

Soundcraft

500

600

USER MANUAL

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SERIES 500/600

<u>CONTENTS</u>	<u>PAGE NO</u>
1.00 Serial No. and Console Specification	2
2.00 SERIES 500/600 CONSOLE DESCRIPTION	3
2.01 Introduction	3
2.02 General Description	3
2.03 Input Module	4
2.04 Group/Monitor Module Series 500	9
2.05 Group/Monitor Module Series 600	12
2.06 Master Module	16
2.07 Optional Stereo Input Module	20
2.08 Input Connection Panel	24
2.09 Output Connection Panel Series 500	25
2.10 Output Connection Panel Series 600	26
2.11 Master Connection Panel Series 500/600	27
2.12 Stereo Input Connection Panel	28
3.00 INSTALLATION	29
3.01 Applying power	29
3.02 Interface Levels	29
3.03 Connector Conventions	30
3.04 General Wiring Procedure	30
4.00 OPERATION	35
4.01 Introduction	35
4.02 Record Mode	35
4.03 Playback Mode	37
4.04 Overdubbing	38
4.05 Remix Mode	39
5.00 MAINTENANCE	41
5.01 General Fault Finding	41
5.02 Removing Modules	42
5.03 Meter alignment	43
5.04 Lamp replacement	43
6.00 GLOSSARY OF TERMS USED	45
7.00 TECHNICAL DESCRIPTION	47
8.00 WARRANTY	54
9.00 RECOMMENDED SPARES KIT	56
10.00 SCHEMATICS	60

*Note

CPS 450 or 650 Power Supplies have a separate
USER MANUAL

SERIES 500/600 PERFORMANCE SPECIFICATION

FREQUENCY RESPONSE:

Line In to Group Out 20Hz:-0.5dB
 1kHz: 0dB ref.
 20kHz:-1.0dB.

GAIN

Mic gain, maximum total 60+10+10 dB
Line gain, maximum total 30+10+10 dB

OPERATING LEVELS.

Switchable, +4dBu or -10dBV (Tascam level.)

INPUT IMPEDANCES:

Mic Input: 2kOhm.
Line Input: 10kOhm.
Tape Return Inputs: 10kOhm.

OUTPUT IMPEDANCES:

Any output. <75Ohm.

OUTPUT CAPABILITY:

Channel inserts and Line Outputs +21dBu into 4k7.
Mix inserts +21dBu into 600Ohm.
All balanced outputs +26dBu into 600Ohm.

DISTORTION:

Line in to Group out 1kHz:<.005%
 10kHz:<.015%
 20kHz:<.02%
Line in to Mix out 1kHz:<.005%
 10kHz:<.008%

CROSSTALK:

	1kHz	10kHz
Panpot isolation	<-68dB	<-68dB
Group to Group	<-85dB	<-68dB
Unrouted channel to Group	<-85dB	<-68dB
Channel to Group, fader down.	<-85dB	<-68dB
Channel to Group, switched off.	<-90dB	<-70dB
Mix bus interchannel (L-R)	<-70dB	<-60dB

NOISE: (Measurement bandwidth 20kHz, ref +4dBu.)

Mic equivalent input noise, 150Ohm source res -128dBV
Group mix noise (24 channels routed.) -85dB
Group mix noise (nothing routed.) -98dB
Aux noise (master gain = 0dB) -83dB

2.00 CONSOLE DESCRIPTION

2.01 Introduction

This User Manual is designed to be of value to both the operator and the technician. For the operator there are flow diagrams, line drawings and suggestions on how to work and connect the console, as well as a detailed description of all the functions and connectors. There are technical descriptions and circuit diagrams for the technician.

2.02 Brief Description

The Soundcraft Series 500 and 600 consoles are designed to cater for both the small studio, (up to 16-track), and for public address applications. The frame of both these consoles is designed to withstand the wear and tear of being on the road.

Key features on the desk include 8 group outputs, 6 auxiliary outputs and dedicated mix outputs (left and right). All balanced inputs and outputs use an electronic, transformerless design to ensure low inherent noise.

The use of electronic balancing reduces the degradation of signal quality which is introduced by more conventional transformer coupled designs, ensuring superior transient response, minimal phase shift and excellent common mode rejection even at high frequencies

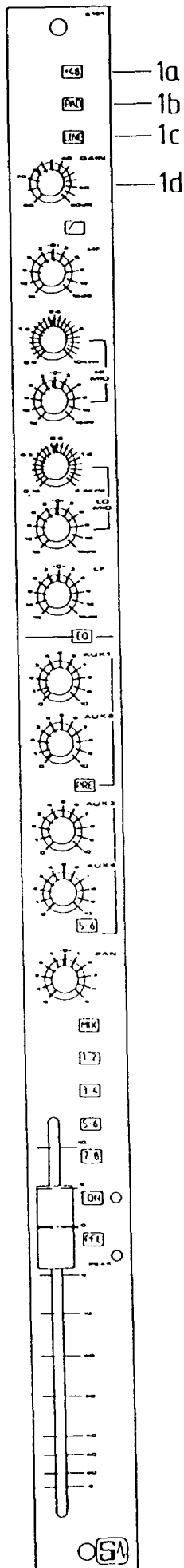
On the Series 500 VU meters are provided for the 8 group outputs and the stereo mix, whilst the Series 600 has an LED Bar-graph display, which may read VU or PEAK, as well as VU metering for the stereo mix.

Being Modular in construction both the Soundcraft Series 500 and the Series 600 are easy to dismantle making any necessary maintenance extremely straight-forward.

Both the Series 500 and the Series 600 consoles can operate at either +4dBu or -10dBV although the internal operating level, (including the insert points), is at -6dBu allowing for greater internal headroom.

The power supply is a 19" rack mounted unit supplying the console with 17 volts positive and negative rails, +24 volt for the LED display, and a +48 volt rail for phantom power of microphones.

NB: On some earlier models the PSU is the same as on the Soundcraft Series 800/1600 and differs slightly in construction from the Medium power supply unit.



2.03 INPUT MODULE

1) Input to Channel

Each channel is individually switchable between the Microphone Input and the Line Input by pressing the LINE switch.

Both Microphone and Line inputs are electronically balanced, using a transformerless design, configured for optimum low noise operation.

The balanced Microphone Input impedance is normally 2kOhms, increasing to 4kOhms when the 20dB Pad is inserted, thus ensuring correct matching for all normally used microphones.

The balanced Line Input has an input impedance of greater than 10kOhm, which is high enough to interface to any normal professional peripheral equipment, without causing undue loading of the source.

a) +48

Pressing the +48 button enables capacitor microphones to be powered by the console's internal 48Volt Phantom Power supply. CAUTION: It is not advisable to use a Direct Injection box when the Phantom Power is on.

b) PAD

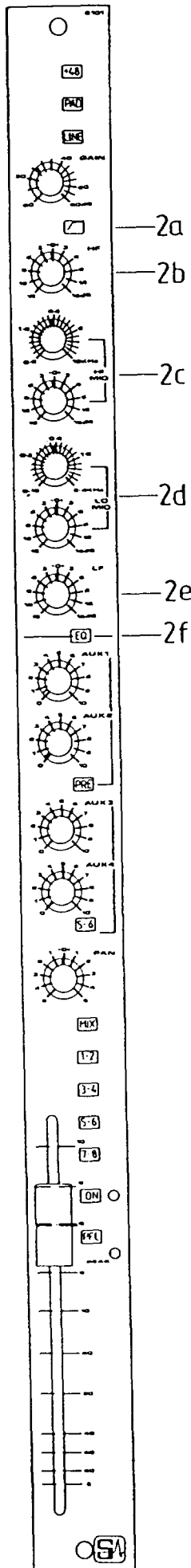
The PAD button inserts a 20dB attenuator into the input of the microphone amplifier, and allows extremely high level input signals to be catered for, without overloading the input stage.

c) LINE

Line Input may be selected by pressing the LINE button.

d) GAIN

The Microphone and Line inputs can be varied between 20dB and 60dB of gain using the GAIN trim control. When used in conjunction with the 20dB PAD, a 60dB control range is available on the Microphone input.



2) The Equalisation Section

The Series 500/600 equalizer is a flexible device allowing five areas of control to be exercised. All amplitude pots are centre detented for easy zeroing. The equaliser may be switched in or out of circuit, independently of the high pass filter.

a) THE HIGH PASS FILTER

The High Pass Filter operates at 100Hz with an ultimate slope of 12dB/octave. This will effectively remove low frequency stage rumble, and other extraneous signals.

b) HF (High Frequency)

15dB of boost or cut is available at 10kHz, with a "shelving" characteristic, ie. the slope of the EQ curve does not keep rising with frequency, but having reached the desired amount, flattens out or "shelves" from that frequency on.

c) HI MID

The Hi Mid Frequency is continuously variable between 600Hz and 10kHz, with 15dB of boost or cut available. The response is of the "bell" type, ie. having reached maximum amplitude (or minimum in the case of cut) at the selected frequency, the amplitude response returns to zero on either side of that frequency. The "Q" (a measure of the bandwidth) of the network is 1.5.

d) LO MID

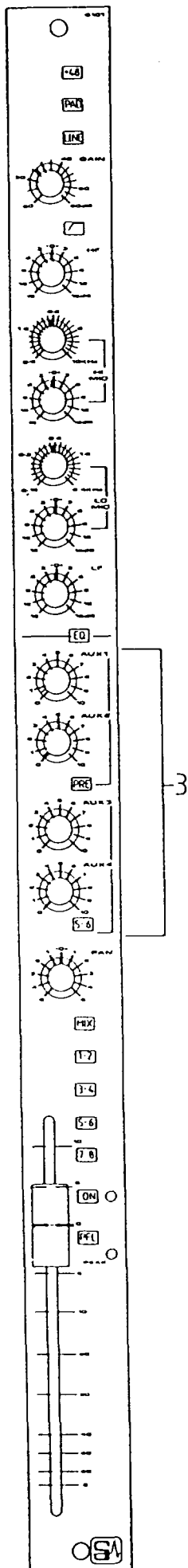
The Low Mid section is identical to the Hi Mid section with the exception that the frequency is variable between 150Hz and 2.4kHz.

e) LF (Low Frequency)

15dB of boost or cut is available at 60Hz, with a "shelving" characteristic.

f) EQ BUTTON

The equaliser circuitry can be switched in or out of the signal path, independent of the High Pass filter.



3) The Auxiliary Section

There are 6 Auxiliary sends available on the Series 500 and 600 Consoles, with 4 level controls, AUX 3 and 4 controls becoming AUX 5 and 6 controls respectively when the AUX 5-6 button is pressed. Note that only 4 auxiliaries can be sent from any one channel.

For each pair of auxiliary sends, (1-2, 3-4, 5-6), there are three options on where the auxiliary send is taken from. These are;

- i) Pre-EQ and Pre-fade
- ii) Post-EQ and Pre-fade
- iii) Post-EQ and Post-fade

These options may be adopted by the installation/removal of several push-on links, (Jumpers), located on the input channel PCB. (See Input PCB diagram ED2162).

a) SENDS 1 AND 2

- i. Pre-fade and Pre-EQ
On input PCB push Jumper J1 (lower position) ON.
Select PRE on Input Channel

- ii. Pre-fade and Post-EQ
Push Jumper J2 (upper position) ON
Select PRE on Input Channel

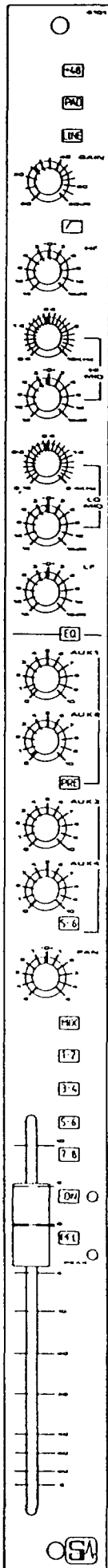
- iii. Post-fade and Post-EQ
Push Jumper J2 (upper position) ON

b) SENDS 3 AND 4

- i. Pre-fade and Pre-EQ
Push Jumpers J3 (lower position) and J8 (lower position) ON

- ii. Pre-fade and Post EQ
Push Jumpers J4 (upper position) and J8 (lower position) ON

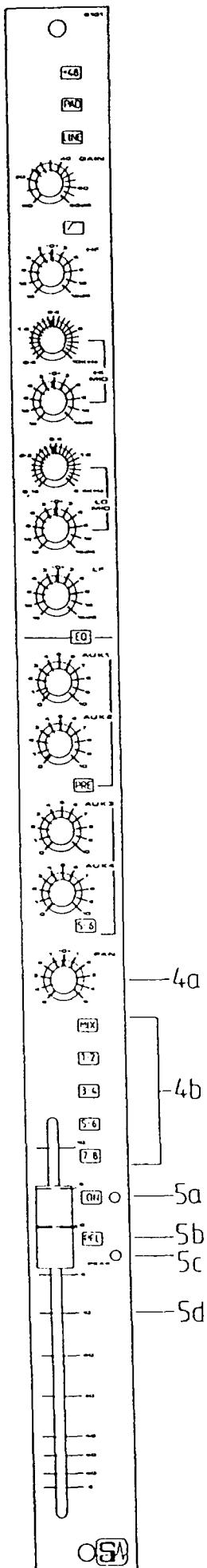
- iii. Post-fade and Post-EQ
Push Jumpers J4 (upper position) and J7 (upper position) ON



c) SENDS 5 AND 6

- i. Pre-fade and Pre-EQ
Push Jumpers J5 (lower position) and J10 (lower position) ON
- ii. Pre-fade and Post-EQ
Push Jumpers J6 (upper position) and J10 (lower position) ON
- iii. Post-fade and Post EQ
Push Jumpers J6 (upper position) and J9 (upper position) ON

S500/S600
STANDARD INPUT FACIA



4) Routing Section

The channel input signal can be routed to any or all of the 8 Group Outputs and the stereo Mix by selecting the relevant routing button.

To route the input signal to one particular Group press the relevant routing button and hard pan left or right. Groups 1,3,5 and 7 correspond to the left-hand side of the pan-pot, and Groups 2,4,6 and 8 the right-hand side.

- a) The Pan Pot is a centre detented control, with a loss of 4.5dB at its centre point. This is a compromise between the 3dB loss required for constant power panning, and 6dB loss required for constant voltage panning.
- b) Selection of any routing button assigns the channel signal to a pair of output groups, or to the stereo mix via the Pan Pot.

5) Channel Status Section

- a) ON
The channel "ON" status is indicated by a green LED. When a channel is switched off, all post-Eq auxiliary sends are also switched off, however, the signal to the insert jack and any pre-Eq auxiliary sends are not switched off.
- b) PFL (Pre Fade Listen)
PFL solos the pre-fader, post insert jack signal, independently of the "ON" switch. Pressing the PFL button illuminates the Solo LED on the Master Module, routes the signal to the master meters and switches the control room monitors and headphones to monitor that input.
- c) PEAK
A red LED indicates the peak signal level at the insert send point, illuminating at a level of approximately 4dB below clipping.
- d) CHANNEL FADER
The channel fader has a slide length of 100mm and an exceptionally smooth feel. Infinity cut off is greater than 90dB.

2.04 GROUP/MONITOR MODULE SERIES 500

The Group/Monitor Module of the Soundcraft Series 500 handles the functions of 2 Group Outputs and 2 Monitor Channels. The module may be used to monitor either the group output or the corresponding tape return when this is selected by the numbered tape return button. Groups 2,4,6, and 8 are positioned at the top, and Groups 1,3,5, and 7 are positioned at the bottom of their respective Modules.

All balanced outputs use an electronic, transformerless design, to ensure low inherent noise.

Each Group/Monitor Module features an equalisation section and 2 auxiliary sends, (which may be switched to pre-Monitor volume control).

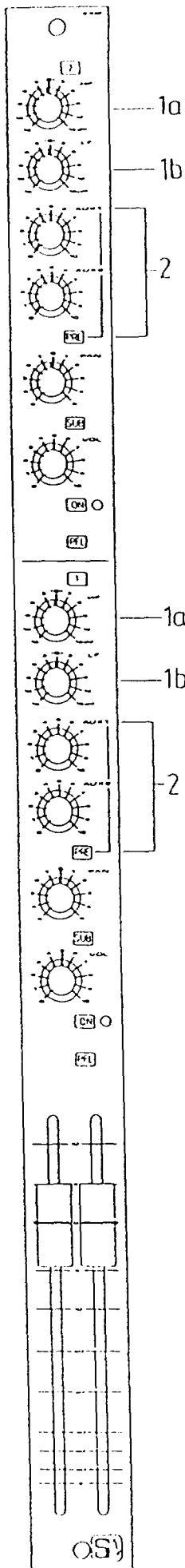
1) The Equalization Section

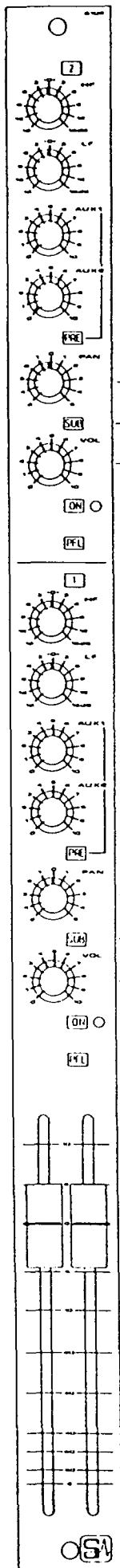
The Series 500 Group/Monitor Module equalizer allows for 2 areas of control which may be used whilst monitoring or as additional equalization when using the module as a Sub-Group. All EQ cut/boost pots are centre detented for easy zeroing. The Equalizer always stays in the Monitor path.

- a) HF (High Frequency)
15dB of boost or cut is available at 8 KHz, with a "shelving" characteristic.
- b) LF (Low Frequency)
15dB of boost or cut is available at 70Hz, with a "shelving" characteristic.

2) The Auxiliary Section

There are two auxiliary sends available on the Series 500 Group/Monitor Module. These are normally post-Monitor volume control but can be switched to pre-Monitor volume control by selecting PRE. In both cases the auxiliary signal is derived after the monitor ON switch. These may be used to provide headphone mixes during recording and overdubbing.





3) Pan

The Pan Pot is a centre detented control with a loss of 4.5dB at its centre point. The Pan control allows the monitor signal to be panned to the required position within the stereo mix.

4) Sub

When the SUB button is pressed any signal introduced at the Monitor Input point, (see Output Panel), is summed into the Group bus of that particular Group AND routed to the stereo mix bus. Also any channels assigned to that particular group are routed to both the group output and the stereo mix bus. This enables the formation of sub-groups as well as providing additional inputs to the console for Effects Returns etc.

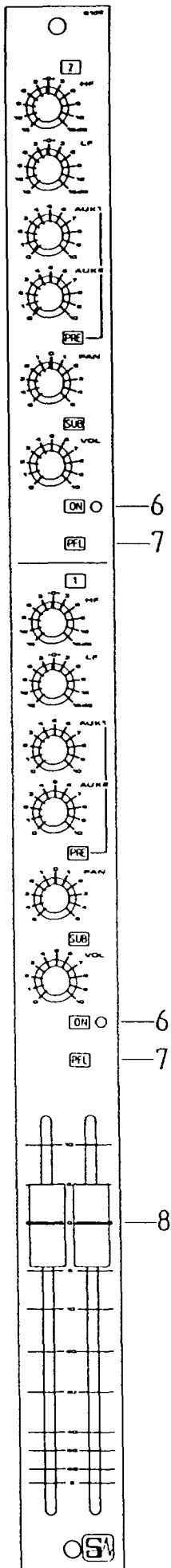
i.e. Say there are 4 different signals that need to be mixed together before reaching the main stereo bus, route all to Group 1, (by pressing 1-2 on the input channel and hard panning left), and press the SUB button on Group 1, the four signals now appear as one at both the Group output and the stereo bus.

NB: When SUB is pressed the meter reads the signal after the Group fader.

If the tape return button and SUB are pressed the meter reads only the monitor input signal.

5) Vol

The monitor volume control enables the monitor contribution to the stereo mix to be adjusted in level, to allow a satisfactory monitor balance to be achieved during recording and over-dubbing.



6) On

The Monitor channel and associated auxiliary sends are activated by pressing the "ON" button. Operation is indicated by an adjacent green LED.

7) PFL

Prefade Listen allows the monitor signal to be soloed independently of the Vol control. This illuminates the Solo LED on the Master Module.

8) Group Fader

The dual Group faders are full length linear faders.

2.05 GROUP/MONITOR MODULE SERIES 600

The Group/Monitor Module of the Soundcraft Series 600 handles the functions of 2 Tape Returns and a Group Output. The monitor section may be used to monitor either the group output or the corresponding tape return when this is selected by the numbered tape return button. Tracks 1-8 are positioned at the bottom of the modules and tracks 9-16 at the top of their respective modules. Since tracks 1-8 are paralleled to tracks 9-16 (1 connected to 9, 2 connected to 10 etc) to record tracks 9-16 simply select "record" on the relevant track on the multitrack machine.

All balanced outputs use an electronic, transformerless design, to ensure low inherent noise.

Each Group/Monitor Module features an equalisation section and 2 auxiliary sends, (which may be switched to pre or post monitor volume control).

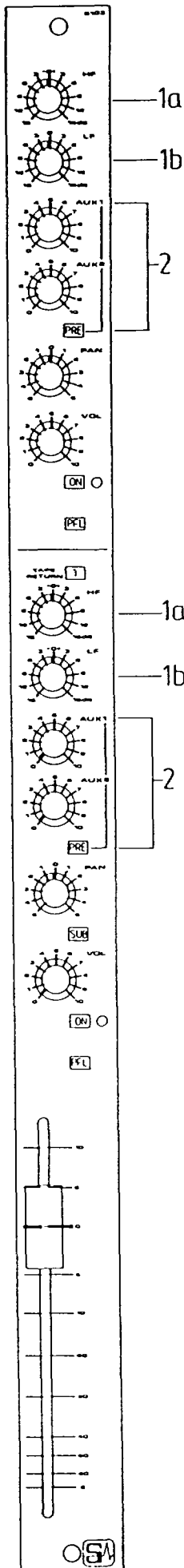
1) The Equalization Section

The Series 600 Group/Monitor Module equalizer allows for 2 areas of control which may be used whilst monitoring or when using the groups as FX returns during re-mix. All EQ cut/boost pots are centre detented for easy zeroing.

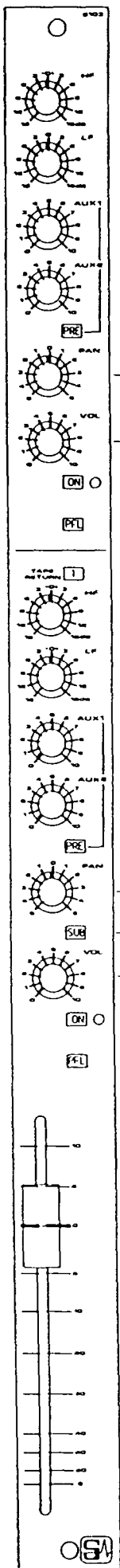
- a) HF (High Frequency)
15dB of boost or cut is available at 15kHz, with a "shelving" characteristic.
- b) LF (Low Frequency)
15dB of boost or cut is available at 50Hz, with a "shelving" characteristic.

2) The Auxiliary Section

There are two auxiliary sends available on the Series 600 Group/Monitor Module. These are normally post-monitor volume control but can be switched to pre monitor volume control by selecting PRE. In both cases the auxiliary signal is derived after the monitor ON switch. These may be used to provide headphone mixes during recording and overdubbing.



5600
OUTPUT FACIA



S600
OUTPUT FACIA

3) Sub

When the SUB button is pressed any signal introduced at the Monitor Input point, (see Output Panel), is summed into the Group bus of that particular Group and routed to the stereo mix bus. Also, any channels assigned to that particular group are routed to both the group output and the stereo mix bus. This enables the formation of sub-groups as well as providing additional inputs to the console for Effects Returns etc.

i.e. Say there are 4 different signals that need to be mixed together before reaching the main stereo bus, route all to Group 1, (by pressing 1-2 on the input channel and hard panning left), and press the SUB button on Group1, the four signals now appear as one at both the Group output and the stereo bus.

NB: When SUB is pressed the meter reads the signal after the Group fader.

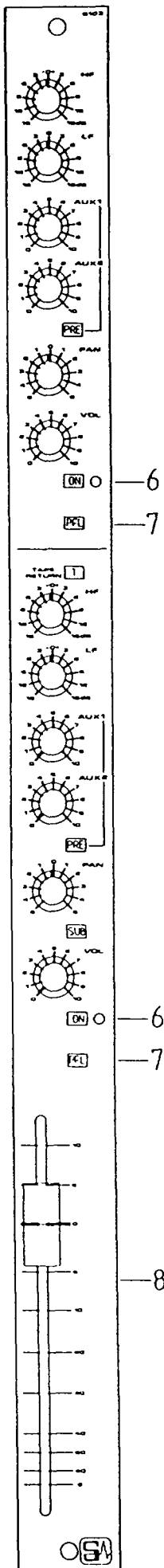
If the tape return button and SUB are pressed the meter reads only the monitor input signal.

4) Pan

The Pan Pot is a centre detented control with a loss of 4.5dB at its centre point. The Pan control allows the monitor signal to be panned to the required position within the stereo mix.

5) Vol

The monitor volume control enables the monitor contribution to the stereo mix to be adjusted in level, to allow a satisfactory monitor balance to be achieved during recording and over-dubbing.



6) On

The Monitor channel and associated auxiliary sends are activated by pressing the "ON" button. Operation is indicated by an adjacent green LED.

7) PFL

Prefade Listen allows the monitor signal to be soloed independently of the Vol control. This illuminates the Solo LED on the Master Module.

8) Group Fader

The Group faders have a slide length of 100mm infinity cut off is greater than 90dB.

2.06 MASTER MODULE SERIES 500/600

The Master Module contains the 6 Auxiliary master level controls, the console oscillator, monitor facilities, the talkback system, the Master Stereo Fader and a headphone socket.

1) Metering on the Series 600

Metering is provided in the form of LED bar-graph meters for the Group Outputs 1-16 & the 6 auxiliaries and VU meters for the stereo mix.

The LED bar-graph meters may read PEAK or VU depending on the position of Jumpers (push on links) on the drive card. (See ED2173 & ED2174).

The jumpers are located at the base of the meter drive card. Odd numbers on top and even numbers underneath.

For Peak metering all the jumpers should be positioned to the left.

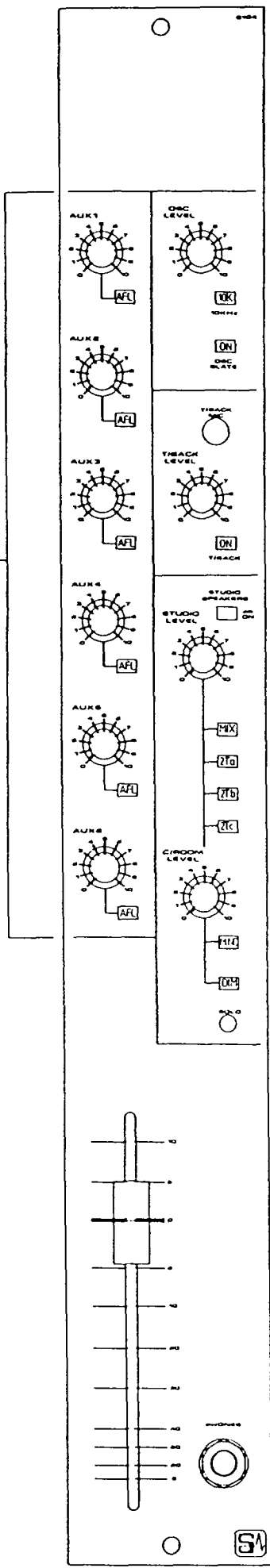
For VU metering all the jumpers should be positioned to the right.

eg. . . ---. J1
 . . ---. J2
 PPM VU

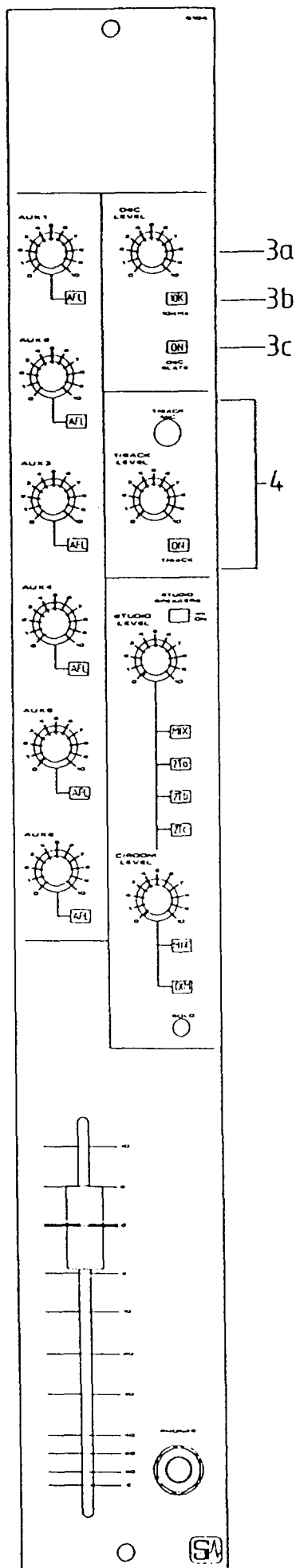
2) Auxiliary Masters 1-6

Each of the 6 auxiliary buses has an overall master level control. An associated AFL, (After fade listen), button allows the signal at the auxiliary to be monitored and metered. This illuminates the Solo LED on the Master Module.

2-



S500/S600
 MASTER FACIA



S500 / S600
MASTER FACIA

3) Oscillator

a) OSC SLATE

The Slate button switches on the oscillator. The Oscillator may be routed to all eight output groups and/or any pair of auxiliaries by the installation of several push on links (Jumpers) on the Right Hand PCB of the Master Module. (See ED2173).

To route the Osc/Talkback to GROUPS 1-8 push Jumper J6 ON.

To route the Osc/Talkback to AUX 1-2 push Jumper J7 ON.

To route the Osc/Talkback to AUX 3-4 push Jumper J8 ON.

To route the Osc/Talkback to Aux 5-6 push Jumper J9 ON.

b) FREQUENCY

The Oscillator frequency can be switched between two set values of 700Hz, when the button is out, and 10kHz, when the button is pressed.

c) OSC LEVEL

Adjusts the level of the Oscillator.

4) Talkback Section

The Talkback section contains the Talkback microphone, the Talkback level control and the Talkback on/off switch. The Talkback system is activated when the Talkback button is pressed. The Talkback System disables the Oscillator.

The Talkback signal may be routed to either Groups 1-8 and/or any pair of auxiliaries by the installation of jumpers 6-9, (located on the Right-hand master PCB). These links are used for both the oscillator signal and the talkback signal.

5. Monitor Section

a) STUDIO LEVEL

The signal from the monitor source selection is fed via the Studio Speaker switch to the Studio Level control.

b) MONITOR SOURCE

Four push buttons, 2Ta, 2Tb, 2Tc, and Mix, route the signals from 3 external stereo sources or the main stereo mix output to the Control Room, Studio and Headphone monitoring systems.

The input sensitivity of 2-track A and B can be increased together to -10dBV, TASCAM operating levels, for ease of use with cassette machines.

