The DDA CS3 console brings the DDA advantage of sonic transparency to a new and readily affordable level of advanced mixing performance. Designed for simplicity of operation, long-term reliability and high audio quality, the CS3 offers a portfolio of powerful, professional features that is truly exceptional at its price.

The CS3 has been developed, through extensive research and discussion with our world-wide users and distributors, as a compact but well-specified mixer for fixed installations, concert and theatre live sound and a host of other demanding applications. Simple to install, connect and operate, the versatile CS3's attractive mix of features and pricing gives you a significant advantage in choosing a console to take on a multitude of tasks with minimum fuss. What's more, with the highest standards of design and construction, this is a console that's built to work reliably for years to come. Which is also why we have the confidence in its durability to include a full 3-Year Warranty with every CS3.

The CS3's compact and ergonomically-friendly format makes the console simple to install and site, as well as making it easy to use by non-technical or untrained operators. Nonetheless, it combines class-leading performance with high quality design and construction.

The DDA advantage in console design is simple. It's all about transparency.

Because we believe that where audio electronics are concerned, the less we put in the way of your signal, the more your mix will shine through.

We apply that principle to every DDA console - and you'll find it at every stage in the CS3.

An elegant gain structure gives you generous headroom throughout, with 'minimal signal path' topology for accurate audio and a low noise floor.

High quality controls and switches, distributed decoupling and gold plated connectors enhance signal integrity.

All of these benefits and thoughtful, precision-built features and techniques are designed to give you maximum quality for an affordable price.

So wherever you're mixing, the audio quality and versatility of our consoles will be transparently obvious. That's the DDA advantage.
7a

**Dimensions & Weights**

- **Width:** 800mm (31.5"")
- **Depth:** 560mm (22.0"")
- **Max. Height (excluding feet):** 195.5mm (7.7"")
- **Nett Weight (unpacked):** 23kg (50lbs 11oz)

- **Width:** 1048mm (41.3"")
- **Depth:** 945mm (37.2"")
- **Max. Height (excluding feet):** 195.5mm (7.7"")
- **Nett Weight (unpacked):** 30kg (66lbs 4oz)

- **Width:** 1298mm (51.1"")
- **Depth:** 565mm (22.0"")
- **Max. Height (excluding feet):** 195.5mm (7.7"")
- **Nett Weight (unpacked):** 37kg (81lbs 6oz)

- **Width:** 1547mm (60.8"")
- **Depth:** 565mm (22.0"")
- **Max. Height (excluding feet):** 195.5mm (7.7"")
- **Nett Weight (unpacked):** 40kg (88lbs 4oz)

PSU (Optional 2 U Rack Mounting):
- 6.4kg (14lbs 7oz)
- 3.91kg (8.6lbs) with additional A.C. mains lead.
**INPUT MODULES**

**LINK OPTIONS**
- Link 3 is normally installed causing the signal fed to auxiliaries 1 and 2 to be pre fade, although they will fade if the channel is muted.
- Link 4 will make the signal pre-equalizer and independent of the mute.
- Link 5 will enable the auxiliaries to send post fader signal.
- Link 10 allows auxiliaries 1 and 2 to be fed from an output of the pre switch, and links 8 and 9 will then determine which pre (FGP) is selected.
- Link 8 is normally installed giving a pre-fade, post cut signal.
- Link 9 will give a pre-equalizer feed.

**AUX 3**
- Controls the level of the channel signal fed to Auxiliary 3.

**AUX 4**
- Controls the level of the channel signal fed to Auxiliary 4.

**PRE**
- Normally this operates on auxiliaries 3 and 4 to change them from a post fade feed to a pre fade feed.

**LINK OPTIONS**
- Links 6 and 7 determine the pre fade fader.
- Link 6 is normally installed going a pre fade, post cut signal.
- If link 7 is installed the PRE feed will be pre equalizer.
- If link 10 is installed the PRE button will affect auxiliaries 1 and 2.
- If link 12 is installed the PRE button will affect auxiliaries 5 and 6.

