

DDA

a MARK IV company

BETTER BY DESIGN

A DDA LIVE SOUND CONSOLE

The QII Monitor Console

Listen...

DDA have been making Live sound consoles since the company was formed in 1980 by David Dearden and Gareth Davies. Our consoles have always been designed to offer class leading audio performance together with carefully conceived design features and ergonomics. We have also never lost sight of the need to provide this level of excellence at an affordable price.

DDA consoles are developed using the skills of some of the most creative and innovative design engineers in the business, but more than this, we never stop listening to you, our customers. Our aim, with all our Live products, is quite simple - to help you produce a better performance.

QII Monitor is one of the finest stage monitor consoles available - when you have finished reading this brochure we're sure you will agree.

Look...

- In the same way that QII Monitor's partner, the QII FOH, made the use of Left/Centre/Right panning a viable option, QII Monitor has been designed to provide the systems functionality required for 'in-ear' monitor systems without operational compromise. 6 stereo and 8 mono sub-groups and provided on the stereo version of QII Monitor while a mono version, offering 20 mono sub-groups, is available for conventional applications. On both versions a separate stereo bus is provided for side fills or FOH purposes along with an innovative sub-group reassign facility. This allows a basic mix, set up on any of 4 reassign buses, to be re-routed to any of the other outputs providing a very easy and quick way to generate a number of similar mixes.

- Without compromising control surface design or structural integrity, we've made QII Monitor extremely 'space-effective' - the 40 input model is only 1755mm long compared to the near 2500mm of one of our competitors offerings! Metering has been provided on each output module enabling the height of the console to be kept to a minimum. An optional meterbridge is available for applications where additional metering is desired.

- Soundchecks and set-ups can be a labourious task. We've aimed to make the process as painless as possible by making QII Monitor's Cue system both simple to use and hugely powerful. Cues can be globally selected to be either PFL, AFL or Solo-In-Place. Each individual cue is capable of momentary or latching, interlocking or additive operation. Input cues have priority over outputs - trouble shooting and EQ trimming have never been simpler. There is even a single button to clear all cue selections at a stroke.

- The QII Monitor systems implementation is everything you would expect:
- Balanced Mic and Line inputs.
- Sweep High pass filter.



- 4-band sweep EQ with switchable Q on mids.
- Balanced inserts at +4dBu - selectable pre/post EQ.
- Balanced direct channel outputs at +4dBu.
- 6 segment LED metering on all inputs.
- 4 mute groups.
- Individual talkback assigns to sub-group outputs.
- Integral Clearcom compatible interface.
- Integral Test oscillator/pink noise generator.

Hear...

When it comes to audio quality, you would expect a console from DDA to leave the rest standing. You will not be disappointed, our attention to the detail of circuit topologies and systems design delivers a level of performance that must be heard to be appreciated. D²™ - DDA's proprietary 'distributed decoupling' technique and Ultra-Ground™, our carefully conceived grounding regime using a 1/2 inch solid copper earth bus all contribute to exceptional noise, crosstalk, distortion and interference immunity characteristics.

Believe..

QII is The monitor Console. Look no further.

Master and Communications Modules

The four module wide master section contains metering, oscillator, talkback and monitoring facilities together with the master faders. The same modules are used for both the Mono and Stereo Monitor consoles.

METERS

Two dual meters are provided. One pair indicates the main stereo output while the other shows solo levels. Calibration trimmers are accessible through the front panel. Three LEDs provide power supply status.

PINK/1kHz

This selects either the 1kHz oscillator or the Pink noise generator.

ON

Switches on the oscillator/pink noise generator.

OSC

Adjusts the oscillator/pink noise generator output level.

EXT INPUT

Injects a stereo input direct to the stereo mix bus via a rotary level control. A solo (listen) facility is provided.

TALKBACK

A front panel XLR is provided for a dynamic talkback microphone along with four assignment switches and a microphone gain control:

EXT - talkback to the external output.

INT - talkback to groups via the T/B enable switch on each group module.

ALL GRPS - talkback to group mix buses (prefader).

L/R - talkback to main stereo buses (prefader).

S/TONE

Adjusts the 'sidetone' level. Sidetone is the level of the headset microphone signal heard in the local headphones.

COMMS

Controls the level to the COMMS headset.

COMMS TO PHONES

Enables talkback to the headphone output.

CALL

Clears other destinations from the communications ring and signals a new call.

T/B (Button)

Enables talkback to the pre-selected destinations.

CUE

Solos the main stereo outputs.

PRE

Switches CUE to monitor the signal prior to the main stereo faders.

LISTEN L/R

Routes the main stereo outputs to the monitoring system. If this switch is not depressed monitors will be active only in solo mode.

MONO

Monos the main monitor outputs.

DIM

Dims the main monitor outputs.

FADERS

The fader to the left-hand side of the module controls the stereo outputs and the one to the right-hand side controls the monitor outputs.

MASTER SOLO CONTROLS

PFL/AFL

Selects either the PFL or AFL buses to the input of the solo system.

CUE TRIM

Adjusts the audible cue level without effecting the metered level.

CUE INTLK

Selects Cue Interlock mode. In this mode pressing any Cue button will cancel the previous cues. Without Cue Interlock enabled any number of cues can be selected at the same time, but with input cues 'suspending' any output cues.

CLR

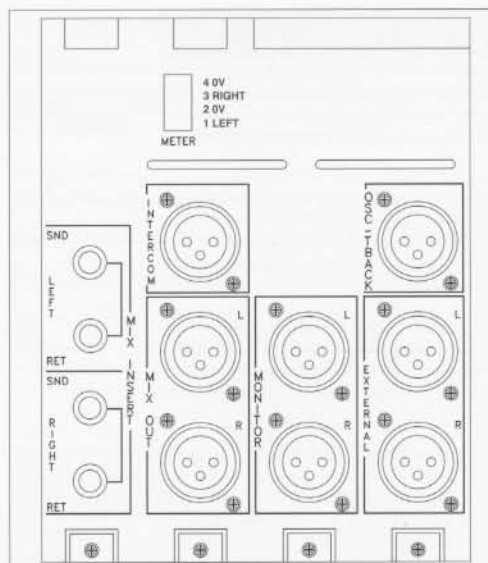
Clears all cue selections except those on the External input. Two leds indicate whether input and output cues are active.

MASTER MUTE

Mutes all channels assigned to relevant mute bus (1-4).

HEADPHONES

Twin 1/4 inch jack headphone outlets are fitted as well as a 4 pin XLR for connection to the comms headset. A level control and ON switch are provided.



CONNECTORS AND PIN ASSIGNMENTS

INSERT SEND/RETURN (balanced).

Separate 1/4" A gauge TRS jack socket.

Nominal level +4dBu

TIP Signal +ve (Hot)

Ring Signal -ve (Cold)

Sleeve Ground.

Send output impedance < 75R

Return input impedance > 10k

MIX MONITOR & OSCILLATOR OUTPUTS (balanced).

XLR type 3 pin Male.

Nominal level +4dBu

Output impedance < 75R

EXTERNAL INPUTS (balanced).

XLR type 3 pin Female.

Nominal level +4dBu

Input impedance > 10k

Pin assignments for all 3 pin XLRs (except Intercom)

Pin 1 Ground

Pin 2 Signal +ve (Hot)

Pin 3 Signal -ve (Cold)

INTERCOM.

XLR type 3 pin Female.