2-track C may be altered independently to -10dBV, Tascam operating levels, when the console is operating at +4dBu, for ease of use with cassette machines etc. (See section 3.02)

c) CONTROL ROOM LEVEL

The Control Room monitoring signal can be adjusted in level. The source signal is either the output of the monitor source selection or the signal from any soloed (AFL/PFL) source.

d) MNO

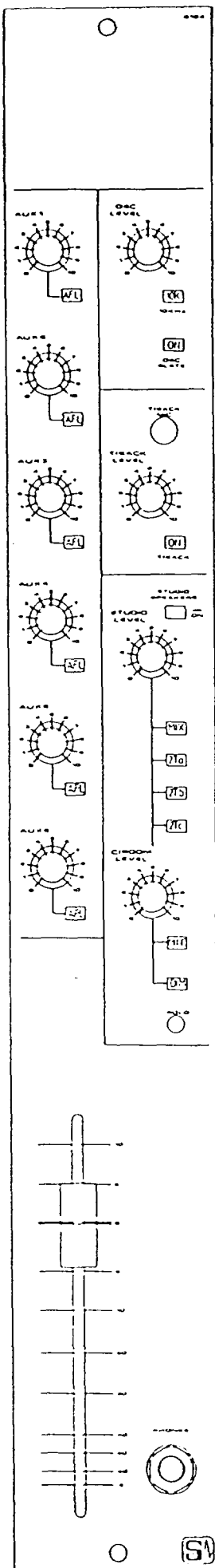
To provide a mono compatibility check of the stereo signal, the left and right monitor channels can be summed together by the MNO switch. This is operative on both the Control Room and Headphone monitoring systems, and does not affect the main stereo output.

e) DIM

The Control Room and Headphone monitoring systems can be attenuated by 20dB.

f) SOLO

The Solo LED illuminates when any PFL or AFL button has been pressed on either Input channels, the Group output modules or the Auxiliary masters. A mono signal replaces the stereo signal on the Phones and Control room output and on the Master Meters.



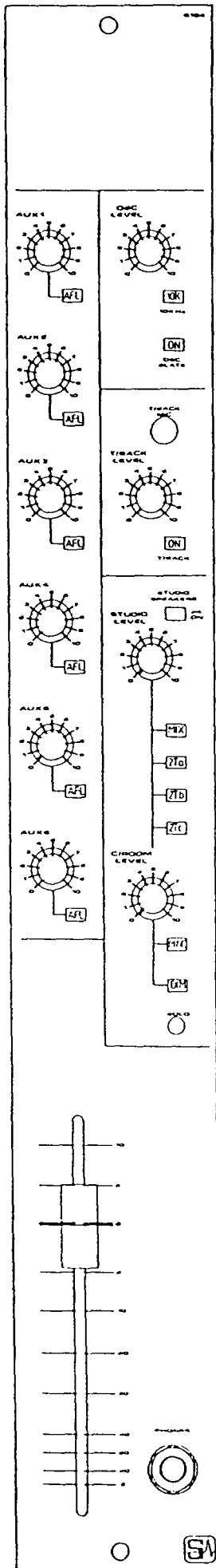
5500 / 5600
MASTER FACIA

6) Master Stereo Fader

The Master Stereo fader is a full length linear fader.

7) Stereo Headphone Socket

The headphones output allows monitoring of the main stereo mix output or any soloed signal, and cuts out the control room feed when the headphones are plugged in. The headphone socket expects to see headphones of 600 Ohms, but will drive 8 Ohms if required.



5500 / 5600
MASTER FACIA

PLEASE NOTE

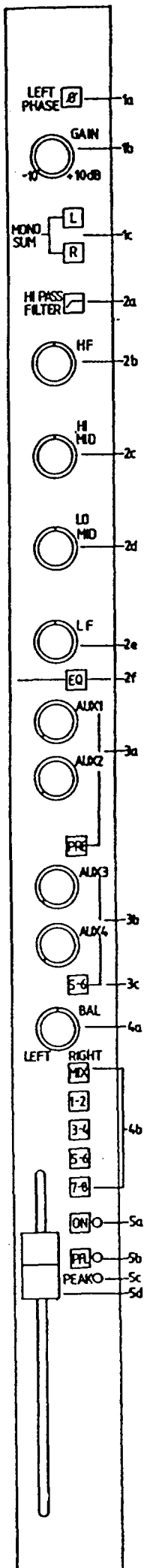
On leaving Soundcraft all Series 500 and Series 600 consoles are set to the following jumper options:-

Operating level - +4dBu.

Meter selection - VU.

Auxiliary sends - Aux 1-2 PRE EQ.
 Aux 3-4 POST EQ, POST FADE.
 Aux 5-6 POST EQ, POST FADE.

Talkback/Oscillator routing - GROUPS 1-8.
 AUX 1-2.
 AUX 3-4.
 AUX 5-6.



2.07 OPTIONAL STEREO INPUT MODULE

The optional stereo input module is available in blocks of four.

1. Channel Input Section

The channel Line Input is electronically balanced with an input impedance of greater than 10kOhms, which is high enough to interface to any normal professional peripheral equipment without loading the source. Insert points Left and Right are provided post the Equaliser.

The interface level can be either +4dBu or -10dBV. To select -10dBV remove jumpers J1 and J2 on the input PCB.

a) (Phase)

Pressing the Phase button will invert the phase on the left-hand only to correct for any input mismatch.

b) INPUT GAIN

The Input Gain can be varied between -10dB and +10dB of gain using the Gain Trim control.

c) L & R

i With both these switches out the module works in stereo mode.

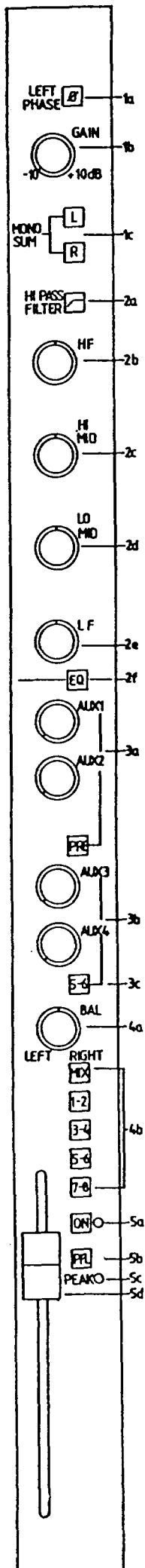
ii With either L or R switched in, both channels of the module are fed by either the left or right input.

iii With both switches pressed, both channels of the module are fed by a mono sum of the left and right inputs.

2. Equaliser Section

a) (High Pass Filter)

The High Pass Filter operates at 100Hz with an ultimate slope of 12dB/Octave. This will effectively remove low frequency stage rumble and other extraneous signals.

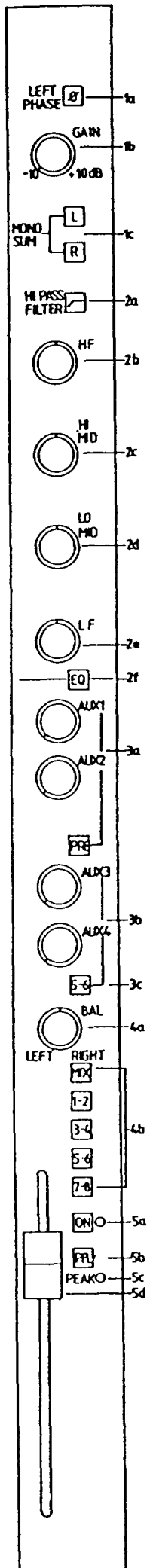


- b) HF (High Frequency)
15dB of boost or cut is available at 10kHz, with a "shelving" characteristic, ie. the slope of the EQ curve does not keep rising with frequency, but having reached the desired amount, flattens out or "shelves" from that frequency on.
- c) HI MID
15dB of boost or cut is available at 2kHz, with a peak/dip characteristic, ie. having reached maximum amplitude, (or minimum in the place of cut), the amplitude response returns to zero on either side of the frequency. The shape of the curve, when plotted shows a characteristic bell shape. The Q of the net-work, (a measure of bandwidth), is 1.5.
- d) LO MID
The Lo Mid section is identical to the Hi Mid section, with the exception that the frequency is 300Hz.
- e) LF (Low Frequency)
15dB of boost or cut is available at 60Hz, with a "shelving" characteristic.
- f) EQ
The Equaliser circuitry can be switched in and out of the signal path, independently of the high pass filter.

3. Auxiliary Section

There are four Auxiliary send controls available. The bottom two can be routed to either of two buses, giving a total of 6 Auxiliary sends. All Auxiliary sends are MONO.

- a) SENDS 1-2
Auxiliary sends 1 and 2 are normally post-fader, but can be switched pre-fader by pressing the appropriate PRE button. In both cases they are post Equaliser.
- b) SENDS 3-4
Auxiliary sends 3-4 may be either pre or post fader, depending on push-on links located on the PCB.



c) SENDS 5-6

Auxiliary sends 5-6 are accessed by pressing the 5-6 button. These may also be pre-selected either pre or post fader by the use of push-on links on the PCB.

ie. Pre Post

Aux 3&4 J4 J3

Aux 5&6 J6 J5

Pre Post

(Refer to the Stereo Input module circuit diagram ED2323.)

4. Routing Section

The channel input signal may be routed to any of the pairs of Group Outputs, (1-2, 3-4, 5-6, 7-8), and the Stereo Mix, by selecting the relevant routing button.

a) BALANCE

The balance control corrects or deliberately creates any errors in stereo matching before the fader and the Auxiliary sends.

b) ROUTING

Selection of any routing button assigns the channel signal to a pair of output groups, or the stereo mix, via the balance correction.

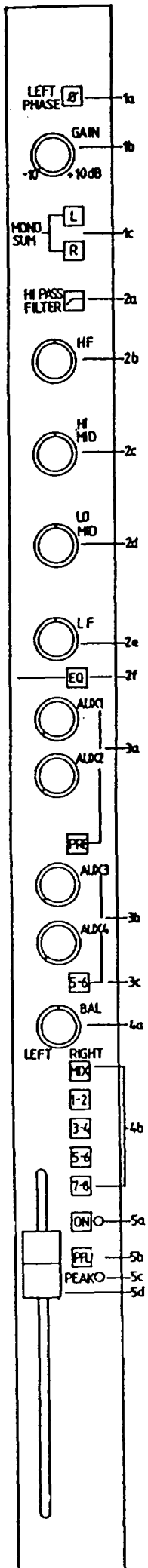
5. Channel Status Section

a) ON

The channel "ON" status is indicated by an LED. When a channel is switched off, all auxiliary sends are also switched off.

b) PFL

Pre-Fade Listen solos the Pre-fader signal independently of the ON switch. This gives a mono check of signal before the on/off switch. PFL operation is indicated by a master warning LED on the Master Module.



c) PEAK

A red LED indicated the peak signal level. This gives visual warning that the higher signal Right or Left is within 5dB of clipping.

d) CHANNEL FADER

The channel fader is an accurately matched long throw stereo fader. Infinity cut off is greater than 90dB.

2.08 INPUT CONNECTOR PANEL SERIES 500/600

1) Line Inputs

These stereo standard jacks carry the electronically balanced Line Inputs. They are wired as follows:-

Tip:	HOT (In phase signal)
Ring:	COLD (Out of phase signal)
Sleeve:	GROUND

Line Inputs 1-8, (1-16 on the Series 600), are normalled from the tape returns. This allows the Tape Returns to be sent directly to the Input Channels without having to re-patch.

2) Mic Inputs

These carry the electronically balanced Microphone Inputs and are wired as follows:-

Pin 1:	GROUND
Pin 2:	HOT (In phase signal)
Pin 3:	COLD (Out of phase signal)

The Microphone Inputs can be fed with a +48v Phantom Power for Capacitor microphones. This is controlled by the Phantom Power switch on the individual Input Channels.

3) Channel Inserts

The Channel Inserts are standard, unbalanced, stereo jacks used to carry both insert send and insert return signals. Under normal conditions with nothing inserted the signal is normalled through the jack socket and thus inserting a jack will automatically break the link. Channel inserts are wired as follows:-

Tip:	Insert return - unbalanced
Ring:	Insert send - unbalanced
Sleeve:	Common Ground

4) Line Outputs

The Line Outputs are standard, unbalanced, stereo jacks used for sending signals to peripheral equipment. Minimum loading is 5kOhm. They are wired as follows:-

Tip:	HOT (In phase signal)- unbalanced
Ring:	Signal Common
Sleeve:	Signal Common

2.09 OUTPUT CONNECTOR PANEL SERIES 500

1) Group Inserts

This is a stereo, standard break point jack socket which contains both insert send and return. The socket is connected as follows:-

Tip: Insert return (unbalanced)

Ring: Insert send (unbalanced)

Sleeve: Common ground

Under normal conditions i.e. with socket not in use, the send is connected to return so that inserting a jack automatically breaks the link.

2) Group Outputs

Fed from the eight individual groups these electronically balanced outputs are wired as follows:-

Pin1: GROUND

Pin2: HOT (In phase signal)

Pin3: COLD (Out of phase signal)

3) Monitor Inputs

The Monitor Inputs carry FX returns via the Monitor section or the SUB button without having to un-plug the Tape Returns. They are wired as follows:-

Tip: HOT (In phase signal)

Ring: COLD (Out of phase signal)

Sleeve: Common Ground.

4) Tape Returns

These stereo standard jack sockets, which are normalled to the Monitor input socket and the corresponding Line input, carry the balanced tape returns and are wired as follows:-

Tip: HOT (In phase signal)

Ring: COLD (Out of phase signal)

Sleeve: Ground

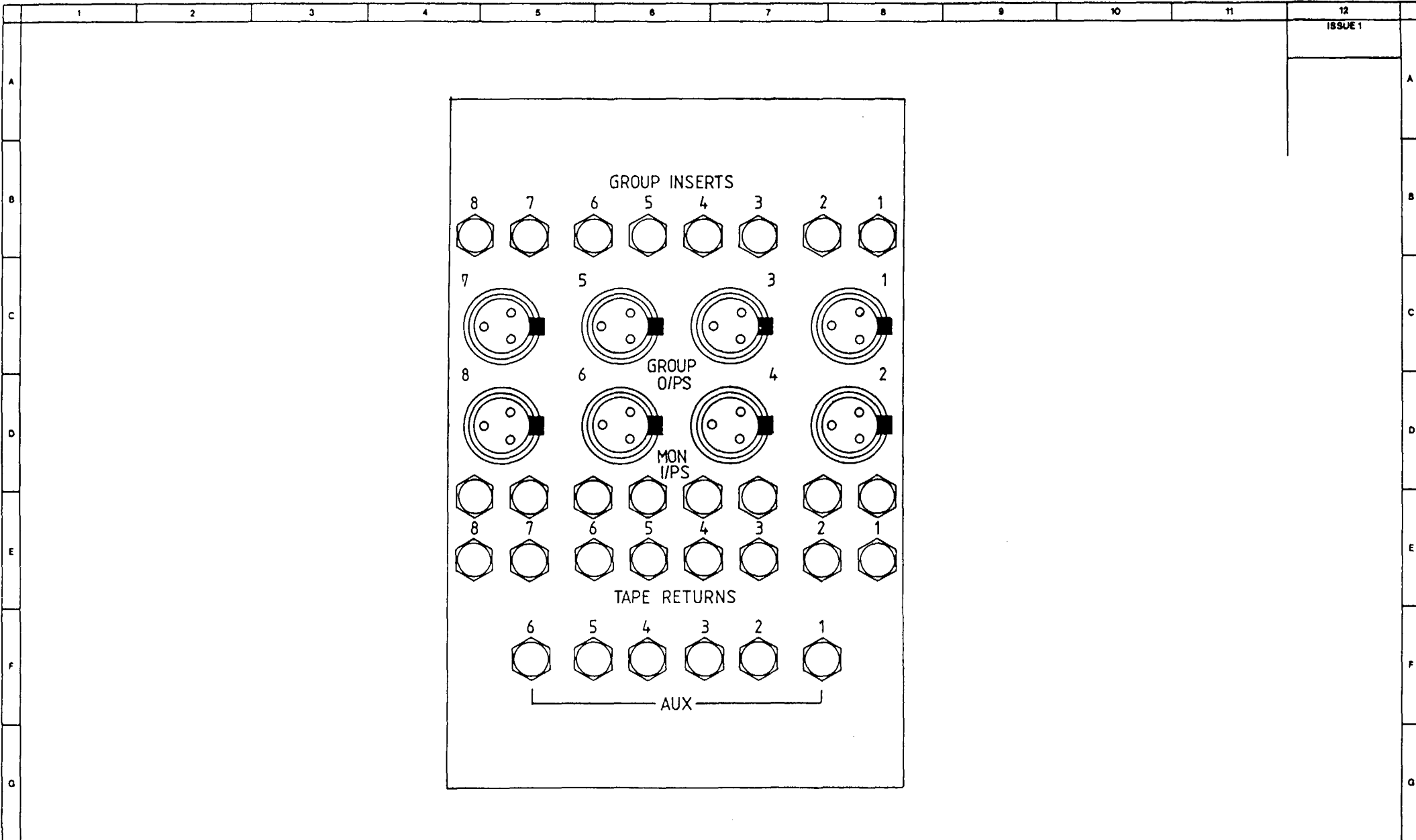
5) Auxiliary Outputs

These are standard electronically balanced jack sockets for the Auxiliary outputs and are wired as follows:-

Tip: HOT (In phase signal)

Ring: COLD (Out of phase signal)

Sleeve: Common Ground



<p>TOLERANCES</p> <p>HOLE SIZES AFTER PAINTING</p> <p>0-3mm -0 -0.06</p> <p>OVER 3-6mm -0 -0.12</p> <p>OVER 6-10mm -0 -0.06</p> <p>OVER 10-15mm -0 -0.15</p> <p>OVER 15-25mm -0 -0.21</p> <p>OVER 25mm -0 -0.29</p>	<p>GENERAL TOLERANCE</p> <p>Unless otherwise stated.</p> <p>± 0.05mm (0-0.007")</p> <p>± 0.25mm (0-0.010")</p> <p>± 0.12mm (0-0.005")</p> <p>HOLE CENTRES ± 0.004"</p> <p>ALL ANGLES ± 0.04°</p>	<p>HOLE INDEX</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>MATL</p> <p>FINISH</p> <p>SCALE</p>	<p>DRN</p> <p>AB</p> <p>TRCD</p> <p>CHKD</p>	<p>SOUNDCRAFT ELECTRONICS LTD</p> <p>UNIT 2,</p> <p>BOREHAMWOOD INDUSTRIAL PARK,</p> <p>ROWLEY LANE,</p> <p>BOREHAMWOOD,</p> <p>HERTFORDSHIRE WD6 8PZ.</p> <p>TELEPHONE: 01-207-5050</p> <p>FACSIMILE No. 2070194</p>	<p>TITLE</p> <p>S500 O/P REAR</p> <p>CONN PANEL</p>
<p>THIRD ANGLE PROJECTION</p> <p>THIS DRAWING TO COMPLY TO BS308.</p>					<p>DRG. No. MI2402</p>	

2.10 OUTPUT CONNECTOR PANEL SERIES 600

1) Auxiliary Outputs

These are standard electronically balanced jack socket outputs for the Auxiliary outputs and are wired the same as the Auxiliary Outputs on the Series 500 Output panel.

2) Group Inserts

This is a stereo, standard break point jack socket which contains both insert send and return. The socket is connected as follows:-

Tip: Insert return (unbalanced)

Ring: Insert send (unbalanced)

Sleeve: Common ground

Under normal conditions i.e. with socket not in use the send is connected to return so that inserting a jack automatically breaks the link.

3) Group Outputs 1-8

Fed from the eight individual groups these electronically balanced outputs are wired as follows:-

Pin1: GROUND

Pin2: HOT (In phase signal)

Pin3: COLD (Out of phase signal)

4) Tape Outputs 9-16

Paralled to the Group Outputs, they are wired as above.

5) Monitor Inputs

The Monitor Inputs carry FX returns. These are wired as follows:-

Tip: HOT (In phase signal)

Ring: COLD (Out of phase signal)

Sleeve: GROUND.

6) Tape Returns

These stereo standard jack sockets carry the balanced tape returns and are wired as follows:-

Tip: HOT (In phase signal)

Ring: COLD (Out of phase signal)

Sleeve: GROUND

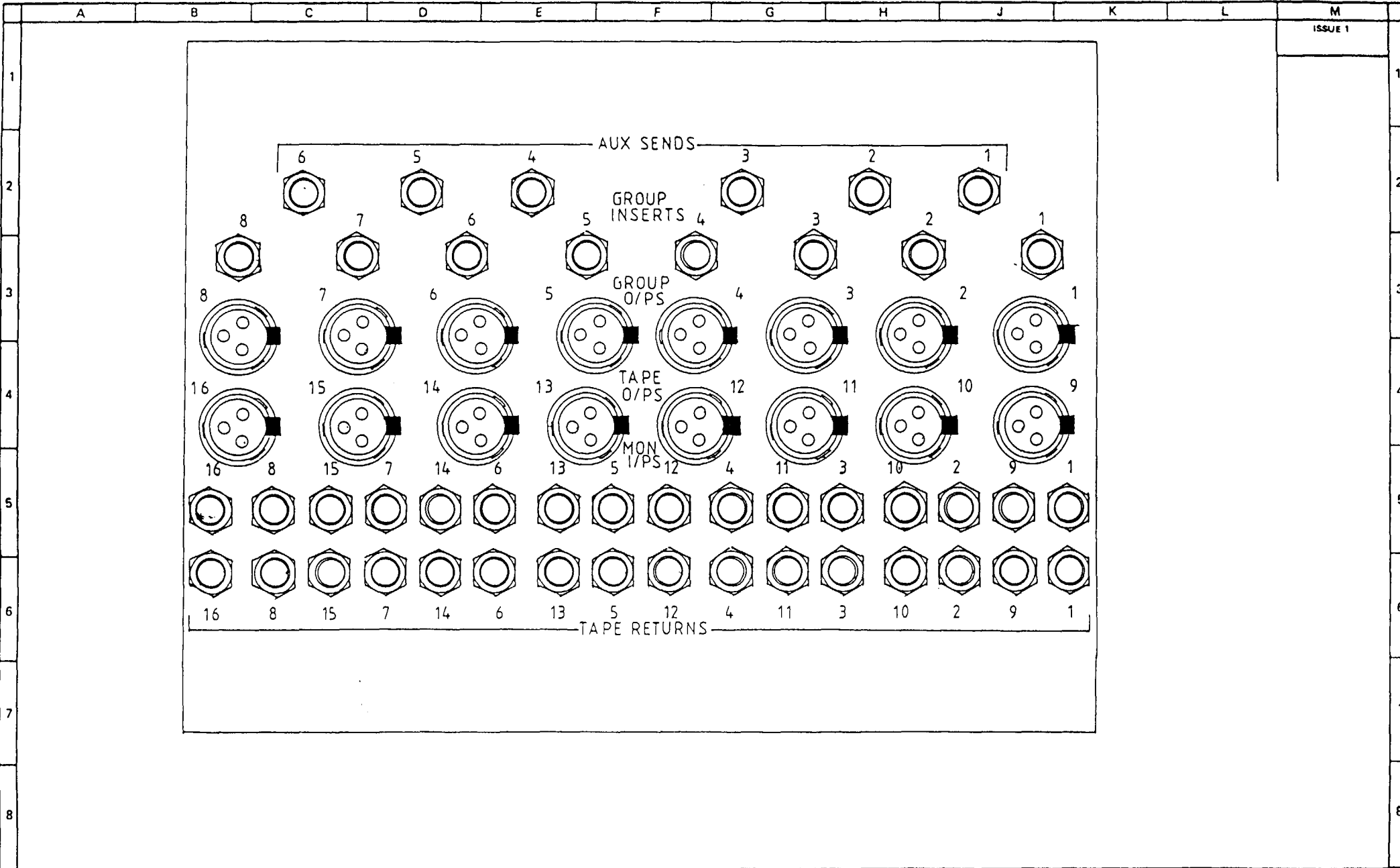
1) Initial Wiring Considerations.

- a) For optimum performance, it is essential for the earthing system to be clean and noise free, as all signals are referenced to this earth. A central point should be decided on for the main earth point system, and all earths should be "star fed" from this point. It is common electrical practice to "daisy chain" the earths to all electrical outlets but this method is unsuitable for audio installations. The preferred method is to run an individual earth wire from each outlet, back to the system star point to provide a safety earth of screen reference for each piece of equipment.

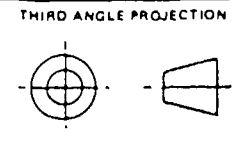
A separate earth wire should also be run from each equipment rack and area, to the star point. This may or may not be used depending on circumstances, but it is easier to install in the first place, than later when problems arise.

The location of the star point should be a convenient, easily accessible place preferably at the rear of the console, or in the main equipment rack.

- b) Install separate "clean" and "dirty" mains outlets, wired individually back to the incoming mains distribution box. Use the "clean" supply for all audio equipment and the "dirty" supply for all lighting, vending machines etc. Never mix the two systems.
- c) If necessary, to provide sufficient isolation from mains borne interference, install an isolating transformer for the "clean" supply. The isolation transformer should be provided with a Faraday Shield which must be connected to earth.
- d) Never locate the incoming mains distribution box near audio equipment, especially tape recorders, which are very sensitive to electro-magnetic fields.
- e) Ensure that all equipment racks are connected to earth, via a separate wire back to the star point.
- f) Equipment which has unbalanced inputs and outputs may need to be isolated from the rack to prevent earth loops.



M
ISSUE 1



TOLERANCE
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

HOLE INDEX

MATL
FINISH
SCALE

DRW
AB
TRCD
CHKD

SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE
S600
OUTPUT REAR CONN
PANEL
DRG. No. MS 2403

2.11 MASTER CONNECTOR PANEL

The master connector panel contains the Control room and studio monitor outputs, the 2-track returns, the main mix outputs, the mix inserts and the PSU connector.

1. C/Room and Studio

These standard jacks carry the outputs to the control room and studio monitors these are electronically balanced and are wired as follows:-

Tip: HOT (In phase signal)
Ring: COLD (Out of phase signal)
Sleeve: GROUND

2. 2-track Returns B and C

These carry the 2-track returns and are wired as above.

3. Mix Outputs and 2-track A Returns

The main mix outputs and 2-track A returns are electronically balanced and are wired as follows:-

Pin 1: GROUND
Pin 2: HOT (In phase signal)
Pin 3: COLD (Out of phase signal)

4. Mix Inserts-

The mix inserts allow access to the main mix immediately before the main stereo fader, they are unbalanced and are wired as follows:-

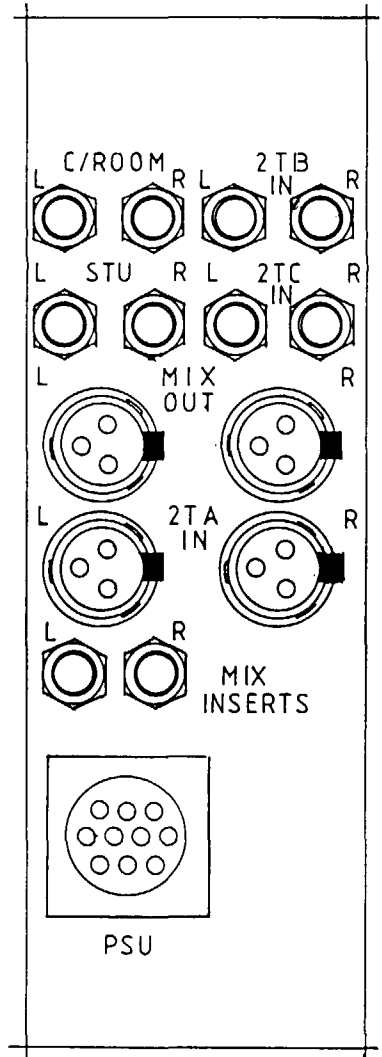
Tip: Insert return
Ring: Insert send
Sleeve: Common Ground

5. PSU

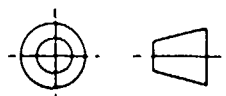
Power to the console is provided via the PSU connector located on the master rear connector panel.

A B C D E F G H J K L M

ISSUE 1



THIRD ANGLE PROJECTION



TOLERANCE
 All imperial dimensions ± 0.010
 All metric dimensions $\pm 0.25\text{mm}$
 All angles $\pm 0.50^\circ$
 Unless otherwise stated

HOLE INDEX

MATL
 FINISH
 SCALE

DRN
 TRCD
 CHKD

SOUNDCRAFT ELECTRONICS LTD
 5-8 GREAT SUTTON STREET
 LONDON EC1V 0BX.
 TELEPHONE. 01-251-3631/2/3
 TELEGRAMS. SOUNDCRAFT LDN EC1
 TELEX. UK. No. 21198. USA. No. 224408

TITLE S500/600
 10WAY PSU MASTER
 CONN PANEL
 DRG. No. MS 2401

2.12 OPTIONAL STEREO INPUT REAR CONNECTOR PANEL

This contains the Left and Right inputs and the Left and Right inserts for four Stereo Input modules.