**AUX 5**
- Controls the level of the channel signal fed to Auxiliary 5.

**AUX 6**
- Controls the level of the channel signal fed to Auxiliary 6.

**Link 11**
- Normally installed giving auxiliaries 5 and 6 a post fade feed.

**LINK OPTIONS**
- If link 12 is installed the feed will depend on the PRE switch.
- If link 13 is installed the feed will be pre-equalizer.
- If link 14 is installed the feed will be pre fade, post cut.

**ROUTING AND SPECS**

**Link (LCR)**
- This changes the pan pot into a left, centre, right pan pot.
- The signal now passes between left and centre or right and centre, it is not possible therefore to have signal on the left and right buses simultaneously from one module if LCR mode is selected. With the pan pot in the centre position there will only be signal on the centre output.

**PAN**
- When PAN is set to centre in LCR mode, equal levels are sent to the left-right (sideways) buses, with a 3DB dip relative to the fully clockwise or anticlockwise position.
- Setting the PAN control fully anticlockwise sends full level to the Left bus, cutting the send to the Right bus. Fully clockwise rotation sends full level to the Right bus, cutting the feed to the Left bus.
INPUT MODULES

CONNECTORS AND PIN DEFINITIONS

1/4" TRS Jack Socket, "A" Gauge, Unbalanced
Nominal Input Level: -10dBu to +4dBu
Tip: Signal +ve (Hot)
Ring: Signal -ve (Cold)
Sleeve: Ground
Output Impedance: >75 Ohm

1/4" TRS Jack Socket, "A" Gauge, Balanced
Nominal Input Level: -10dBu to +4dBu
Tip: Signal +ve (Hot)
Ring: Signal -ve (Cold)
Sleeve: Ground
Input Impedance: >10 x Ohm

Remote Connector
1 Ground
2 Mute Input. Grounding this pin mutes or cuts the channel.
3 Mute Override. This pin is grounded when the CUT switch is depressed.
a MIXTAPE selector switch
2. LR switch enabling the stereo mix to be monitored
3. CENTRE switch enabling the MONO or CENTRE mix to be monitored on the stereo monitor outputs
   (the above two switches shall not be interlocked to enable monitoring of an LCR mix by pressing both)
4. LEFT, CENTRE and RIGHT meters with the left meter also being used to indicate PFL and AFL levels
   (solo logic to allow audio monitoring and metering of PFL or AFL signals with input priority)
5. Solo logic to enable operation of a solo in place media on inputs balanced monitor outputs on XLR connection, a
   switch selectable headphone output

TALKBACK SECTION
An external talkback microphone shall be assignable to
the auxiliary outputs in pairs, the left, right and mono
(centre) buses of the console and the group buses
the talkback microphone shall optionally be phantom
powered by inserting a link in the module
there shall be a TALKBACK GAIN control

There shall be a “scroll strip” area at the bottom of the
channel.

POWER SUPPLY
The power supply shall feed regulated voltages of +48V
and ±18V DC to the console and shall optionally be
rack mountable. Input voltage and frequency to the
power supply shall be as follows:
230V/120V AC at 50-60Hz.

The supply shall be CE and UKCA approved for safety.

Accessories shall be available as follows:

Input balancing transformers
Output balancing transformers
Lifetime
Technical Manual

The console shall conform to the EC directive for
Electromagnetic Compatibility.

The console shall be a DDA CS3
The CS3 console shall be free standing and powered by an external power supply. It shall be capable of routing to four audio sub groups which can further be sub mixed to the main left centre and right outputs of the console. There shall be four frame sizes, each console shall have a master section and four group output sections in addition to 16, 24, 32 or 40 input channels. PFL, AFL and Solo in Place monitoring modes are available while an external tape input can be assigned to the mix outputs for use as an intermission playback facility.

