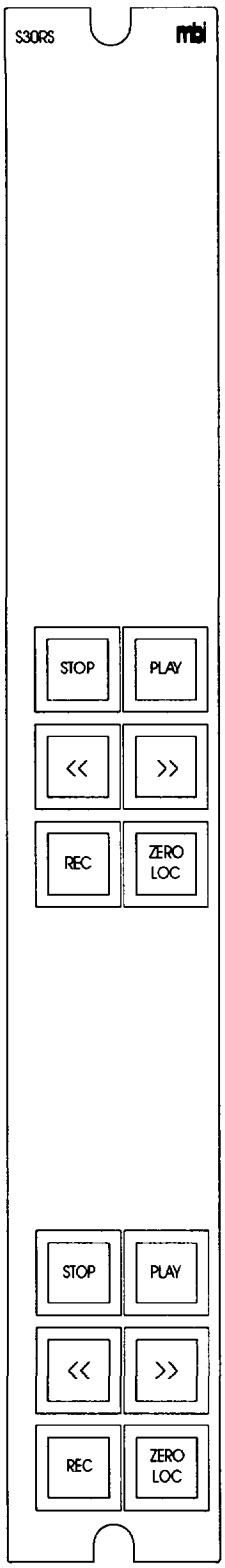
4 A separate control adjusts the **LEVEL** of the Aux 3 stereo output.

5 The **EFFECTS RETURN 1** control feeds an external stereo Line level input directly to the Program bus.

6 The **EFFECTS RETURN 2** control feeds a second external stereo Line level input directly to the Program bus.

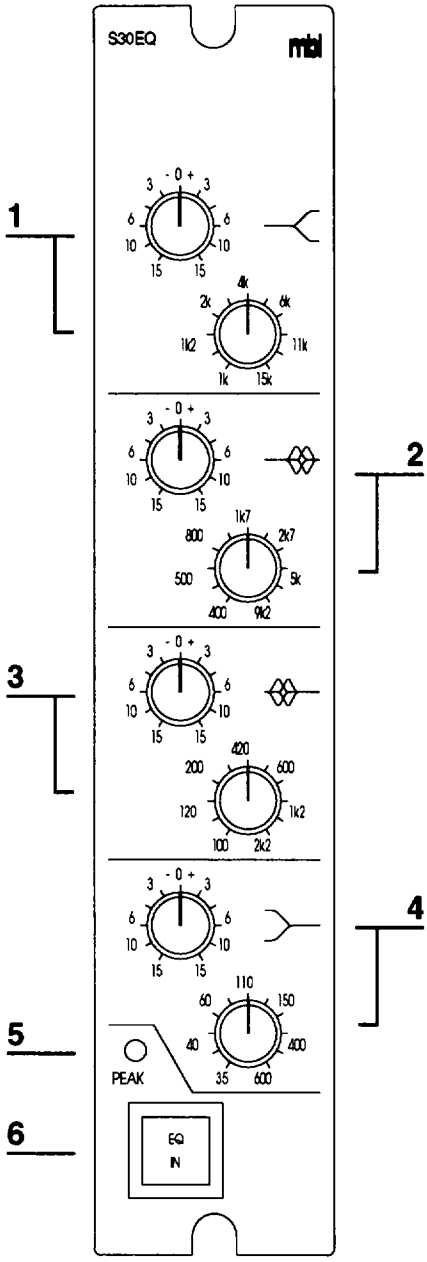
7 Stereo Prefade Monitoring (**PFL**) is provided for the Effects Return inputs. The switches have two modes of operation: The switch action is *momentary* as long as the switch is held depressed, and *latching* if the switch is pressed fleetingly (less than 500 mS). The PFL switches illuminates when enabled.

Remote Start Module S30/RS



This module houses two identical sets of Remote Switches for external machine control. Internal illumination is derived as tallies of the machine functions.

Equalisation Module S30/EQ



The Equalisation module may be inserted into the channel, group or main output signal path, according to the console configuration.

A four band semi parametric equalisation with is provided, with separate centre frequency and boost/cut controls for each section. The Q is fixed at 1.5.

1 The **HF** section is variable over a frequency range of 1kHz to 15kHz with a shelving response (lower knob). 15dB cut or boost is available (upper knob), with a flat response when the control is centred.

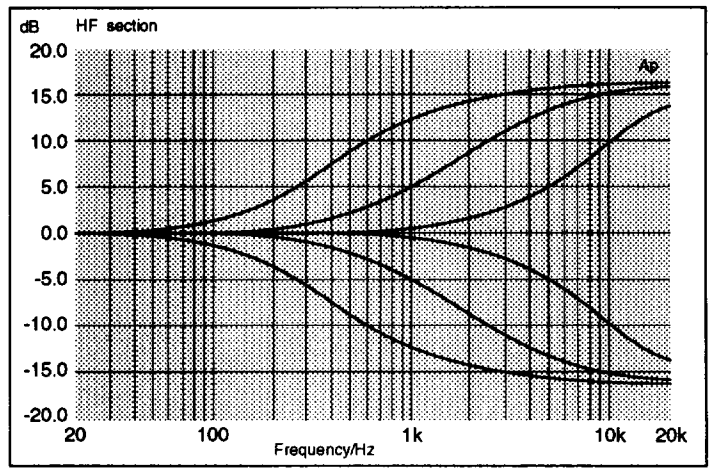
2 The **HMF** (HI-MID) section is variable over a frequency range of 400Hz to 9k2Hz with a shelving response (lower knob). 15dB cut or boost is available (upper knob), with a flat response when the control is centred.

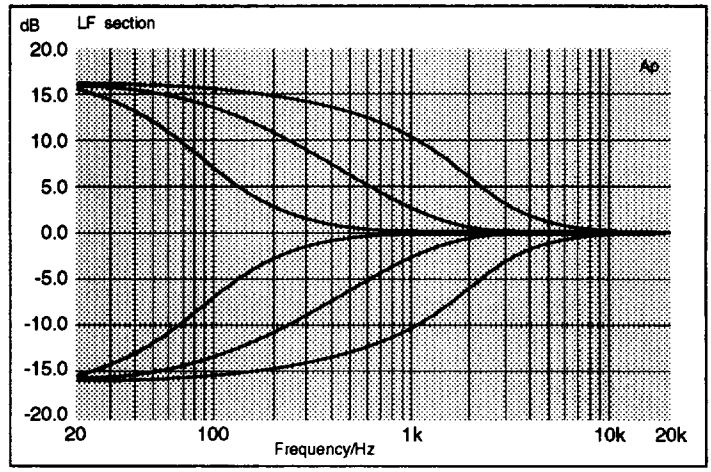
3 The **LMF** (LO-MID) section is variable over a frequency range of 100Hz to 2k2Hz with a bell response (lower knob). 15dB cut or boost is available (upper knob), with a flat response when the control is centred.

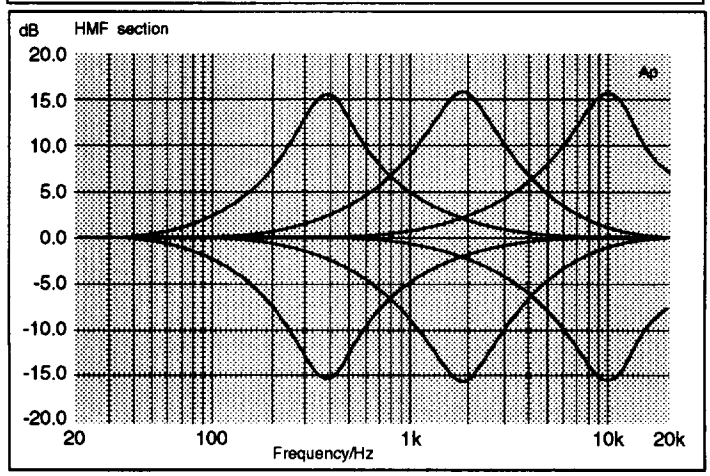
4 The **LF** section is variable over a frequency range of 35Hz to 600Hz with a shelving response (lower knob). 15dB cut or boost is available (upper knob), with a flat response when the control is centred.