Pin 1 Ground

Pin 2 Ring/power

Pin 3 Audio/call

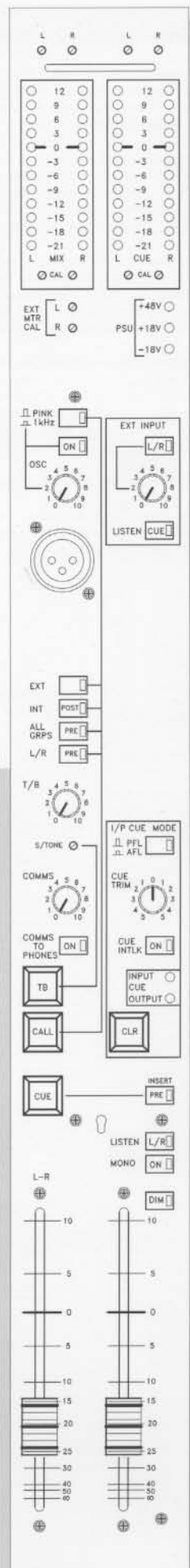
External meters.

Pin 1 Signal Left

Pin 2 Common

Pin 3 Signal Right

Pin 4 Common



STM Input Module

The STM (Stereo/Mono) Input Module is designed to send to 6 stereo and 8 mono monitor sends. Microphone and Line inputs are available together with an equaliser which can be internally switched to be either pre or post the insert point which is fully balanced on both the send and return.

48V
When pressed this switches on the phantom voltage for the microphone input.

-20
This switches a 20dB attenuator into the microphone input. If the input is transformer coupled this pad can assist in preventing saturation on high level signals as it precedes the transformer.

PHASE
This reverses the phase of the selected input signal, to compensate for cabling errors.

LINE
This selects the LINE INPUT when depressed and illuminated. A Rotary GAIN Control adjusts the gain of both the mic and the line inputs.

HPF
Inserts a HIGH PASS FILTER, which can be swept from 20Hz to 500Hz, into the signal chain.

INS
Selects the insert return.

EQ
Selects the equaliser to be in circuit. When the equaliser is not switched in it is physically bypassed. A 4 band equaliser is available with switchable Q on the mid frequency sections. Hi Q (1.8) is obtained with the buttons depressed. Low Q is 0.9. The remaining controls are identical for each section consisting of a frequency control and a boost/cut control. The mid sections have a peaking response while the HF and LF sections are shelving.

It should be noted that the equaliser can be selected to be pre or post the insert point by means of an internal switch on the module. The 6 stereo sends are identical, and consist of a rotary level and pan control, a PRE switch to select prefade operation and an ON switch to make the send active. The pre-fade signal is selectable by links on the circuit board and can be pre or post the equaliser or post the channel ON switch so that it will be cut with the channel although the level will not depend upon the fader. Consoles normally leave the factory with the PRE signal linked as POST-EQ. The remaining 8 sends are mono. Each mono send has a rotary level control while pairs of sends have a PRE and an ON switch operating in the same way as for the stereo sends.

MIX
This switch assigns the group signal to the main L/R mix bus of the console. This signal is post fade post PAN.

ON
When pressed this enables the channel POST FADE and POST ON signals.

LED METER
The 6 segment meter can be selected to display PRE/POST EQ or POST FADER signal. Consoles normally leave the factory linked so that the meter shows the PRE-EQ signal. The top LED indicates that the signal is approaching clipping level and it is linked to three points in the signal chain to show a peak occurring at any of them. The LED will illuminate if the signal is within 4dB of the maximum possible.

1, 2, 3, 4
Selects the MASTER MUTE GROUP assignment. Thus, for example, if switch 1 is pressed and the MASTER MUTE for Group 1 is operated the module will MUTE. The master switches are located on the master module and are discussed on page 3.

FADER
This controls the level of all post fade signals within the module. The DIRECT OUTPUT is also controlled by the fader.

CUE
This button places PRE and POST FADE signals onto the SOLO BUSES and signals the master solo logic that a solo is being requested. If pressed momentarily the solo will latch and remains on, however, if the button is held for less than half a second then the solo will release as the button is released.

CONNECTORS AND PIN ASSIGNMENTS

MIC INPUT: Female XLR type 3 pin connectors, Balanced
Nominal level: -56dBu to -8dBu
Pin 1: Ground
Pin 2: Signal +ve (hot)
Pin 3: Signal -ve (cold)
Input impedance: >2k.

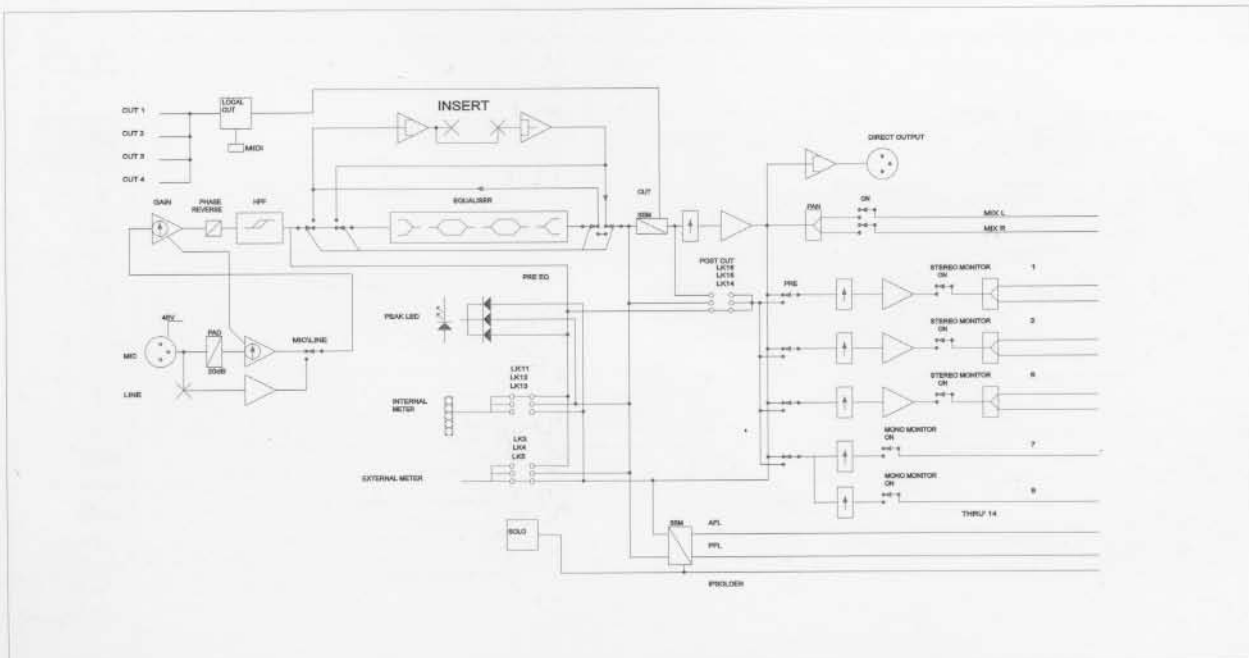
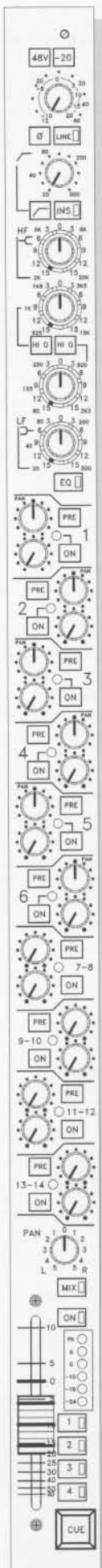
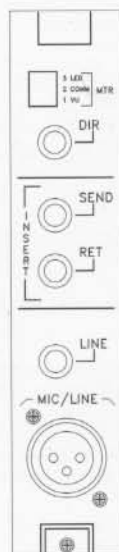
LINE INPUT: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Input Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Input Impedance: >10k

INSERT SEND: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Output Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Output Impedance: <75R

INSERT RETURN: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Input Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Input Impedance: >10k

DIRECT OUTPUT: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Output Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Output Impedance: <75R

Note that the Mic input XLR connector can be used as the line input if no connector is inserted in the LINE INPUT jack.