**INPUT CHANNEL**
The input channel shall have the following facilities:
- A 48V phantom power switch operating on the microphone input.
- A rotary input gain control.
- A microphone line input gain range selector switch.
- A three band equaliser with high and low pass shelving section and a parametric mid frequency section. The high frequency section shall operate at 12kHz and the low frequency section shall operate at 50Hz. The middle section shall be switchable from 50Hz to 15kHz with Q continuously adjustable from 0.7 to 4.5.
- A switchable 80Hz, 160Hz/6dB/octave high pass filter.
- Six auxiliary sends with auxiliaries 1 and 2 normally configured to take a pre-fade post cut signal, auxiliaries 3 and 4 to take either the post fade signal or the pre-fade post cut signal depending upon the position of the PRE switch and auxiliaries 5 and 6 to take the post signal. Links shall exist to allow any of the available signals (pre equaliser, pre fader post cut and post) to be made available for any of the auxiliary sends.
- A pan pot which can be configured for LR or LCR (Left, Centre, Right) operation and that can be selected to pan across the groups.
- An illuminating CUE switch independent routing to 4 buses in addition to the LR bus and the Mono (Centre) bus.
- Peak and signal present indicators.
- An illuminating PFL switch.
- A long throw 100mm audio taper fader.
- A "visible strip" area.

There shall be an XLR connector for the microphone input with the line input normally connected through a TRS jack socket. When no jack is inserted the XLR signal shall be normalised through the jack to become the line input signal. There shall be an insert jack using the tip as the signal send and the ring as the signal return. There shall be a TRS jack for the direct output which shall be the post fade post cut level.

Input channels shall be available in multiples of 4.

**OUTPUT CHANNEL**
The output channel shall contain a group output stage, an auxiliary output stage and a stereo line input.

**STEREO LINE INPUT**
This shall contain the following:
- A balanced stereo line in stage.
- A balance control.
- A long throw 100mm fader for level control.
- Pairs routing to the groups routing to the LR and centre buses.
- An illuminating PFL switch.
- Input connection shall be through a pair of TRS jacks linked such that a mono input, applied to the left input and with no connection to the right input, will be applied equally to the left and right signal paths of the return.
**BUS PALK**
This indicates when the group mix bus level is very high and the signal is in danger of becoming distorted. The signal routed to the group should be reduced immediately by pulling the faders down or reducing the input gain of the routed channels.

**THE AUXILIARY MASTER SECTION**
Each group output stage contains one auxiliary output section.

**LEVEL**
This controls the auxiliary output level.

**AFL**
This allows the auxiliary signal to be pre-echoed. This post-fader auxiliary signal is overlaid and therefore it is dependent on the position of the output level control.

There is an auxiliary insert point allowing the insertion of an effect unit into the auxiliary signal path pre the level control.

**THE GROUP OUTPUT SECTION**

**L/R (LCR)**
This changes the pan pot from standard L-R to CR mode-while the signal will pan between left and centre or right and centre.

**CUT**
The C.U.T switch disables the channel signal path and is indicated by a led in the switch when the group is muted.

**PAN**
The depth of the relative levels sent to the left and right outputs or the left, centre and right outputs, depending upon the set pan mode when MIX is pressed.

**FADER**
The fader controls the level of the group output. As with the input module, fader operation is close to the D.P. signal and a 6dB attenuation is expected and any large deviations from this will indicate that the signal from the module feeding the group are too high or too low.

**MIX**
When MIX is pressed the signal is sent to the stereo mix. The pan control can be switched to LCR mode and the entire bus will then be fed with the centre output of the pan pot without the MONO button being pressed.

**MONO**
This feeds the post-fader group signal to the mono output of the console when pressed. In LCR mode the centre output of the pan pot will be replaced by the post-fader signal if this switch is pressed. In LCR mode, the center output will not receive a signal until this switch is pressed.

**AFL**
Allows the post-fader pre-echo group signal to be selected. Thus the AFL meter located on the solo meter will depend upon the group fader but not on the CUT switch.

There is a pre-fader group insert point allowing an effect unit or similar to be introduced into the signal path.
+48V
Provides 48 volt phantom power for a condenser microphone, or DI box. Optional balancing transformers may be fitted on the Mic line input.

GAIN
The gain control is a wide range rotary potentiometer, and is active on both Mic and Line inputs. With Mic selected the gain can be adjusted from -20dB to +20dB. For Line inputs, the adjustment is from -10dB to +10dB.