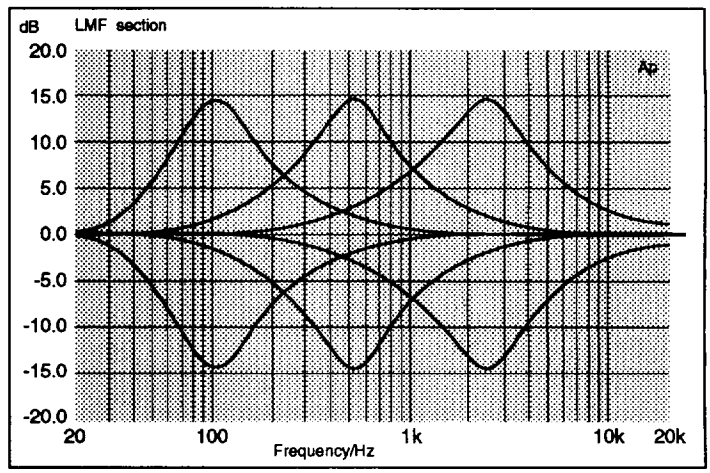
5 A multi-point peak detector illuminates the **PEAK LED** when the signal exceeds a level of +16dBu (6dB below clipping). The detector is sourced from both the EQ module output, sensing the equalised signal or the input signal if EQ IN is not selected, and also the output of the EQ sections to show that an excessively high signal would be present if EQ IN was pressed.

6 **EQ IN** inserts the Equalisation into the signal path and the switch illuminates to show that the EQ is active. The module is bypassed when the switch is not selected.

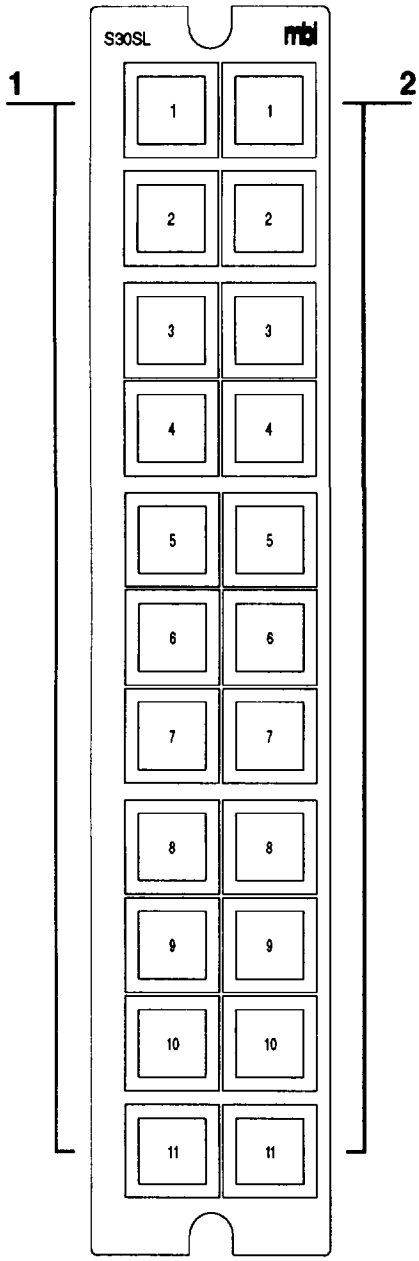

dB
HF section
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-15.0
-20.0
Ap
20
100
1k
10k
20k
Frequency/Hz


dB
LF section
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-15.0
-20.0
Ap
20
100
1k
10k
20k
Frequency/Hz


dB
HMF section
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-15.0
-20.0
Ap
20
100
1k
10k
20k
Frequency/Hz


dB
LMF section
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-15.0
-20.0
Ap
20
100
1k
10k
20k
Frequency/Hz

Selector Module S30/SEL

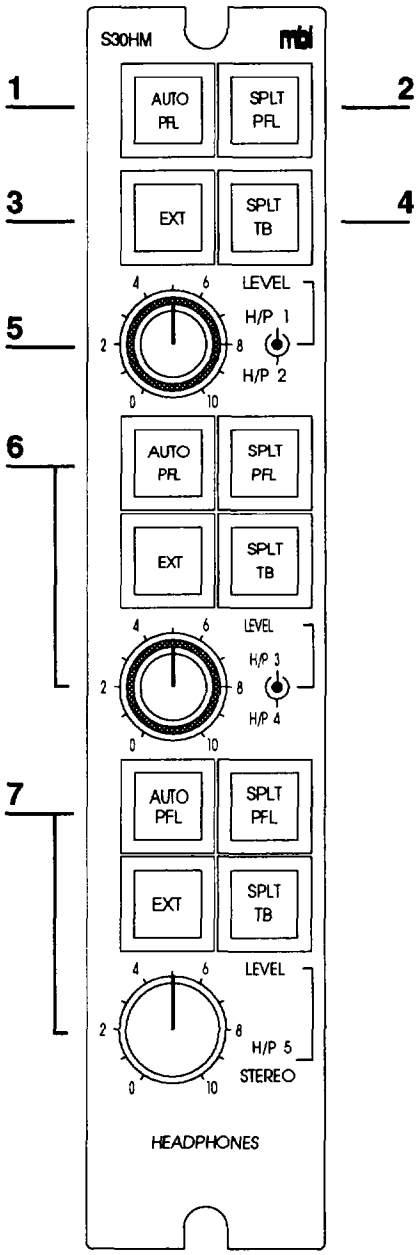


The Selector Module comprises two banks of eleven switches which may be configured as 22 stereo inputs to 1 stereo output or 11 inputs to 2 stereo outputs. The module operates in conjunction with rack mounted relay cards.

The module is typically used as external selector switchbank for Loudspeaker Module S30/LS and Headphone Module S30/HM/C and as extra input selector to input channel modules.

1, 2 Two banks of eleven electronically latching switches select any external stereo input to one of two stereo outputs. The switches illuminate to show the current selection.

Headphone Module S30/HM/C



This module provides three studio monitoring outputs for studio or contributor use. Each output has level control, Split Talkback, Split Prefade and External input selection.

The module normally receives Desk Output but an alternative input may be selected by the EXT switch.

Module outputs are configured as four mono (H/P 1,2,3 and 4) and one stereo (H/P 5). Outputs may be accessed by the talkback system from the S30/TB Talkback Control module.

1 **AUTO PFL** prepares the monitor section to receive PFL/AFL from channel and group modules. The switch illuminates at half brightness when AUTO PFL is selected, changing to full brightness when PFL is activated from any channel or group PFL switch.

2 It is often important that Desk Output is available on the monitoring system without interruption, and this may be achieved by the **SPLT PFL** (Split PFL) function. When SPLT PFL is selected the monitor section will respond to an active PFL from a channel or group, routing a mono sum of the PFL signal to the right output, with the desk mono signal retained on the left output. The SPLT PFL switch illuminates at half brightness when selected, and at full brightness when a PFL is active.

3 Pressing **EXT** sources the monitor section from an External input instead of the normal desk output.

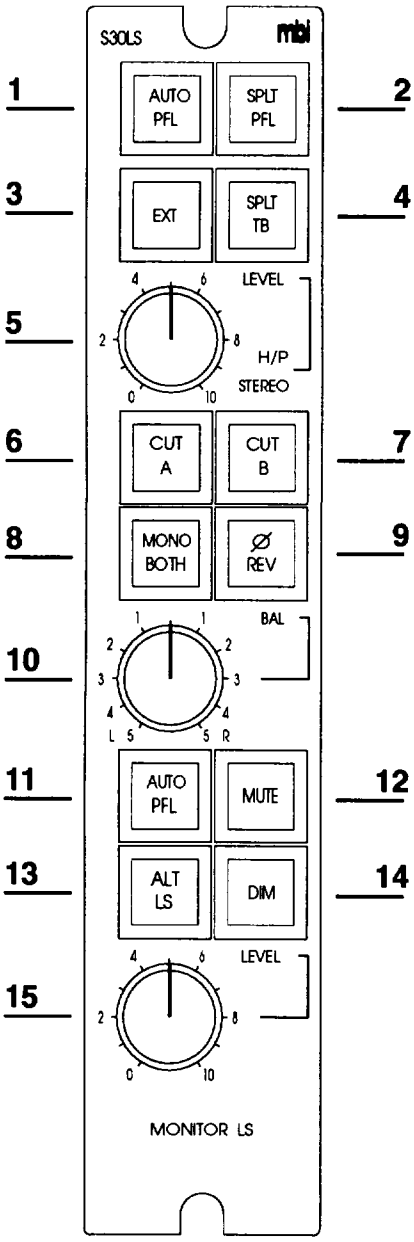
4 SPLT TB operates in a similar way to SPLT PFL. When **SPLT TB** is selected the monitor section will respond to an incoming Talkback signal by routing that signal to the right output, with the desk mono signal retained on the left output. The SPLT TB switch illuminates at half brightness when enabled, and lights at full brightness when a Talkback signal is received.

5 Headphone **LEVEL** is adjusted by a dual concentric control. Headphone 1 output is controlled by the upper knob and Headphone 2 output is controlled by the lower knob.

6 This monitor section controls **HEADPHONE 3** and **HEADPHONE 4** outputs, and is identical to the section above.

7 The Headphone 5 section is similar , but is configured as a stereo output. Functions are are described in 1-5 above, except that LEVEL is a single stereo control.