STM Output Module

The STM (Stereo/Mono) Output Module contains a stereo group output, a mono group output and a stereo external input. Normally six stereo output modules are supplied in a stereo console.

THE STEREO OUTPUT SECTION

CUE LEVEL

The signal sent to the Solo bus can be adjusted by ± 15 dB.

BAL

This is a balance control which will affect the group output and consequently the SUB signal.

SUB

This enables the group to be used as a sub group by assigning it to the stereo bus, used either as sidefills in the monitor applications, or main L/R speakers in FOH applications.

INS

This enables the INSERT return. Note that the insert send is always active.

PHASE

This reverses the phase of the group output and can be useful in instances where feedback is occurring.

TB

This enables talkback onto the group output. Note that the talkback is injected after the fader and the ON switch.

ON

This enables the stereo output.

DIM

This reduces the level of the group output by 6dB and again can be useful if feedback is occurring.

LED METER

The 12-way led meter indicates the higher of the stereo group levels.

EXT

Switches the meter to display the external stereo input signal.

PRE

Switches the signal fed to the solo system to be pre the insert point, useful for checking the group signal before and after processing.

CUE

This selects the group to the SOLO system. Normally the signal is pre fade and post insert but it can be switched to read PRE INSERT.

THE MONO OUTPUT SECTION

The mono output section illustrated on this page is almost identical to the stereo section described on the previous page. In place of the BALANCE control there is a PAN control which pans the signal to the L/R mix bus when the SUB switch is pressed. The meter is permanently assigned to the group output.

The CUE system is identical to that of the stereo input section with group solos being treated as output solos by the master solo logic.

THE EXTERNAL INPUT SECTION

This section allows the connection of a stereo input to the group module.

ON

This connects the external input to the stereo group output therefore allowing it to be mixed with any other signals assigned to that group. The associated level control adjusts the external input signal level.

CUE

This enables the external input to be soloed. The external input is treated as an input solo by the master solo logic. A possible application for this would be to have the radio receiver from an in ear monitoring system connected to the external input thus enabling the monitor mix to be checked.

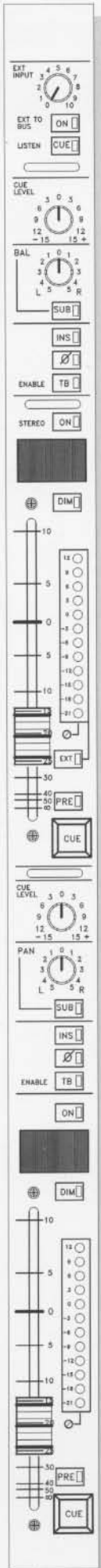
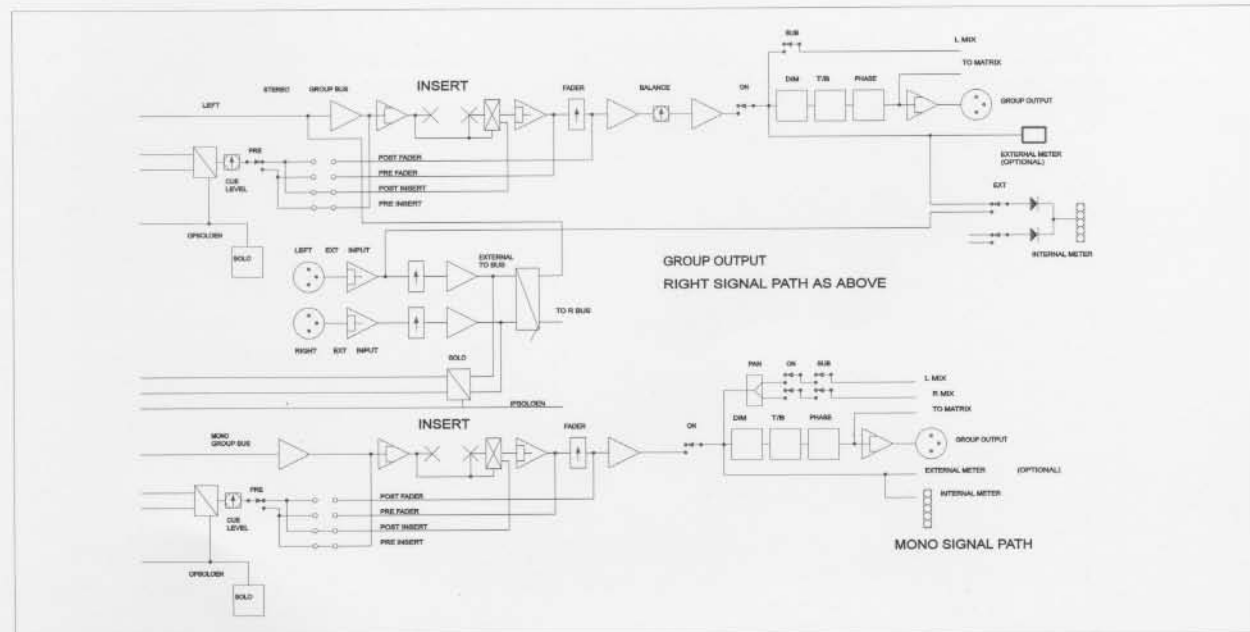
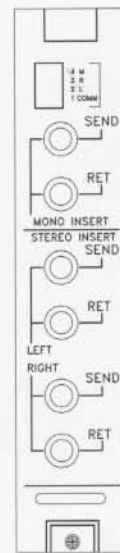
CONNECTOR AND PIN ASSIGNMENTS

The connector panel contains the mono and stereo group insert jacks and the external meter connector.

INSERT SEND: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
 Nominal Output Level: +4dBu
 TIP: Signal +ve (Hot)
 RING: Signal -ve (Cold)
 SLEEVE: Ground
 Output Impedance: <75R

INSERT RETURN: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
 Nominal Input Level: +4dBu
 TIP: Signal +ve (Hot)
 RING: Signal -ve (Cold)
 SLEEVE: Ground
 Input Impedance: >10k

EXTERNAL METER:
 1 Common
 2 Mono Group External Meter
 3 Left Group External Meter
 4 Right Group External Meter



STM Reassign Module

Normally two STM (Stereo/Mono) Reassign Modules are fitted to a console and, in conjunction with the six standard output modules, gives eight mono output groups. The mono output group on the reassign module is identical to those on the standard output modules.

The group output is available in the normal way but by using the reassign controls the signal can also be fed to the mix buses of any output groups. Thus when a suitable mix is achieved on the mono group it can be reassigned to any other output where it can then be mixed with other signals already assigned to that output. This greatly speeds up the creation of monitor mixes.

A typical use of the re-assign system is a standard drum mix, which could consist of 8 Mic inputs. These inputs could be mixed to one of the Re-Assign group outputs, then when a performer requests more drums to his monitors only one control will need to be adjusted. Without the re-assign system the same procedure would need the adjustment of 8 controls.

Before re-assignment can take place the BUS TO RE-ASSIGN switch must be active.

Reassignment to the stereo buses is made by LEVEL and PAN controls with each send having an ON switch. The mono reassigns are controlled by a LEVEL control with an ON switch operating across pairs of sends.

THE EXTERNAL INPUT SECTION

The external input can accept a mono signal and has a LEVEL control and an ON switch. The external input can be assigned to the group by sending through the reassign output for that group.