MICLINE
Switching this inserts an attenuator into circuit with the microphone line input and alters the range of gain available. This should be pressed when high level (line level) signals are connected to the channel through the line input jack. Note that if a jack is not inserted into the line input socket then the AUX connector may be used as the line input.

EQUALISER
The equaliser in the input module is a three band design, incorporating a parametric mid-range section and fixed frequency shelving high and low frequency sections.

HF
A high frequency shelving equaliser, providing 15dB of boost or cut at 12kHz.

MID
A parametric mid frequency equaliser, providing 15dB of boost or cut. The frequency is adjustable from 200Hz to 20KHz and the Q or bandwidth can be swept between the values of 0.7 and 4.5. In extreme values this results in a boost at the lowest low Q setting and about a third of an octave at the narrowest high Q setting. This enables the part of the audio spectrum shelving adjustment to be targeted very precisely and reduces the effect on parts of the signal that require no modification.

LF
A low frequency equaliser, providing 15dB of boost or cut at 50Hz.

FILTER
The filter switch inserts a 80Hz highpass filter with a rolloff of 12dB per octave into circuit after the input amplifier. This may be used to eliminate unwanted low-frequency noises transmitted to the microphone through a floorstand, for example.

An insert point is located after the EQ section allowing the introduction of an effect unit or similar into the signal path.

AUXILIARIES
There are six auxiliary outputs. Additionally, the channel direct output may be used to provide a dedicated auxiliary send.

AUX 1
Controls the level of the channel signal fed to Auxiliary 1. This signal is normally pre-fader.

AUX 1
Controls the level of the channel signal fed to Auxiliary 2. This signal is normally pre-fader.
EQ GRAPHS

LOW FREQUENCY EQUALIZER RESPONSE

HIGH FREQUENCY EQUALIZER RESPONSE

MID FREQUENCY EQUALIZER RESPONSE SHOWING BANDWIDTH RANGE

MID FREQUENCY EQUALIZER RESPONSE SHOWING BANDWIDTH RANGE
CUT
The CUT switch disables the channel signal path, and is indicated by an LED in the switch when the channel is muted. When CUT, all post-fade auxiliary sends and routing assignments are muted in addition to the pre-fade, post-out sends.

MIX
Routes the post-fade, post-pan channel signal to the stereo mix bus or the left, center and right buses if L/R panning is selected.

MONO
Routes the post fader signal to the mono or center bus. In L/R pan mode with MIX selected no signal will be routed to the mono output if this switch is not depressed. With the pan control in L/R mode and MIX selected the center output of the pan pot is routed to the mono or center bus without this button being pressed. If the button is pressed the the pan pot output will be replaced by the post fade signal.

PAN
Pressing this allows the output of the pan pot to be sent to the groups. An odd and an even group should be used when panning across groups and the pan control will operate as described for the left and right buses above. If this switch is not pressed then the selected groups will receive identical mono signals which are not dependent upon the pan pot position. Pan mode should be set for L/R operation.

1 (QR 2, 3, 4)
Routes the post-fade, post-pan if selected) channel signal to output group 1 (or 2, 3, 4).

PFL
The PFL button feeds the post-insert return signal to the Monitor Section (headphones or headphones), replacing the selected monitor source. The main stereo and center outputs of the console are not affected. The LED in the PFL switch will illuminate when the PFL function is active and PFL signals from different channels that are active simultaneously will be mixed together. If Solo in Place mode is selected for the master module) then all other channels on the console will be muted while only the channel initiating the solo will be heard. This allows signals to be processed exactly as they will appear in a mix but in isolation. Note that this is no longer pfl.

PEAK
This LED (light emitting diode) indicates when the signal is getting close to clipping level. If clipping occurs the signal will be severely distorted and the channel input gain should be reduced.

SIGNAL
This LED shows when signal is present in the channel and is simply a useful aid on occasions when no output can be found from the console. It establishes that there is input signal and that maybe there is a routing or some other problem.