Loudspeaker Module S30/LS



This module provides control for stereo Control Room or Studio monitor loudspeakers and stereo headphones. The module normally receives Desk Output but an alternative input may be selected by the EXT switch.

Headphone Section

1 **AUTO PFL** prepares the monitor section to receive PFL/AFL from channel and group modules. The switch illuminates at half brightness when AUTO PFL is selected, changing to full brightness when PFL is activated from any channel or group PFL switch.

2 It is often important that Desk Output is available on the monitoring system without interruption, and this may be achieved by the **SPLT PFL** (Split PFL) function. When SPLT PFL is selected the monitor section will respond to an active PFL from a channel or group, routing a mono sum of the PFL signal to the right output, with the desk mono signal retained on the left output. The SPLT PFL switch illuminates when a PFL is active.

3 Pressing **EXT** sources the monitor section from an External input instead of the normal desk output.

4 SPLT TB operates in a similar way to SPLT PFL. When **SPLT TB** is selected the monitor section will respond to an incoming Talkback signal by routing that signal to the right output, with the desk mono signal retained on the left output. The SPLT TB switch illuminates at half brightness when enabled, and lights at full brightness when a Talkback signal is received.

5 A stereo Headphone **LEVEL** control adjusts output level.

Loudspeaker Section

6 **CUT A** mutes the Left (A) speaker output. The switch is illuminated when muted.

7 **CUT B** mutes the Right (B) speaker output. The switch is illuminated when muted.

8 **MONO BOTH** feeds desk mono to left and right speaker outputs.

9 **Ø REV** (Phase Reverse) inverts the right speaker output.

10 The **BALANCE** control adjusts the position of the monitor signal within the stereo image.

11 **AUTO PFL** prepares the monitor section to receive PFL/AFL from channel and group modules. The switch illuminates at half brightness when AUTO PFL is selected, changing to full brightness when PFL is activated from any channel or group PFL switch.

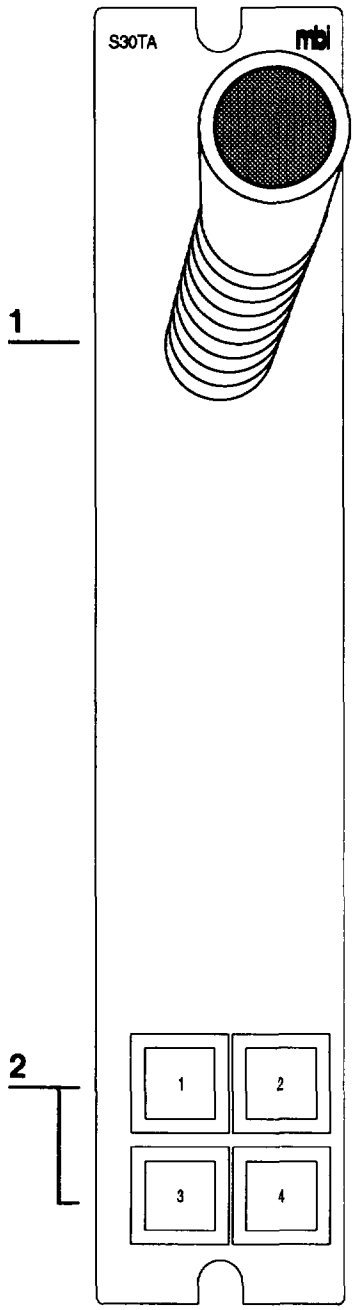
12 Pressing the **MUTE** switch cuts both left and right outputs. The switch illuminates when muted.

13 **ALT LS** switches the outputs from the normal monitor speakers to feed a pair of ALTernative (Mini) loudspeakers.

14 **DIM** attenuates the left and right outputs by an amount set by internal jumpers. The switch illuminates when DIM is active.

15 A stereo **LEVEL** control adjusts output level.

Talkback Audio Module S30/TA

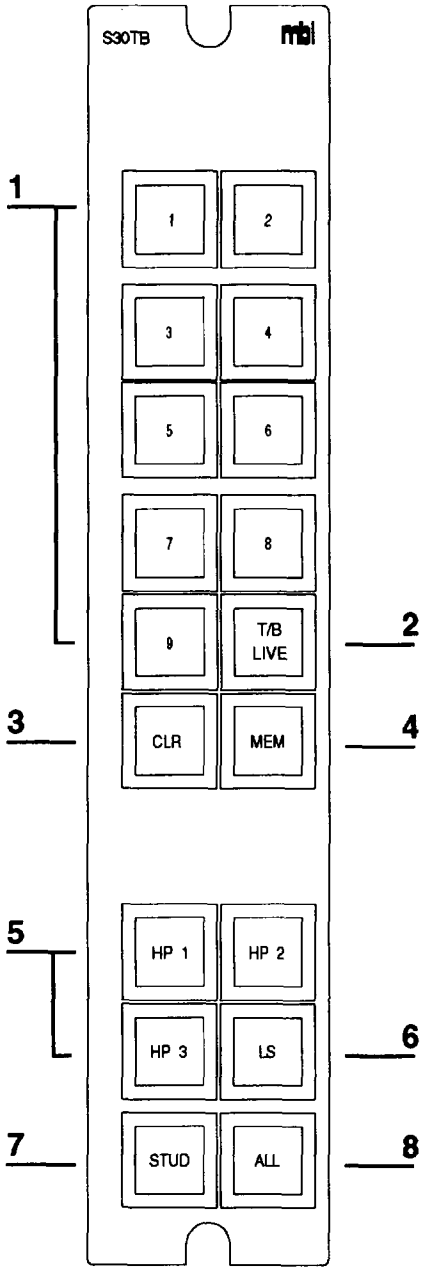


This module provides the source for the Talkback Control module.

1 The source may be the fixed **GOOSENECK** microphone or optionally external inputs, selected by external control signals.

2 A choice of four independent **TALKBACK DESTINATIONS** may be selected by pressing one or more momentary switch.

Talkback Control Module S30/TB



This module controls the routing of the signal from the Talkback Audio module to headphone and loudspeaker outputs (via the S30/LS and S30/HM/C modules), or to a number of talkback groups.

1-4 Nine TALKBACK GROUPS may be created to simplify talkback to any number of outside source destinations.

A Talkback group is set up as follows:

- Press **MEM (4)**. The switch will illuminate to show that it is active.
- Press *and hold* one of the nine talkback GROUP switches **(1)**. While holding the switch, press the TB switch on any input channels which you wish to add to the group. The channel TB switch will illuminate at half brightness to show that it is selected to a group.
- Release the GROUP switch and repeat the operation to set up further groups if required. Note that input channels may only be selected to one group at a time, and this will be the last group selected. Deselect the MEM switch when group set-up is complete.
- Channels may be cleared from a group by pressing *and holding* **CLR (3)** on the Talkback Control module, followed by pressing the TB switch on any channels which are to be removed from the group.

The Talkback group is selected by pressing the appropriate GROUP switch. Talkback will be activated on any channels assigned to the group, and the channel TB switches will illuminate accordingly. Note that only one Talkback group may be active at any time.

T/B LIVE (2) illuminates whenever there is a valid talkback group selection in operation.

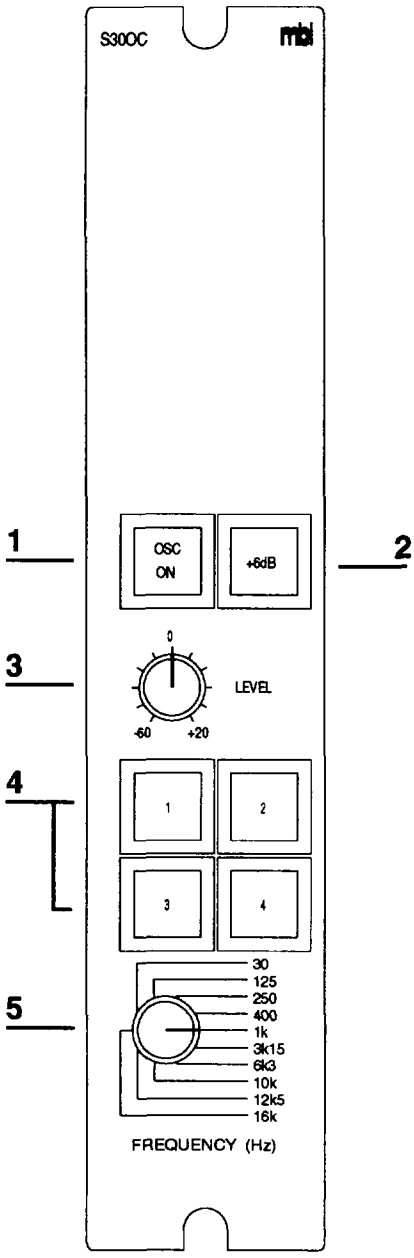
5 Talkback may be routed to mono **HEADPHONE OUTPUTS 1 - 3** on the Headphone module by pressing the appropriate HP 1 - HP 3 switch.