1. Left and Right Inputs

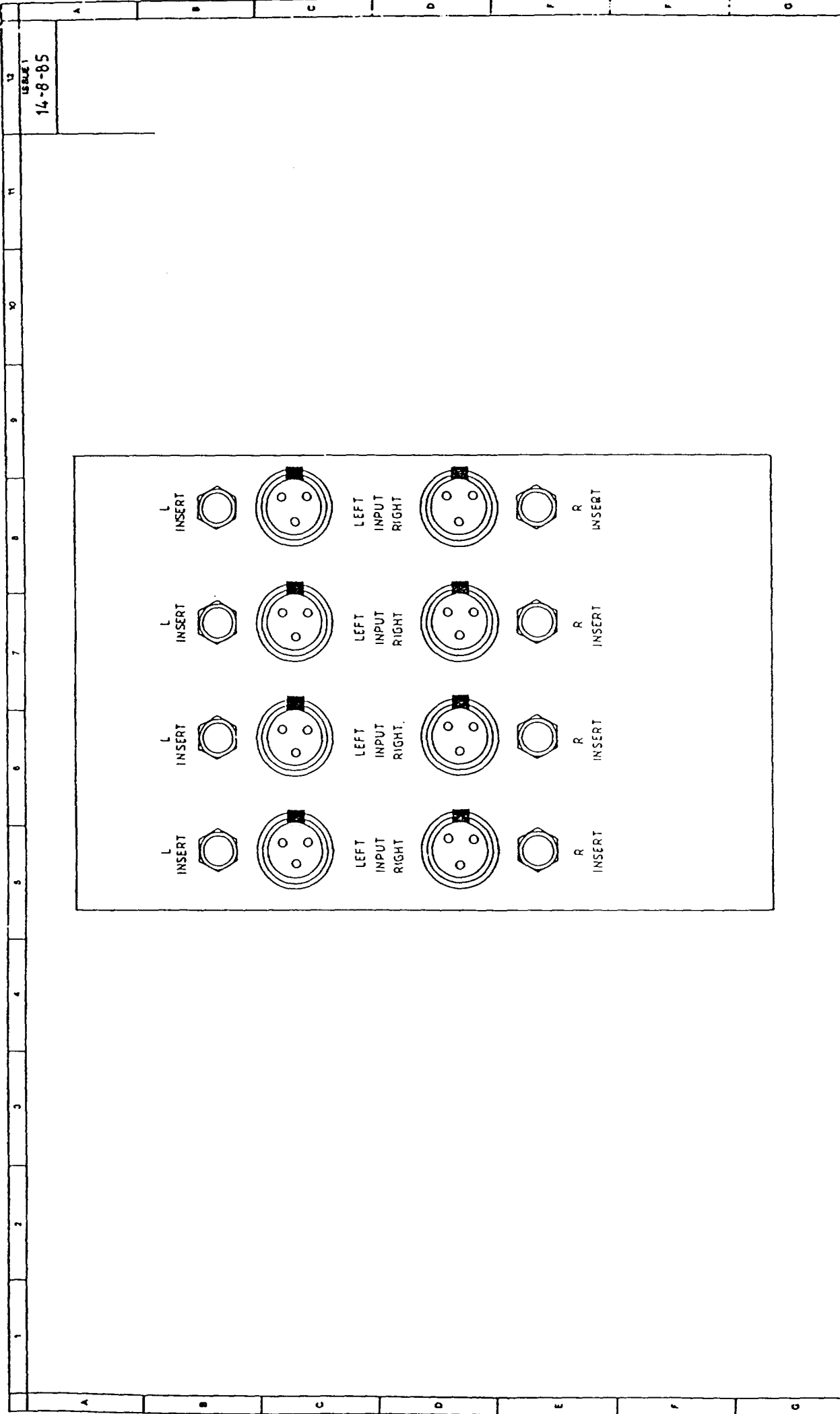
These female XLRs are the Line inputs to the Stereo Modules and are balanced. They are wired as follows:-

Pin1: GROUND
Pin2: HOT
Pin3: COLD

2. Left and Right Inserts

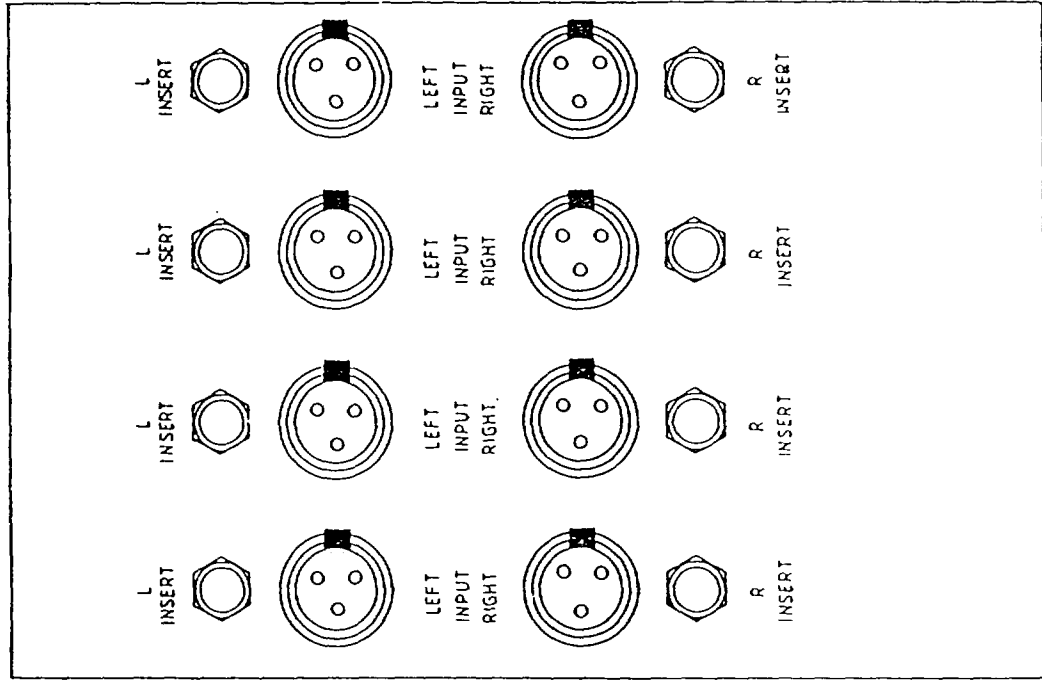
The Left and Right insert points allow access to the signal path immediately after the Equaliser section, they are unbalanced and are wired as follows:-

Tip: Insert return
Ring: Insert send
Sleeve: Common Ground



13
 12
 11
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 5
 4
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 1

13
 12
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 8
 7
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 5
 4
 3
 2
 1



TITLE
 S500/600 STEREO I/P
 REAR CONN PANEL

DWG No M12503

SOUNDSCRAFT ELECTRONICS LTD
 UNIT 2,
 BOREHAMWOOD INDUSTRIAL PARK,
 POWLEY LANE,
 BOREHAMWOOD,
 HEATFORDSHIRE WDA 8PZ.
 TELEPHONE: 01-207-6030
 FACSIMILE No. 2070184

DRW	AB
MATL	
FINISH	
SCALE	
THIRD ANGLE PROJECTION	
THIS DRAWING TO COMPLY	

<input type="checkbox"/>	
<input type="checkbox"/>	
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<input type="checkbox"/>	

HOLE INDEX

<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

TOLERANCES
 UNLESS OTHERWISE SPECIFIED

GENERAL TOLERANCES
 Dimensions not specified:
 1st Dimension ±0.10
 2nd Dimension ±0.15
 3rd Dimension ±0.20
 4th Dimension ±0.25
 5th Dimension ±0.30
 6th Dimension ±0.40
 7th Dimension ±0.50
 8th Dimension ±0.60
 9th Dimension ±0.70
 10th Dimension ±0.80
 11th Dimension ±1.00
 12th Dimension ±1.50
 13th Dimension ±2.00

FINISH
 UNLESS OTHERWISE SPECIFIED

ALL DIMENSIONS IN MILLIMETERS

3.00 INSTALLATION

3.01. Applying Power

Before switching on the Series 500 or 600 console check that the mains voltage selector on the power unit is set at the correct mains voltage for your area, and that the fuse is of the correct rating.

For operation on voltages between 220 and 240V ac the fuse should be rated at - 3.15A, 20mm, anti-surge.

For operation on voltages between 100 and 120V ac the fuse should be rated at - 6.30A, 20mm, anti-surge.

3.02. Interface Levels

Both the Soundcraft Series 500 and the Series 600 differ from previous Soundcraft consoles in that they are designed to work with 2 different nominal input/output levels. These are the usual +4dBu, (1.228Vrms), and -10dBV (= -7.8dBu), often called the Tascam level. These levels refer only to matching with the tape machine being used; mic sensitivity is not affected.

Changing between these two modes of operation requires the installation/removal of several push-on links, and the operation of various internal switches. (See ED2173, ED2176 & ED2177).

Note that whichever gain mode is in use, the nominal internal level in most parts of the console, including the insert points, is -6dBu, and this does not change.

a) INPUT CHANNELS

All that is necessary is to change one jumper (J11) on top of the channel PCB, to establish Line Input sensitivity.

+4 MODE: Jumper ON
-10 MODE: Jumper OFF

b) OUTPUT GROUPS

Two things need to be changed on a group; the nominal output level and the tape-return sensitivity. This is done by simply using S9, the push switch pointing backwards away from the fascia.

+4 MODE: S9 OUT
-10 MODE: S9 IN

c) MASTER MODULE

LEFT PCB - AUX MASTERS

If it is necessary to change the nominal output level of the aux masters then this is done with Jumpers 1 to 6, which configure the aux masters individually.

+4 MODE: Jumper OFF
-10 MODE: Jumper ON

RIGHT PCB - MIX, CONTROL ROOM SELECT etc

Mix Output Level: Set by J1/101

+4 MODE: Jumper OFF

-10 MODE: Jumper ON

2-track returns sens: Set by J4,5 and J104/105

+4 MODE: Jumpers ON

-10 MODE: Jumpers OFF

2-track return C:

The sensitivity of this input may be increased separately, so that 2-track C operates in -10 MODE while the rest of the desk is at +4 MODE.

To do this Jumpers J2,3 and J102,103 are pushed ON.

3.03. Connector Conventions

All XLR type connections are normally wired to the following standard:-

Pin 1 GROUND

Pin 2 HOT (In phase signal)

Pin 3 COLD (Out of phase signal)

All inputs and outputs are electronically balanced except for Monitor Channel Insert and Line Out.

3.04. General Wiring Procedures

To take full advantage of the excellent signal to noise ratio and low distortion of Soundcraft consoles care must be taken to ensure that incorrect installation and wiring does not degrade the performance of the desk. Hum, buzz, instability and Radio Frequency Interference can usually be traced to earth loops and inferior earthing systems. In some areas, especially heavy industrial areas, the incoming mains earth will not be adequate, and a separate technical earth for all the audio equipment must be supplied. However, check with your local electricity supply company to ensure that safety regulations are not infringed or negated.

The successful, hum free, installation of a system requires forethought, and the establishment of a set of ground rules, which must be consistently adhered to at all stages of installation.

1) Initial Wiring Considerations.

- a) For optimum performance, it is essential for the earthing system to be clean and noise free, as all signals are referenced to this earth. A central point should be decided on for the main earth point system, and all earths should be "star fed" from this point. It is common electrical practice to "daisy chain" the earths to all electrical outlets but this method is unsuitable for audio installations. The preferred method is to run an individual earth wire from each outlet, back to the system star point to provide a safety earth of screen reference for each piece of equipment.

A separate earth wire should also be run from each equipment rack and area, to the star point. This may or may not be used depending on circumstances, but it is easier to install in the first place, than later when problems arise.

The location of the star point should be a convenient, easily accessible place preferably at the rear of the console, or in the main equipment rack.

- b) Install separate "clean" and "dirty" mains outlets, wired individually back to the incoming mains distribution box. Use the "clean" supply for all audio equipment and the "dirty" supply for all lighting, vending machines etc. Never mix the two systems.
- c) If necessary, to provide sufficient isolation from mains borne interference, install an isolating transformer for the "clean" supply. The isolation transformer should be provided with a Faraday Shield which must be connected to earth.
- d) Never locate the incoming mains distribution box near audio equipment, especially tape recorders, which are very sensitive to electro-magnetic fields.
- e) Ensure that all equipment racks are connected to earth, via a separate wire back to the star point.
- f) Equipment which has unbalanced inputs and outputs may need to be isolated from the rack to prevent earth loops.

2) Audio Wiring

Having provided all equipment with power and earthing connections, consideration must be given to the method of providing audio interconnection, and adequate screening of those interconnections. This must be done in a logical sequence to avoid problems, and assist in the localisation of problem equipment.

- a) Connect Control Room Monitor system to the console, and check for any hum, buzz, or RFI. Only when you are satisfied with the quietness of the console and the monitor system should you proceed with the next step.
- b) Connect multitrack tape recorder, via noise reduction system if applicable, and again check that the system is still clean.
- c) Connect stereo tape recorders, studio monitors, echo and foldback sends one at a time, checking and isolating any connection which degrades performance.
- d) Connect all peripheral devices.
- e) Connect all microphone lines.

By following this sequence much time and future trouble will be saved, and the result will be a quiet, stable system.

3) Shielding

Audio equipment is supplied with a variety of input and output configurations, which must be taken into consideration when deciding where the screen connections should be made. There are three sources of unwanted signal being impressed on the screen, which are as follows:-

- i Extraneous electrostatic or electromagnetic fields.
- ii Noise and interference on the earth line.
- iii Capacitive coupling between the screen and signal wires.

To minimise the adverse affects of the unwanted coupling to the signal wires, it is important that the screen is connected at one end only, i.e. the screen must not carry any signal current. Any signal on the wires within the screen will be capacitively coupled to the screen, and this current will ultimately be returned to the source of the signal, either directly, if the screen is connected at the signal source end, or indirectly via the earthing system, if the signal is connected at the signal destination end. The indirect connection will cause an increase in high frequency cross-talk, and should be avoided wherever possible. Therefore, in general, always connect the shield only at the signal source end. In high RF areas, the screen can also be connected to earth via a 0.01 micro Farad capacitor. This will present a short circuit at RF frequencies, thus lowering the effective shield impedance to ground. However, at low audio frequencies the reactance of the capacitor will be sufficiently high not to cause an earth loop problem.

Combinations of unbalanced, balanced and electronically balanced, (differential), systems mean that there are nine interconnection permutations. The optimum of the screen in each case is shown in Table 1.

TABLE 1

	OUTPUT	INPUT	SCREEN
1	Unbalanced	Unbalanced	Source
2	Unbalanced	Balanced	Source
3	Unbalanced	Differential	Source
4	Balanced (Note 1)	Unbalanced	Destination
5	Balanced	Balanced	Source
6	Balanced (Note 2)	Differential	Destination
7	Differential (Note 3)	Unbalanced	Source
8	Differential	Balanced	Source
9	Differential	Differential	Source

Note 1 - The shield is connected to the destination earth point, which is opposite to normal practice, because the signal wires being shielded are referenced to the input earth, not the output earth.

Note 2 - If the output transformer is centre tapped to earth, the screen should be connected at the source.

Note 3 - When an active differential output is operated in unbalanced mode, it is very important that the output current returns to earth via the shortest, least reactive route. Check for instability at the output.

N.B.

- a) In all cases, use good quality twin screened audio cable. Check for instability at the output.
- b) Always connect both conductors at both ends, and ensure that the screen is only connected at one end.
- c) Do not disconnect the mains earth from each piece of equipment. This is needed to provide both safety and screen returns to the system star point.
- d) Equipment which has balanced inputs and outputs may need to be electrically isolated from the equipment rack and/or other equipment, to avoid earth loops.

It is important to remember that all equipment which is connected to the mains is a potential source of hum and interference, and may radiate both electrostatic or electromagnetic radiation. In addition, the mains will also act as a carrier for many forms of RF interference generated by electric motors, air-conditioning units, thyristor light dimmers etc. Unless the earth system is clean, all attempts to improve hum noise levels will be futile. In extreme cases there will be no alternative but to provide a completely separate and independent "technical earth" to replace the incoming "noisy earth". However, always consult your local electricity supply authority to ensure that safety regulations are not being infringed.

S500/600 A, B MUTE OPTION INFORMATION

On mono module and stereo module fit components in dotted box. Opto isolator is 4N33 type, giving open collector pull down when module is "ON".

STEREO MODULE

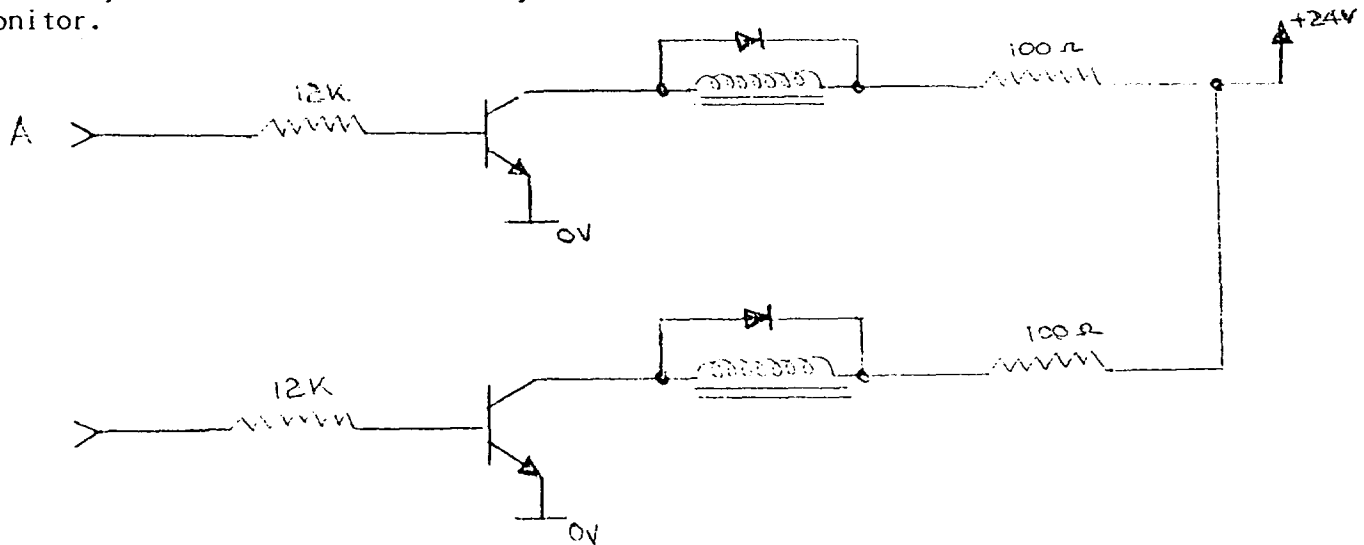
R60 to be 4K7 resistor. Fit J9 if momentary pulse NOT required.

MONO MODULE

Fit J14 if momentary pulse NOT required.

To use A, B monitor mutes, wire from PSU interface PCB from A, & B line to transistors as shown below.

These may then drive external relays to mute control room monitor and studio monitor.



Relays to be 24V type.

Transistors to be 2n1681 BL or 25c 2240 BL NPN or equivalent

N.B. Diodes are essential

4.00 OPERATION SERIES 500 AND 600

4.01 Introduction

The Soundcraft Series 500/600 console has been designed to provide the varied facilities required in a small modern recording studio.

The recording process can be broken down into 4 basic sequences:-

1. Record mode: Recording direct from microphone or line input onto the multitrack tape recorder.
2. Multitrack playback: Listening to what has been recorded.
3. Overdubbing: Building up the track complement whilst listening to what has already been recorded.
4. Mixing: Combining all the recorded tracks, various effects, echo etc to form the final stereo mix.

A detailed explanation of all the controls and switches has been given in section 2.00 and it is assumed that the user is familiar with basic multitrack recording methods.

4.02 Record Mode

1. Record Mode

This is the basic starting point in making a recording. Input channels are placed in the microphone mode by placing the LINE button in the "up" position. The signal is routed to the desired console group output by pressing the relevant group routing button on each channel, on the Series 600 the signal may be routed to tracks 9-16 by simply selecting "record" on the relevant track of the multitrack machine. The signal can be routed to more than one group if desired and panned between any odd and even numbered groups by using the channel Pan Pot.

The signal may be metered at pre-fade, post EQ, by pressing PFL and using the mix meters and at the relevant Group Output to the tape machine on the Group Output meter, if the tape return button is in the "up" position. A monitor balance is achieved using the appropriate level control. The monitor Pan Pot will pan the signal between the left and right speakers.

The various gain and level controls throughout the signal chain may now be adjusted to set the operating levels for optimum signal to noise ratio and headroom conditions.

2. Channel and Group Faders

In general the channel and group faders should be set to approximately the zero position. This will enable the engineer to increase the level by 10dB, or fade out completely, while normally operating in the fine resolution area of the fader travel. The absolute position of the fader is not too critical, but situations where, for example, the channel fader is operated at -30dB will usually mean that the pre-fader headroom has been reduced to a point where an amplifier could overload and cause distortion. Operating with the channel fader below the zero point and the group fader above zero also means that the noise contribution from the group bus could degrade the normally excellent signal to noise ratio.

3. Microphone Gain

Having set both channel and group faders as above, the microphone gain is set to give the required level at the group output. The amount of gain required depends on the type of microphone, the sound pressure level developed by the instrument or voice and the distance between the sound source and microphone. In the case of high output and high sound pressure levels, it may be necessary to switch in the -20dB attenuator pad, to prevent overloading the input stage.

4. Insert Points

In situations where the dynamics of the input signal are very wide, or where a particular effect is required, it is often necessary to patch in a limiter/compressor, equalizer or effects device into the signal chain. This can be done by using either the Channel Insert points or the Group Insert points. Which insert point is used will depend on the type of effect required. If only an individual instrument is to be controlled, the channel insert point would be used. However, if a number of microphone channels have been mixed to a single group, for instance, backing vocals, then it will be necessary to patch in an overall limiter, using the group insert point.

5. Headphone Mix

During recording, it is of course essential for the musicians to hear what they and everybody else are playing. Headphone mixes are derived using any or all of the auxiliary sends, either direct from the input channels, or alternatively from the group monitor channels. Deriving the headphone mix from the monitor channels has the advantage of giving the musicians a mix when replaying the recording just made, which is useful when overdubbing to enable them to hear their performance. However, a mix derived from the monitor channels during recording will be affected by any gain riding of the channel or group faders, which may cause problems.

If the echo send level from the echo return is set too high, the entire system will start to feed-back and go into oscillation, instead of decreasing in amplitude with each successive loop.

If it is not required to record the echo signal, but merely to route it direct to the monitors select MIX. This will route the signal directly to the stereo mix bus, which is also the monitor signal in this mode.

4.03 Multitrack Playback

Having actually recorded something on the multitrack recorder, it is necessary to be able to listen to the recording. This is achieved by simply selecting Tape Return. The effect of this is to connect the individual monitor to the output of the relevant track of the multitrack machine. Therefore, the signal from the tape machine now follows the same monitor signal path as the group output signal had been using. This means that all levels and panning, and therefore the monitor mix, will remain the same as they were when the recording was being made. This is assuming, of course, that the tape machines were correctly aligned.

The facility of monitoring the playback of the multitrack in this way enables the operator to perform a quality check even while the recording is being made, providing that the following precautions are observed.

1. Isolation between control room and studio is good. If not, the musicians will hear a delayed version of what they are playing.
2. Headphone mix is derived from the channel faders, otherwise the musicians will again hear a delayed version.
3. Any noise reduction is either a simultaneous encode-decode system, or not used. If it is not a simultaneous encode-decode system, then while recording it will be in the encode mode, and the signal presented to the console monitor return will probably be the tape recorder line input signal i.e. the signal from the console group output. In this case, pressing the Tape Return will appear to have no effect, as it will be the same signal in both cases. This particular effect can, in some cases, be put to good use, however, when overdubbing as it allows monitor switching to be achieved automatically, depending on the mode of the tape recorder. This will be dealt with more thoroughly in section 4.04 which describes the overdubbing process.

4.04 Overdubbing

Overdubbing is the process of building up a recording track by track, while listening to all the previously recorded tracks. As such it will be clear that this is a combination of the previous two modes, with some of the channels in the microphone, (recording), mode and some monitors in the Tape Return, (multitrack playback), mode.

Any tracks which have already been recorded are monitored by selecting the relevant tape return buttons. A headphone mix may be set up using the auxiliary sends on the monitor channels. Monitor echo can also be similarly set up, as already described in section 4.02.

At this stage, a decision must be made as to the source of the headphone mix signal from the overdub channels. It can be derived from either the input channel or the monitor channel or both.

1. Input Channel

In this case, the musician always hears himself. However, he will not be able to hear his previously recorded signal off the tape machine, if he needs to "drop in" in the middle of a take.

2. Monitor Channel

If the headphone mix is derived from the monitor channels, the engineer can decide whether the musician hears himself live or the previously recorded signal off tape, (sync playback), by pressing the Tape Return button. However, he will not be able to hear both, and a vocalist, for instance, may find it difficult to match levels and intonation.

This switching can sometimes be achieved automatically if a noise reduction unit is in use, and with some tape machines. If the tape machine or noise reduction unit is arranged to switch its sync output to line input whenever the machine is in stop, fast forward, rewind, or record and only switch to sync playback off tape when the machine is in the play mode, the automatic switching condition will be met.

All that is now usually necessary when overdubbing is to select Tape Return on the relevant monitor channel, and let the tape machine and/or noise reduction perform the work of monitor switching.

The musician now hears himself live at all times except when the tape machine is actually in the sync play mode, then he will hear his previous signal off tape. This method saves the engineer from continually switching monitor sources, but can only be used with certain tape machines.

3. Both

If derived from both, then the musician is able to hear himself live, via the input channel, and his previous recording via the monitor channel, if it is switched to monitor Tape Return, until the moment of entering record mode. At that point, most tape machines switch from sync playback to line input. The effect of this will be a slight increase in the level of that signal in the headphone mix, due to the addition of the input channel signal and tape machine line input signal, which is effectively the same signal.

4.05 Remix Mode

When all recording and overdubbing has been completed, the console is placed in the remix mode.

Remixing is the process of combining all the previously recorded tracks together with any special effects devices such as harmonizers, flangers and delay lines.

The remix mode is entered by selecting Line Input, (LINE) on input channels 1-8 on the Series 500 and 1-16 on the Series 600. This connects the outputs of the multitrack machine to the inputs of each channel, via the gain trim control. As when laying the initial tracks, the gain trim can be adjusted to allow the fader to work near its nominal zero position.

By selecting MIX, the channel can be routed directly to the stereo mix, via the channel Pan Pot, to allow positioning of the signal within the stereo perspective.

Sub-groups may be formed by routing a number of signals to any one group and pressing the SUB button on that group. This signal is summed into the relevant group bus AND that group is routed to the stereo mix bus.

NOTE that pressing SUB routes the Monitor Input to the relevant group and ALSO routes that group to the stereo mix bus.

On both the Series 500 and the 600 each Group/Monitor module can be used as a Line level input, say for FX returns, and directly accesses the stereo mix bus.

Limiters or other effects devices can be connected to any input channel or output group by patching into the relevant insert points.

All 6 auxiliary sends can be used to feed echo or effects devices, as headphone mixes are not required during remixing.

The composite stereo mix will be controlled in level by the stereo master fader and the level metered on the stereo mix meters. These meters will also indicate the level of any solo signal, or any of the stereo tape returns selected on the monitor source selection buttons. These monitor source selection buttons allows quality and level checking of the stereo recording in the same way as described for multitrack playback.

5.00 MAINTENANCE

Every console that leaves Soundcraft undergoes a thorough testing at all stages of manufacture. These tests include individual testing of every function on all the PCB's, a thorough testing of all the functions of the completed mixer, a soak test of 48 hours before the final test, which consists of listening, measuring and mechanical function checks prior to packaging and shipment. In this way we try to ensure that any faulty components or manufacture show up long before the console leaves the company. Thus a long and trouble-free life can be expected.

Although all Soundcraft Consoles have been designed with long term reliability in mind, it is inevitable that occasional maintenance will be required. However, due to the amount of attention given to the problems of maintenance during the design stages of this console, and the modular construction, servicing tends to be extremely simple to carry out, with the minimum of test equipment needed to isolate and rectify faults.

5.01 General Fault Finding

With the exception of the electronically balanced microphone amplifier, and the hybrid discrete/op amp summing amps, all signal electronics are configured around high slew rate, low noise integrated circuits. The microphone amplifier is a proprietary design, utilizing a discrete transistor, noise cancelling front end, differentially summed via a low noise integrated circuit.

The use of integrated circuits means that the majority of audio faults can be repaired by simply replacing the I.C., having first isolated the fault to a particular stage in the signal chain. The isolation can often be done without even having to remove the module from the console, by judicious use of insert points, and/or switching the module to various modes. As with all servicing a good knowledge of the basic signal flow is necessary for best results. Each module should be viewed as a number of signal blocks, through which the signal must flow. If the signal appears at the input to a block, but not at the output, then the fault lies within that block. By dividing a module into individual sections, what at first appears to be an extremely complicated piece of equipment can be simplified into a series of sequential stages. This is the basic first move in all types of fault finding, and usually requires no more than a certain amount of logical thought. Servicing a console is more a matter of clear thinking and having an understanding of what should be happening, than having a highly developed technical knowledge.

To illustrate the method of logical fault finding, let us assume that we have a non-functioning input module, in both microphone and line modes.

The first step is to ensure that a fault really does exist! Check that the module is in the correct mode of operation, and that no jacks are inserted in the insert points, which may be interrupting the signal flow.

If in doubt about the module operation, set up an adjacent module in exactly the same way, which will allow a direct comparison between a working and possible non-working module.

Route the channel directly to MIX, so that the channel may be monitored in the normal way. Using an oscillator set it to approximately 1kHz and patch the oscillator signal into the channel Line Input. If all is well, an undistorted signal should now be heard. More likely, because of the fault it won't.

Large sections of the module circuitry can be by-passed by switching out the Hi-pass filter and the Equalizer.

If switching out a section causes the signal to re-appear, then the fault is located in that section, which can then be traced at component level, by removing the module from the console frame, and reconnecting it via extender cables.

With the module installed on extender cables, access is now available to all parts of the module, and the signal may be traced through the various stages, using an oscilloscope, millivoltmeter, or even high impedance headphones. Refer to the Block Schematic which shows the signal flow through the modules. When a point is reached where the signal is not present, or is distorted, the probable faulty components can be checked out and if necessary replaced. Integrated circuits, due to their internal complexity, are the most likely cause of problems, followed by mechanical components such as switches and faders, which are susceptible to physical contamination from oxidisation, dust and liquids.

5.02 Removing Modules

Remove the 2 module retaining screws, which will allow the module to be carefully withdrawn from the console. The ribbon cable will now be exposed, and may be detached from the module. The module will still have some cables attached, but these are sufficiently long to allow the module to be completely withdrawn from the console. Extender cables can now be plugged into the main ribbon cable, and the module, taking care not to twist the extender cable. Although damage to the module will not be caused by plugging and unplugging the module with the power still switched on, this is not recommended for the inexperienced, as it is possible to bend the connector pins if care is not taken.

5.03 Meter Alignment

SERIES 500

The VU meters are attached to drive cards in sets of four on the group outputs, with the two master VU meters being connected together on a separate card. These cards also contain the detection and drive circuitry for the peak LED which is pre-set to indicate a peak level of 8dB above 0VU.

0VU is normally adjusted to indicate a line level of +4dBu, i.e. a level of 1.228volts. However, it can be re-adjusted to indicate a different line level if required by the pre-set potentiometer on the drive card.

Connect a millivoltmeter to the group output. Route the oscillator set to 1kHz to the group outputs 1-4 and adjust the group output levels to read the required level on the millivoltmeter. (Normally this would be +4dBu). Adjust the VU drive pre-set to indicate 0VU on the VU meters and repeat for all other group meters and the Stereo mix meters.

Note that the peak LED will always indicate a level of 8dB above whatever the 0VU level has been set to.

SERIES 600

The LED Bargraph meters are connected, in sets of eight on the group outputs/tape returns, with the meters for the auxiliaries being connected in a group of 6, onto drive cards situated at the back of the meter. This drive card also contains the drive circuitry for the peak LED which is pre-set to indicate a peak level of 8dB above 0VU.

Align VU-meters as for Series 500. (See above.)

5.04 Lamp Replacement

Illumination of the VU meters is provided by 1 wire ended lamp in each meter. This is a 12 volt lamp. NB: On some early models illumination is provided by 2 wire ended lamps in each meter. These are 9 volt lamps. The lamps in each group of 4 meters are wired in series and powered by the + 17 volt audio supply. A series resistor provides turn on surge current limiting to prolong the lamp life.

The stereo mix meters have an additional series resistor to simulate the voltage drop of the missing pairs of meters.

To replace lamps, first remove the eight screws securing the PCB, (on the stereo mix meters there are only 4 screws), and the 6 screws that secure the sub-bracket, (4 on the stereo mix meters), the back of the meter is now accessible, and the lamps may be replaced.

It is recommended that both lamps be replaced even if only one has failed, as the remaining lamp will have been overstressed and its life substantially reduced.