FAADER
The fader is the main signal level control for the channel, and is a long-throw type giving smooth control of channel level. Note that the fader is calibrated and the normal operating position is expected to be close to the 0dB mark.
The Stereo Master module contains the main stereo and centre outputs, two Auxiliary master outputs, the monitoring section and a talkback microphone input. In addition, an XLR connector is provided for a gooseneck light if the console is to be operated under low or poor lighting conditions (maximum power: 5 Watts at 12V).

Insert points are provided pre-fader in the left, right and centre output signal paths. Plugging in a jack automatically breaks the normal signal path to insert the external equipment.

The Stereo Mix, Group, and Auxiliary outputs have a nominal operating level of +4dBu and can be transformer balanced.

The three LED bargraph meters follow the output of the stereo mix under normal operating conditions. If any PFL or AFL button is pressed, the left meter shows the level of the selected signal.

There is also an unbalanced stereo output on phone connectors taken from before the mix insert points which can be used to feed a tape recorder or DAT machine, for example. The nominal operating level is −10dBV. This allows the feed to the tape recorder to remain unaffected by any device connected to the master module insert points and to be independent of the master faders.

COMMUNICATIONS

TALKBACK MIC
A microphone may be plugged in to this socket to provide talkback facilities to the output buses. The microphone may be a dynamic type, or by using an internal link for phantom powering, may be a condenser microphone.

TB LEVEL
This adjusts the level of the talkback microphone signal.

AUX 1-2
If 1-2 is pressed, the talkback microphone signal is routed to the Auxiliary 1 and 2 buses.

AUX 3-4
If 3-4 is pressed, the talkback microphone signal is routed to the Auxiliary 3 and 4 buses.

AUX 5-6
If 5-6 is pressed, the talkback microphone signal is routed to the Auxiliary 5 and 6 buses.

MIX
If pressed the talkback signal is routed to the LR and Mono (centre) buses.

BUS
If pressed the talkback microphone signal is routed to all the group outputs.
THE AUXILIARY MASTER SECTION
This shall contain the following:
- an unbalanced pre fader insert point with the send on the tip and the return on the ring
- a rotary level control
- a balanced output available on an XLR connector
- an illuminating AFL switch

THE GROUP OUTPUT SECTION
This shall contain the following:
- an unbalanced pre fader insert point with the send on the tip and the return on the ring
- a long throw 100mm audio taper fader for level control
- a balanced output available on an XLR connector
- an illuminating AFL switch
- a BUS PEAK indicator to warn of impending summing amplifier overload
- a 12 segment meter on the output routing of the group to the LR bus or the Mono (Centre) bus of the console
- a PAN control switchable between LR and LCR mode for use in sub mixing the group to the LR or LCR and Centre mix outputs.

There shall be a "scribble strip" area at the bottom of the module.

THE MASTER MODULAR
The master modular shall consist of a Left, Centre, Right master output section, two auxiliary master output sections, a talkback section and a monitor section.

AUXILIARY MASTER SECTION
Each of the two auxiliary master sections shall contain the following:
- an unbalanced pre fader insert point with the send on the tip and the return on the ring
- a rotary level control
- a balanced output available on an XLR connector
- an illuminating AFL switch

LEFT, RIGHT MASTER SECTION
This section shall contain the following:
- BUS PEAK indicators for left and right signal paths warning of impending summing amplifier overload
- unbalanced pre fader insert points with the send on the tip and the return on the ring
- a pre fader insert stereo output to Tape Recorder at a level of -10dBV
- a long throw 100mm stereo, audio taper fader for (level control of the LR signal
- two balanced output stages to XLR connectors
- a switch enabling the LR mix to be monitored onto the centre bus of the console

MONO (CENTRE) MASTER SECTION
This section shall contain the following:
- a BUS PEAK indicator warning of impending summing amplifier overload
- an unbalanced pre fader insert point with the send on the tip and the return on the ring
- a long throw 100mm mono, audio taper fader for level control
- a balanced output stage to XLR connector