6 Similarly, Talkback may be routed to the selected monitor loudspeaker output by pressing **LS**.

7 Talkback may be routed to the stereo Studio Headphone output on the loudspeaker module by pressing **STUD**.

8 Pressing **ALL** routes the Talkback to all destinations. This function is inhibited in TRANSMISSION mode.

Oscillator Module S30/OC



This module comprises a switched frequency Oscillator which may be routed to a choice of four output destinations to suit individual requirements.

1 The Oscillator is enabled by **OSC ON**, which illuminates when the Oscillator is active.

2 **+6dB** boosts the Oscillator output level by that amount if required.

3 Oscillator **LEVEL** may be varied from -60dB to +20dB. The centre, calibrated position sets the level at 0dBu.

4 The Oscillator may be routed to four **DESTINATIONS** as selected by switches 1-4.

5 Oscillator **FREQUENCY** is set by a multi-position switch, spanning a range of 30Hz to 16kHz. The Oscillator is calibrated at 1kHz.

Special Output Modules

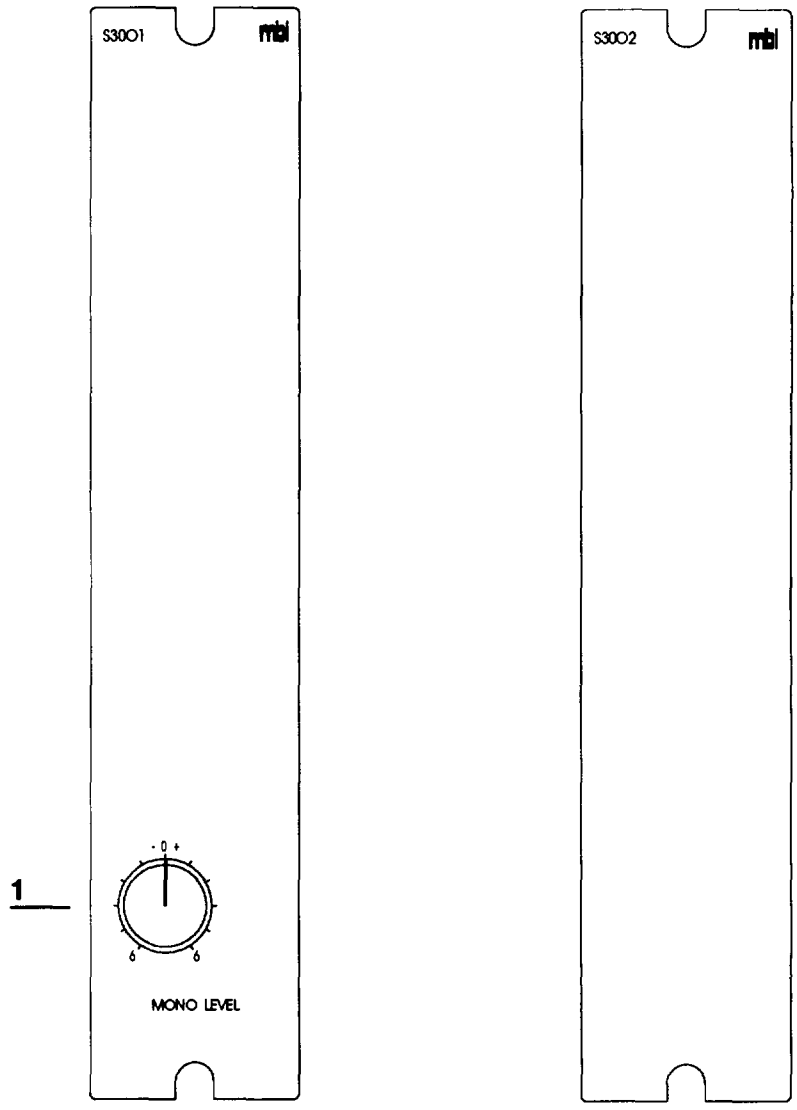
Two special output modules are fitted on the RAI versions of the console, for Transmission control and additional output balancing.

S30/O1

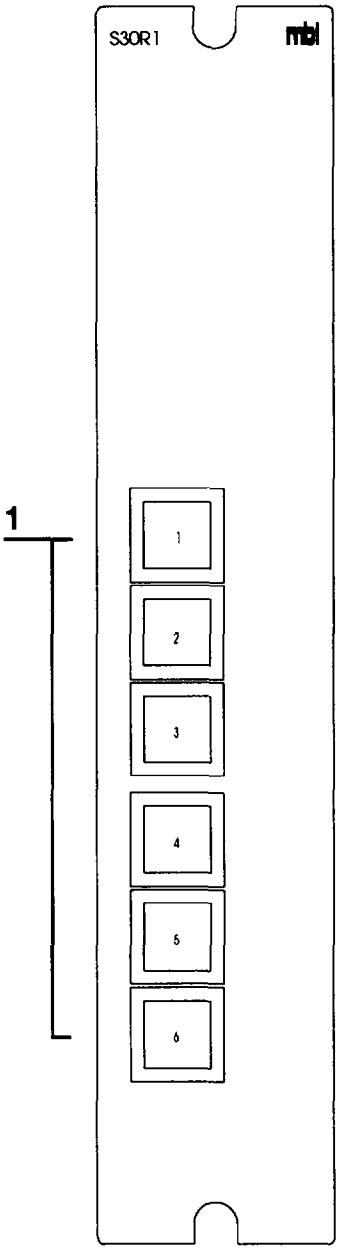
This module receives the Program bus and provides additional gain and a ± 6dB level trim (1) for the mono ouputs. External control is provided of Transmission mode switching. The module outputs are linked to:

S30/O2

This module receives the outputs of the S30/O2 module and provides final buffering and balancing of the Transmission Outputs.

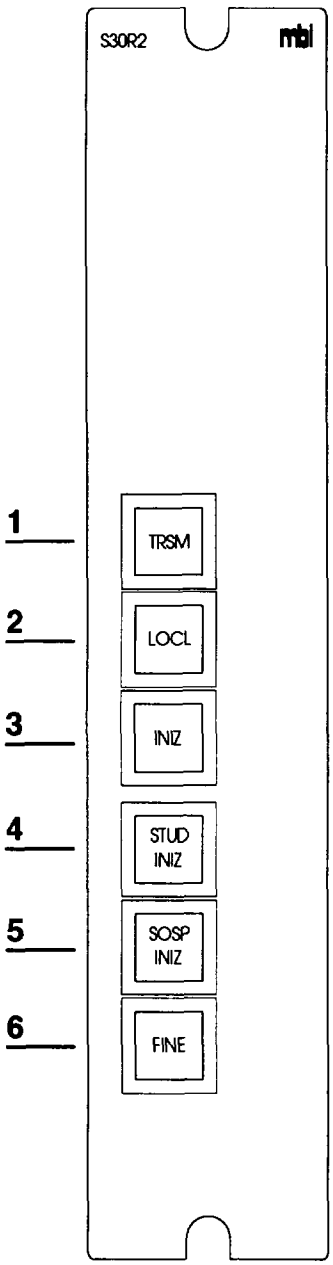


Special Switch Unit S30/R1



1 This module comprises 6 switches with internal tally lamps. The switches provide isolated switch closure for external control applications.

Piastra Comandi S30/R2



1 The **TRSM** (Transmission) switch enables the connection between the Console and the Central Control and all the necessary functions for the Transmission. (It is possible to exclude the Button with a Jumper). The same switch can be Remote with a Ground Command. When the Console is enabled sends a Confirmation Signal for the Transmission (closure to ground). Led on INIZIO and INIZIO STUDIO lights up.

2 Pressing the LOCALE (**LOCL**)switch allows the console to be used without connecting it to the Central Control. By pressing this switch, INIZIO and SOSPENSIONE STUDIO functions are enabled and the red Led on the FINE Button lights up. If a Transmission Enable arrives when you are in LOCALE, the Led on Transmission Button lights up and a Buzzer rings.