6.00 GLOSSARY OF TERMS USED

AFL	After fade Listen: This button will "solo" the signal (or ALL with their AFL buttons down) on the monitors, and the feed for this solo is taken AFTER the fader.
Attenuate	To reduce the electrical level or amount of gain.
Auxiliary Send	Extra output from the console, usually used for echo sends and foldback.
Bus	Wire carrying a signal or sum of a group of signals.
Cold	The negative going current of a signal. With 2 signal wires, one is positive going (hot), and the other is negative going.(cold)
Cut	To cut a channel means to turn it OFF.
dB (decibel)	A logarithmic ratio used to represent voltage or power gain. The reference about which the ratio is made is usually stated.
Ground	Earth or screen of a cable when referring to connecting leads.
Group Output	The output of a group bus which is carrying a sum of all the signals assigned to that group number.
Hot	Positive going current of a signal. With 2 signal wires, one is positive going (hot), and the other is negative going.(cold)
Hz	Measurement of frequency (Hertz) 1Hz = 1 cycle per second.
Insert	An insert point allows peripheral equipment to be introduced into the signal path.
Khz	Measurement of frequency expressed to the power of 1000.i.e. 1Khz = 1000 cycles per second.
KOhm	Measurement of electrical resistance expressed to the power of 1000.i.e. 1 KOhm = 1000 Ohms.
Mains	Local Electrical Supply.
Multitrack Logic	Either the multitrack machine's monitor switching or its safe/record switching.

Ohm	Measurement of electrical resistance.
Overdubbing	The process of recording new tracks on a multitrack tape recorder whilst listening back in synchronisation with previously recorded tracks.
Pan Pot	A pan pot places a signal across two stereo lines (left & right) turning it to the left will send all the signal to the left line, and to the right, all of the signal will be sent to the right side. If the pan pot is left at its centre detent, an equal amount of signal will be fed to both sides and the image in the stereo picture will be central.
PFL	Pre fade Listen: This button will "solo" the signal (or ALL with their PFL buttons down) on the monitors, and the feed for this solo is taken BEFORE the fader.
Phantom Power	A voltage (usually +48 Volts) across the microphone input to power capacitor microphones.
POST	Post means after the fader.
PRE	Pre means before the fader.
Ring	The connecting part in the middle of a stereo jack, (it mates second).
Signal to Noise Ratio	The ratio between the level of signal and the level of unwanted noise.
Sleeve	The connecting part of a stereo jack which mates last and is always earth.
Star Point	A single point to which ALL earths are separately connected.
Sync	To be operating the multitrack machine from the synchronised head. i.e. recording and playing back onto and from the same tape head.
Tip	The connecting part at the end of a stereo jack, (it mates first).
Track Bouncing	Taking a group of previously recorded tracks and recording them as a group onto another track. e.g. bouncing down 4 vocals from 4 tracks to just one track "frees" 3 tracks for fresh recording.

7.00 SERIES 500/600 TECHNICAL DESCRIPTION

These are brief technical descriptions of the Series 500 and Series 600 mixing desks. They are very similar in their internal circuitry, the only difference being in the configuration of the output groups. The Series 500 has four double-group output modules fitted, each with their own monitor section, for use primarily with an 8-track tape-machine. The Series 600 has eight single group-modules fitted, but with two tape-return monitor sections and double group-output connectors to allow use of a 16-track machine.

Series 500/600 consoles are fitted with extensive level-switching facilities so that they can be quickly field-modified to allow operation on either +4dBu or -10dBV (Tascam) standards. (See Section 3.02 Interface levels.)

The table below gives a quick guide to the SC numbers and related circuit diagrams.

	<u>PCB No.</u>	<u>Drq No.</u>
500/600 STANDARD I/P PCB	SC1491	ED2162
500/600 INPUT REAR CONN PCB	SC1502	ED2210/30
500 STANDARD GROUP PCB	SC1493	ED2176
500 O/P REAR CONN CCT DIAGRAM	SC1504	ED2230
600 STANDARD GROUP PCB	SC1492	ED2177
600 O/P REAR CONN CCT DIAGRAM	SC1503	ED2210
500/600 MASTER LH PCB	SC1495	ED2174
500/600 MASTER RH PCB	SC1494	ED2173
500/600 8-WAY LED METER DISPLAY	SC1496	ED2202
500/600 6-WAY LED METER DISPLAY	SC1497	ED2203
500/600 4-WAY METER DRIVE PCB	SC1498	ED2185
500/600 MASTER METER DRIVE PCB	SC1499	ED2181
500/600 PSU INTERFACE PCB	SC1505	
500/600 MASTER METER PEAK LED PCB	SC1506	
500/600 4-WAY METER PEAK LED PCB	SC1507	
SERIES 500 BLOCK DIAGRAM		ED2206
SERIES 600 BLOCK DIAGRAM		ED2207
800/1600 PSU CCT DIAGRAM		ED2093

Operating Levels

I/O levels are +4dBu (1.228 Vrms) or -10dBV (-7.5dBu)
Internal nominal level is -6dBu.

SERIES 500/600 INPUT CHANNEL

This PCB holds fairly standard circuitry, and only the points of interest are noted.

J11 provides gain switching for the line input. Pushing on the jumper introduces extra attenuation to the line-input pad on the input conn PCB, and provides suitable sensitivity for +4 operation.

The EQ switch (S5) disables the eq stages completely when not pressed in; not only is the EQ bypassed so that the signal flows around it, but signal input to the EQ section is also removed, to minimise the amount of audio current flowing down the earth connections.

The PFL switch (S7) signals a PFL condition to the Solo Enable bus by connecting it to V+ through a 100k resistor (R31). The Solo Enable bus operates as a virtual-earth bus so that there are no transient signals on it that might crosstalk into audio buses.

The circuitry in the dotted box (R60, etc) is an option to allow muting of external devices when the ON switch of the input module is released, via mute busses A,B or via optoisolator IC5.

Extensive changes in the sourcing of the various aux sends are possible by moving jumpers J1-J10, allowing various combinations of pre/post EQ and pre/post fader. (See Section 2.03)

Routing is through the 22k mix resistors, the outward end being grounded when routing switching is released, so that crosstalk cannot occur to the bus across the switch contact capacitance.

SERIES 500 OUTPUT MODULE (DOUBLE GROUP)

Each module contains two groups, eg the first module holding GP1 and GP2. Only the first will be described; add 100 to get the component numbers for the other.

The group summing amps are of the hybrid discrete/ op-amp type for improved noise performance. R1,C1 and R2,C2 remove any noise from the supply lines, and these components are shared between the two groups. Main negative feedback, to generate the virtual-earth on the bus goes through R5, while R6,R7 provide internal DC feedback to stabilise the operating conditions of TR1 and IC1A. R7,R50 provide bias to set this.

IC2A re-inverts the signal to get it back into phase, and, being a 5532 section, gives the insert output a 600 Ohm drive capability.

IC2B is the low-noise fader post-amp. As far as signals going through C13 are concerned, this is a fixed-gain stage (+10dB) as usual. However, S6E is part of the level-change switch; when this is out the signal passes with a full gain through IC1B, which brings the nominal level up to -2dBu, and ensures a low-impedance drive for the EBOS (electronically balanced output stage) IC3. When S6E is in, however, only a fraction of the signal coming from IC2B (set by R14,15,16) reaches IC1B and this gives the lower output level required for -10dBV operation.

The group signal passes through C13 to the monitor source-select (or RET) switch S2. Note that meter source switching is done with a separate section of this switch. Normally (when SUB is not operated) the output from the RET switch is sent through a conventional bass and treble EQ stage (IC5), and from here to the monitor section ON switch and PFL switch.

When the SUB switch is operated, the following changes take place:

- i) The tape-return i/p amp is connected to the monitor section EQ by S1B,S1C, over-riding the position of the TAPE RETURN button. This now only controls the meter source, through S2A.
- ii) The output of the VOL post-amp is routed to the group summing amp, via R47 and S1A.
- iii) The monitor pan pot is connected to the group o/p by S1D, so that the group is routed directly to MIX through it.

SERIES 600 OUTPUT GROUP

The circuitry of this is very similar to the Series 500 Group described above, with the difference that there is only one group and two tape-return sections. For example, the first output module holds Group 1 and Tape>Returns 1 and 9.

SERIES 500/600 MASTER MODULE

This holds all the central functions of the mixing console, and contains two PCB's, the Left and Right-hand.

The LH PCB contains 6 auxiliary master sections, each with AFL facilities. The RH PCB contains the mix sum-amp and o/p stages, the 2-track tape-returns and control-room select switching, the PFL system and the slate oscillator and talk-back system.

MASTER LEFT-HAND PCB

This contains six identical aux master sections; only the first is described. The summing amp is a hybrid discrete/op-amp type, designed for very low noise. R3 provides DC feedback to set the op-amp operating conditions, and shunt feedback through R2 generates the virtual-earth on the aux bus.

From this stage the signal (inverted in phase) passes through the master gain pot VR1, and then to an inverting post-amp stage IC2A, with a gain of +10dB. This stage re-inverts the signal to get it back in phase, and a feed is taken off here for the aux metering, and the AFL switch.

The next stage (IC2B) is an inverting amp with switchable gain; shunt feedback is used as the gain switching demands gain in one setting, and attenuation in the other. When jumper J1 is fitted, R12 is shorted out, and the negative feedback around IC2B is increased, reducing the nominal o/p level for -10dBV operation.

From here the signal passes to a standard EBOS circuit for a balanced output drive.

MASTER RH PCB.

The MIX L & R sum amps are hybrid discrete/op-amp types as described above. R28 ensures that the buses remain at zero DC potential. From here the signal is reinverted by IC2A to get the signal back in phase again; This 5532 stage also permits a 600 Ohm load drive capability when the insert is set to be prefade.

The insert point can be moved pre or post the mix fader by altering the jumpers J10,11,12. All three jumpers are moved as a body; if the three jumpers are not touching each other than it's not right.

IC8A is a conventional postamp with +10dB of gain, and also has a 600 Ohm drive capability for when the insert is postfade.

The signal then passes through R18 to a gain-select stage IC4A, which provides the low-gain (-10dBV) option when J1 is fitted. A conventional EBOS stage (IC5) is then driven via C15.

The EBOS output passes not only to the MIX o/p sockets, but also to the control-room (CRM) select switches, which are S1,2,3,4. Note that the CRM select switch-bank operates fully-balanced, with the balanced input amp IC6 coming after the input has been selected. The gain of this amp can be set by means of jumpers J4,5, which are fitted for +4 mode, and removed for -10 mode. The gain of the inputs is defined by the input resistors eg R25,26 for MIX, or R27,28 for 2-TRACK A. The 2-TRACK C input can have its input sensitivity increased to deal with -10 levels (eg from cassette decks) independently of the others by adding jumpers J2,3 (See Sect 3.02). This is only applicable when the rest of the 2-track returns are set up for +4dBm.

From IC6 the signal passes to the PFL switcher, composed of FETs F1,F2. The feed to the studio o/p is taken off from just before this point so that the studio feed is not interrupted by use of the PFL/AFL system.

When a PFL or AFL switch is depressed, the Solo Enable bus is connected to V+ via a 100K resistor. IC12 is connected as a virtual-earth stage, and so acts to maintain zero volts on the bus by moving its output negatively, causing zener D5 to conduct and absorb the current injected through the 100K. (R64 ensures that the op-amp is not saturated positively by stray currents when D5 is not conducting) When the op-amp o/p goes negative, TR4 is turned off via R65, and the PFL logic-signal goes high (+16V). TR5 is turned on via R68 and the not-PFL logic-signal goes high. These changes turn off F1 via D1 and allow R40 to keep F2 held on. Therefore the signal from IC6 is ignored, and that from PFL/AFL summing amp IC11 is passed to the CRM system instead. R41 helps absorb FET switching transients.

R42,43 make up the CRM dimming/mono network. When either DIM (S5) or Talkback (TB) is in use R43 is grounded, introducing a drop of approx 20dB. For mono compatibility checks, S10 (MNO) joins the two channels of the CRM feed together.

VR4 is the CRM gain control, feeding headphone amp IC7. This has its output current capability boosted by means of TR2,TR3 transistors, operating in class AB due to biasing diodes D3,D9. R48,49 define the quiescent current, and negative feedback around the o/p transistors is via R46,R45. This stage is capable of driving 8 Ohm headphones to a high level, and R50 is included so that if 600 Ohm phones are then plugged in, the sound levels will be roughly equal.

When headphones are plugged in, the feed to the CRM EBOS and rear panel output sockets is broken by the jack socket normalling contacts and the CRM loudspeakers are muted. When the phones are unplugged, the CRM signal flows through the CRM EBOS stages to provide a balanced 600 Ohm output capability from the rear panel.

The studio-speaker feed is taken off IC6 before the PFL switcher, and passes through the ON switch and the studio level control VR5 to inverting amplifier IC9; the TB signal is mixed in at this point when required. From here the signal passes through C36 to the Studio o/p EBOS IC10

The talkback (TB) and slate oscillator (OSC) share the same set of mix resistors and therefore one only can be used at a time. TB always overrides OSC. When neither are enabled, S8C and S9A rest on their back contacts and the mix resistors RIC7, RIC8 are grounded to prevent interbus crosstalk. At the same time, the back contact of S9B gives IC2A 100% negative feedback and prevents oscillation, while C53 is not grounded by S8C and the TB mic amp gain is therefore reduced to unity.

When the oscillator is enabled, S9B allows oscillation to occur and routes IC12A o/p to the level control VR6; R81 makes the law more usable. Simultaneously S9A removes the short from the RICs and the osc signal is slated to the buses. Note that this signal does not go to the studio path. The detailed operation of the oscillator is described below.

When the TB is enabled, S8B switches over to route the mic amp to the RICs, while S8C removes the ground from the RICs and applies it to C53 to allow the full mic gain set up by VR7 to be realised. R85 sets maximum gain and R83, C50 provide smoothed power to the electret microphone.

The oscillator is a modified Wien bridge type giving 700Hz or 10KHz depending on S7. The amplitude-control system (D6, TR7, TR6, F3) appears complex, but is designed to give a very close control of oscillation amplitude without the expense of a thermistor; the amplitude of the two frequencies should differ by less than 0.2dB.

Oscillation amplitude is controlled by adjusting the amount of negative feedback via R73,74, by controlling the resistance of F3.

When the amplitude becomes too great on positive peaks, D6 conducts, turning on TR7, which charges C48. This has a fast-attack, slow-decay action, with decay set by R80. This turns on TR6, which pulls down the voltage on F3 gate, and increases its resistance, and therefore the amount of neg feedback. R75,77 provide distortion cancellation for F3.

LED BARGRAPH METER PCBs.

The 6-way and 8-way are identical in operation, each consisting of repeated sections. PR1 sets the calibration, and IC1A,D1,D2 form a precision half-wave rectifier. In VU mode J1 increases the gain of the rectifier stage; J2 provides either fast-attack slow-decay for Peak mode, or integration by R4,C2 in VU mode. IC1B buffers C2 at unity gain, and drives the internal comparators of the 3914 bargraph chips IC2,3. R6,R7 allow this voltage to increase the voltage at the top of the comparator reference ladder as the signal increases, to give a quasi-logarithmic law. D3 drops the +24V supply down to the +18V required by the 3914s, and R8,C3 decouple this supply. R9,10 set LED drive current.

8.00 SOUNDCRAFT RECOMMENDED WARRANTY

(This warranty applies to sales within the UK and should form the basis of the warranty offered by the overseas vendor of Soundcraft products.)

1.

`Soundcraft' means Soundcraft Electronics Ltd.
`End User' means the person who first puts the equipment into regular operation.
`Dealer' means the person other than Soundcraft (if any) from whom the End User purchased the Equipment, provided such a person is authorised for this purpose by Soundcraft or its accredited Distributor.
`Equipment' means the equipment supplied with this manual.
2. If within the period of twelve months from the date of delivery of the Equipment to the End User it shall prove defective by reason only of faulty materials and/or workmanship (but not faulty design) to such an extent that the effectiveness and/or usability thereof is materially affected the Equipment or the defective component should be returned to the Dealer or to Soundcraft and subject to the following conditions the Dealer or Soundcraft will repair or at its option replace the defective components. Any components replaced will become the property of Soundcraft.
3. Any Equipment or component returned will be at the risk of the End User whilst in transit (both to and from the Dealer or Soundcraft) and postage must be prepaid.
4. This warranty shall only be available if:-
 - a) the Equipment has been properly installed in accordance with instructions contained in Soundcraft's manual; and
 - b) the End User has notified Soundcraft or the Dealer within 14 days of the defect appearing; and
 - c) no persons other than authorised representatives of Soundcraft or the Dealer have effected any replacement of parts maintenance adjustments or repairs to the Equipment; and
 - d) the End User has used the Equipment only for such purposes as Soundcraft recommends, with only such operating supplies as meet Soundcraft's specifications and otherwise in all respects in accordance with Soundcraft's recommendations.

5. Defects arising as a result of the following are not covered by this Warranty: faulty or negligent handling, chemical or electro-chemical or electrical influences, accidental damage, Acts of God, neglect, deficiency in electrical power, air-conditioning or humidity control.
6. The benefit of this Warranty may not be assigned by the End User.
7. End Users who are consumers should note their rights under this Warranty are in addition to and do not affect any other rights which they may be entitled against the seller of the Equipment.

SERIES 500/600 ACTIVE COMPONENTS PARTS LISTINGS

Input Module - 5101

DESCRIPTION		PART NO	QUANTITY USED
Transistor	2N4403	BD0329	2
Transistor	2SC2240	BD0302	2
Op-amp	TL072	BE0413	3
Op-amp	NE5534	BE0407	1
Diode	1N4148	BA0001	2

Output Module - 5102

DESCRIPTION		PART NO	QUANTITY USED
Transistor	2N4403	BD0329	2
Op-amp	TL072	BE0413	6
Op-amp	NE5532	BE0428	4

Master Module - 5104

DESCRIPTION		PART NO	QUANTITY USED
Transistor	2N4403	BD0329	8
Transistor	2SC2240	BD0302	5
Transistor	2SA970	BD0301	3
Transistor	J112	BD0322	5
Diode	1N4148	BA0001	9
Diode	6V2 Zener	BB0104	1
Op-amp	NE5532	BE0428	14
Op-amp	TL072	BE0413	15
Op-amp	TL071	BE0404	1

Meter Drive Assembly - MIX

DESCRIPTION		PART NO	QUANTITY USED
Transistor	2SC2240	BD0302	4
Op-amp	TL072	BE0413	1

Meter Drive Assembly (Series 500) - GROUP

DESCRIPTION		PART NO	QUANTITY USED
Transistor	2SC2240	BD0302	8
Op-amp	TL072	BE0413	2

Meter Drive Assembly (Series 600) - GROUP

DESCRIPTION		PART NO	QUANTITY USED
Diode	1N4148	BA0001	16
Zener Diode	400mW 6.2V	BB0104	8
Dual Op-amp	TL072	BE0413	8
LED Bar-graph driver	LM3914	BE0427	16
LED array 10-way DIL Green		JA0017	8
LED array 5-way DIL Red		JA0018	8
LED array 5-way DIL Green		JA0019	8

Power Supply Unit

DESCRIPTION		PART NO	QUANTITY USED
Transistor	2SC2240	BD0302	8
Transistor	2SA970	BD0301	8
Transistor	BD135	BD0317	2
Transistor	BD136	BD0311	1
Transistor	TIP2955	BD0315	2
Transistor	TIP3055	BD0316	2
Regulator	LM317T	BE0430	1
Regulator	LM337T	BE0431	1
Regulator	LM338K	BE0438	1
Diode Bridge	KBP02	BC0204	1
Diode Bridge	KBL02	BC0207	2
Diode Bridge	KBPC25-02	BC0208	1
Diode	1N4148	BA0001	11
Zener Diode	400mW 11V	BB0106	1

SERIES 500 CUSTOMER SPARES KIT (Complete Kit Part No.RZ2252)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
BA0001	1N4148 Diode	1
BB0104	Zener Diode 6V2	1
BB0106	Zener Diode 11V	1
BC0204	Bridge Rect. KBP02	1
BC0207	Bridge Rect. KBL02	1
BC0208	Bridge Rect. KBPC25-2	1
BD0301	Transistor 2SA970	2
BD0302	Transistor 2SC2240	2
BD0311	Transistor BD136	1
BD0315	Transistor TIP2955	1
BD0316	Transistor TIP3055	1
BD0317	Transistor BD135	1
BD0322	FET J112	2
BD0329	Transistor 2N4403	2
BE0404	TL071	2
BE0407	NE5534	2
BE0413	TL072	4
BE0428	NE5532	4
BE0430	LM317T	1
BE0431	LM337T	1
BE0438	LM338K	1
DD0321	Alps Mono Fader	1
DD0322	Alps Stereo Fader	1
DF0529	Alps 2 Pole Push Switch	2
DF0530	Alps 4 Pole Push Switch	2
DM1101	Alps 10KBx2	2
DM1102	Alps 10KB	2
DM1103	Alps 10KA	2
DM1104	Alps 10KRD	2
DM1105	Alps 10KAx2	1
DM1106	Alps 10KRDx2	2
FF0614	0.1" 2 way Jumper	10
JA0001	Small Greed LED TLG102	2
JA0002	Small Red LED TLR102	2
JA0003	Large Red LED TLR104	2
JB0122	VU Meter Bulb	4
JD0315	VU Meter	1
KA0027	White Fader Knob	1
KA0028	Red Fader Knob	1
KA0029	Yellow Fader Knob	1
ZD0305	3.15A 20mm Fuse	2
ZD0307	6.3A 20mm Fuse	2

SERIES 600 CUSTOMER SPARES KIT (Complete Kit Part No.RZ2256)

<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
BA0001	Diode 1N4148	2
BB0104	Zener Diode 6V2	2
BB0106	Zener Diode 11V	1
BC0204	Bridge Rect. KBP02	1
BC0207	Bridge Rect. KBL02	1
BC0208	Bridge Rect. KBPC25-2	1
BD0301	Transistor 2SA970	2
BD0302	Transistor 2SC2240	2
BD0311	Transistor BD136	1
BD0315	Transistor TIP2955	1
BD0316	Transistor TIP3055	1
BD0317	Transistor BD135	1
BD0322	FET J112	2
BD0329	Transistor 2N4403	2
BE0404	TL071	2
BE0407	NE5534	2
BE0413	TL072	5
BE0427	LM3914	2
BE0428	NE5532	4
BE0430	LM317T	1
BE0431	LM337T	1
BE0438	LM338K	1
DD0321	Alps Mono Fader	1
DD0322	Alps Stereo Fader	1
DF0529	Alps 2 Pole Push Switch	2
DF0530	Alps 4 Pole Push Switch	2
DM1101	Alps 10KBx2	2
DM1102	Alps 10KB	2
DM1103	Alps 10KA	2
DM1104	Alps 10KRD	2
DM1105	Alps 10KAx2	1
DM1106	Alps 10KRDx2	2
FF0614	0.1" 2 way Jumper	10
JA0001	Small Greed LED TLG102	2
JA0002	Small Red LED TLR102	2
JA0003	Large Red LED TLR104	2
JA0017	LED array 10-wy DIL Green	1
JA0018	LED array 5-way DIL Red	1
JA0019	LED array 5-way DIL Green	1
JB0122	VU Meter Bulb	4
JD0315	VU Meter	1
KA0027	White Fader Knob	1
KA0028	Red Fader Knob	1
KA0029	Yellow Fader Knob	1
ZD0305	3.15A 20mm Fuse	2
ZD0307	6.3A 20mm Fuse	2

SERIES 500/600 SCHEMATICS

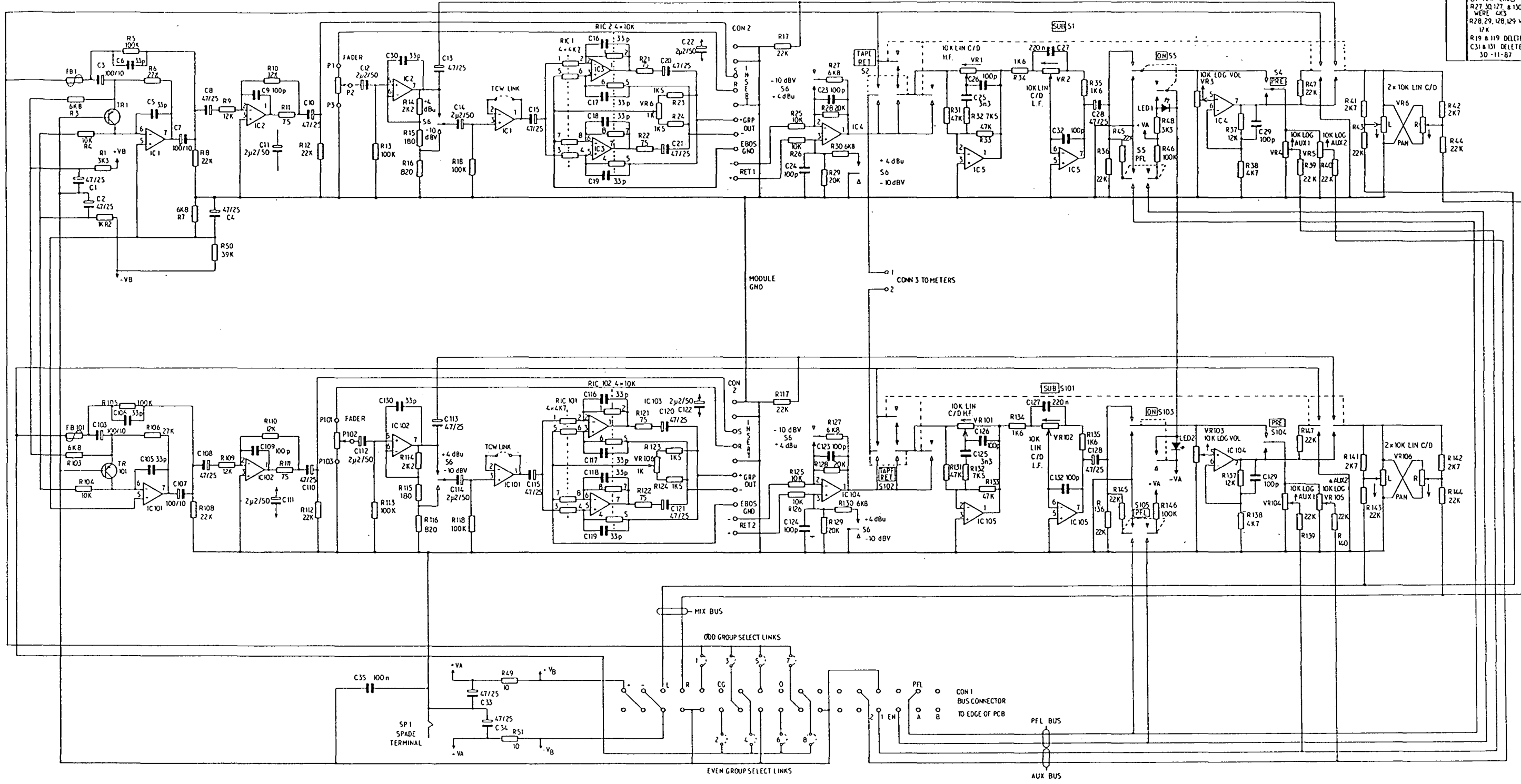
ED2212 S500/600 INPUT MODULE SIGNAL FLOW DRG
ED2213 S600 GROUP OUTPUT MODULE WITHOUT 'SUB' BUTTON IN
ED2214 S600 GROUP OUTPUT MODULE WITH 'SUB' BUTTON
ED2215 S500 GROUP OUTPUT MODULE SIGNAL FLOW DRG
ED2326 S500/600 STEREO I/P MDL SIGNAL FLOW DIAG

ED2206 S500 BLOCK DIAGRAM
ED2207 S600 BLOCK DIAGRAM

ED2162 S500/600 STD I/P CCT DRG
ED2323 STEREO I/P CCT DRG
ED2176 S500 STD O/P CCT DRG
ED2177 S600 STD O/P CCT DRG
ED2174 S500/600 AUX MAST LH CCT DRG
ED2173 S500/600 MAST RH CCT DRG
ED2202 S600 8-WAY LED MTR CCT DRG
ED2203 S500/600 AUX MAST LED MTR OPT CCT DRG
ED2185 S500 4-WAY VU MTR DRIVE CCT DRG
ED2181 S500/600 MAST MTR DRIVE CCT DRG
ED2230 S500 REAR CONN DRG
ED2210 S600 REAR CONN DRG

ED2202 METER BRIDGE LED METER PCB

Issue 5
REDRAWN
24 - 7 - 85
ISSUE 6
COMPONENTS ADDED
7 - 8 - 85
ISSUE 7
R20 & R120 REPLACED
BY TCW LINKS
R27, R127 & R130
WERE 4K5
R28, 29, 128, 129 WERE
12K
R19 & R119 DELETED
C31 & C31 DELETED
30-11-87

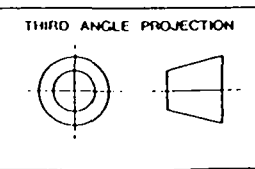


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NOTES.

HOLE INDEX.

TOLERANCE.
All Imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.



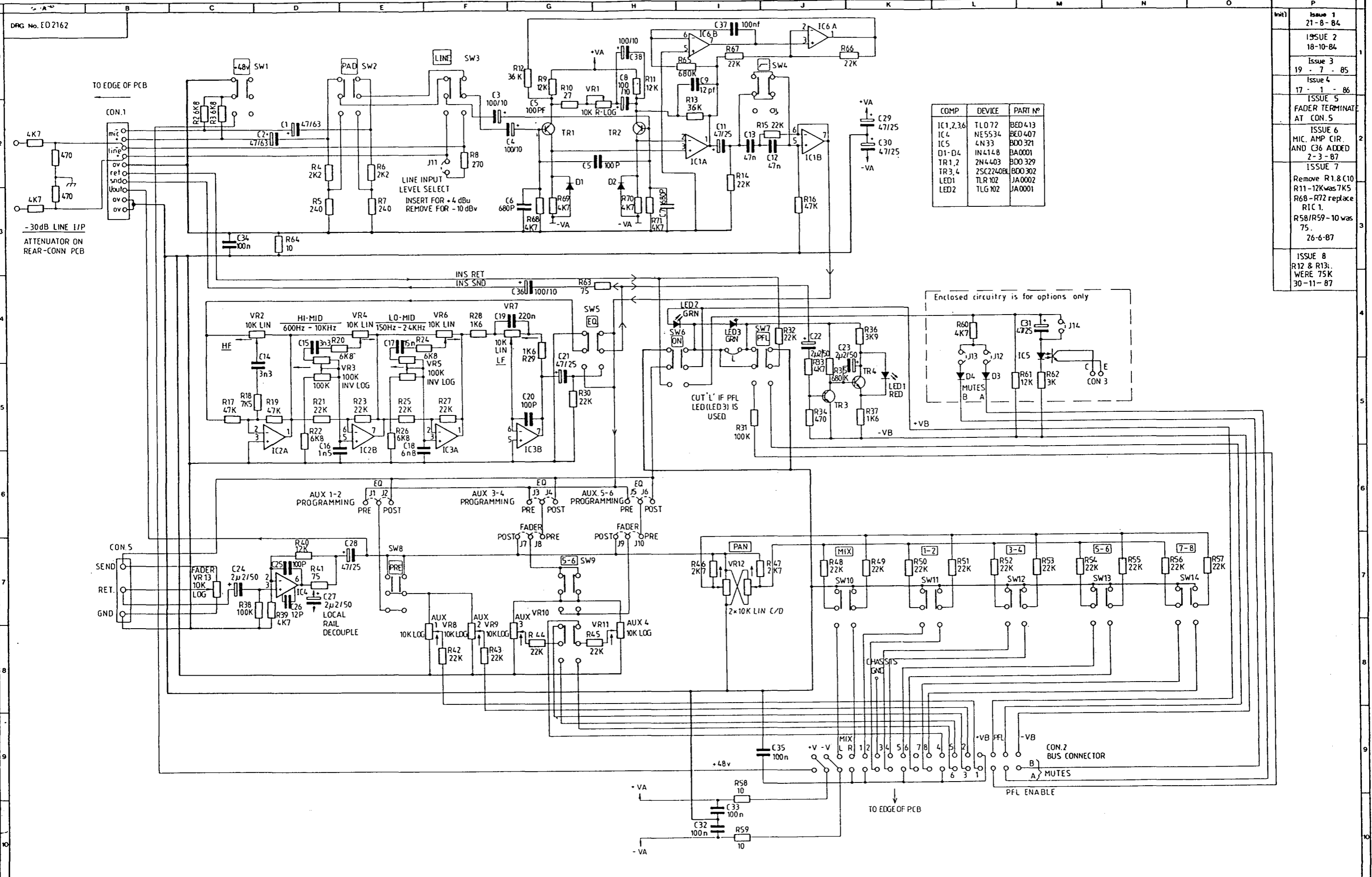
MATL.
FINISH.
SCALE.