MONITOR SECTION
This section shall contain the following:
- an external TAPE INPUT assignable to the LR or CENTRE outputs of the console in addition to the monitoring system
**CONNECTORS AND PIN ASSIGNMENTS**

**OUTPUT MODULE**

Group Output: 3 Pin Male XLR Type, Balanced
Nominal Output Level: +4dBu
Pin 1: Ground
Pin 2: Signal +ve (Hot)
Pin 3: Signal -ve (Cold)
Output Impedance: <75 Ohm

Auxiliary Output: 3 Pin Male XLR Type, Balanced
Nominal Output Level: +4dBu
Pin 1: Ground
Pin 2: Signal +ve (Hot)
Pin 3: Signal -ve (Cold)
Output Impedance: <75 Ohm

Stereo Inputs: TRS Jack Socket, “A” Gauge, Balanced
Nominal Input Level: -4dBu
Tip: Signal +ve (Hot)
Ring: Signal -ve (Cold)
Sleeve: Ground
Input Impedance: >10 kOhm

Insert Points: TRS Jack Socket, “A” Gauge, Unbalanced
Nominal Input Level: -20dBu
Tip: Insert Send
Ring: Insert Return
Sleeve: Ground
Output Impedance: >75 Ohm
Input Impedance: >10 kOhm
Priority is given to an input solo. If an output solo is active and an input solo is then activated the output solo cannot be heard for the duration of the input solo.

SOLO IN PLACE
Solo In Place is a solo mode where the monitor system does not change over to listen to the solo bus. For SLP mode to operate the monitor selection will be set to MIX. The monitor system remains listening to the mix outputs and when a solo on an input module is requested a signal is sent from the master module to mute all other input modules. Thus only the channel with the solo key pressed will be heard. Output solos will continue to operate as normal and will take priority over input solos. More than one channel can be SLP'd at any one time.

L+R TO CENTRE
This means the pot faders left and right outputs onto the centre output of the console.

+18/-18dB
These 3 leds indicate the presence of the two power rails and the phantom voltage supply.

FADERS
A stereo LEFT/RIGHT fader and a CENTRE (MONO) fader are provided, giving smooth control of the output signals.

HEADPHONES
Stereo headphones with impedances from 100 ohms to 600 ohms may be plugged into the headphone socket. This socket is located below the armrest and to the right hand side of the console.

METERS
The three meters indicate the levels of the left, centre (mono) and right outputs of the console. The left meter is additionally used to indicate solo levels in which case the remaining two meters will not indicate.

BUS PEAK LEDS
There are three leds to indicate peak level on the left, centre and right busses. Any indication here will mean that the level from the input modules, the groups if sub mixed into the main mix, or the stereo inputs is too high and should be reduced to avoid distortion.

THE AUXILIARY MASTER SECTION
Auxiliary master 5 and 6 are locate here.

LEVEL
This controls the auxiliary output level.

AFL
This allows the auxiliary signal to be previewed. The post fade auxiliary signal is used and therefore it is dependent on the position of the output level control.

There is a pre-fader auxiliary insert point allowing the introduction of an effect unit or similar into the auxiliary signal path.
Each Group Output Module contains a Group Output stage, an Auxiliary Output stage and also a Stereo Input, for use, for example, with external effects processors. The group and auxiliary outputs are electronically balanced and may optionally be transformer balanced.

The stereo input can be routed to the stereo mix, the centre bus or the group buses. Insert points are provided in the group and auxiliary send signal path, allowing the connection of external processing devices such as limiters/compressors units.

A twelve segment LED meter reads the signal input on the Group output. It is post gain and post cut and therefore will show no signal if the fader is down or the group is muted.

The group outputs can be used in their own right as control outputs to be fed to loudspeaker systems or tape machine inputs. They can also be fed into the main left, right and centre buses of the console, giving the ability to control the level of a group of channels onto the main buses with one (group) fader.

STEREO INPUT SECTION
This is a high level stereo input that can be routed to the left, right, centre and group buses of the console. It could be used to bump a tape machine into the console without tying up two modules or the output of an effect device whether stereo or mono. The input of the effect device would normally be fed from an auxiliary output of the console.