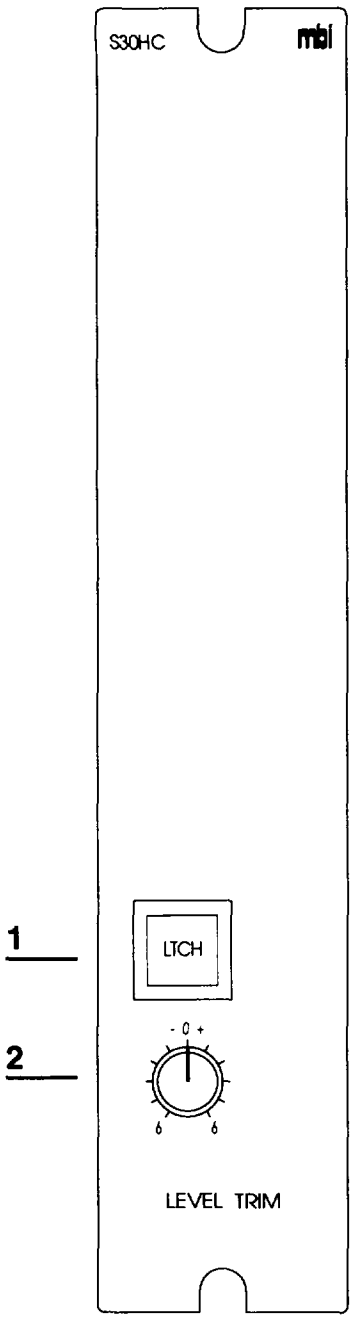
3 When the Console is enabled by the Transmission function, the yellow Led on INIZIO (**INIZ**) switch lights up. By pressing this switch you connect the Console to the Central Control, INIZIO and SOSPENSIONE STUDIO are enabled and red Led on the FINE switch lights up.

4 Pressing the INIZIO STUDIO (**STUD INIZ**) switch, if the function is enabled by INIZIO or LOCALE switch, mutes the Studio Monitors and the Headphone outputs and switches on the Microphones with a delay adjustable to 300 msec. Red Led on SOSPENSIONE STUDIO lights up.

5 Pressing the SOSPENSIONE (**SOSP INIZ**) switch, the Microphones are disabled, connected Studio Monitors and Headphone Outputs are enabled with a delay (not specified) to avoid transients.

6 Pressing the **FINE** switch cancels the LOCALE mode, automatically switching off all the switch LEDs, or cancels TRANSMISSION and in this case all the Led switch off if the Remote enable is no longer present. If it is still present, the Led on INIZIO switch lights up as would be the case if a Transmission Enable signal was received and the Studio Condition remains in the same condition as it was.

Hybrid Control Module S30/HC



The Hydrid Control module provides level trim and a remote switch closure for controlling an external telephone hybrid.

1 The latching **LTCH** (Latch) switch operates an isolated relay contact closure and either illuminates when latched or may receive an external isolated LED signal.

2 The LEVEL TRIM control provides ± 6dB level adjustment from the input to balanced output.

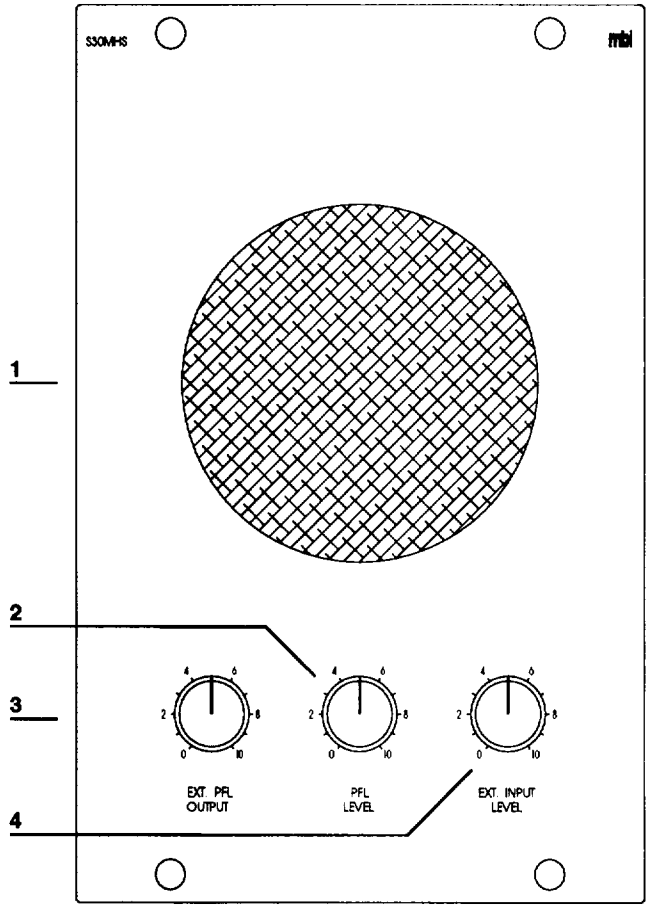
Meterbridge Loudspeaker S30/MHS

1 This module comprises a built-in **LOUDSPEAKER** which may receive PFL, two Reverse Talkback inputs and a stereo external line level input.

2 **PFL LEVEL** adjusts the level of a mono sum of the stereo PFL signal fed to the loudspeaker.

3 The stereo PFL signal is buffered and made available as a balanced output from this module. Output level is set by the **EXT. PFL OUTPUT** control.

4 An external stereo input is available which is summed to mono and fed to the loudspeaker at a level set by **EXT. INPUT LEVEL.**



4 Specifications

Specifications

Input Impedance

Mic	1k2Ω
Line	20kΩ

(Mono & Stereo)
Input transformer balance optional.

Channel Gain

Mono Mic	-25dB to -65dB (coarse)
	± 20dB (fine)
Mono Line	± 20dB (fine)

Note: Mono mic/line channel uses 'fine' control for line gain with 'coarse' control disabled.

Stereo	Mic	-30dB to -60dB
	Line	± 20dB

Pan Range

OFF / -3dB centre / OFF

Balance Range

± 12dB

HI Pass Filter

-3dB @ 80Hz	18dB/octave

Lo Pass Filter

-3dB @ 15kHz	18dB/octave

Crosstalk

Less than	-60dB @ 1kHz

C.M.R.R.

better than	-70dB @ 1kHz
	-60dB @ 10kHz

Noise

Mic	E.I.N. -128dB
Line	Less than -80dB

THD

Less than	0.05%

Max Output

Greater than	+22dBu

Output Impedance

Cleanfeed (mix minus)	< 50Ω
Group Output	< 50Ω
Main Output A.B.M.	
Electronically balanced	< 50Ω
Transformer balanced	< 75Ω

MBI reserve the right to amend or improve this specification without prior notice. E. & O.E.

Connector Pin Outs

Connector Pin Outs

Notes

- Audio connections are made on EDAC 20 way connectors. Audio is wired balanced +/- (+ is positive phase) with screen (ground).

- Inputs are on chassis sockets (fixed female).

  Inserts are on chassis plugs (fixed male).

  Outputs are on chassis plugs (fixed male).

  Connector polarisation pins are not used .

- Machine transport remotes (play, stop, record, etc) are on 25 way D type connectors (panel mounted socket - fixed female. One connector is provided for Machine 1 control and another for Machine 2 control.

- Additional remote controls (channel mute, cough cut, etc) are on a 15 way D connector (panel mount socket - fixed female).

- Unused connector pins are fitted to equalise insertion forces as recommended by the manufacturer.

Input Channel (S30/M/F + S30/S/F + S30/S/J/A)

Audio:

Inputs	20 way EDAC	Panel Socket
		+ .- (screen)
	Input 1 left	A.E (B)
	Input 1 right	D.J (C)
	Input 2 left	S.W (T)
	Input 2 right	V.X (U)
Inserts	20 way EDAC	Panel plug
	Send left	A.E (B)
	Send right	D.J (C)
	Return left	S.W (T)
	Return right	V.X (U)
Outputs *(Clean Feed)*	20 way EDAC	Panel plug
	Clean feed 1 output	A.E (B)
	Clean feed 2 output	D.J (C)
	External T/B input	S.W (T)

Remotes:

Commands from the module are relay contacts (earth and volts free). Commands to the module are opto isolator.