CONNECTOR AND PIN ASSIGNMENTS

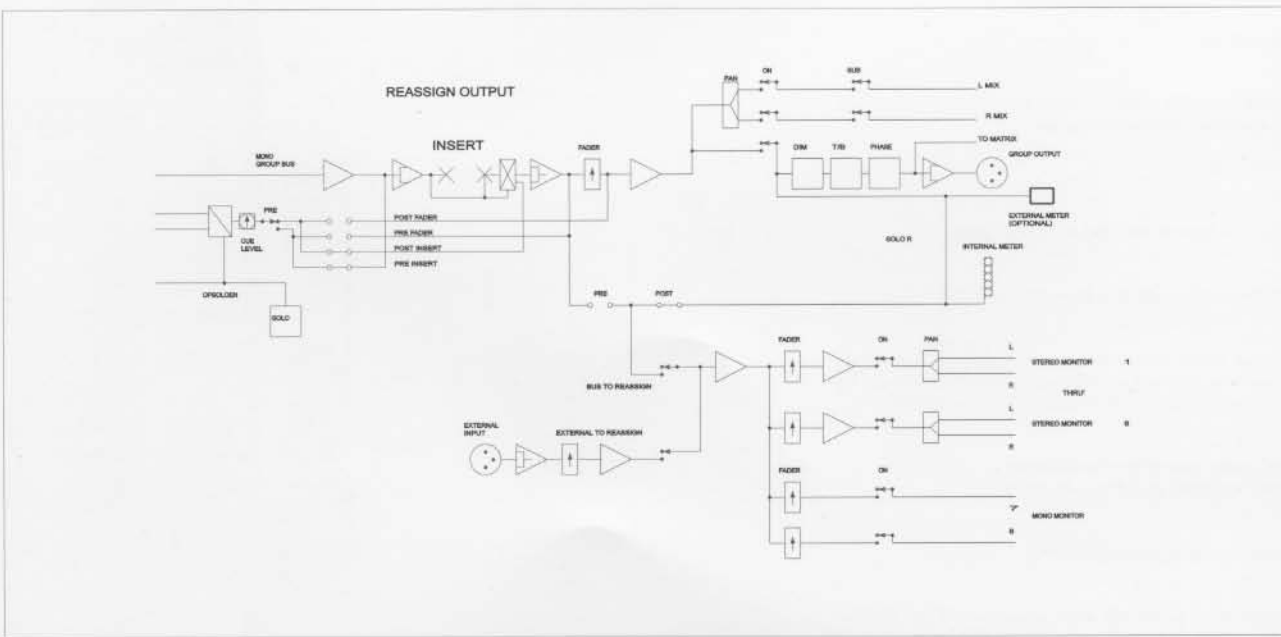
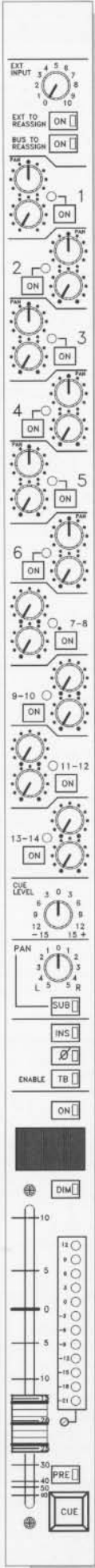
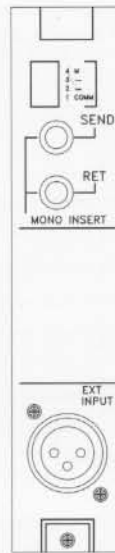
The connector panel contains connections for the mono group output, the group insert send and return and the external meter connections.

INSERT SEND: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
 Nominal Output Level: +4dBu
 TIP: Signal +ve (Hot)
 RING: Signal -ve (Cold)
 SLEEVE: Ground
 Output Impedance: <75R

INSERT RETURN: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
 Nominal Input Level: +4dBu
 TIP: Signal +ve (Hot)
 RING: Signal -ve (Cold)
 SLEEVE: Ground
 Input Impedance: >10k

EXTERNAL METER:
 1 Common
 2 Not Used
 3 Not Used
 4 Group Meter

GROUP OUTPUT: Female XLR type 3 pin connector, Balanced
 Nominal level: +4Bu
 Pin 1: Ground
 Pin 2: Signal +ve (hot)
 Pin 3: Signal -ve (cold)
 Output Impedance: <75R



ALM Output Module

The ALM (All Mono) Output Module contains two mono output sections and two mono external inputs which can be assigned to the group mixing buses. These bus inputs can also be soloed and the level of the solo varied to suite listening conditions. Jumpers are used to assign the groups to their buses and the external inputs will follow these jumpers.

BUS INPUT (UPPER)

ON
Used to enable the upper mono external bus input.

CUE
Used to solo the upper mono external input.

BUS INPUT (LOWER)

The switches on the lower bus input are identical to those in the upper section

MONO OUTPUT SECTION (UPPER)

CUE LEVEL
The signal sent to the solo bus can be adjusted by ± 15 dB.

PAN
This pans the SUB signal across the stereo mix bus.

SUB
Applies the group signal to the main L/R outputs.

ON
This enables the mono output.

INS
This enables the INSERT return. Note that the insert send is always active.

PHASE
This reverses the phase of the group output and can be useful in instances where feedback is occurring.

TB
This enables talkback onto the group output. Note that the talkback is injected after the fader and the ON switch.

DIM
This reduces the level of the group output by 6dB and again can be useful if feedback is occurring.

LED METER
Used to monitor the group output level.

CUE

This selects the group to the SOLO system. Normally the signal is pre fade and post insert but it can be switched to read PRE INSERT. The CUE LEVEL can be adjusted by ± 15 dB.

PRE-INSERT

Allows the cue or solo to be taken from before the insert point.

The lower output is identical to that described above. The second external input will assign to this when switched on.

CONNECTOR AND PIN ASSIGNMENTS

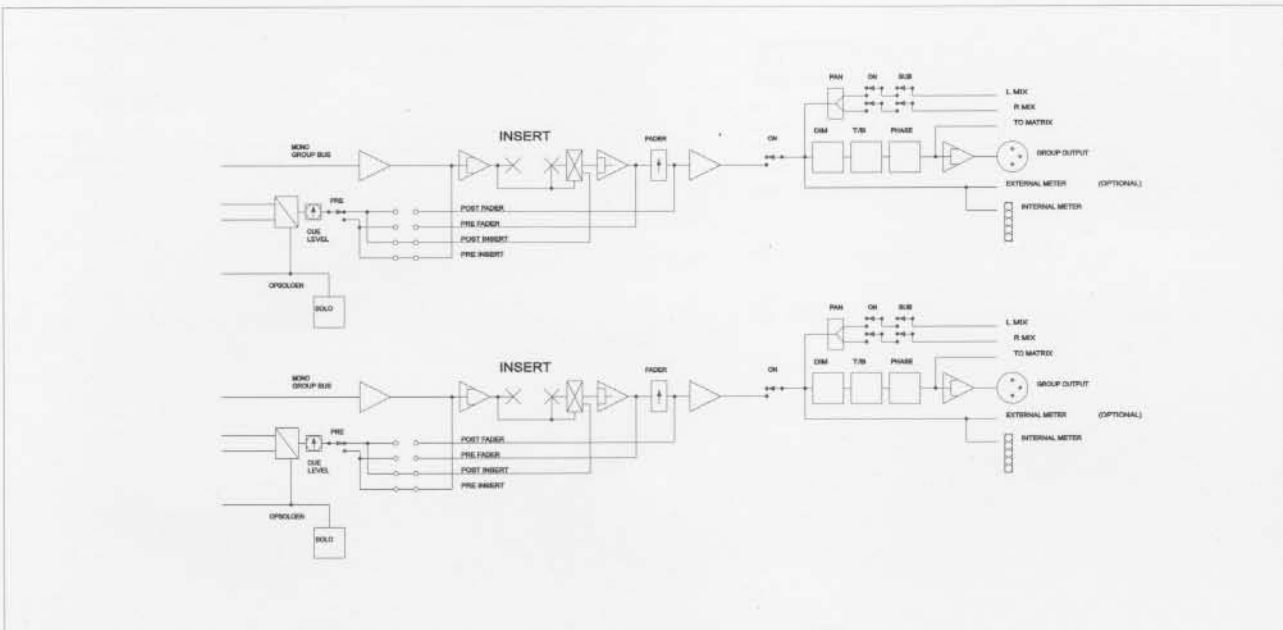
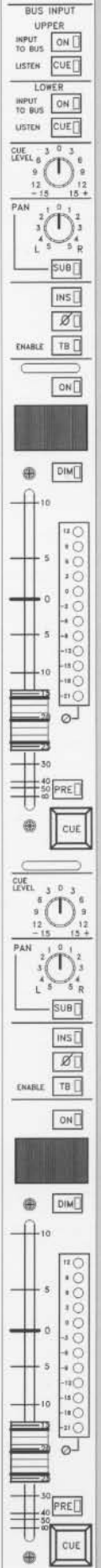
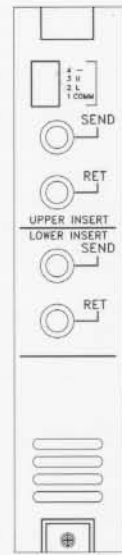
The connector panel contains the group insert send and return and the external meter connections for both the upper and lower mono group outputs.