BALANCE
Adjusts the relative left/right levels of the return signal. This is not to be confused with the balance referred to in the case of balanced inputs for example.

Note that if a mono signal is connected to the left input and nothing is plugged into the right input the signal will be sent to the left and right signal paths. This saves a special cable having to be made or used for mono signal sources. If a mono input is connected to the right input then only the right signal path will receive this signal.

FADER
This is the level control for the return signal, and adjusts the amount of level sent to the routed outputs.

L/R
Routes the return signal to the L/R stereo mix.

MIX
Routes the return signal to mono or centre mix. The left and right signals are combined to mono for this.

1,2,3,4
Routes the return signal to groups 1 and 2 (or 3 and 4).

PFL
This allows the pre fade auxiliary return signal to be soloed. The solo is pre fader and therefore will not depend on the position of the stereo input fader. In effect it allows the input signal to be viewed on the solo meter and monitored.

METER
This meter indicates the level of the group output. It has a VU characteristic.
CONNECTORS AND PIN DEFINITIONS

Left and Right Outputs: 3 Pin XLR type, Balanced
Nominal Output Level: +4dBu
Pin 2: Signal +ve (Hot)
Pin 3: Signal -ve (Cold)
Pin 1: Ground
Output Impedance: <75 Ohm

Mono (Centre) Output: 3 Pin XLR type, Balanced
Nominal Output Level: +4dBu
Pin 2: Signal +ve (Hot)
Pin 3: Signal -ve (Cold)
Pin 1: Ground
Output Impedance: <75 Ohm

Tape Play Inputs: Phono sockets
Nominal Input Level: -10dBV
Tip: Signal +ve (Hot)
Sleeve: Ground
Input Impedance: >40 kOhm

Tape Record Outputs: Phono Sockets
Nominal Output Level: -10dBV
Tip: Signal +ve (Hot)
Sleeve: Ground
Output Impedance: 1k5 Ohm

Insert Points: 1/4" TS Jack socket, "A" Gauge, Unbalanced
Nominal Input level: -20dBu
Tip: Insert Send
Ring: Insert Return
Sleeve: Ground
Output Impedance: >75 Ohm
Input Impedance: >10 kOhm

Monitor Outputs: 3 Pin XLR type, Balanced
Pin 2: Signal +ve (Hot)
Pin 3: Signal -ve (Cold)
Pin 1: Ground
Output Impedance: <75 Ohm
Nominal Output level: +4dBu

Headphone Output: TRS Jack Socket, "A" Gauge
Nominal Output level: -14dBu
Tip: Left Channel
Ring: Right Channel
Sleeve: Ground
TECHNICAL SPECIFICATIONS

FREQUENCY RESPONSE
20Hz-20kHz =+1dB
(Equaliser in circuit, any input to any output)

MAXIMUM INPUT LEVEL
Mix input = 0dBu
Line input = +30dBu when line switch is depressed

MAXIMUM OUTPUT LEVEL
Better than +20dBu on all balanced outputs into 10kohms
Better than +28dBu on all balanced outputs into 600 ohms
Better than +24dBu on all unbalanced outputs into 10kohms

MICROPHONE INPUT
SIN
-127.5dBu ref 200 ohms
-128.7dBu ref 100 ohms
-129.7dBu ref 200 ohms
-130.7dBu ref 100 ohms

MICROPHONE INPUT DISTORTION
Maximum gain
Minimum gain
+20dB better 0.0001% at 1kHz
+25dB better 0.003% at 1kHz

LINE INPUT DISTORTION
Maximum gain
Minimum gain
 SIGNAL Present LED
 Peak LED
 >95dB
 >78dB ref 400 ohms
 Signal to noise ratio
 >78dB ref 400 ohms
(mentioned with 16 ohms, 50 ohms at 0dB, unity gain, equaliser off)

Maximum Power Consumption = 2000W

Current demand for +18V, -18V rails
16A/2 1.4 Amps
24A/2 1.8 Amps
32A/2 2.2 Amps
40A/2 2.6 Amps