Machine 1	25-pin D connector	Panel Socket		
		Pins		
	(Screen) Ground	1		
	+12V : 0V	14	2	
	Cue Lamp command common/NO	15	3	Relay
	External Fader Start -/+	16	4	Opto isolator
	Fader Start tally common/NO	17	5	Relay
	External Play command -/+	18	6	Opto isolator
	Machine Not Ready tally -/+	19	7	Opto isolator
	External Prefade 1 -/+	20	8	Opto isolator
	M/C 1 Play command common/NO	21	9	Relay
	M/C 1 Play tally -/+	22	10	Opto isolator
	M/C 1 Record command common/NO	23	11	Relay
	M/C 1 Record tally -/+	24	12	Opto isolator
	M/C 1 Stop command common/NO	25	13	Relay

Machine 2

25-pin D connector	Panel socket		
	Pin		
(Screen) Ground	1		
+12V : 0V	14	2	
Cue Lamp command common/NO	15	3	Relay
External Fader Start -/+	16	4	Opto isolator
Fader Start tally common/NO	17	5	Relay
External Play command -/+	18	6	Opto isolator
Machine Not Ready tally -/+	19	7	Opto isolator
External Prefade 2 -/+	20	8	Opto isolator
M/C 2 Play command common/NO	21	9	Relay
M/C 2 Play tally -/+	22	10	Opto isolator
M/C 2 Record command common/NO	23	11	Relay
M/C 2 Record tally -/+	24	12	Opto isolator
M/C 2 Stop command common/NO	25	13	Relay

Remote

15-pin D connector	Panel socket		
	Pin		
(Screen) Ground	1		
External Mute input 1 -/+	9	2	Opto isolator
External Mute input 2 -/+	10	3	Opto isolator
Hybrid Latch 1 common/NO	11	4	Relay
Hybrid Latch 2 common/NO	12	5	Relay
External i/p changeover -/+	13	6	Opto isolator
Input 2 tally common/NO	14	7	Relay
Fader Open tally common/NO	15	8	Relay

Stereo Group Module S30/G/B

Audio:

Inserts	20 way EDAC	Panel plug	
		+ .- (screen)	
	Send left	A.E (B)	
	Send right	D.J (C)	
	Return left	S.W (T)	
	Return right	V.W (U)	
Group Individual Output	20 way EDAC	Panel plug	
		+ .- (screen)	
	Left	A.E (B)	
	Right	D.J (C)	
		S.W (T)	
		V.X (U)	
Remotes	15-pin D connector	Panel socket	
		Pins	
	(Screen) Ground	1	
	External Group Mute -/+	9 2	Opto isolator
		10 3	
		11 4	
		12 5	
		13 6	
		14 7	
	Fader Open tally common/NO	15 8	Relay

Output Module S30/OM

Audio:

Inserts	20 way EDAC	Panel plug
		+ .- (screen)
	Send left	A.E (B)
	Send right	D.J (C)
	Return left	S.W (T)
	Return right	V.W (U)
Outputs:	20 way EDAC	Panel plug
	Program 1 left	A.E (B)
	Program 1 right	D.J (C)
	Program 2 left	S.W (T)
	Program 2 right	V.X (U)
Remotes	15-pin D connector	Panel socket

	Pins		
(Screen) Ground	1		
Ducker On command -/+	9	2	Opto isolator
	10	3	
Ducker On Tally common/NO	11	4	Relay
	12	5	
	13	6	
+12V : 0V	14	7	
	15	8	

Aux Master Module S30/AM/B

Audio:

Inputs	20 way EDAC	Panel socket ***+ .- (screen)***
	Effects Return 1 left	A.E (B)
	Effects Return 1 right	D.J (C)
	Effects Return 2 left	S.W (T)
	Effects Return 2 right	V.W (U)
Inserts	20 way EDAC	Panel plug
	Aux 1 send	A.E (B)
	Aux 2 send	D.J (C)
	Aux 1 return	K.F
	Aux 2 return	L.M
	Aux 3 send	S.W (T)
	Aux 4 send	V.X (U)
	Aux 3 return	M.N
	Aux 4 return	R.P
	(Note that there is no separate screen connection for the insert return wires)	
Outputs	20 way EDAC	Panel plug
	Mono aux 1	A.E (B)
	Mono aux 2	D.J (C)
(Stereo aux left)	Mono aux 3	S.W (T)
(Stereo aux right)	Mono aux 4	V.X (U)
Remotes	25-pin D connector	Panel socket

	Pins		
(Screen) Ground	1		
+12V : 0V	14	2	
Aux 1 On tally common/NO	15	3	Relay
External Aux 1 on/off -/+	16	4	Opto isolator
Aux 2 On tally common/NO	17	5	Relay
External Aux 2 on/off -/+	18	6	Opto isolator
	19	7	
	20	8	
Aux 3 On tally common/NO	21	9	Relay
External Aux 3 on/off -/+	22	10	Opto isolator
Aux 4 On tally common/NO	23	11	Relay
External Aux 4 on/off -/+	24	12	Opto isolator
	25	13	

RAI Special Output S30/01

Audio	20 way EDAC	Panel Plug	
		+ .- (screen)	
	Stereo Transmission left	A.E (B)	
	Stereo Transmission right	D.J (C)	
	Mono Transmission	S.W (T)	
	Mono Program	V.X (U)	
	Program left	K.M (F)	
	Program right	L.R (H)	

(The Tx signals are unbalanced, and intended to be linked to S3002 via the EDACs. The other signals are buffered balanced outputs)

Remotes	15-pin D connector	Panel socket		
		Pin		
	(Screen) Ground	1		
	Transmission mode -/+	9	2	Opto isolator
		10	3	
		11	4	
		12	5	
		13	6	
	+12V : 0V	14	7	
		15	8	

RAI Special Output S30/O2

Audio

Inputs

20 way EDAC	Panel Plug
	+ .- (screen)
Stereo Transmission left	A.E (B)
Stereo Transmission right	D.J (C)
Mono Transmission	S.W (T)
External Mono	V.X (U)
External Stereo left	K.M (F)
External Stereo right	L.R (H)

(The Tx signals are intended to be linked to S3001 via the EDACs. The other signals are balanced inputs)

Outputs

20 way EDAC	Panel Plug
	+ - (screen)
Stereo Transmission 1 left	A.E (B)
Stereo Transmission 1 right	D.J (C)
Stereo Transmission 2 left	S.W (T)
Stereo Transmission 2 right	V.X (U)
Mono Transmission 1	K.M (F)
Mono Transmission 2	L.R (H)

(All these signals are buffered balanced outputs)

20 way EDAC Panel socket

Loudspeaker Module S30/LS

Audio

Inputs	20 way EDAC		Panel socket
			+ .- (screen)
	External input left		A.E (B)
	External input right		D.J (C)
Outputs	20 way EDAC	Panel Plug	
			+ .- (screen)
	Main loudspeaker left		A.E (B)
	Main loudspeaker right		D.J (C)
	Alternate loudspeaker left		S.W (T)
	Alternate loudspeaker right		V.X (U)
	Headphone left		K.M (F)
	Headphone right		L.R (H)

Headphone Module S30/HM/C

Audio:

Inputs	20 way EDAC	Panel Plug
		+ .- (screen)
	External 1	A.E (B)
	External 2	D.J (C)
	External 3	S.W (T)
	External 4	V.X (U)
	External 5 left	K.M (F)
	External 5 right	L.R (H)

Outputs	20 way EDAC	Panel Plug
		+ .- (screen)
	Headphones 1	A.E (B)
	Headphones 2	D.J (C)
	Headphones 3	S.W (T)
	Headphones 4	V.X (U)
	Headphones 5 left	K.M (F)
	Headphones 5 right	L.R (H)

Talkback Audio Module S30/TA

Audio:

Inputs	20 way EDAC	Panel socket
		+ .- (screen)
	External 1 input left	A.E (B)
	External 1 input right	D.J (C)
	External 2 input left	K.F
	External 2 input right	L.H
	External 3 input left	S.W (T)
	External 3 input right	V.X (U)
	External 4 input left	M.N
	External 4 input right	R.P

Outputs	20 way EDAC	Panel plug
		+ .- (screen)
	External 1 output left	A.E (B)
	External 1 output right	D.J (C)
	External 2 output left	K.F
	External 2 output right	L.H
	External 3 output left	S.W (T)
	External 3 output right	V.X (U)
	External 4 output left	M.N
	External 4 output right	R.P

(Note absence of screen pin on 2 & 4 in each case)

Remotes	25-pin D connector	Panel socket		
	(Screen) Ground	1		
	+12V/0V	14	2	
	Ext 1 TB lamp -/+	15	3	Opto isolator
	Ext 2 TB lamp -/+	16	4	Opto isolator
	Ext 3 TB lamp -/+	17	5	Opto isolator
	Ext 4 TB lamp -/+	18	6	Opto isolator
	Ext 1 TB command common/NO	19	7	Relay
	Ext 2 TB command common/NO	20	8	Relay
	Ext 3 TB command common/NO	21	9	Relay
	Ext 4 TB command common/NO	22	10	Relay
		23	11	
		24	12	
		25	13	

Special Remote Start Module S30/RS

Remotes

25-pin D connector 1 — Panel socket

	Pins		
(Screen) Ground	1		
Switch 6	14	2	mom. make
Lamp 6 -/+	15	3	LED
Switch 5	16	4	mom. make
Lamp 5 -/+	17	5	LED
Switch 4	18	6	mom. make
Lamp 4 -/+	19	7	LED
Switch 3	20	8	mom. make
Lamp 3 -/+	21	9	LED
Switch 2	22	10	mom. make
Lamp 2 -/+	23	11	LED
Switch 1	24	12	mom. make
Lamp 1 -/+	25	13	LED