INSERT SEND: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Output Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Output Impedance: <75R

INSERT RETURN: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Input Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Input Impedance: >10k

EXTERNAL METER

- 1 Common
- 2 Lower group meter
- 3 Upper group meter
- 4 Not used



ALM Reassign Module

Normally four ALM (All Mono) Reassign Modules are fitted to a mono console and, in conjunction with the eight dual mono output modules, they give twenty mono output groups. The mono output group on the reassign module is identical to those on the standard ALM output modules.

The group output is available in the normal way but by using the reassign controls the signal can also be fed to the mix buses of any output groups. Thus when a suitable mix is achieved on the mono group it can be reassigned to any other output where it can then be mixed with other signals already assigned to that output. This greatly speeds up the creation of monitor mixes.

A typical use of the re-assign system is a standard drum mix, which could consist of 8 Mic inputs. These inputs could be mixed to one of the Re-Assign group outputs, then when a performer requests more drums to his monitors only one control will need to be adjusted. Without the re-assign system the same procedure would need the adjustment of 8 controls.

If care is not taken with assignments it is possible to feed the signal back to its own bus thus creating feedback.

Before re-assignment can take place the BUS TO RE-ASSIGN switch must be active.

The mono reassigns are controlled by a LEVEL control with an ON switch operating across pairs of sends.

THE EXTERNAL INPUT SECTION

The external input can accept a mono signal and has a LEVEL control and an ON switch. The external input can be assigned to the group by sending through the reassign output for that group. Note that there is a danger of feedback because you can assign the group back to itself.

CONNECTOR AND PIN ASSIGNMENTS

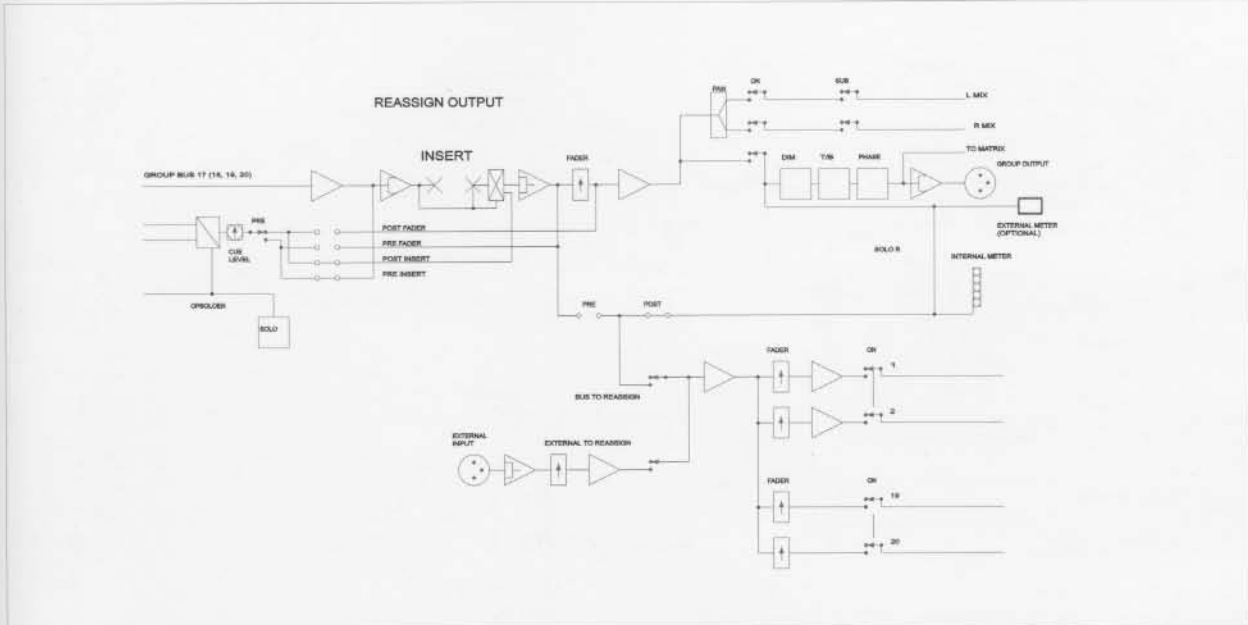
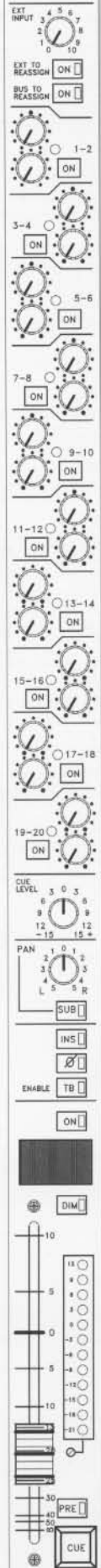
The connector panel contains connections for the mono group output, the group insert send and return and the external meter connections.

INSERT SEND: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
 Nominal Output Level: +4dBu
 TIP: Signal +ve (Hot)
 RING: Signal -ve (Cold)
 SLEEVE: Ground
 Output Impedance: <75R

INSERT RETURN: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
 Nominal Input Level: +4dBu
 TIP: Signal +ve (Hot)
 RING: Signal -ve (Cold)
 SLEEVE: Ground
 Input Impedance: >10k

EXTERNAL METER:
 1 Common
 2 Not Used
 3 Not Used
 4 Group Meter

GROUP OUTPUT: Female XLR type 3 pin connector, Balanced
 Nominal level: +4Bu
 Pin 1: Ground
 Pin 2: Signal +ve (hot)
 Pin 3: Signal -ve (cold)
 Output Impedance: <75R



ALM Input Module

The ALM (All Mono) Input Module is designed to send to 20 mono monitor sends. Microphone and Line inputs are available together with an equaliser which can be internally switched either pre or post the insert point which is fully balanced on both the send and return.

48V
When pressed this switches on the phantom voltage for the microphone input.

-20
This switches a 20dB attenuator into the microphone input. If the input is transformer coupled this pad can assist in preventing saturation on high level signals as it precedes the transformer.

PHASE
This reverses the phase of the selected input signal, to compensate for cabling errors.

LINE
This selects the LINE INPUT when depressed and illuminated.

A Rotary GAIN Control adjusts the gain of both the mic and the line inputs.