DRG. CHRIS
TRCD.
CHKD.

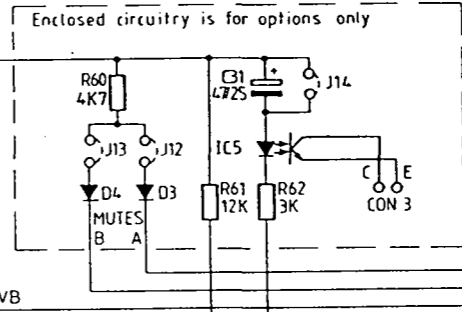
SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC1V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN. EC1
TELEX. UK No. 21158. USA No 01-2203

TITLE. S500
STANDARD OIP

DRG No. ED 2176 1501453 15531



COMP	DEVICE	PART Nº
IC1,2,3,6	TLO 72	BEO 413
IC 4	NE 5534	BEO 407
IC 5	4N33	BDO 321
O1-D4	IN4148	BA0001
TR1,2	2N4403	BDO 329
TR3,4	2SC2240B	BDO 302
LED1	TLR 102	JA0002
LED2	TLG 102	JA0001



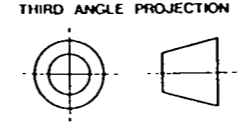
Issue	Date	Description
Issue 1	21-8-84	
Issue 2	18-10-84	
Issue 3	19-7-85	
Issue 4	17-1-86	
Issue 5		FADER TERMINATE AT CON.5
Issue 6		ISSUE 6 MIC. AMP CIR. AND C36 ADDED 2-3-87
Issue 7		Remove R1.8 C10 R11-12K was 7K5 R68-R72 replace RIC 1. R58/R59-10 was 75. 26-6-87
Issue 8		R12 & R13: WERE 75K 30-11-87

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NOTES. ALL CONNECTORS VIEWED FROM COMPONENT SIDE OF PCB

HOLE INDEX.

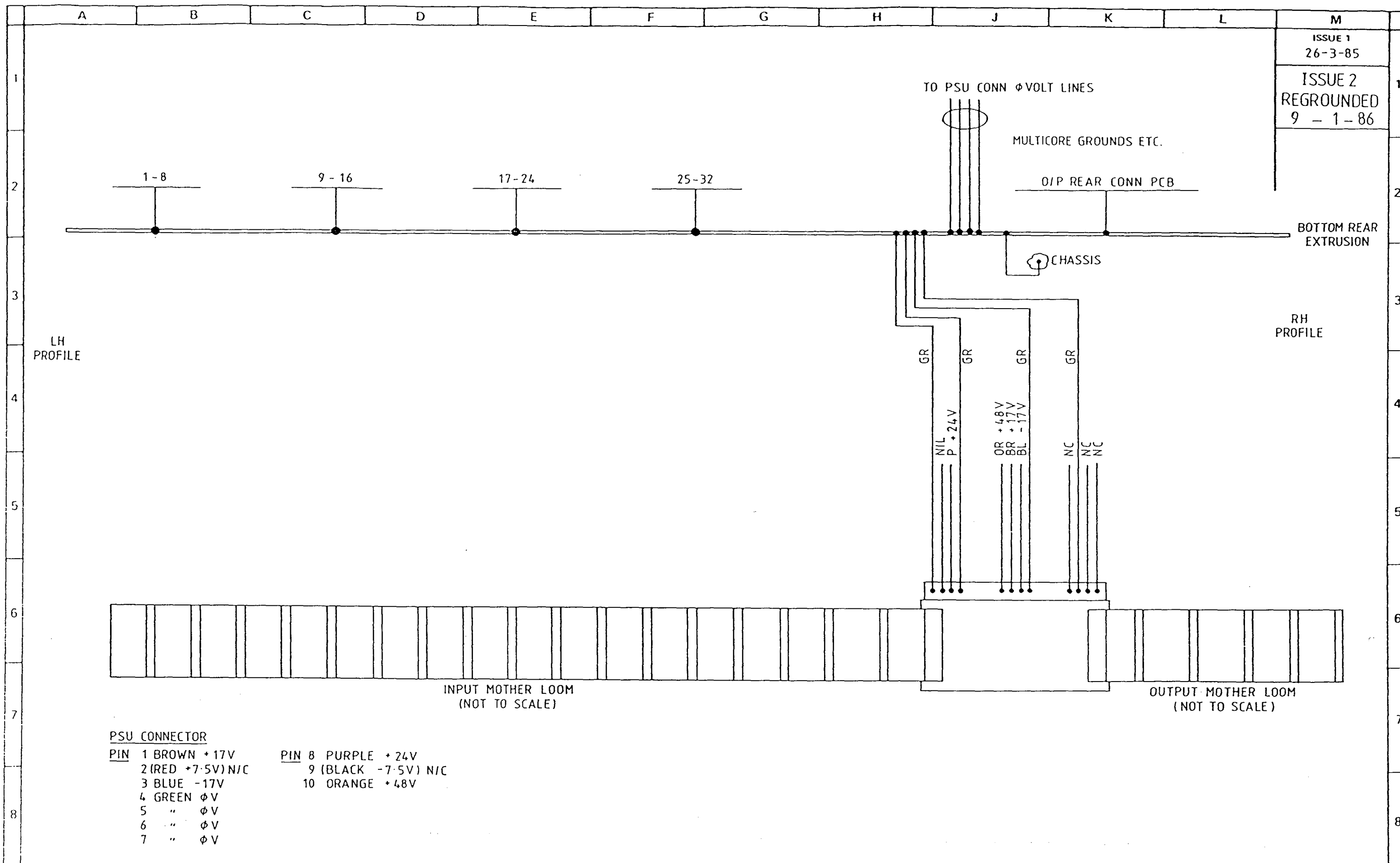
TOLERANCE.
All imperial dimensions ±0.010
All metric dimensions ±0.25mm
All angles ±0.5°
Unless otherwise stated.



MATL. _____
FINISH. _____
SCALE. _____

DRG. _____
TRCD. Sharon
CHKD. *[Signature]*
SOUNDRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC IV. OBX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDRAFT LDN. EC1
TELEX. UK No. 21198. USA No. 01-2203

TITLE.
SS001600 STD I/P
CIRCUIT DIAGRAM
DRG No. ED 2162



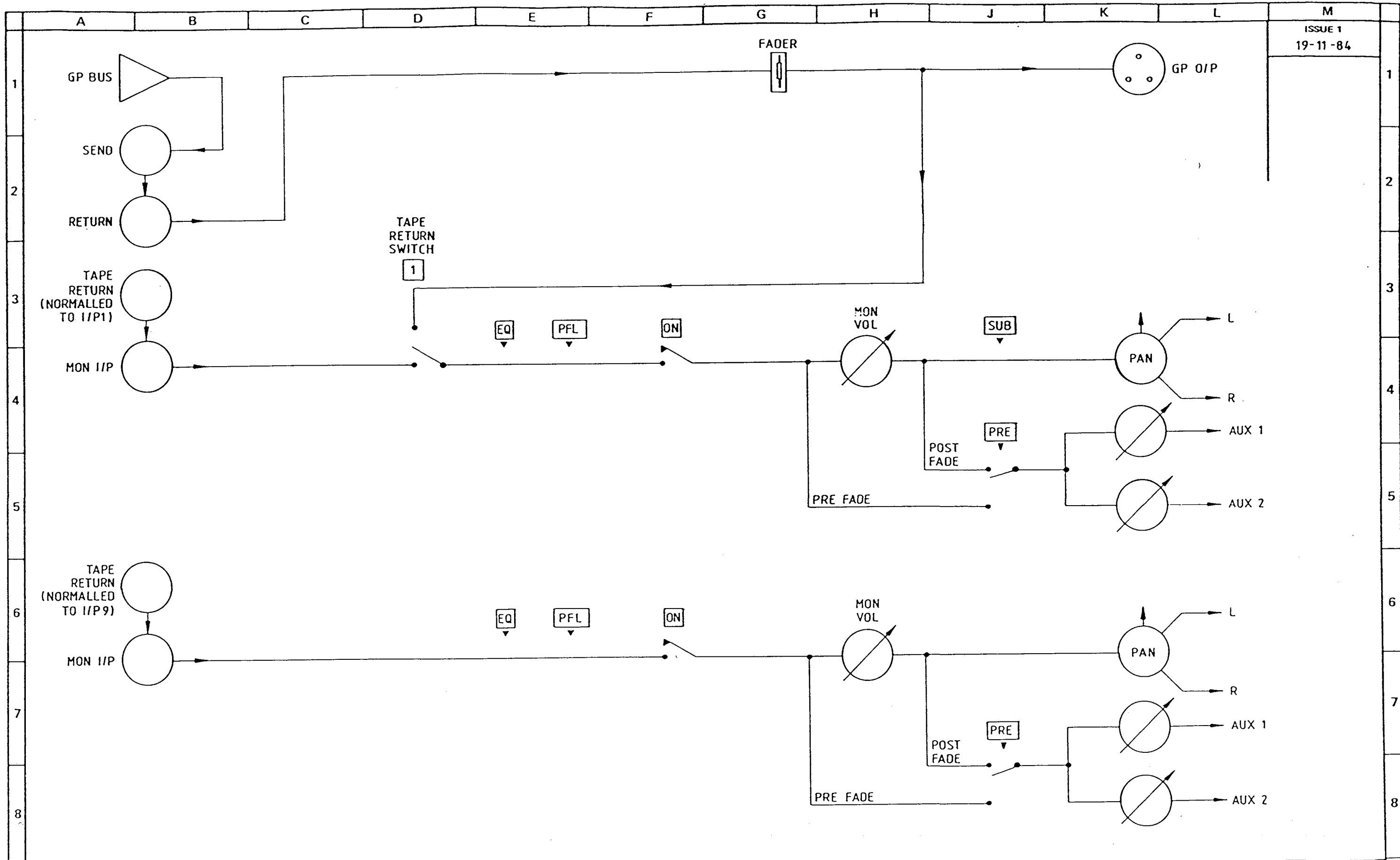
ISSUE 1
26-3-85

ISSUE 2
REGROUNDED
9-1-86

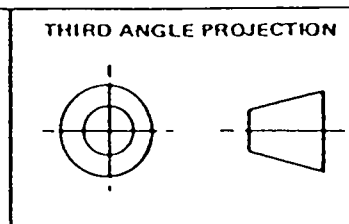
PSU CONNECTOR

- | | |
|--------------------------|----------------------------|
| PIN 1 BROWN +17V | PIN 8 PURPLE +24V |
| 2 (RED +7.5V) N/C | 9 (BLACK -7.5V) N/C |
| 3 BLUE -17V | 10 ORANGE +48V |
| 4 GREEN φV | |
| 5 " φV | |
| 6 " φV | |
| 7 " φV | |

<p>THIRD ANGLE PROJECTION</p>	<p>TOLERANCE</p> <p>All imperial dimensions ± 0.010</p> <p>All metric dimensions ± 0.25mm</p> <p>All angles ± 0.50°</p> <p>Unless otherwise stated</p>	<p>HOLE INDEX</p>	MATL	DRN	<p>SOUNDCRAFT ELECTRONICS LTD</p> <p>5-8 GREAT SUTTON STREET</p> <p>LONDON EC1V 0BX.</p> <p>TELEPHONE. 01-251-3631/2/3</p> <p>TELEGRAMS. SOUNDCRAFT LDN EC1</p> <p>TELEX. UK. No. 21198. USA. No. 224408</p>	TITLE
			FINISH	TRCD		<p>S500/600</p> <p>CONSOLE WIRING</p> <p>DIAGRAM</p>
			SCALE	CHKD		



ISSUE 1
19-11-84



TOLERANCE
 All Imperial dimensions ± 0.010
 All metric dimensions $\pm 0.25\text{mm}$
 All angles $\pm 0.50^\circ$
 Unless otherwise stated

HOLE INDEX

MATL
 FINISH
 SCALE

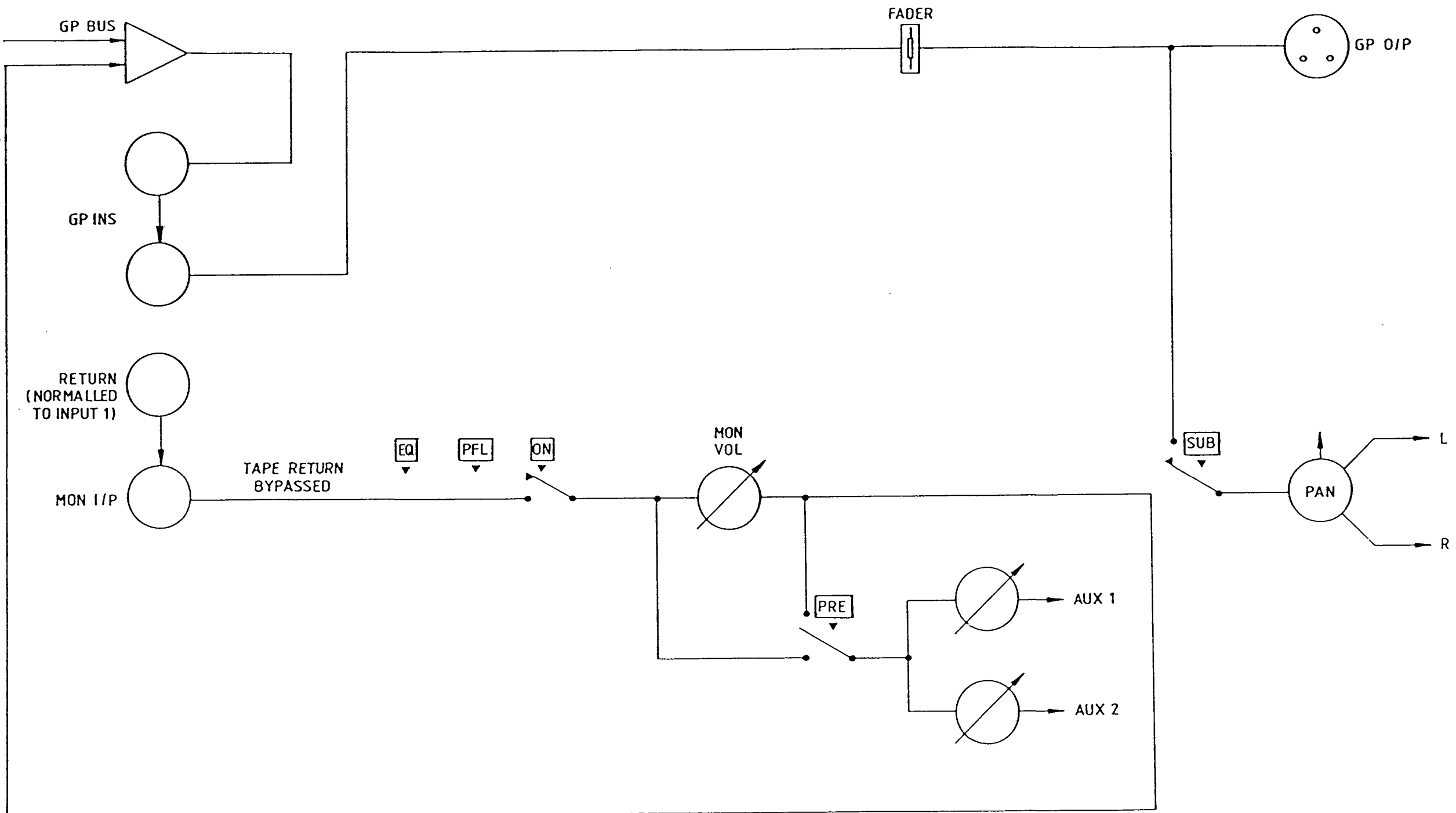
DRN
 TRCD
 CHKD

SOUNDCRAFT ELECTRONICS LTD
 5-8 GREAT SUTTON STREET
 LONDON EC1V 0BX.
 TELEPHONE. 01-251-3831/2/3
 TELEGRAMS. SOUNDCRAFT LON ECT
 TELEX. UK. No. 21198. USA. No. 224408

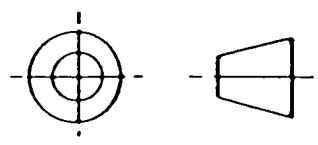
TITLE
 S600
 GROUP OUTPUT MODULE
 WITHOUT 'SUB' BUTTON IN
 DRG. No. ED 2213

A B C D E F G H J K L M

ISSUE 1
19-11-84



THIRD ANGLE PROJECTION



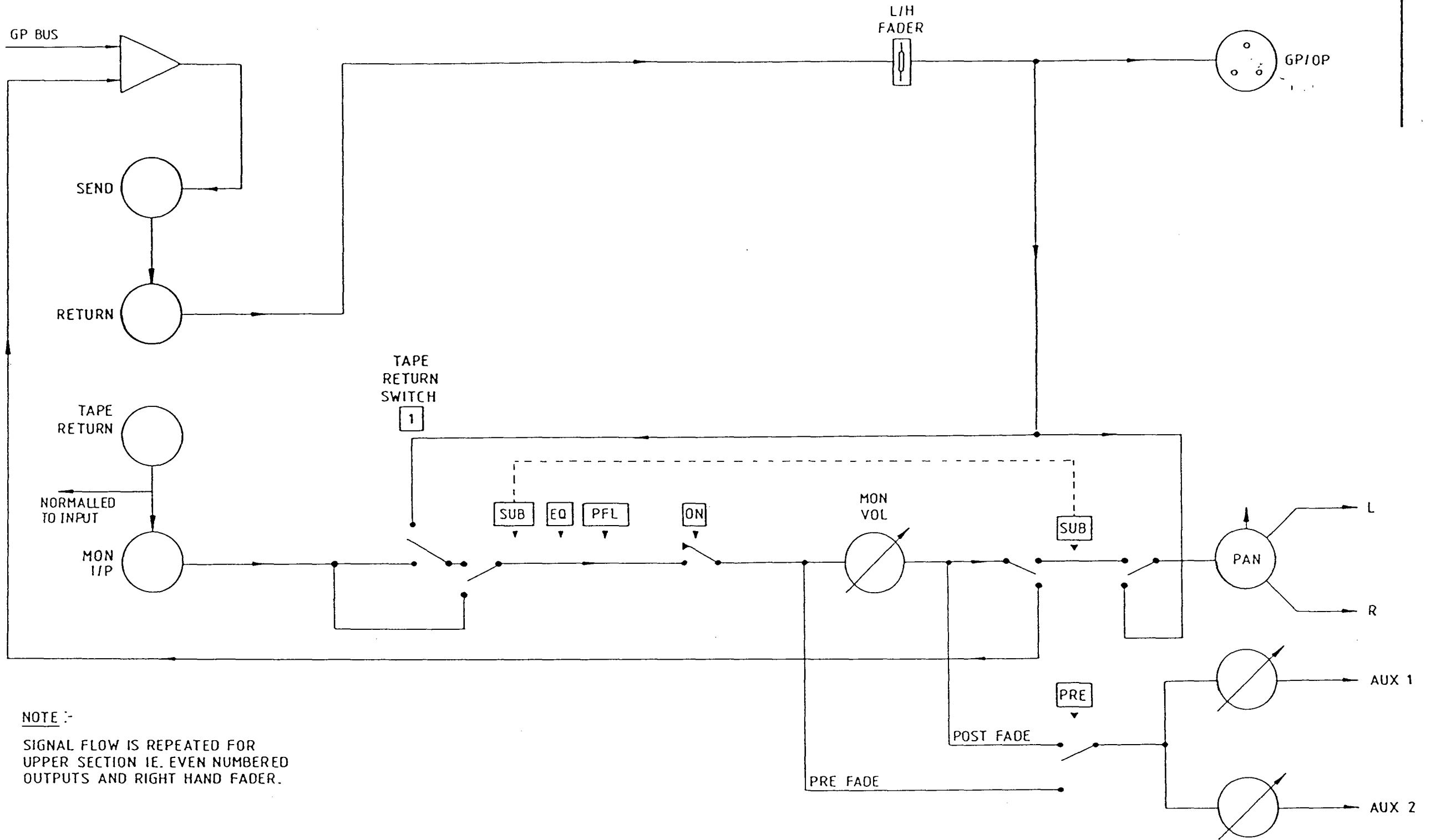
TOLERANCE
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

NOTES
FOR CLARITY TAPE RETURN
9 NOT SHOWN, SEE ED 2213

MATL	DRN
FINISH	TRCD <i>Culver</i>
SCALE	CHKD

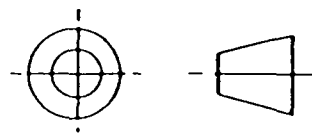
SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LON EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE
S600
GROUP OUTPUT MODULE
WITH 'SUB' BUTTON IN
ORG. No. ED 2214



NOTE :-
SIGNAL FLOW IS REPEATED FOR
UPPER SECTION IE. EVEN NUMBERED
OUTPUTS AND RIGHT HAND FADER.

THIRD ANGLE PROJECTION



TOLERANCE

All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

HOLE INDEX

MATL

FINISH

SCALE

DRN

TRCD

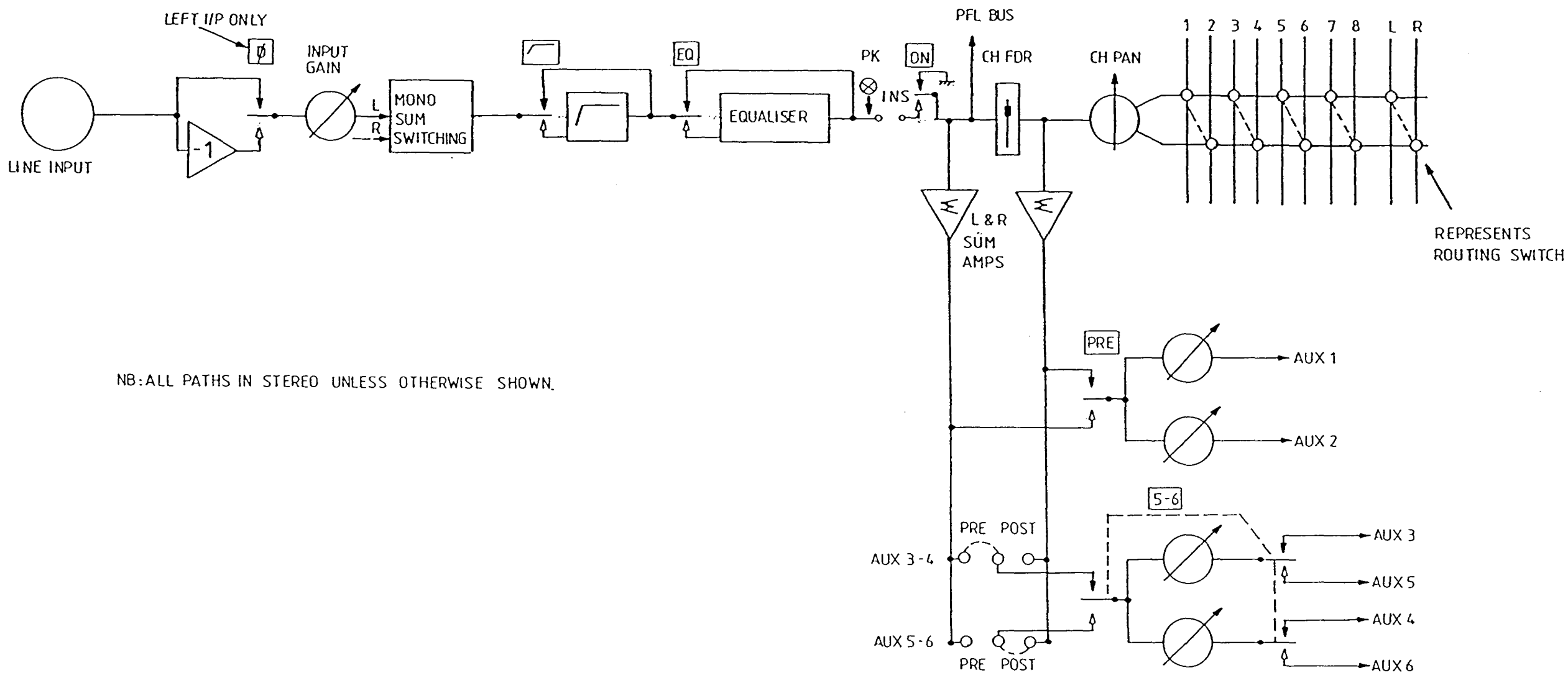
CHKD

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LONDON EC1V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE

500
GROUP OUTPUT
MODULE SIGNAL FLOW DIA

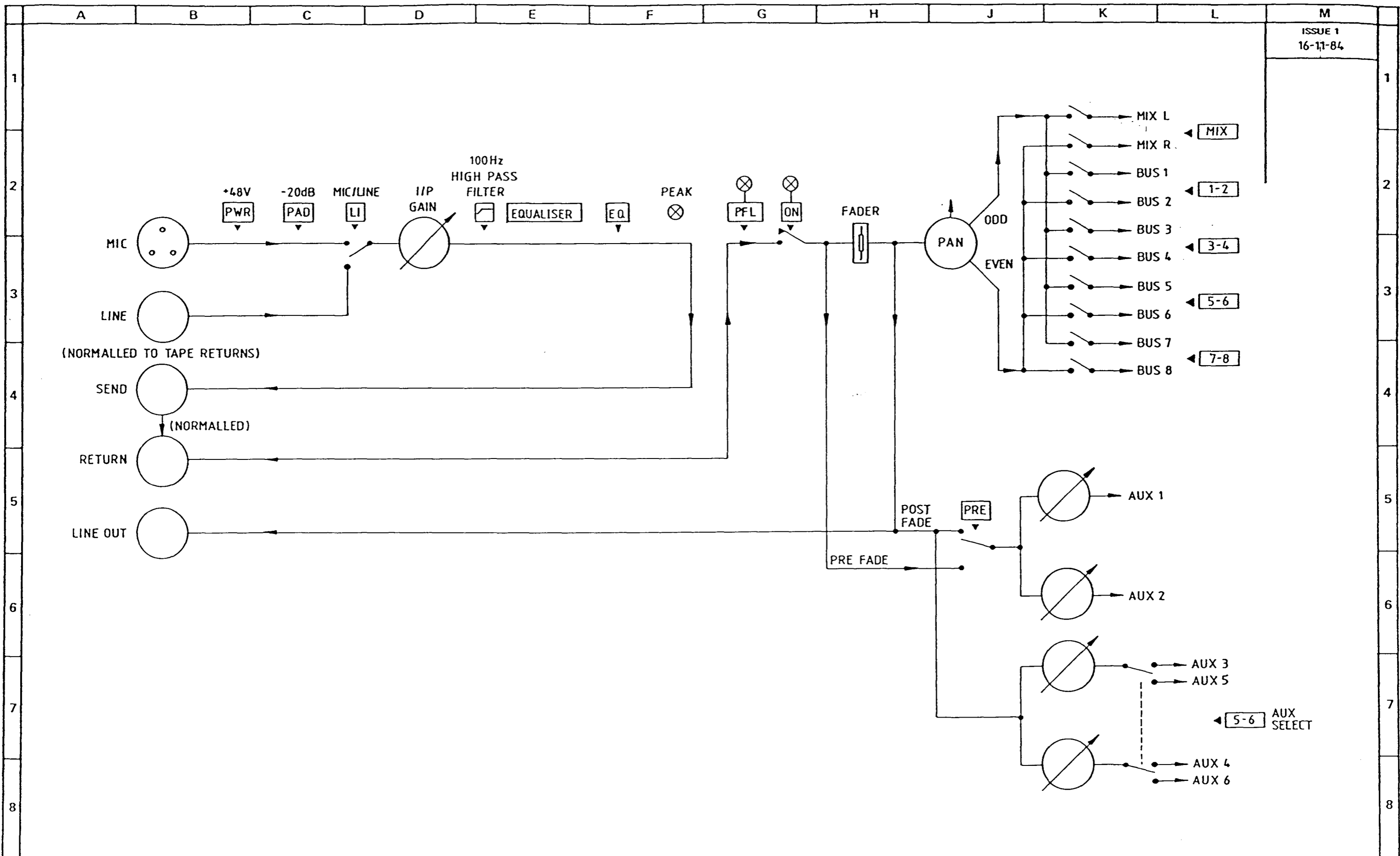
DRG. No. ED 2215



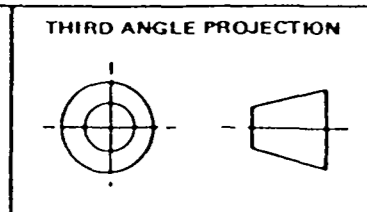
NB: ALL PATHS IN STEREO UNLESS OTHERWISE SHOWN.