25-pin D connector 2 — Panel socket

	Pins		
(Screen) Ground	1		
Switch 12	14	2	mom. make
Lamp 12 -/+	15	3	LED
Switch 11	16	4	mom. make
Lamp 11 -/+	17	5	LED
Switch 10	18	6	mom. make
Lamp 10 -/+	19	7	LED
Switch 9	20	8	mom. make Lam
Switch 8	22	10	mom. make
Lamp 8 -/+	23	11	LED
Switch 7	24	12	mom. make
Lamp 7 -/+	25	13	LED

Talkback Control Module S30/TB

Audio

20 way EDAC socket — Panel socket

	+.- (screen)
Remote Input 1	A.E (B)
Remote Input 2	D.J (C)

Remotes

15-pin D connector 1 — Panel socket

	Pins	
(Screen) Ground	1	
Transmission Input -/+	9 2	Opto isolator
0V : +12V	10 3	Current-limited
DA1/DA2	11 4	High active
-17V : +17V	12 5	Current-limited
D1/D0	13 6	High active
D3/D2	14 7	High active
	15 8	

15-pin D connector 2 — Panel socket

	Pins	
(Screen) Ground	1	
Transmission Input -/+	9 2	Opto isolator
0V : +12V	10 3	Current-limited
DA2/DA3	11 4	High active
-17V : +17V	12 5	Current-limited
D1/D0	13 6	High active
D3/D2	14 7	High active
	15 8	

Hybrid Control Module S30/HC

Audio	20 way EDAC socket	Panel socket	
		+.- (screen)	
	Input	A.E (B)	
	Output	D.J (C)	
Remotes	15-pin D connector	Panel socket	
		Pins	
	(Screen) Ground	1	
	Latch Lamp -/+	9 2	Opto isolator
	Latch Relay common/NO	10 3	Relay
		11 4	
		12 5	
		13 6	
	+12V : 0V	14 7	Current-limited
		15 8	

Special Switch Unit S30/R1

Remotes

25-pin D connector	Panel socket		
	Pins		
(Screen) Ground	1		
Switch 1	14	2	mom. make
Lamp 1 -/+	15	3	LED
Switch 2	16	4	mom. make
Lamp 2 -/+	17	5	LED
Switch 3	18	6	mom. make
Lamp 3 -/+	19	7	LED
Switch 4	20	8	mom. make
Lamp 4 -/+	21	9	LED
Switch 5	22	10	mom. make
Lamp 5 -/+	23	11	LED
Switch 6	24	12	mom. make
Lamp 6 -/+	25	13	LED

Oscillator Module S30/OC

Audio	20 way EDAC plug	Panel plug
		+ .- (screen)
	Output 2	A.E (B)
	Output 1	D.J (C)
	Output 4	S.W (T)
	Output 3	V.W (U)

Remotes	15-pin D connector	Panel socket		
		Pins		
	(Screen) Ground	1		
	Remote On command -/+	9	2	Opto isolator
		10	3	
		11	4	
		12	5	
		13	6	
	+12V : 0V	14	7	Current-limited
		15	8	

Meterbridge Loudspeaker S30/MHS

Audio

20 way EDAC socket — Panel socket

	+ .- (screen)
External Input left	A.E (B)
External Input right	D.J (C)
Reverse Talkback 1	S.W (T)
Reverse Talkback 2	V.X (U)
PFL Output left	K.M (F)
PFL Output right	L.R (H)

Remotes

15-pin D connector — Panel socket

	Pins		
(Screen) Ground	1		
Reverse Talkback 1 -/+	9	2	Opto isolator
Reverse Talkback 2 -/+	10	3	Opto isolator
	11	4	
	12	5	
	13	6	
+12V : 0V	14	7	Current-limited
	15	8	

Note:

1. The S30 MHS will also monitor the desk prefade bus and be controlled by the 'LOCAL mute' bus via the internal bus connector.

2. External Audio input is stereo, but combined to mono internally.

Desk Selector Module S30/SEL

The remote plugs for this module are wired pin-for-pin to the Selector Rack remotes.

Remotes

15-pin D connector 1	Panel plug	
	Pins	
(Screen) Ground	1	
OV : +12V	9 2	Current-limited
Relay 1 /LED power left	10 3	
Relay 3 /Relay 2	11 4	
Relay 5 /Relay 4	12 5	
Relay 7 /Relay 6	13 6	
Relay 9 /Relay 8	14 7	
Relay 11 /Relay 10	15 8	

15-pin D connector 2	Panel plug	
	Pins	
(Screen) Ground	1	
OV : +12V	9 2	Current-limited
Relay 12 /LED power right	10 3	
Relay 14 /Relay 13	11 4	
Relay 16 /Relay 15	12 5	
Relay 18 /Relay 17	13 6	
Relay 20 /Relay 19	14 7	
Relay 22 /Relay 21	15 8	

Selector Rack Unit

Audio 2 x 56 way EDAC Panel socket

Each 56 way connector carries 11 stereo audio inputs and 1 stereo audio output.

The S30 SEL control module has link options to command the rack unit to function as two individual 11 into 1 stereo or one 22 into 1 stereo switcher.

Each rack unit will hold six switching cards.

56 way EDAC

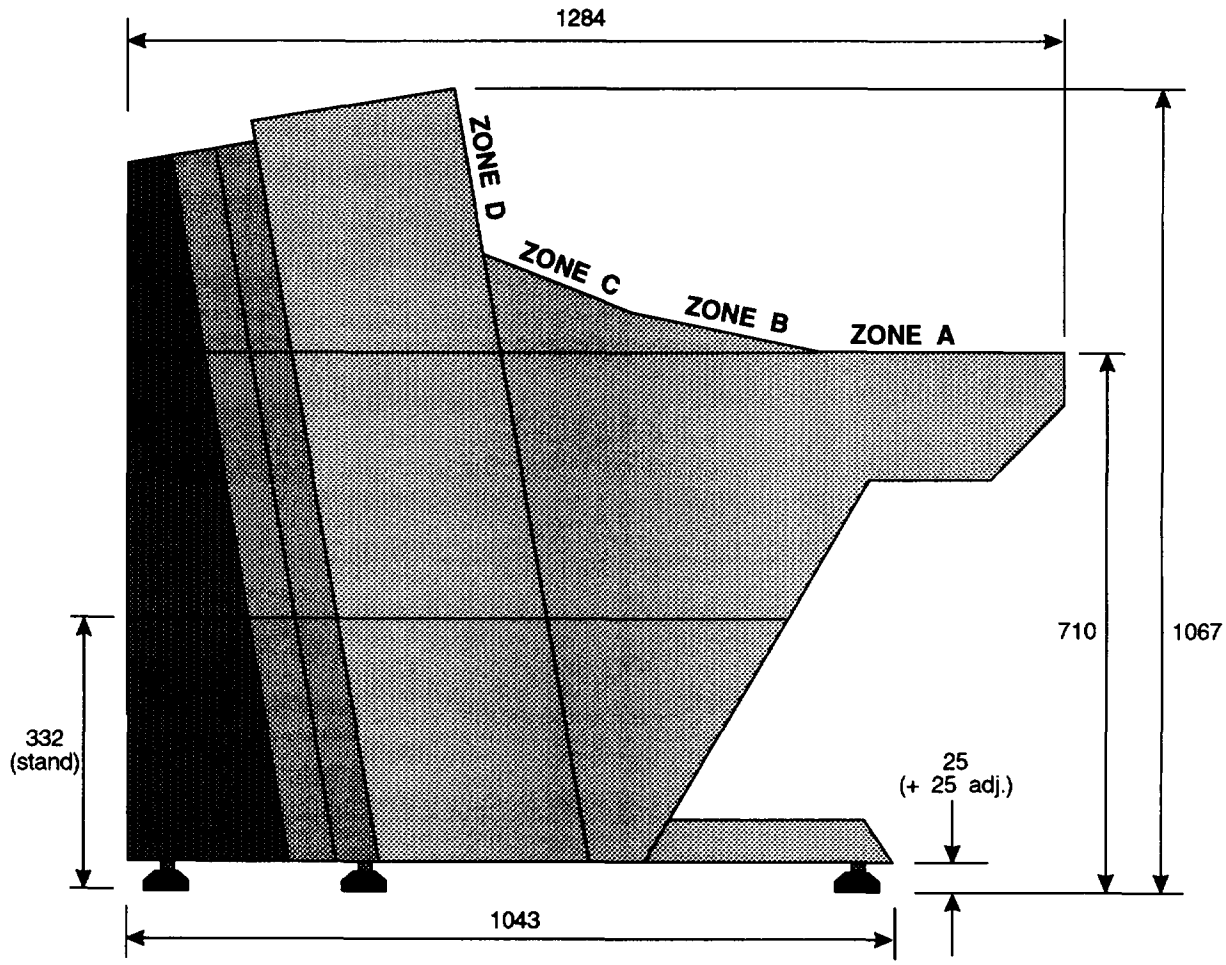
Connector 1 (2)	***Pin-out (+.-)***
Input 1 (12) left	A.B
Input 1 (12) right	C.D
Input 2 (13) left	E.F
Input 2 (13) right	J.K
Input 3 (14) left	L.M
Input 3 (14) right	N.P.
Input 4 (15) left	R.S
Input 4 (15) right	U.V
Input 5 (16) left	W.X
Input 5 (16) right	Y.Z
Input 6 (17) left	a.b
Input 6 (17) right	c.d
Input 7 (18) left	k.l
Input 7 (18) right	m.n
Input 8 (19) left	p.r
Input 8 (19) right	s.t
Input 9 (20) left	u.v
Input 9 (20) right	x.y
Input 10 (21) left	z.AA
Input 10 (21) right	BB.CC
Input 11 (22) left	DD.EE
Input 11 (22) right	HH.JJ
Input 11 (22) screen	e.h
Output 1 (2) left	KK.LL
Output 1 (2) right	MM.NN
Output 1 (2) screen	f.y