HPF
Inserts a HIGH PASS FILTER, which can be swept from 20Hz to 500Hz, into the signal chain.

INS
Selects the insert return.

EQ
Selects the equaliser to be in circuit. When the equaliser is not switched in it is physically bypassed. A 4 band equaliser is available with switchable Q on the mid frequency sections. Hi Q (1.8) is obtained with the buttons depressed. Low Q is 0.9. The remaining controls are identical for each section consisting of a frequency control and a boost cut control. The mid sections have a peaking response while the HF and LF sections are shelving.

It should be noted that the equaliser can be selected to be pre or post the insert point by means of an internal switch on the module. The 20 monitor sends are mono. Each send has a rotary level control while pairs of sends have a PRE and an ON switch.

MIX
This switch assigns the group signal to the main L/R mix bus of the console. This signal is post fade post PAN.

ON
When pressed this enables the channel POST FADE and POST ON signals.

LED METER
The 6 segment meter can be selected to display PRE/POST EQUALISER or POST FADER signal. Consoles normally leave the factory linked so that the meter shows the PRE-EQ signal. The top LED is used to indicate that the signal is approaching clipping level and it is linked to three points in the signal chain to show a peak occurring at any of them. The LED will illuminate if the signal is within 4dB of the maximum possible.

1, 2, 3, 4
Selects the MASTER MUTE GROUP assignment. Thus, for example, if switch 1 is pressed and the MASTER MUTE for Group 1 is operated the module will MUTE. The master switches are located on the master module and are discussed on page 3.

FADER
This controls the level of all post fade signals within the module. The DIRECT OUTPUT is also controlled by the fader.

CUE
This button places PRE and POST FADE signals onto the SOLO BUSES and signals the master solo logic that a solo is being requested. If pressed fleetingly the solo will latch and remain, however, if the button is held for a short period then the solo will release as the button is released. INTERLOCKING and INPUT PRIORITY MODES can be selected on the master module.

CONNECTORS AND PIN ASSIGNMENTS

MIC INPUT: XLR type 3 pin connectors, Balanced
Nominal level: -56dBu to -8dBu
Pin 1: Ground
Pin 2: Signal +ve (hot)
Pin 3: Signal -ve (cold)
Input impedance: >2k.

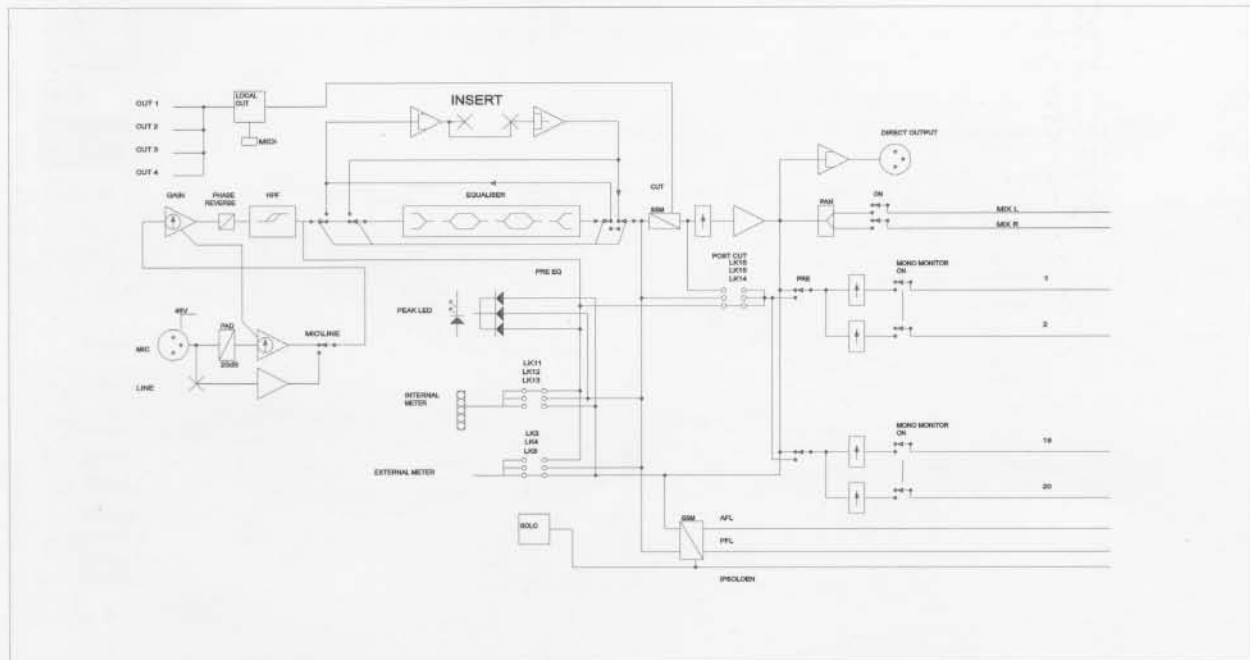
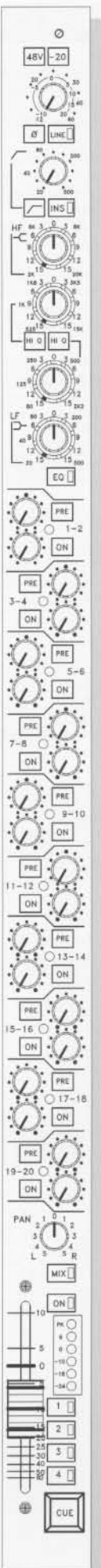
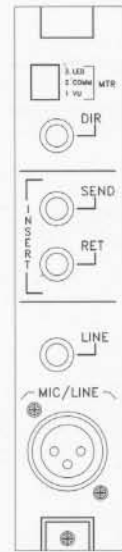
LINE INPUT: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Input Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Input Impedance: >10k

INSERT SEND: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Output Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Output Impedance: <75R

INSERT RETURN: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Input Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Input Impedance: >10k

DIRECT OUTPUT: 1/4" TRS Jack Socket, 'A' Gauge, Balanced
Nominal Output Level: +4dBu
TIP: Signal +ve (Hot)
RING: Signal -ve (Cold)
SLEEVE: Ground
Output Impedance: <75R

Note that the Mic input XLR connector can be used as the line input if no connector is inserted in the LINE INPUT jack.



QII Stereo (STM) Monitor Console Architects and Engineers Specification

The mixing console shall be a mainframe which accepts the following plug-in modules: 24, 32, 40 or 48 channel input modules (depending on the size ordered). The output modules shall consist of six dual stereo/mono output modules and 4 reassign output modules which each contain a stereo output. The frame shall be self-contained, with the exception of the power supply, which shall be capable of being mounted in a standard 19" rack, and connected to the console by a flexible cable with locking connectors.

Input connections to the frame shall be by XLR-3 type connectors for each Microphone Input, and 1/4" TRS Jack sockets for each Line Input. Output connectors shall be XLR-3 type, for all group outputs, stereo and mix outputs, . XLR's shall be wired in accordance with the IEC standard as Pin 2 = 'hot'. All inputs and outputs, including insert send and returns and the direct output, shall be electronically balanced, with optional transformer isolation on Mic inputs and main outputs. Separate TRS Jack connectors shall be provided for insert sends and returns and the direct output on each channel input. The nominal operating levels of the console shall be +4dBu, both input and output. Insert send and return and the direct output shall also be nominally +4dBu. The frame shall be equipped with a padded arm rest, moulded side cheeks, and finished in dark grey.