REPRESENTS
ROUTING SWITCH

<p>TOLERANCES HOLE SIZES AFTER PAINTING</p> <table border="1"> <tr><td>0-3mm</td><td>+ 0.10</td></tr> <tr><td></td><td>- 0.00</td></tr> <tr><td>OVER 3-6mm</td><td>+ 0.12</td></tr> <tr><td></td><td>- 0.00</td></tr> <tr><td>OVER 6-10mm</td><td>+ 0.15</td></tr> <tr><td></td><td>- 0.00</td></tr> <tr><td>OVER 10-18mm</td><td>+ 0.18</td></tr> <tr><td></td><td>- 0.00</td></tr> <tr><td>OVER 18-25mm</td><td>+ 0.21</td></tr> <tr><td></td><td>- 0.00</td></tr> <tr><td>OVER 25mm</td><td>+ 0.25</td></tr> <tr><td></td><td>- 0.00</td></tr> </table>	0-3mm	+ 0.10		- 0.00	OVER 3-6mm	+ 0.12		- 0.00	OVER 6-10mm	+ 0.15		- 0.00	OVER 10-18mm	+ 0.18		- 0.00	OVER 18-25mm	+ 0.21		- 0.00	OVER 25mm	+ 0.25		- 0.00	<p>GENERAL TOLERANCE Delete where not applicable.</p> <table border="1"> <tr><td>± 0.60mm (0.020")</td></tr> <tr><td>± 0.25mm (0.010")</td></tr> <tr><td>± 0.12mm (0.005")</td></tr> <tr><td>HOLE CENTRES ± 0.004"</td></tr> <tr><td>ALL ANGLES ± 0.60°</td></tr> <tr><td>Unless otherwise stated.</td></tr> </table>	± 0.60mm (0.020")	± 0.25mm (0.010")	± 0.12mm (0.005")	HOLE CENTRES ± 0.004"	ALL ANGLES ± 0.60°	Unless otherwise stated.	<p>HOLE INDEX</p> <table border="1"> <tr><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td></tr> </table>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>MATL</p> <p>FINISH</p> <p>SCALE</p> <p>THIRD ANGLE PROJECTION THIS DRAWING TO COMPLY TO BS308.</p>	<p>DRN AB</p> <p>TRCD</p> <p>CHKD <i>G. J. Jones</i></p>	<p>SOUNDCRAFT ELECTRONICS LTD UNIT 2, BOREHAMWOOD INDUSTRIAL PARK, ROWLEY LANE, BOREHAMWOOD, HERTFORDSHIRE WD8 5PZ. TELEPHONE: 01-207-5050 FACSIMILE No. 2070194</p>	<p>TITLE S500/600 STEREO I/P SIGNAL FLOW DIAG.</p> <p>DRG No. ED 2326</p>
0-3mm	+ 0.10																																								
	- 0.00																																								
OVER 3-6mm	+ 0.12																																								
	- 0.00																																								
OVER 6-10mm	+ 0.15																																								
	- 0.00																																								
OVER 10-18mm	+ 0.18																																								
	- 0.00																																								
OVER 18-25mm	+ 0.21																																								
	- 0.00																																								
OVER 25mm	+ 0.25																																								
	- 0.00																																								
± 0.60mm (0.020")																																									
± 0.25mm (0.010")																																									
± 0.12mm (0.005")																																									
HOLE CENTRES ± 0.004"																																									
ALL ANGLES ± 0.60°																																									
Unless otherwise stated.																																									
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ISSUE 1
16-11-84



TOLERANCE
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

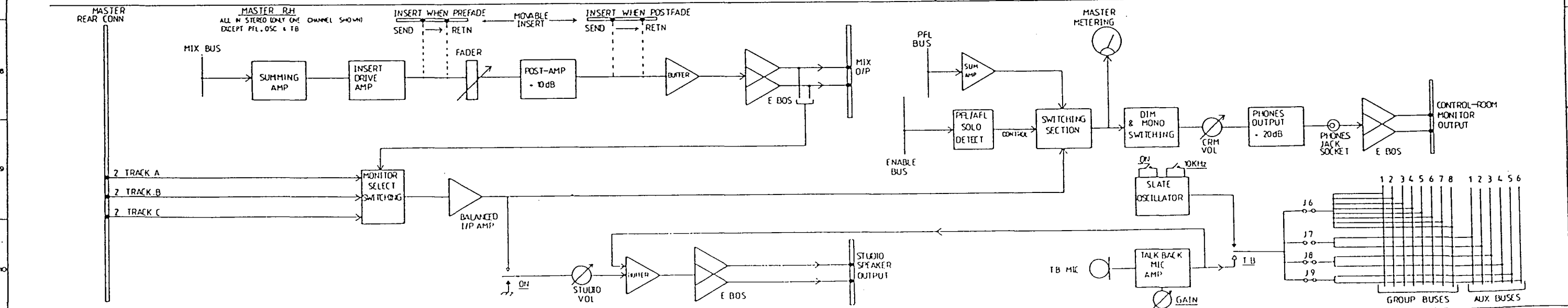
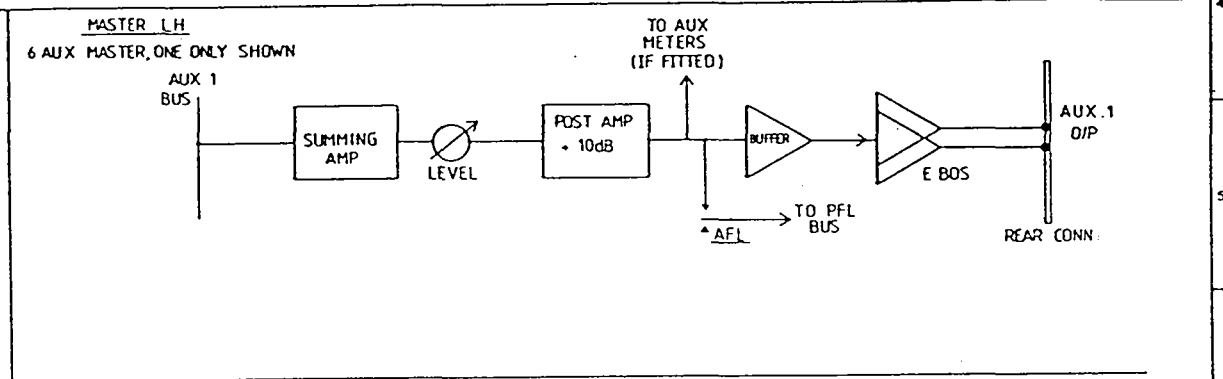
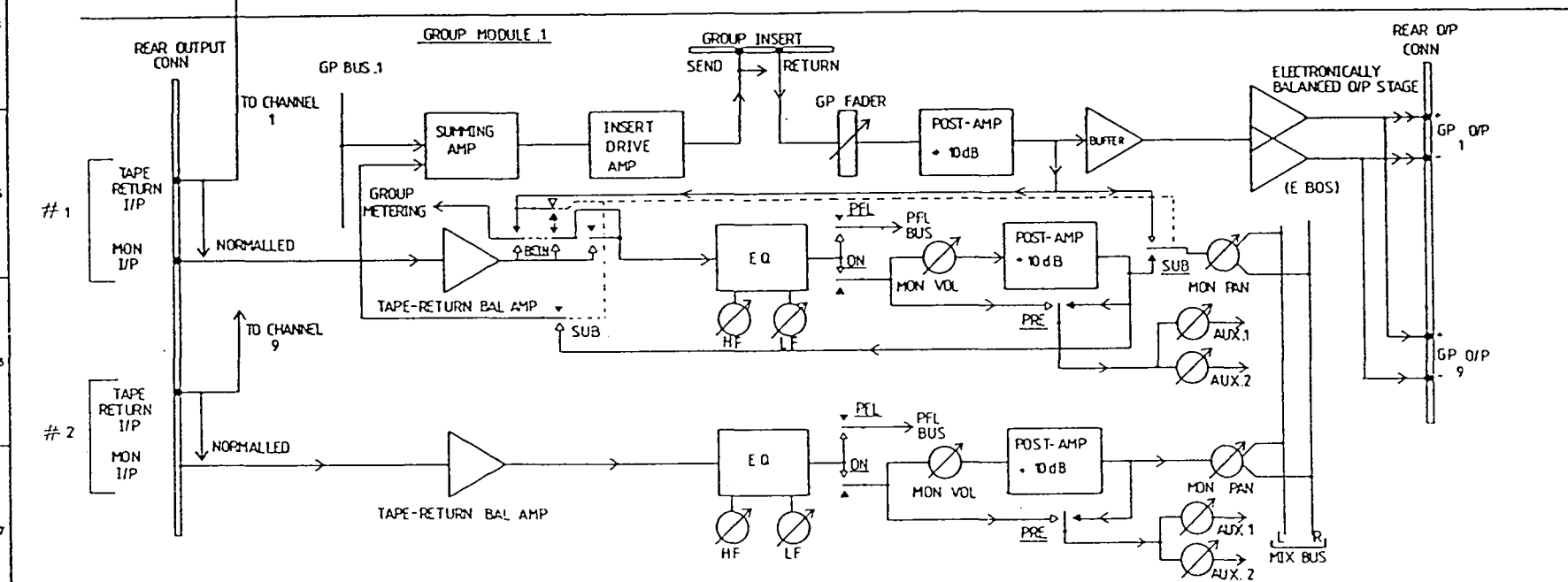
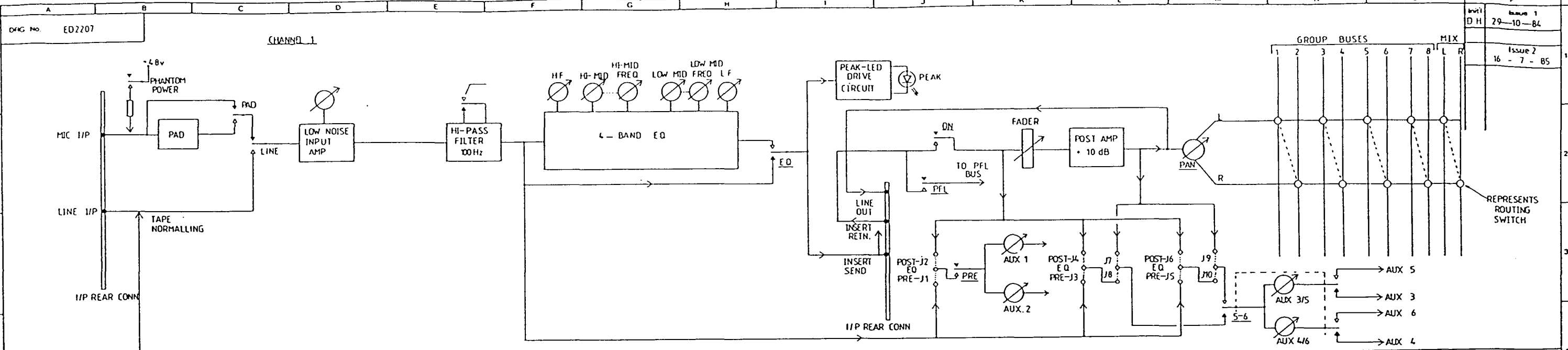
HOLE INDEX

MATL
FINISH
SCALE

DRN
TRCD
CHKD

SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE S500 1600
INPUT MODULE
(SIGNAL FLOW)
DRG. No. ED 2212



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NOTES.
DETAILS OF GAIN-SWITCHING NOT SHOWN

HOLE INDEX

TOLERANCE.
All imperial dimensions ±0.010
All metric dimensions ±0.25mm
All angles ±0.50°
Unless otherwise stated

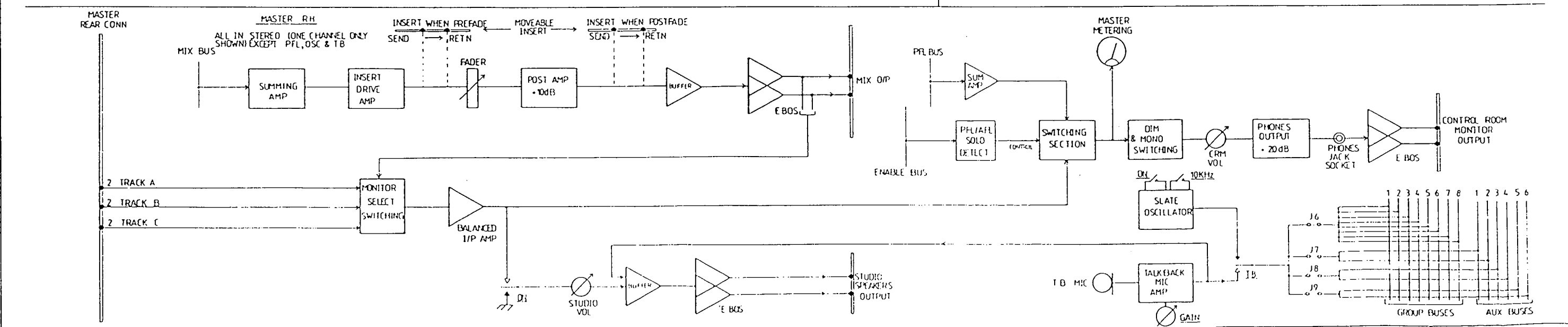
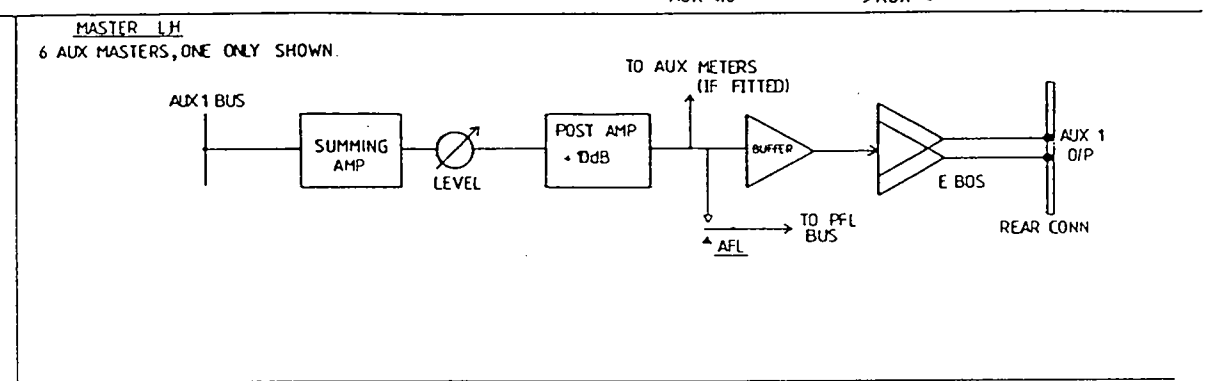
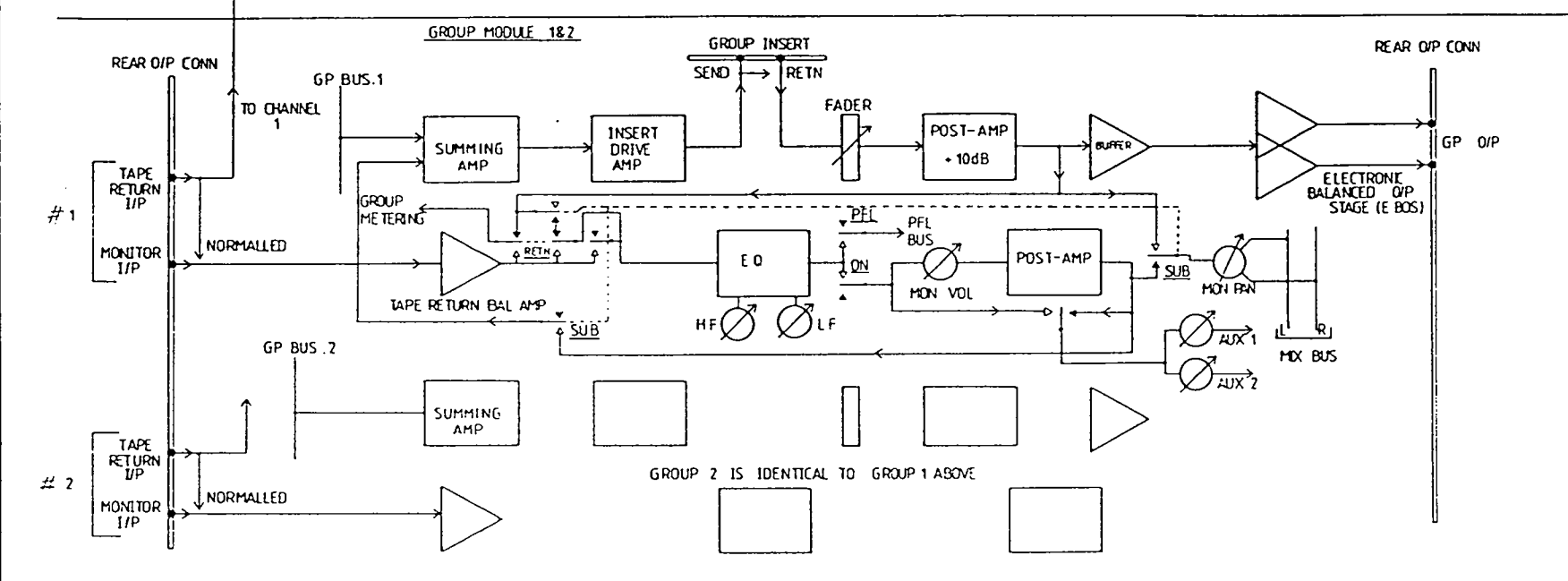
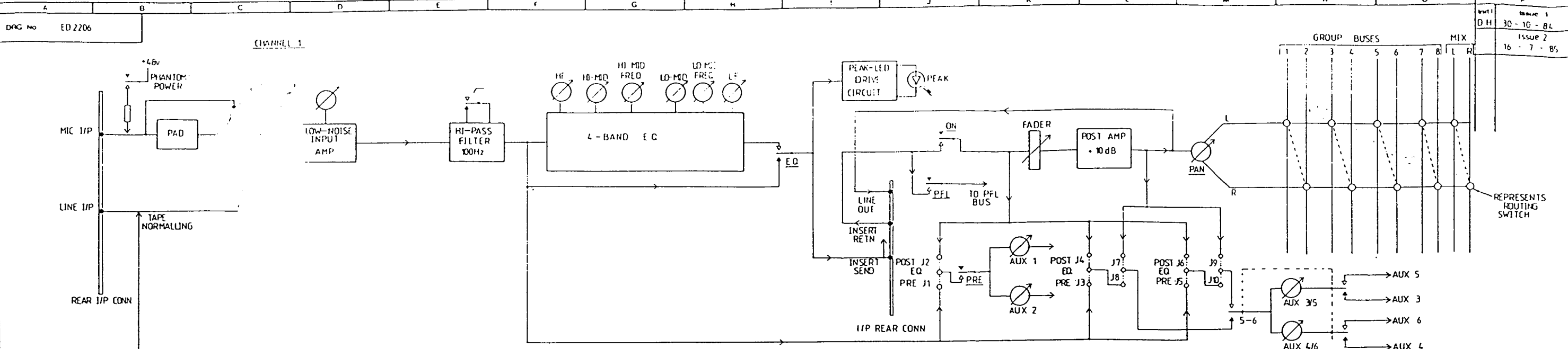
THIRD ANGLE PROJECTION

MATL.
FINISH.
SCALE.

DRG. (1/H)
THCD.
CRKD.

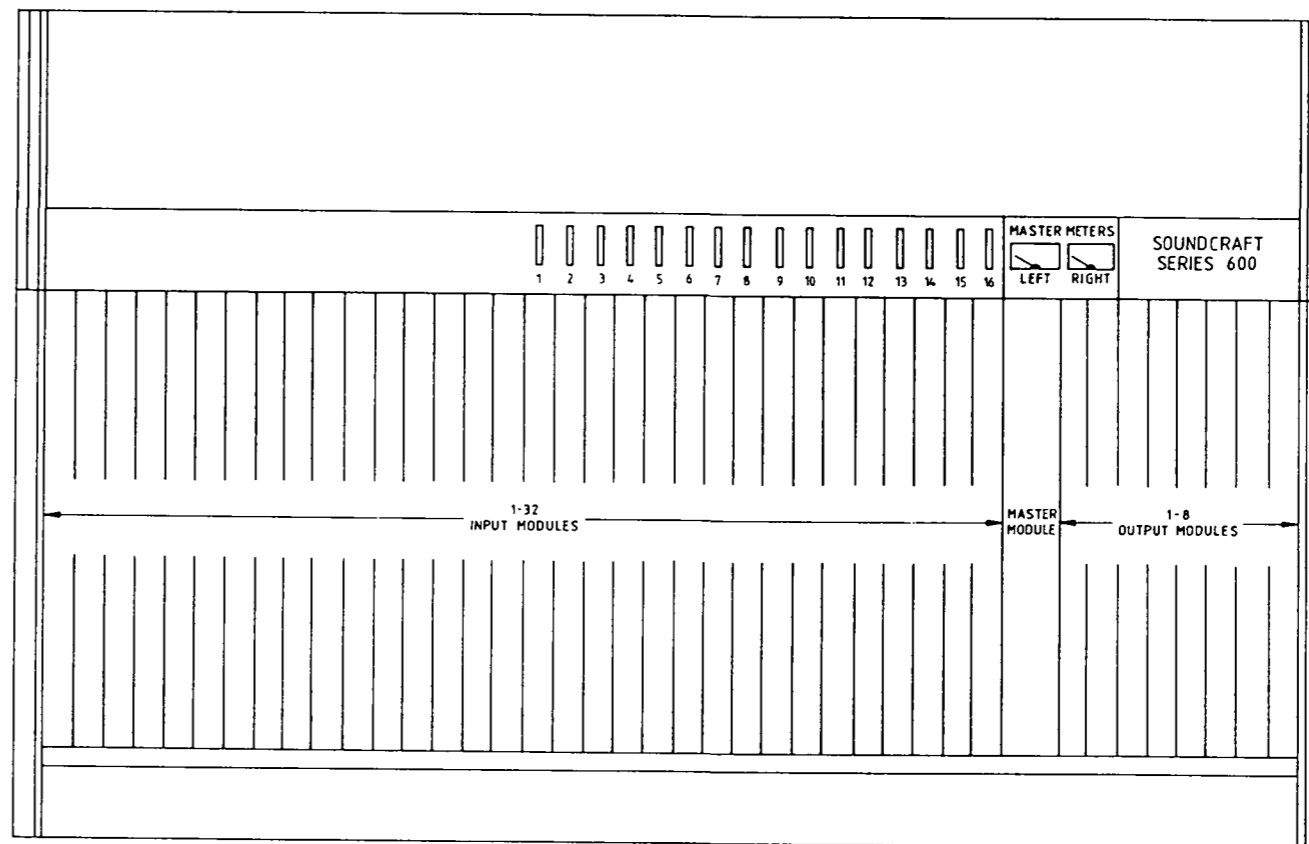
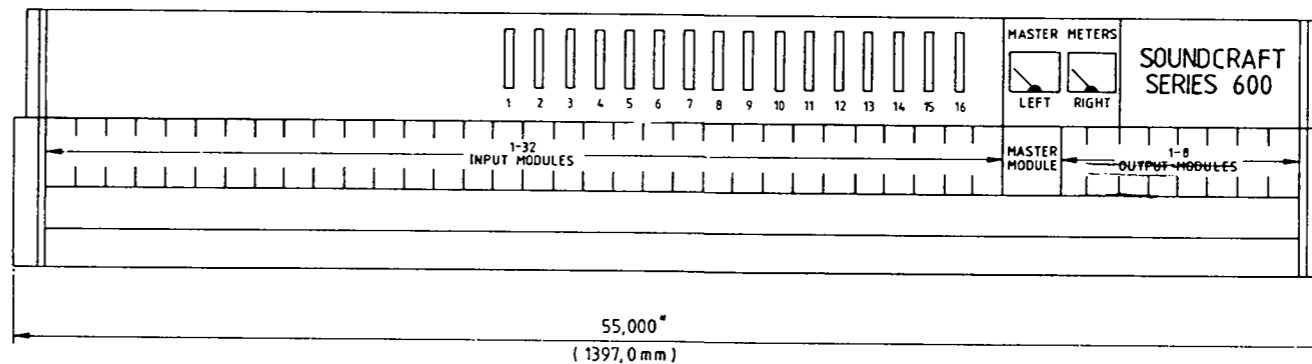
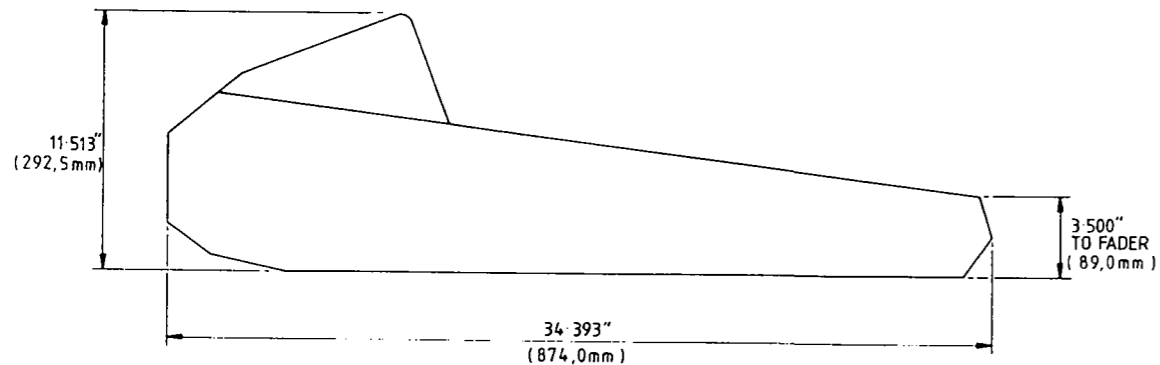
SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC4N 3DU, ENGL.
TELEPHONE: 01-251-3631/2/3
TELEGRAMS: SOUNDCRAFT LDM EC1
TELEX: UK No. 21198, USA No. 01-2703

TITLE. S600
BLOCK DIAGRAM.
DRG No. ED2207



<p>Soundcraft Electronics Limited own the copyright of this drawing which is not to be copied, reproduced or disclosed, in part or whole, to a third party without written permission.</p>	<p>NOTES DETAILS OF GAIN SWITCHING NOT SHOWN</p>	<p>HOLE INDEX</p>	<p>TOLERANCE All imperial dimensions ± 0.010 All metric dimensions $\pm 0.25mm$ All angles $\pm 0.50^\circ$ Unless otherwise stated</p>	<p>THIRD ANGLE PROJECTION</p>	<p>MATERIAL FRESH SCALE</p>	<p>ORG DH TECD CHKD</p>	<p>SOUNDRAFT ELECTRONICS LTD 5-8 GREAT SUTTON STREET LONDON EC1V 0BR TELEPHONE 01-251-3631/2/3 TELEGRAMS SOUNDRAFT LON EC1 TELEX (UK No) 21198 USA No 01-2203</p>	<p>TITLE S500 BLOCK DIAGRAM ENG No ED 2206</p>
--	---	--------------------------	---	--------------------------------------	--	--	---	--

Issue 1	4-6-85
Issue 2	LENGTHS CHANGED TO 16 I/P 45 INCH. 24 I/P 55 INCH. 32 I/P 65 INCH. 40 I/P 75 INCH. 16-7-87
Issue 3	LENGTHS CHANGED TO 16 I/P 35 INCH. 24 I/P 45 INCH. 32 I/P 55 INCH. 40 I/P 65 INCH. 23-6-89
DG	

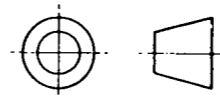


NOTES.
16 I/P LENGTH = 35.000" (889.0mm)
24 I/P LENGTH = 45.000" (1143.0mm)
40 I/P LENGTH = 65.000" (1651.0mm)

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated.

THIRD ANGLE PROJECTION



MATL. _____

FINISH. _____

SCALE. _____

DRG. *Colin Hamilton*
TRCD. _____
CHKD. _____

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC IV, OBX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN, EC1
TELEX. UK No. 21198. USA No. 01-2203

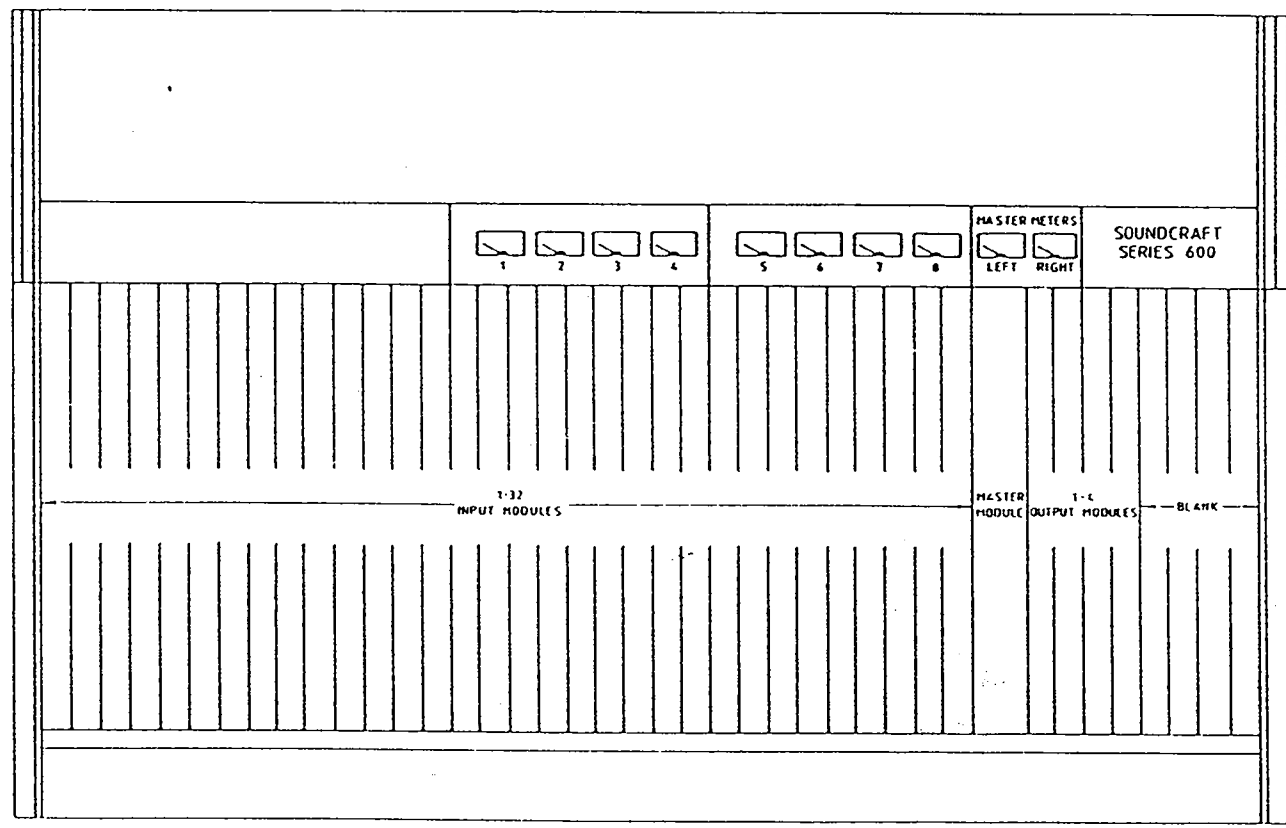
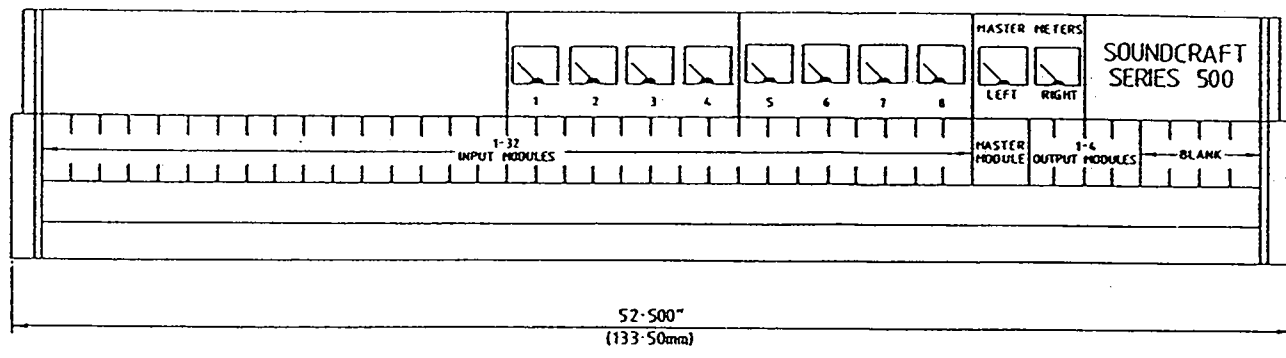
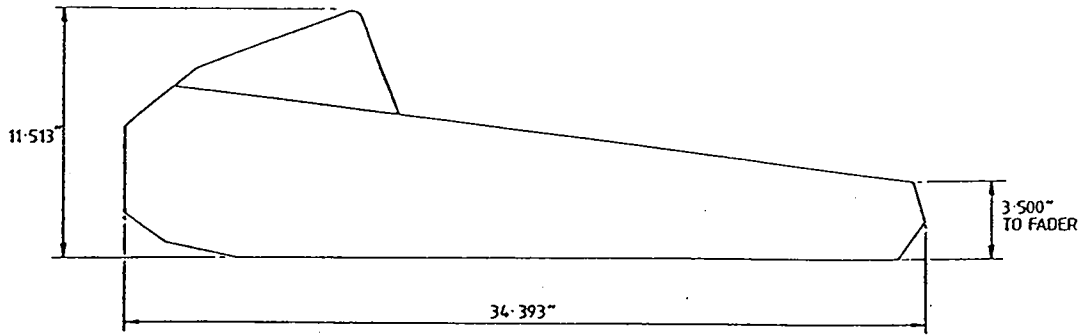
TITLE.
S600
CONSOLE SCHEMATIC
LAYOUT

DRG No. MI 2438

Soundcraft Electronics Limited
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or disclosed, in part or whole, to a
third party without written permission.