6 Appendices

Dimensions

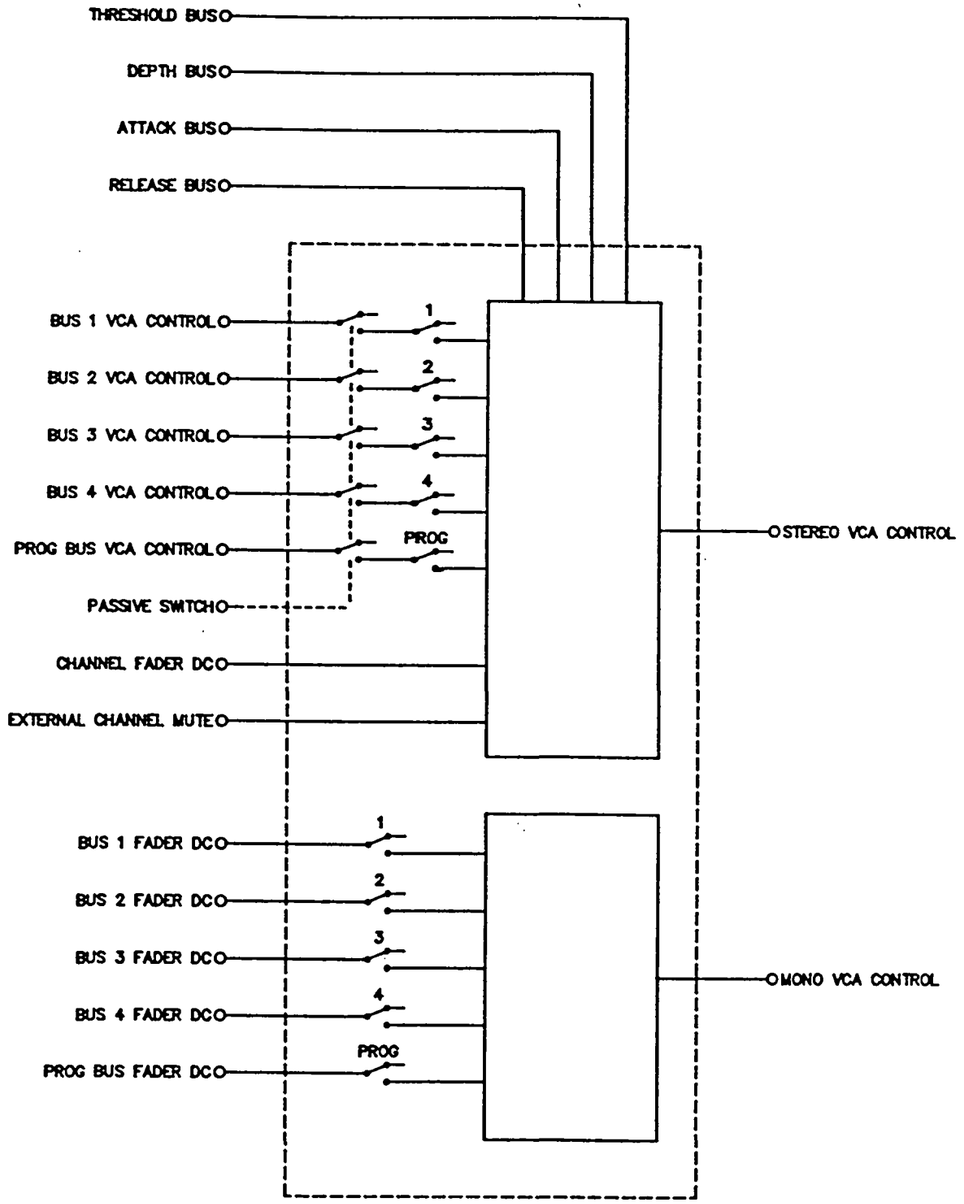
Dimensions

Series 30 Outline Dimensions



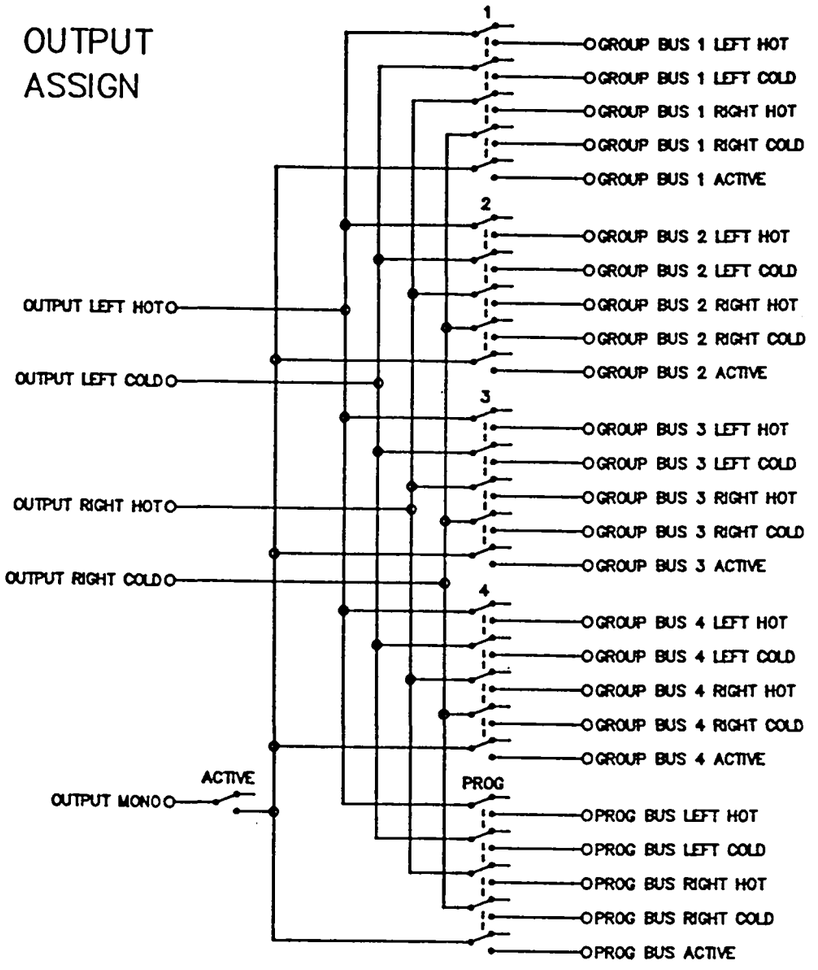
OVERALL LENGTH (including side trim)	
40 Way	1682
48 Way	2007

All dimensions are in millimetres.

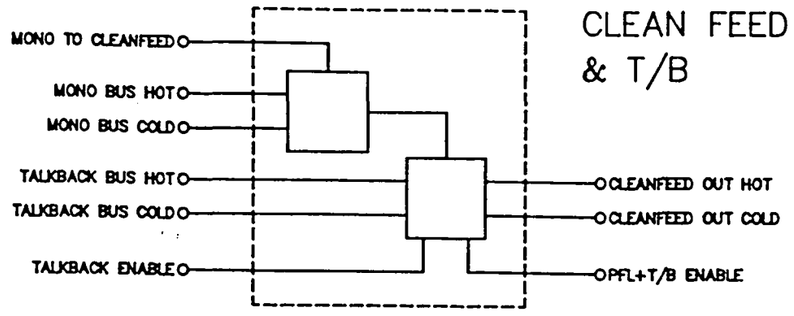


VCA CONTROL

OUTPUT ASSIGN



CLEAN FEED & T/B



Dimensions in Millimetres Third angle projection Tolerance +/_ 0.3 mm	DRAWN: Paul H CADNAME: ROUTBLOC	Soundcraft	PROJECT: SERIES 30	DRAWING No: S30/C/GPBLOCS	TITLE: GPM/GPS BLOCKS