THE STM INPUT MODULE

Each input module shall include the following features:
Phantom power on/off switch (to apply 48 volts DC across the input connectors balanced leads for powering capacitor microphones); a 20dB attenuator pad, switchable into the Mic input; a phase reverse switch; a gain control with a range of 12dB to 60dB on the Mic input and -10 to +20dB on the line input; mic/line input switching; a tuneable high pass filter with separate in/out switch (12 dB/octave, 20 to 500Hz Hz); a four band sweep EQ section with controls for HF (± 15 dB swept from 2kHz to 20kHz, shelving), HI-MID (± 15 dB swept from 525Hz to 15kHz, peaking/bell, with a switchable Q of 0.9 or 1.8), LO-MID (± 15 dB swept from 80Hz to 2.2kHz, peaking/bell, with a switchable Q of 0.9 or 1.8), and LF (± 15 dB swept from 20Hz to 500Hz, shelving), with EQ in/out switching with led indication; 6 stereo and 8 mono sends, each with a level control, pairs of mono sends will share a Pre switch and an On switch with led indication, the pre fade signal shall be selectable by internal links to be pre or post equaliser or post the channel On switch; a Mix switch to assign the channel to the stereo mix bus; a Pan control to pan the signal across the mix bus; a channel ON switch with led indication (or CUT switch); a 5 segment led meter to be assignable via internal links to read the pre or post equaliser signal or the post fader signal; a peak led to indicate overload of the channel simultaneously connect across the same three points that the meter can be assigned to; a CUE button with flashing led indication; 4 MUTE group (scene preset) assign switches with led indication; a 60mm high quality audio taper Fader to control the post fade signal level.

There shall be provision to connect an external VU or Bargraph meter to any input module. There shall be an internal switch which allows the insert to be pre or post the equaliser section.

THE STM OUTPUT MODULE

This module shall include the following:
One stereo output section and one mono output sections each consisting of; a mono output level Fader calibrated in dB's; Cue and On switching with led indication; a Cue Level control; a Pan or BAL control with Sub switching to route the mono group signal to the main stereo mix bus with led indication; an Insert switch to select the Insert return signal; a Phase Reverse switch to reverse the monitor group signal phase; a Dim key to reduce the group level by 6dB; a TB Enable switch allowing talkback to be injected after the group fader; a 12 segment bargraph; a Pre-Insert switch to allow Cue to be taken from before the insert point of the monitor send.

THE STM REASSIGN MODULE

This module shall contain one mono output stage consisting of:
A mono output level Fader calibrated in dBs; Cue and On switching with led indication; a Cue Level control; a Pan control with Sub switching to route the mono group signal to the main stereo mix bus with led indication; an Insert switch to select the Insert return signal; a Phase Reverse switch to reverse the monitor group signal phase; a Dim key to reduce the group level by 6dB; a TB Enable switch allowing talkback to be injected after the group fader; a 12 segment bargraph; a Pre-Insert switch to allow Cue to be taken from before the insert point of the monitor send.

A Re-Assign section consisting of; a Bus to Re-assign switch; 6 stereo re-assign controls with pre and on switches; 8 mono re-assign controls with pre and on switches.

An External Input section consisting of; a stereo Level control; an On switch to assign the input to the stereo group bus; a Cue switch to allow soloing of the external input.

MASTER MODULE

The Master Module shall be provided with facilities for:

A stereo 12 segment bargraph meter assigned to the stereo output of the console; a stereo 12 segment bargraph assigned to the Cue bus of the console; power integrity indicators on the ± 18 V and +48V rails; an external tape stereo input with level control, Cue and an assign switch to the main stereo output; a main monitor signal level control; L/R source selection to the console monitor output which is also switches the stereo meters and the headphone output of the console; a mono switch to mono the console monitor output; a DIM switch to reduce the console monitor output level by 20dB; CUE mode selection of PFL or AFL; selection switching for CUE interlock mode; leds to indicate input or output CUE selection, and a master CUE RESET (CLR) switch; a 12 segment LED meter to monitor PFL Cue signal levels; an internal oscillator capable of generating a 1kHz tone or pink noise, with an ON/OFF switch with led indication and a level control; assign switches to route the oscillator/pink noise or talkback signals to all the group buses, the matrix buses, an external output and the main stereo bus; a Clearcom-compatible interface with talkback ON switch with led indication, illuminated T/B send and CALL facilities, talkback level control and side-tone adjust preset.

The module shall also incorporate front-panel accessible meter calibration presets for the main stereo and mono meters, and a 3 pin XLR-type connector for a talkback microphone. Stereo faders shall be provided to control the left and right outputs and the console monitor output.

The Heaphones Output and Master Mute Switches shall be located on an otherwise blank module.

The Console shall be a DDA QII Mono Monitor.

QII Stereo (STM) Standard Console Layouts

Frame Size	Modules Fitted Left to Right
36 Modules	Inputs 1-24 Master 6 STM Outputs 2 STM Re-Assigns
44 Modules	Inputs 1-32 Master 6 STM Outputs 2 STM Re-Assigns
52 Modules	Inputs 1-24 Master 6 STM Outputs 2 STM Re-Assigns Inputs 25-36
60 Modules	Inputs 1-24 Master 6 STM Outputs 2 STM Re-Assigns Inputs 25-48

Options

- Meterbridge (adds approx. 4.5 inches/11.4 cms to the console height)
- PSU autoswitchover
- Mic multiway connectors (edac 56 way)
- Input extender consoles - linked
- Floorstand
- Littlites 12 inch/18 inch (2 XLR connectors standard
4 XLR standard on 60 module frame)
- Mic input transformers
- Line output transformers
- Midi mute automation
- 10 way external source switching
- Flight case

QII Mono (ALM) Monitor Console Architects and Engineers Specification

The mixing console shall be a mainframe which accepts the following plug-in modules: 20, 28, 36 or 44 channel input modules (depending on the size ordered). The output modules shall consist of six dual mono output modules and 4 reassign output modules which each contain a mono output. The frame shall be self-contained, with the exception of the power supply, which shall be capable of being mounted in a standard 19" rack, and connected to the console by a flexible cable with locking connectors.

Input connections to the frame shall be by XLR-3 type connectors for each Microphone Input, and 1/4" TRS Jack sockets for each Line Input. Output connectors shall be XLR-3 type, for all group outputs, stereo and mix outputs. XLR's shall be wired in accordance with the IEC standard as Pin 2 = 'hot'. All inputs and outputs, including insert send and returns and the direct output, shall be electronically balanced, with optional transformer isolation on Mic inputs and main outputs. Separate TRS Jack connectors shall be provided for insert sends and returns and the direct output on each channel input. The nominal operating levels of the console shall be +4dBu, both input and output. Insert send and return and the direct output shall also be nominally +4dBu. The frame shall be equipped with a padded arm rest, moulded side cheeks, and finished in dark grey.

THE ALM INPUT MODULE

Each input module shall include the following features:

Phantom power on/off switch (to apply 48 volts DC across the input connectors balanced leads for powering capacitor microphones); a 20dB attenuator pad, switchable into the Mic input; a phase reverse switch; a gain control with a range of 12dB to 60dB on the Mic input and -10 to +20dB on the line input; mic/line input switching; a tuneable high pass filter with separate in/out switch (12 dB/octave, 20 to 500Hz Hz); a four band sweep EQ section with controls for HF (± 15 dB swept from 2kHz to 20kHz, shelving), HI-MID (± 15 dB swept from 525Hz to 15kHz, peaking/bell, with a switchable Q of 0.9 or 1.8), LO-MID (± 15 dB swept from 80Hz to 2.2kHz, peaking/bell, with a switchable Q of 0.9 or 1.8), and LF (± 15 dB swept from 20Hz to 500Hz, shelving), with EQ in/out switching with led indication; 20 Mono Sends each with a level control, pairs of sends will share a Pre switch and an On switch with led indication, the pre fade signal shall be selectable by internal links to be pre or post equaliser or post the channel On switch; a Mix switch to assign the channel to the stereo mix bus; a Pan control to pan the signal across the mix bus; a channel ON switch with led indication (or CUT switch); a 5 segment led meter to be assignable via internal links to read the pre or post equaliser signal or the post fader signal; a peak led to indicate overload of the channel simultaneously connect across the same three points that the meter can be assigned to; a CUE button with flashing led indication; 4 MUTE group (scene preset) assign switches with led indication; a 60mm high quality audio taper Fader to control the post fade signal level.