ORG No. M12437

Issue 1
4-4-85
Issue 2
21-11-86

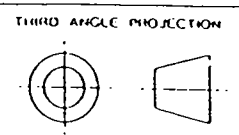


Soundcraft Electronics Limited
own the copyright of this drawing
which is not to be copied, reproduced
or disclosed, in part or whole, to a
third party without written permission.

NOTES:
16 I/P LENGTH = 825.50mm
24 I/P LENGTH = 1079.50mm

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated

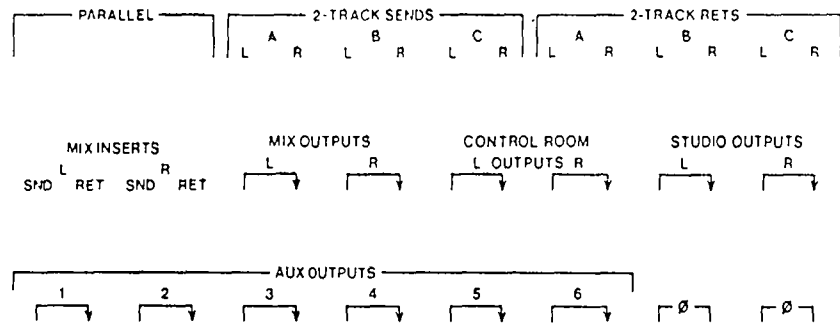


MATL.	ENG.
FINISH.	TRCD.
SCALE.	CHKD.

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC IV 0DU.
TELEPHONE: 01-751-3631/2/3
TELEGRAMS: SOUNDCRAFT LON EC1
TELEX UK 44 21198 USA No 01-2703

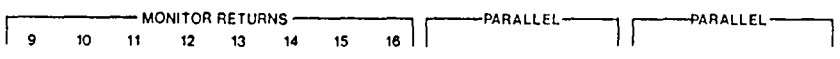
TITLE: S500 CONSOLE SCHEMATIC LAYOUT

ORG No: MF 2437



LINE IN	CHANNEL 1 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 2 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 3 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 4 INSERT SND RET	LINE OUT
LINE IN	CHANNEL 5 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 6 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 7 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 8 INSERT SND RET	LINE OUT
LINE IN	CHANNEL 9 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 10 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 11 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 12 INSERT SND RET	LINE OUT
LINE IN	CHANNEL 13 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 14 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 15 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 16 INSERT SND RET	LINE OUT
LINE IN	CHANNEL 17 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 18 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 19 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 20 INSERT SND RET	LINE OUT
LINE IN	CHANNEL 21 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 22 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 23 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 24 INSERT SND RET	LINE OUT
LINE IN	CHANNEL 25 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 26 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 27 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 28 INSERT SND RET	LINE OUT
LINE IN	CHANNEL 29 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 30 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 31 INSERT SND RET	LINE OUT	LINE IN	CHANNEL 32 INSERT SND RET	LINE OUT

INSERT SND RET	GRP OUT	MON 1	INSERT SND RET	GRP OUT	MON 2	INSERT SND RET	GRP OUT	MON 3	INSERT SND RET	GRP OUT	MON 4
INSERT SND RET	GRP OUT	MON 5	INSERT SND RET	GRP OUT	MON 6	INSERT SND RET	GRP OUT	MON 7	INSERT SND RET	GRP OUT	MON 8



TAPETRACKS
SND¹ RET SND² RET SND³ RET SND⁴ RET SND⁵ RET SND⁶ RET SND⁷ RET SND⁸ RET

TAPETRACKS
SND⁹ RET SND¹⁰ RET SND¹¹ RET SND¹² RET SND¹³ RET SND¹⁴ RET SND¹⁵ RET SND¹⁶ RET

TAPETRACKS
SND¹⁷ RET SND¹⁸ RET SND¹⁹ RET SND²⁰ RET SND²¹ RET SND²² RET SND²³ RET SND²⁴ RET

TIELINES
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

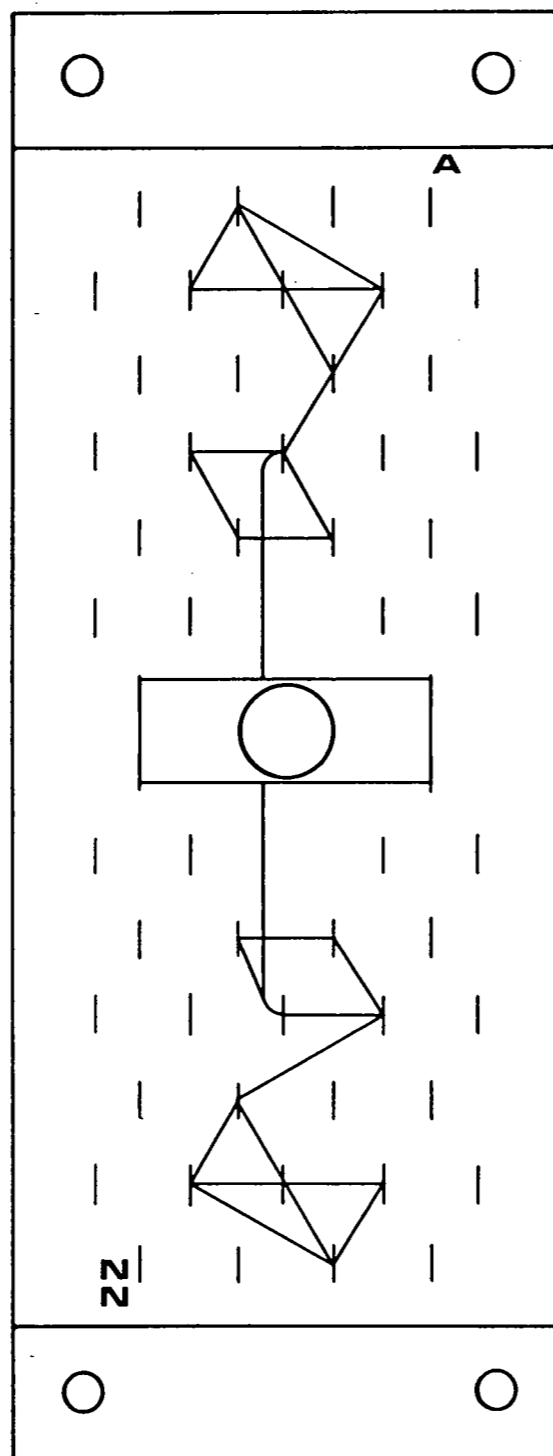
TIELINES
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

TIELINES
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48

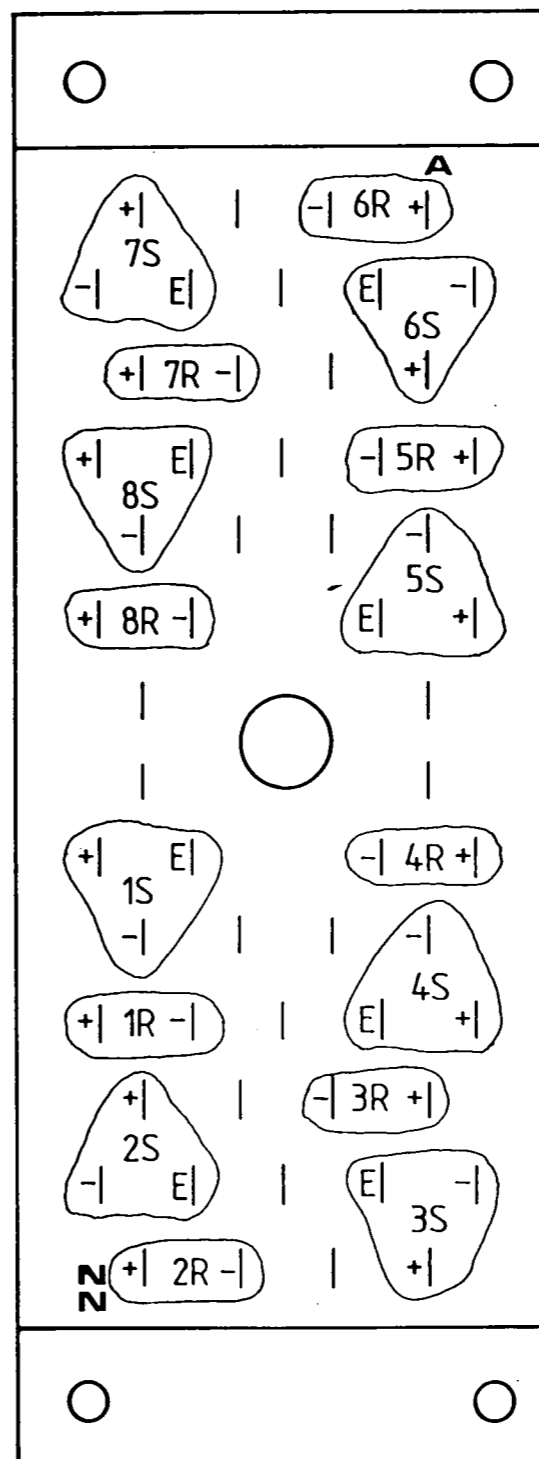
TIELINES
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64

SONARDAFFILE (1) PHONICS 110
UNIT 2
BORE HAMMOCK LIND PARK
RETEL/UNIVERSITY
HEATHS WGS 592
01 707 5000
P.A.S. IN 27/11/84

TITLE
5.00
PATRIOTRY PARK



GND

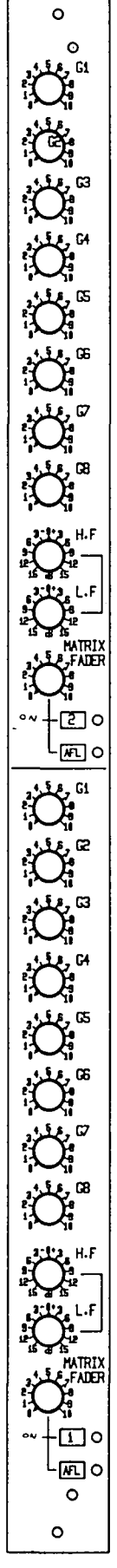
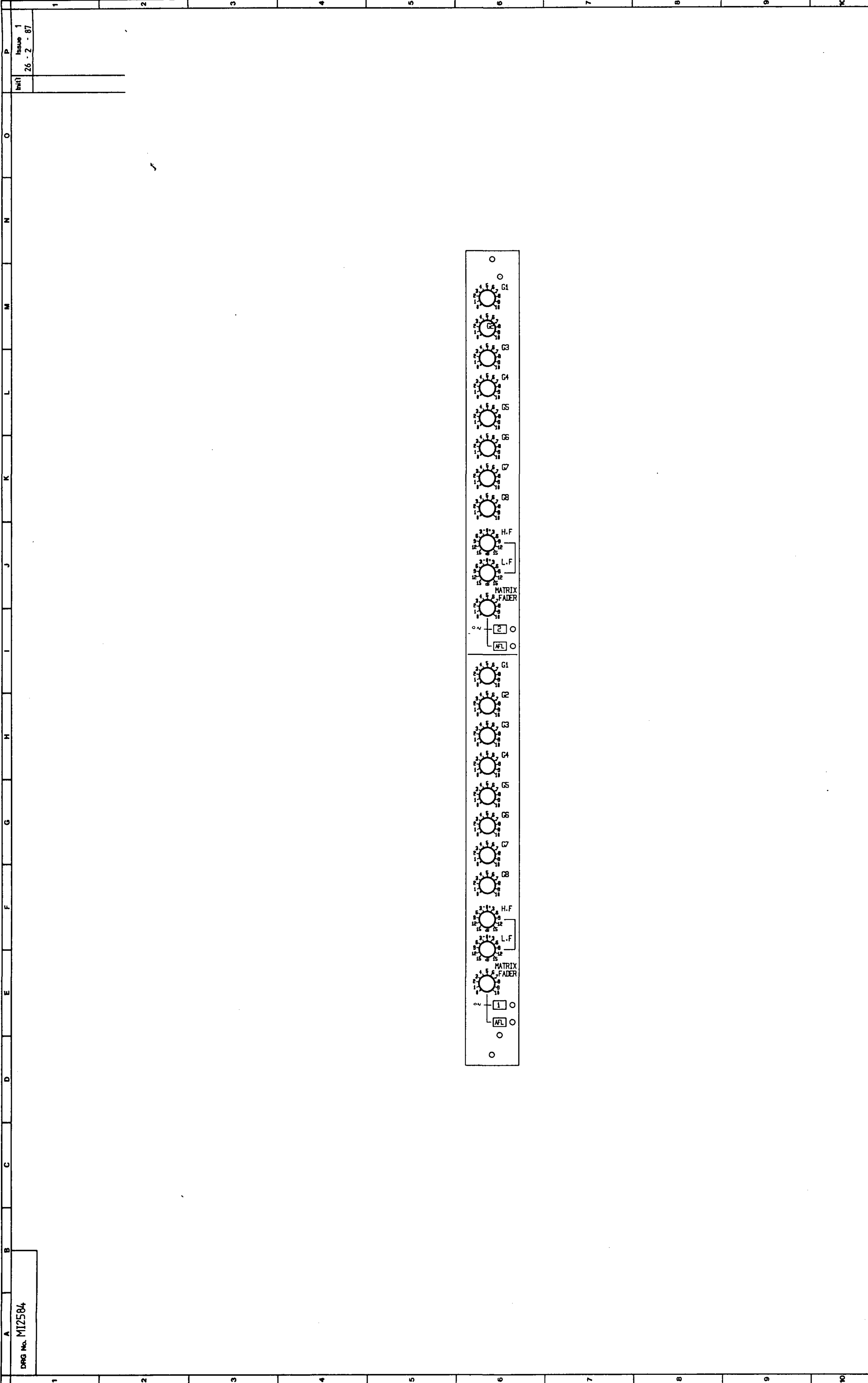


SIGNALS & GND

S = CONSOLE SEND
R = TAPE RETURN

VIEWED FROM FREE CON. SOLDER PINS.

<p>TOLERANCES HOLE SIZES AFTER PAINTING</p> <p>0-3mm - 0.10 0-00</p> <p>OVER 3-6mm - 0.12 0-00</p> <p>OVER 6-10mm - 0.15 0-00</p> <p>OVER 10-18mm - 0.18 0-00</p> <p>OVER 18-25mm - 0.21 0-00</p> <p>OVER 25mm - 0.25 0-00</p>	<p>GENERAL TOLERANCE</p> <p>Delete where not applicable</p> <p>± 0.50mm (0.020")</p> <p>± 0.25mm (0.010")</p> <p>± 0.12mm (0.005")</p> <p>HOLE CENTRES ± 0.064"</p> <p>ALL ANGLES ± 0.50°</p> <p>Unless otherwise stated</p>	<p>HOLE INDEX</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>MATL</p> <p>FINISH</p> <p>SCALE N.T.S.</p> <p>THIRD ANGLE PROJECTION THIS DRAWING TO COMPLY TO BS308</p>	<p>DRN BTB</p> <p>TRCD</p> <p>CHKD</p>	<p>SOUNDCRAFT ELECTRONICS LTD UNIT 2 BOREHAMWOOD INDUSTRIAL PARK ROWLEY LANE BOREHAMWOOD HERTFORDSHIRE WD6 5PZ TELEPHONE 01 207 5050 FACSIMILE No 2070194</p>	<p>TITLE TS12 TAPE I/O & 600 PATCH</p> <p>DRG No MI2589</p>
---	---	--	---	---	--	---	---



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NOTES

HOLE INDEX

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

TOLERANCES

HOLE SIZES AFTER PAINTING

0-3mm	+0.10
	-0.00
OVER 3-6mm	+0.10
	-0.10
OVER 6-10mm	+0.15
	-0.00
OVER 10-18mm	+0.20
	-0.00
OVER 18-25mm	+0.21
	-0.00
OVER 25mm	+0.25
	-0.00

GENERAL TOLERANCES

Delete where not applicable.

± 0.50mm	(0.020")
± 0.25mm	(0.010")
± 0.12mm	(0.005")

All angles ± 0.5°
Hole centres ± 0.004"

Unless otherwise stated.

MATL

FINISH	TRCD
SCALE	CHKD

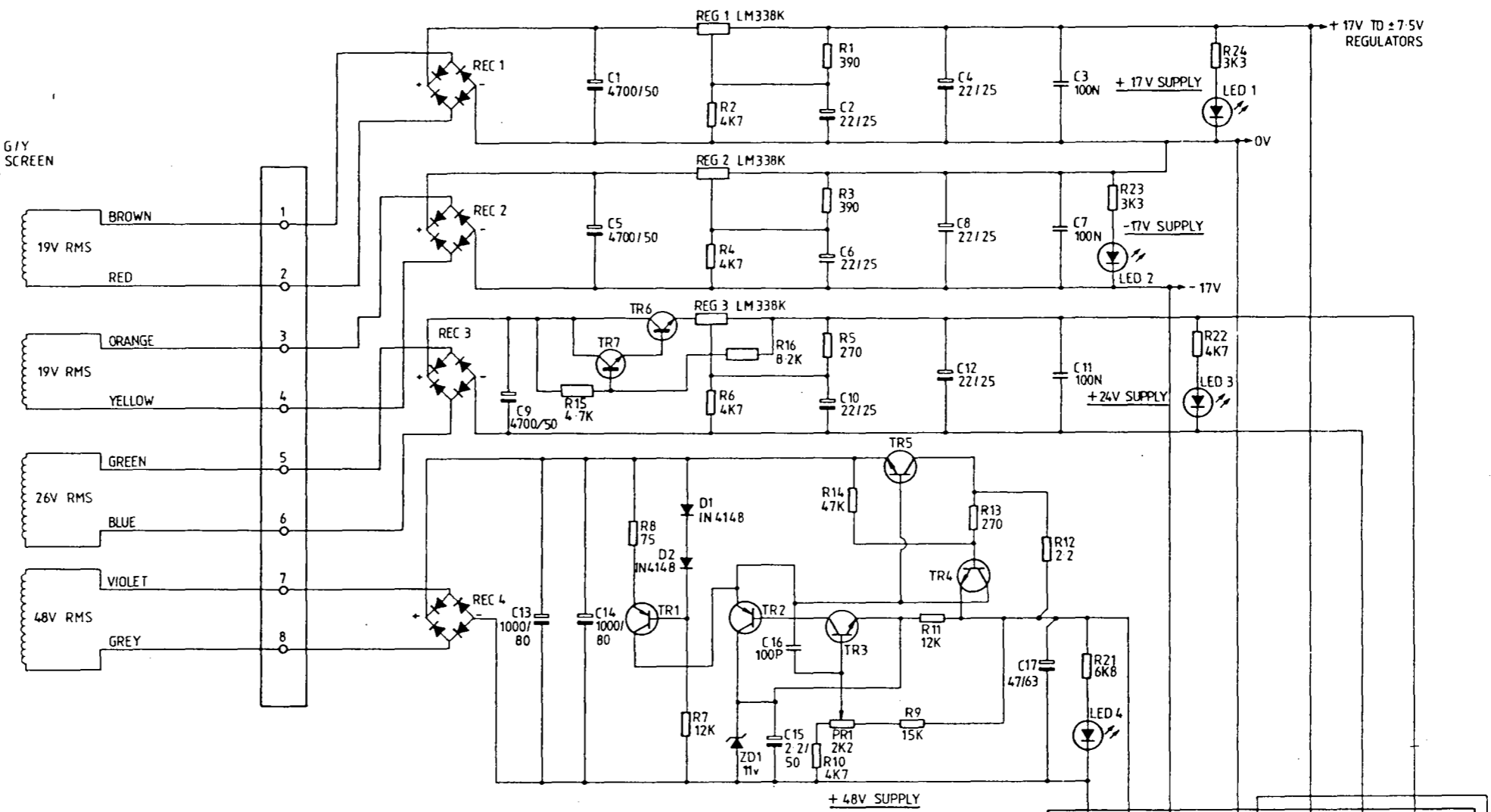
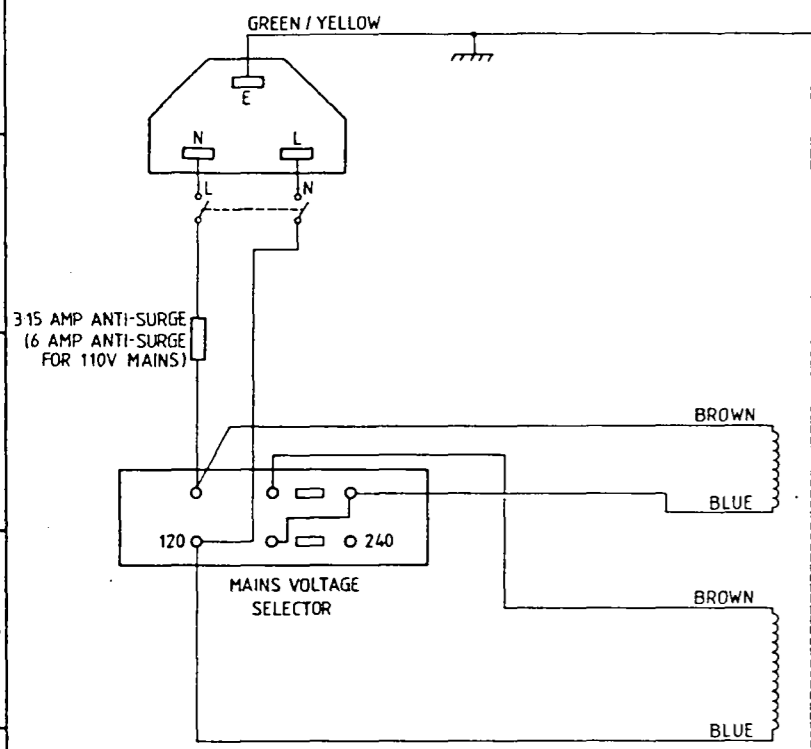
THIRD ANGLE PROJECTION
THIS DRAWING TO COMPLY TO BS308.

SOUND CRAFT ELECTRONICS LTD
UNIT 2,
BOREHAMWOOD INDUSTRIAL PARK,
ROWLEY LANE,
BOREHAMWOOD,
HERTFORDSHIRE WD6 5PZ.
TELEPHONE: 01-207-5050
FACSIMILE No. 2070194

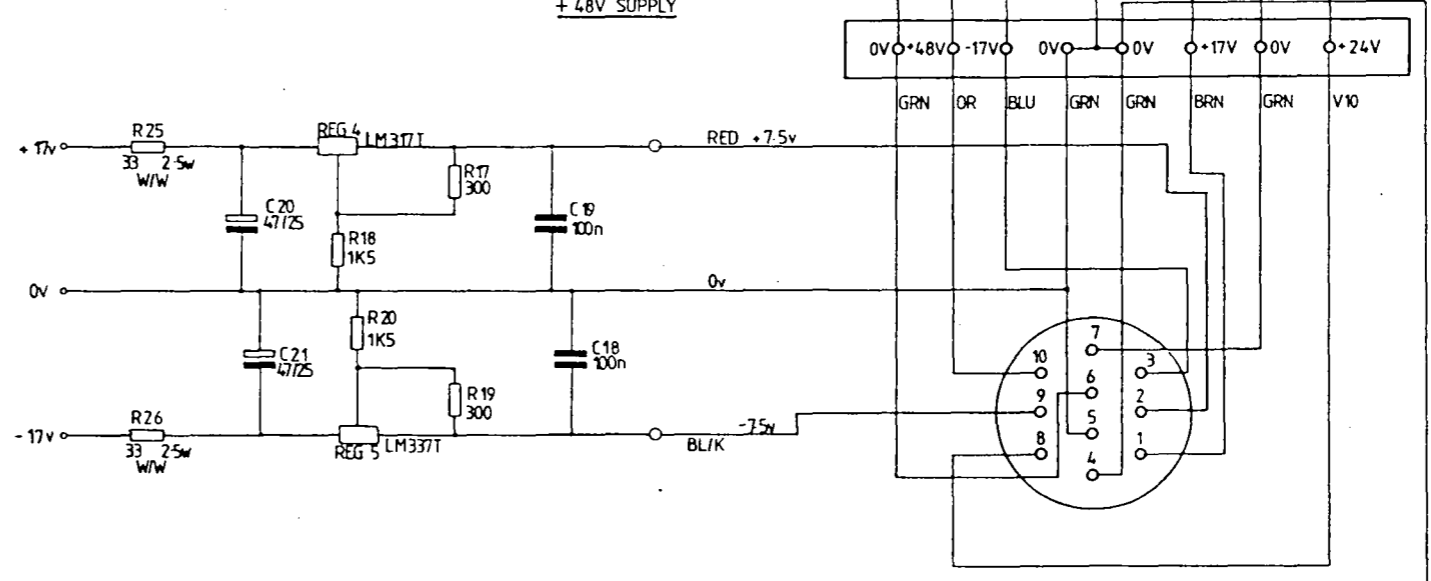
TITLE: S500
MATRIX MODULE

DRG No. M12584

Issue 1	25-10-84
Issue 2	7-1-85
ISS 3	22/1/85
Issue 4	31-1-85



TRANSISTORS	
TR1 & TR2	= PNP 2SA970 GR
TR3,4, 7	= NPN 2SC2240 BL
TR5	= NPN BD135
TR6	= NPN 2N3055
RECTIFIERS	
REC1, REC2 & REC3	= KBF02
REC4	= KBP02



VIEWED FROM SOLDER PINS OF SRC CONNECTOR

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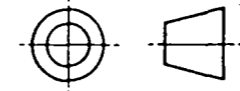
NOTES.

HOLE INDEX.

TOLERANCE.

All imperial dimensions ± 0.010
 All metric dimensions $\pm 0.25mm$
 All angles $\pm 0.50^\circ$
 Unless otherwise stated.

THIRD ANGLE PROJECTION



MATL.

FINISH.

SCALE.

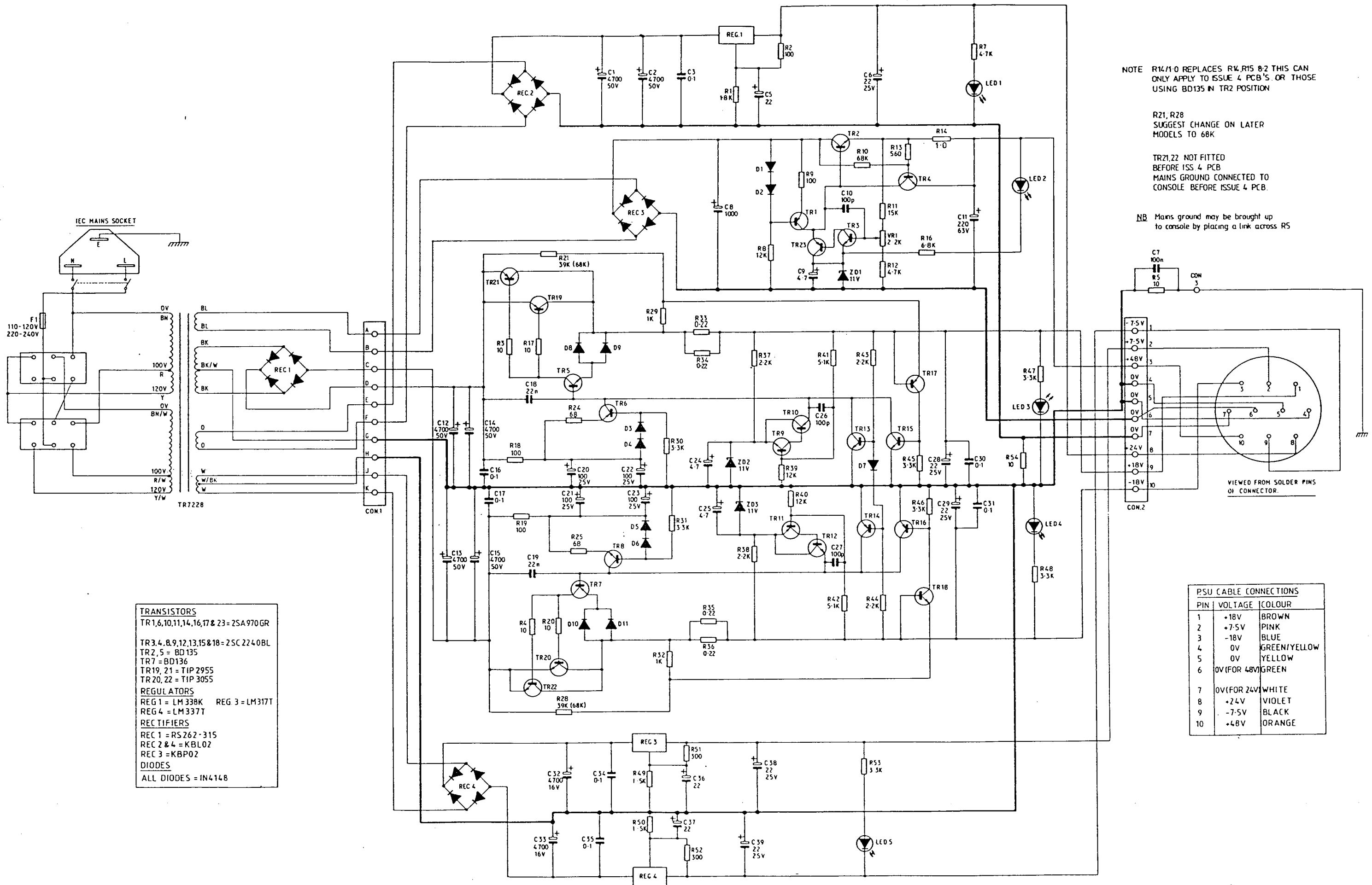
DRG.

TRCD.

CHKD.

SOUNDRAFT ELECTRONICS LTD.
 5-8 GREAT SUTTON STREET
 LONDON, EC4V 0BX.
 TELEPHONE. 01-251-3631/2/3
 TELEGRAMS. SOUNDRAFT LDN. EC1
 TELEX. UK No. 21198. USA No. 01-2203

TITLE
 MEDIUM CONSOLE
 POWER SUPPLY
 SC1584
 DRG No. ED 2208



NOTE R14/1-0 REPLACES R14, R15 8-2 THIS CAN ONLY APPLY TO ISSUE 4 PCB'S. OR THOSE USING BD135 IN TR2 POSITION

R21, R28 SUGGEST CHANGE ON LATER MODELS TO 68K

TR21, 22 NOT FITTED BEFORE ISS 4 PCB MAINS GROUND CONNECTED TO CONSOLE BEFORE ISSUE 4 PCB.