There shall be provision to connect an external VU or Bargraph meter to any input module. There shall be an internal switch which allows the insert to be pre or post the equaliser section.

THE ALM OUTPUT MODULE

This module shall include the following:

Two mono output sections each consisting of; a mono output level Fader calibrated in dB's; Cue and On switching with led indication; a Cue Level control; a Pan control with Sub switching to route the mono group signal to the main stereo mix bus with led indication; an Insert switch to select the Insert return signal; a Phase Reverse switch to reverse the monitor group signal phase; a Dim key to reduce the group level by 6dB; a TB Enable switch allowing talkback to be injected after the group fader; a 12 segment bargraph; a Pre-Insert switch to allow Cue to be taken from before the insert point of the monitor send.

THE ALM REASSIGN MODULE

This module shall contain one mono output stage consisting of:

A mono output level Fader calibrated in dB's; Cue and On switching with led indication; a Cue Level control; a Pan control with Sub switching to route the mono group signal to the main stereo mix bus with led indication; an Insert switch to select the Insert return signal; a Phase Reverse switch to reverse the monitor group signal phase; a Dim key to reduce the group level by 6dB; a TB Enable switch allowing talkback to be injected after the group fader; a 12 segment bargraph; a Pre-Insert switch to allow Cue to be taken from before the insert point of the monitor send.

A Re-Assign section consisting of:

A Bus to Re-assign switch; 20 mono re-assign controls with pre and on switches in pairs.

An External Input section consisting of:

A mono Level control; an On switch to assign the input to the stereo group bus; a Cue switch to allow soloing of the external input.

MASTER MODULE

The Master Module shall be provided with facilities for: a stereo 12 segment bargraph meter assigned to the stereo output of the console; a stereo 12 segment bargraph assigned to the Cue bus of the console; power integrity indicators on the ± 18 V and +48V rails; an external tape stereo input with level control, Cue and an assign switch to the main stereo output; a main monitor signal level control; L/R source selection to the console monitor output which is also switches the stereo meters and the headphone output of the console; a mono switch to mono the console monitor output; a DIM switch to reduce the console monitor output level by 20dB; CUE mode selection of PFL or AFL; selection switching for CUE interlock mode; leds to indicate input or output CUE selection, and a master CUE RESET (CLR) switch; a 12 segment LED meter to monitor PFL Cue signal levels; an internal oscillator capable of generating a 1kHz tone or pink noise, with an ON/OFF switch with led indication and a level control; assign switches to route the oscillator/pink noise or talkback signals to all the group buses, the matrix buses, an external output and the main stereo bus; a Clearcom-compatible interface with talkback ON switch with led indication, illuminated T/B send and CALL facilities, talkback level control and side-tone adjust preset. The module shall also incorporate front-panel accessible meter calibration presets for the main stereo and mono meters, and a 3 pin XLR-type connector for a talkback microphone. Stereo faders shall be provided to control the left and right outputs and the console monitor output.

The Headphones Output and Master Mute Switches shall be located on an otherwise blank module.

The Console shall be the DDA QII Mono Monitor.

QII Mono (ALM) Standard Console Layouts

Frame Size	Modules Fitted Left to Right
36 Modules	Inputs 1-20 Master 8 ALM Outputs 4 ALM Re-Assigns
44 Modules	Inputs 1-28 Master 8 ALM Outputs 4 ALM Re-Assigns
52 Modules	Inputs 1-24 Master 8 ALM Outputs 4 ALM Re-Assigns Inputs 25-36
60 Modules	Inputs 1-24 Master 8 ALM Outputs 4 ALM Re-Assigns Inputs 25-44

Options

- Meterbridge (adds approx. 4.5 inches/11.4 cms to the console height)
- PSU autoswitchover
- Mic multiway connectors (edac 56 way)
- Input extender consoles - linked
- Floorstand
- Littlites 12 inch/18 inch (2 XLR connectors standard
4 XLR standard on 60 module frame)
- Mic input transformers
- Line output transformers
- Midi mute automation
- 10 way external source switching
- Flight case

DDA QII Monitor – Specifications and Dimensions

Maximum Gain

Mic Input to Mix Output	86dB
Line Input to Mix Output	40dB

Frequency Response

Mic Input to Mix Output (gain 55dB)	20Hz, -0.50dB 20kHz, -0.20dB
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Line Input to Mix Output (gain 0dB)	20Hz, -0.50dB 20kHz, -0.20dB
--	---------------------------------

Noise, DIN Audio Weighted

Microphone Input Gain 55dB, EIN Ref 200 Ohm	<-127.5dBu
--	------------

Line Input to Mix Output Gain 0dB, 16 inputs routed	<-83dBu
--	---------

Distortion

Microphone Input to Mix Output -50dBu input, +4dBu output	<0.005%
--	---------

Line Input to Mix Output +4dBu input, +4dBu output	<0.005%
---	---------

Crosstalk

Adjacent channel, 1kHz	<-100dBu
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Group to Mix, 1kHz	<-88dBu
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Fader Attenuation, 1kHz	<-95dBu
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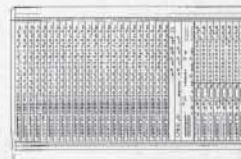
Panpot Isolation, 1kHz	<-72dBu
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Note: All specifications relate to dBu, ie 0dBu = 0.775V RMS

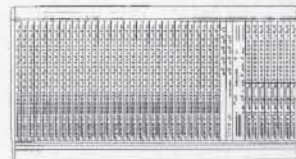
QII Monitor Power Supply specifications

AC Mains Voltage selection:- 100V/120V/220V/240V	750VA
Power consumption (Max):	50Hz.- 60Hz
AC Mains frequency:	220/240V - 6.3A
Fuse Ratings:	110/120V - 10A
Cooling Method:	Internal fan
DC Power Outputs:	+17 Volts, 10A max
	-17 Volts, 10A max
	+48 Volts, 0.35A max

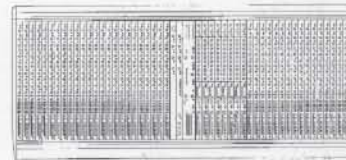
36 Module Frame:
1255mm x 810mm x 368mm
49.4" x 31.9" x 14.5"
Nett Weight (unpacked):
65Kg/157lbs



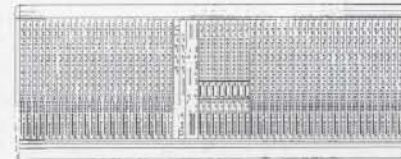
44 Module Frame:
1505mm x 810mm x 368mm
59.25" x 31.9" x 14.5"
Nett Weight (unpacked):
75Kg/174lbs



52 Module Frame:
1755mm x 810mm x 368mm
69.1" x 31.9" x 14.5"
Nett Weight (unpacked):
85Kg/192lbs



60 Module Frame:
2005mm x 810mm x 368mm
78.9" x 31.9" x 14.5"
Nett Weight (unpacked):
95Kg/215lbs



QII Monitor Power Supply Dimensions

Height:	89mm/3.5" (2U rack mounting)
Depth:	265mm/10.5"
Width: Front Panel:	483mm/19"
Housing:	438mm/17.25"

Our policy is one of continuous development. DDA reserves the right to change the design and specifications of its products without notice.



a MARK IV company

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