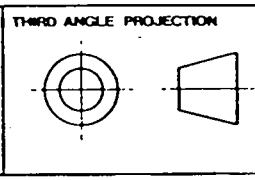
NB Mains ground may be brought up to console by placing a link across R5

- TRANSISTORS**
 TR1,6,10,11,14,16,17 & 23 = 2SA970GR
 TR3,4,8,9,12,13,15 & 18 = 2SC2240BL
 TR2,5 = BD135
 TR7 = BD136
 TR19,21 = TIP2955
 TR20,22 = TIP3055
- REGULATORS**
 REG1 = LM338K REG3 = LM317T
 REG4 = LM337T
- RECTIFIERS**
 REC1 = RS262-315
 REC2 & 4 = KBL02
 REC3 = KBP02
- DIODES**
 ALL DIODES = IN4148

PSU CABLE CONNECTIONS

PIN	VOLTAGE	COLOUR
1	+18V	BROWN
2	+7.5V	PINK
3	-18V	BLUE
4	0V	GREEN/YELLOW
5	0V	YELLOW
6	0V (FOR 4.8V)	GREEN
7	0V (FOR 2.4V)	WHITE
8	+2.4V	VIOLET
9	-7.5V	BLACK
10	+4.8V	ORANGE

Issue 1 12-11-81
 Issue 2 19-1-82
 Issue 3 3-3-82
 Issue 4 9-7-82
 Issue 5 16-11-83
 Issue 6 10-9-84



NOTES
 All resistors in ohms.
 All capacitors in microfarads, unless otherwise stated.
 R33,34,35,36 all 2.5W wirewound.
 FOR PART No. GD0336

TOLERANCE
 All imperial dimensions ±0.01
 All metric dimensions ±0.25mm
 All angles ±0.50°
 Unless otherwise stated

HOLE INDEX

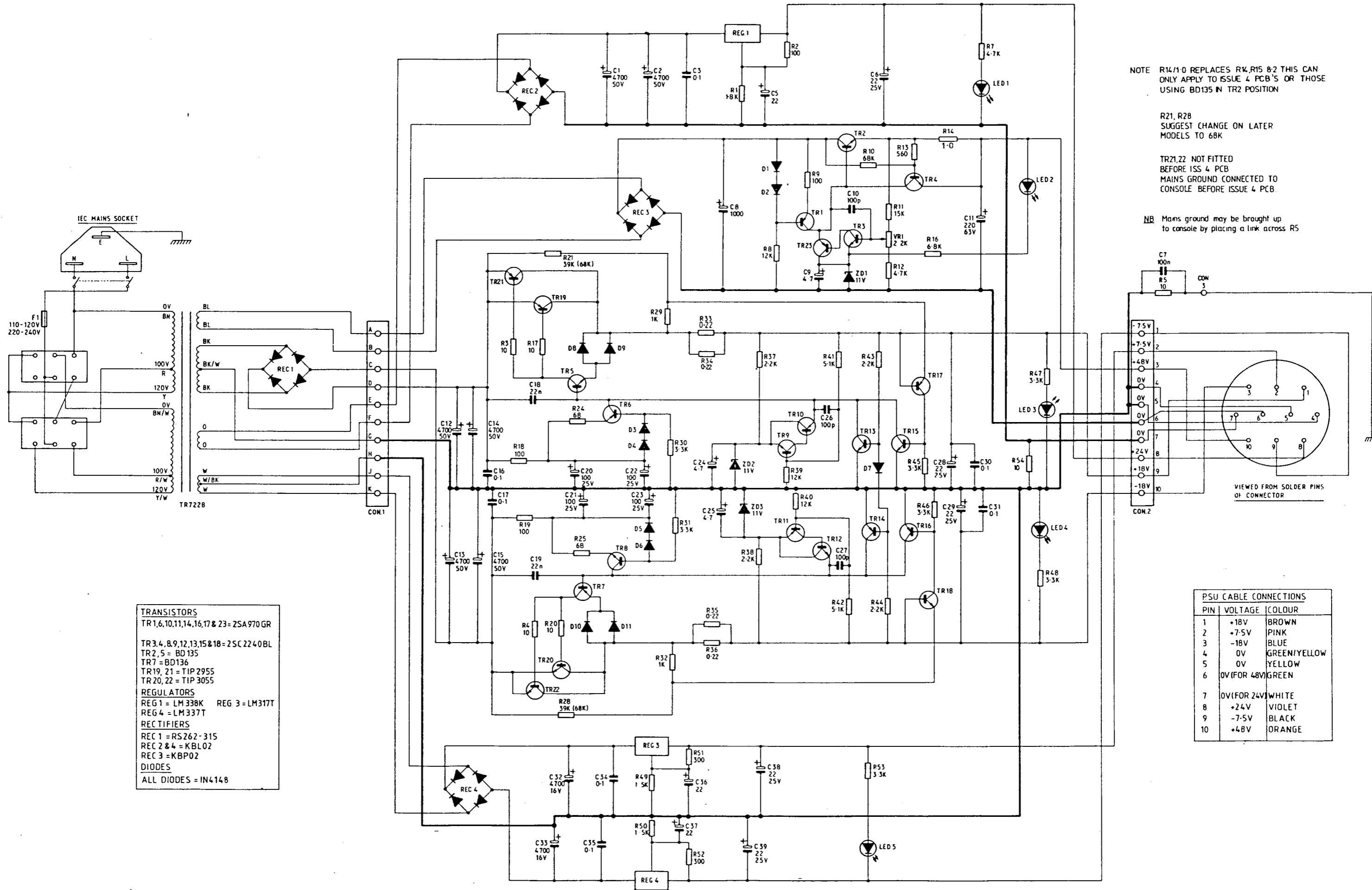
MATL —
FINISH —
SCALE —

DRN MARK
TRCD
CHKD

SOUNDCRAFT ELECTRONICS LTD
 5-8 GREAT SUTTON STREET
 LONDON EC1V 0BX.
 TELEPHONE: 01-251-3631/2/3
 TELEGRAMS: SOUNDCRAFT LDM EC1
 TELETYPE No. 21198. USA. No. 224408

TITLE
 POWER SUPPLY
 CURCUIT DIAGRAM
 (SC1218 Iss 4)

DRG. No. ED 2093



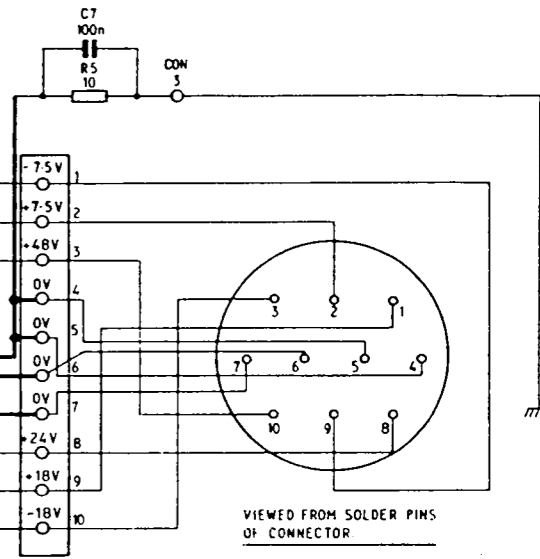
NOTE R14/1.0 REPLACES R14/R15 8.2 THIS CAN ONLY APPLY TO ISSUE 4 PCB'S OR THOSE USING BD135 IN TR2 POSITION

R21, R28 SUGGEST CHANGE ON LATER MODELS TO 68K

TR21, 22 NOT FITTED BEFORE ISS 4 PCB MAINS GROUND CONNECTED TO CONSOLE BEFORE ISSUE 4 PCB.

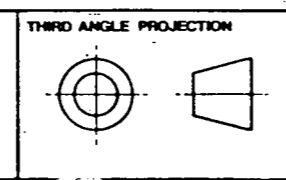
NB Mains ground may be brought up to console by placing a link across R5

- TRANSISTORS**
 TR1,6,10,11,14,16,17 & 23= 2SA970GR
 TR3,4,8,9,12,13,15 & 18= 2SC2240BL
 TR2,5= BD135
 TR7= BD136
 TR19,21= TIP2955
 TR20,22= TIP3055
- REGULATORS**
 REG1= LM338K REG3= LM317T
 REG4= LM337T
- RECTIFIERS**
 REC1= RS262-315
 REC2 & 4= KBL02
 REC3= KBP02
- DIODES**
 ALL DIODES = IN4148



PSU CABLE CONNECTIONS		
PIN	VOLTAGE	COLOUR
1	+18V	BROWN
2	+7.5V	PINK
3	-18V	BLUE
4	0V	GREEN/YELLOW
5	0V	YELLOW
6	0V (FOR 4.8V)	GREEN
7	0V (FOR 2.4V)	WHITE
8	+2.4V	VIOLET
9	-7.5V	BLACK
10	+4.8V	ORANGE

Issue 1 12-11-81
 Issue 2 19-1-82
 Issue 3 3-3-82
 Issue 4 9-7-82
 Issue 5 16-11-83
 Issue 6 10-9-84



NOTES
 All resistors in ohms.
 All capacitors in microfarads, unless otherwise stated.
 R33,34,35,36 all 2.5W wirewound.
 FOR PART No GD0336

TOLERANCE
 All imperial dimensions ±0.01
 All metric dimensions ±0.25mm
 All angles ±0.50°
 Unless otherwise stated

HOLE INDEX

MATL —
FINISH —
SCALE —

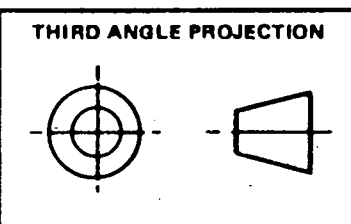
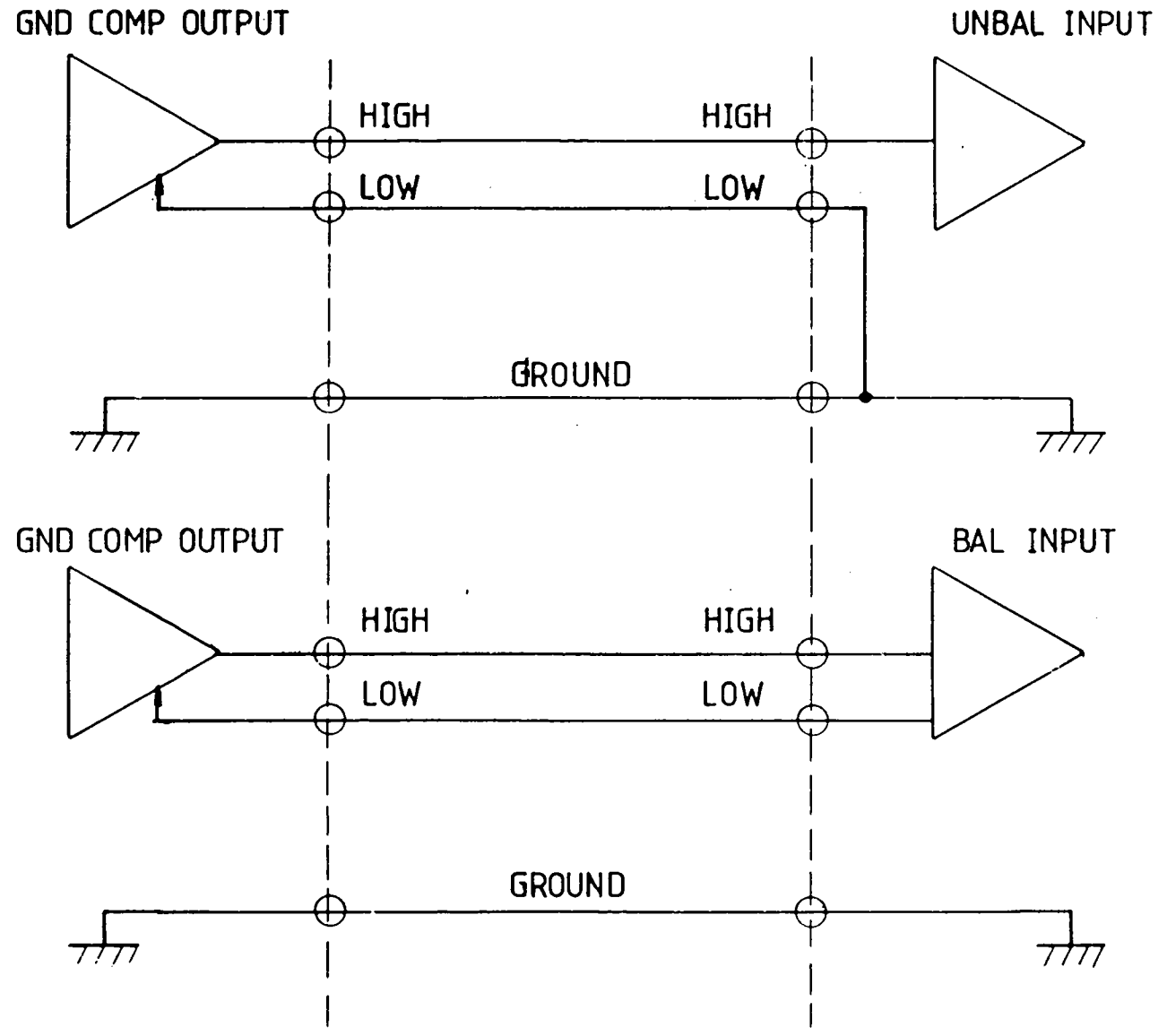
DRN MARK
CHKD

SOUNDCRAFT ELECTRONICS LTD
 5-8 GREAT SUTTON STREET
 LONDON EC1V 0BX.
 TELEPHONE: 01-251-3631/2/3
 TELEGRAMS: SOUNDCRAFT LDM EC1
 TELETYPE: No. 21198. USA No. 224408

TITLE
 POWER SUPPLY
 CIRCUIT DIAGRAM
 (SC1218 Iss.4)

DRG. No. ED 2093

WIRING FOR GROUND COMPENSATED OUTPUT



TOLERANCE
 All imperial dimensions ± 0.010
 All metric dimensions $\pm 0.25\text{mm}$
 All angles $\pm 0.50^\circ$
 Unless otherwise stated

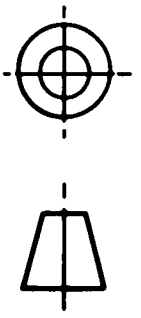
HOLE INDEX

MATL
 FINISH
 SCALE

DRN GS
 TRCD AB
 CHKD

SOUNDCRAFT ELECTRONICS LTD
 6-8 GREAT SUTTON STREET
 LONDON EC1V 0BX.
 TELEPHONE. 01-251-3631/2/3
 TELEGRAMS. SOUNDCRAFT LDN EC1
 TELEX. UK. No. 21198. USA. No. 224408

TITLE WIRING FOR
 GND COMP O/P
 DRG. No. MI 2426



THIRD ANGLE PROJECTION

TOLERANCE
 All imperial dimensions ±0.010
 All metric dimensions ±0.25mm
 Unless otherwise stated

HOLE INDEX

MATL

FINISH

SCALE

DRN
GC

TRCD
SHOJON

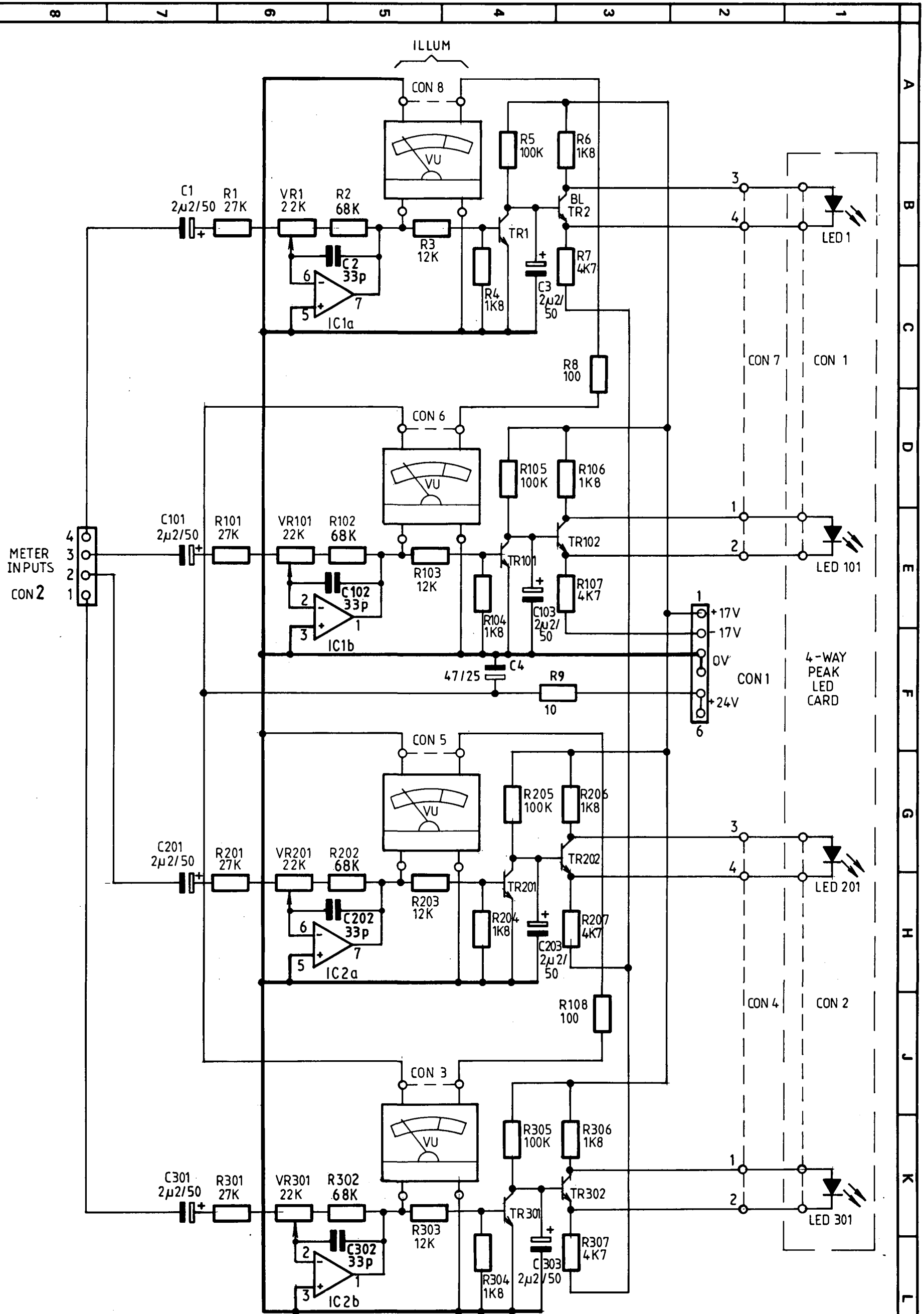
CHKD

SOUNDCRAFT ELECTRONICS LTD
 6-8 GREAT BUTTON STREET
 LONDON EC1V 0BX.
 TELEPHONE: 01-261-3831/2/3
 TELEGRAMS: SOUNDCRAFT LON EC1
 TELERX. UK. No. 21188. USA. No. 22408

TITLE
S500

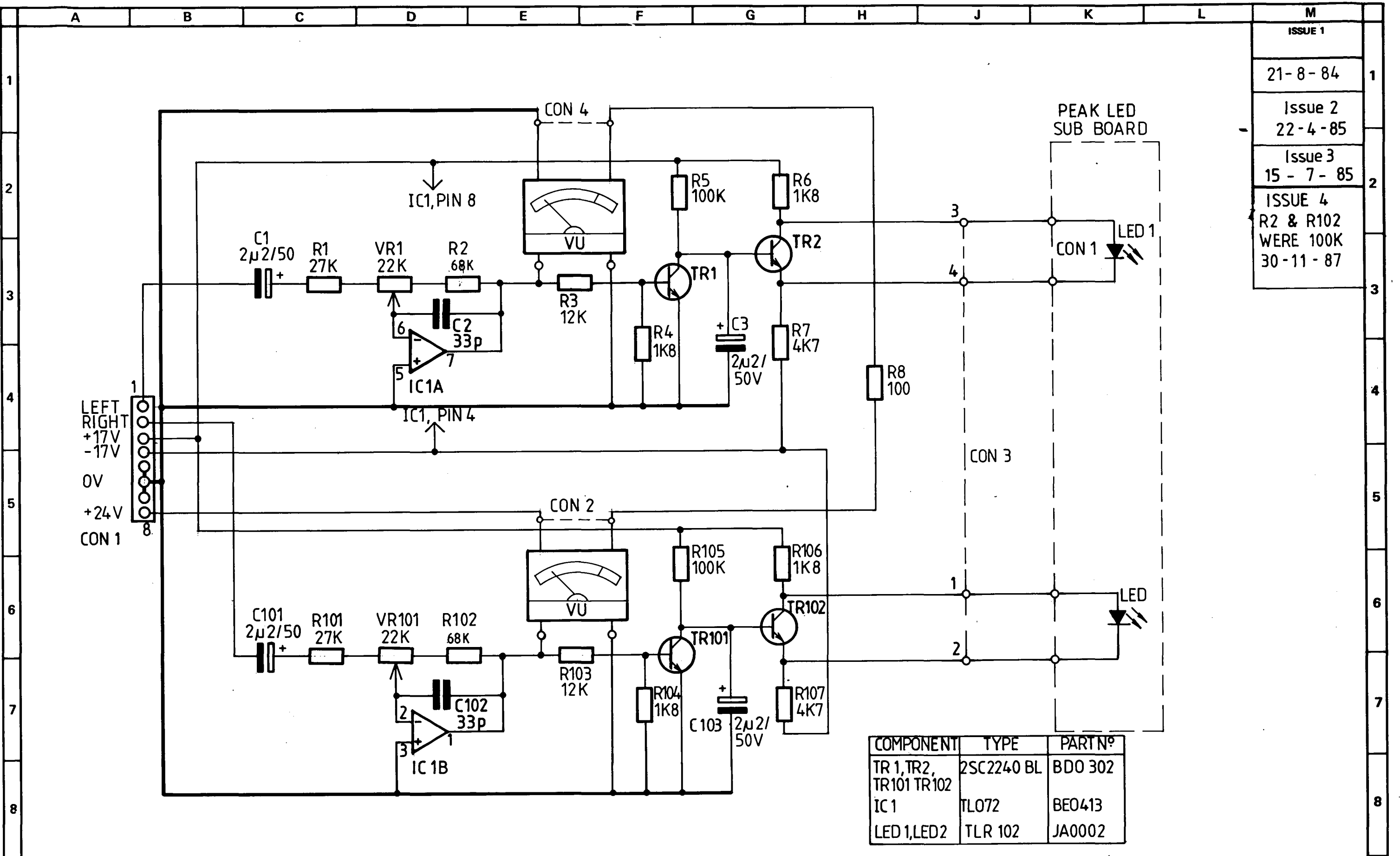
4 WAY VU METER DRIVE
 CIRCUIT DIAG. (SC1498)

DRG. No. ED2185



COMPONENT	TYPE	PART N ^o
TR1-TR 302	2SC 2240BL	BDO 302
IC1,IC2	TLO 72	BEO 413
LED1 LED 301	TLR 102	JA0002

ISSUE 1	3-9-84
ISSUE 2	22-4-85
ISSUE 3	16-7-85
ISSUE 4	R2,102,202, 302 WERE 100K 30-11-87



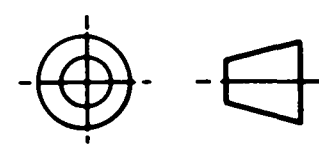
ISSUE 1
21-8-84

Issue 2
22-4-85

Issue 3
15-7-85

ISSUE 4
R2 & R102
WERE 100K
30-11-87

THIRD ANGLE PROJECTION



TOLERANCE
All imperial dimensions ± 0.010
All metric dimensions ± 0.25mm
All angles ± 0.50°
Unless otherwise stated

HOLE INDEX

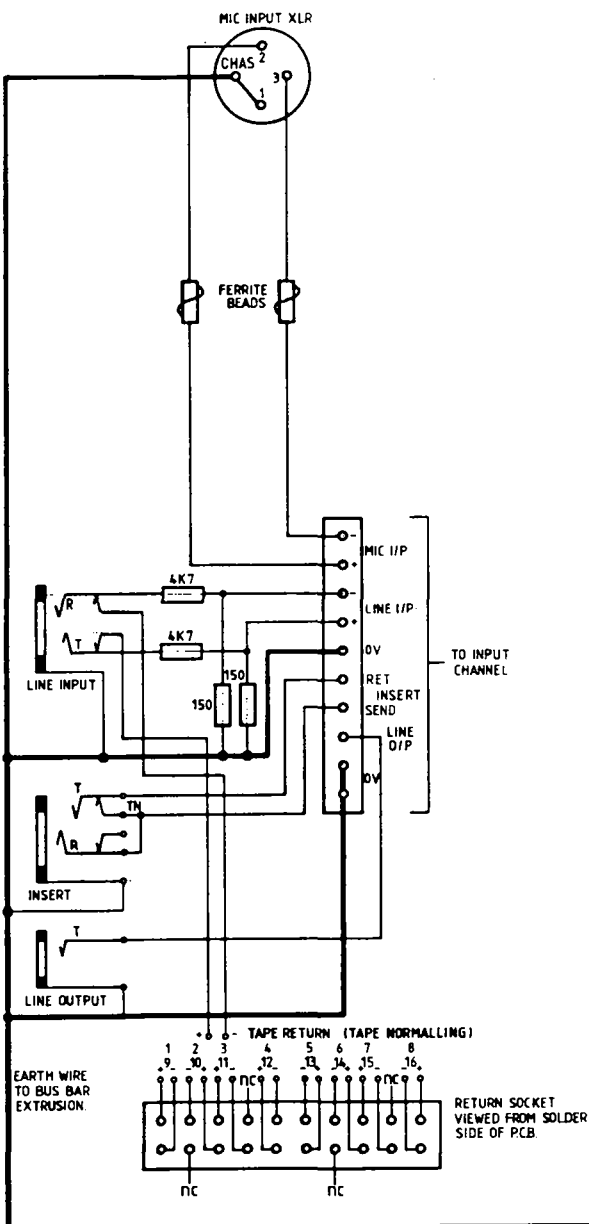
MATL
FINISH
SCALE

DRN
TRCD
CHKD

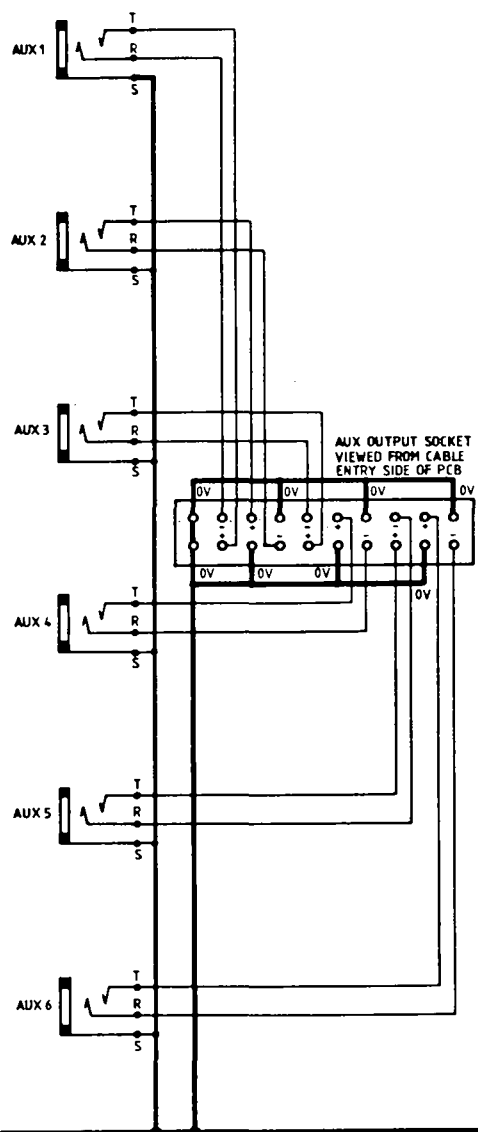
SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-251-3831/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE S500/S600
MASTER METER DRIVE
CIRCUIT DIAGRAM
DRG. No. ED2181

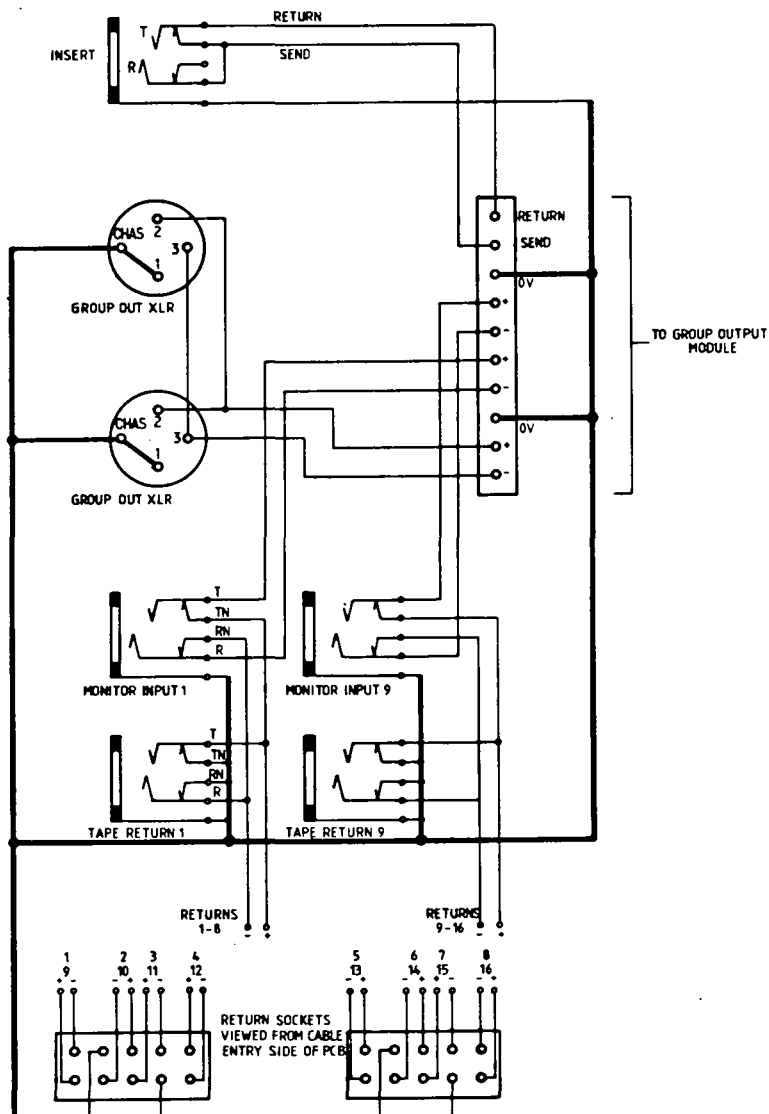
INPUT REAR CONN. (One of eight sections shown)



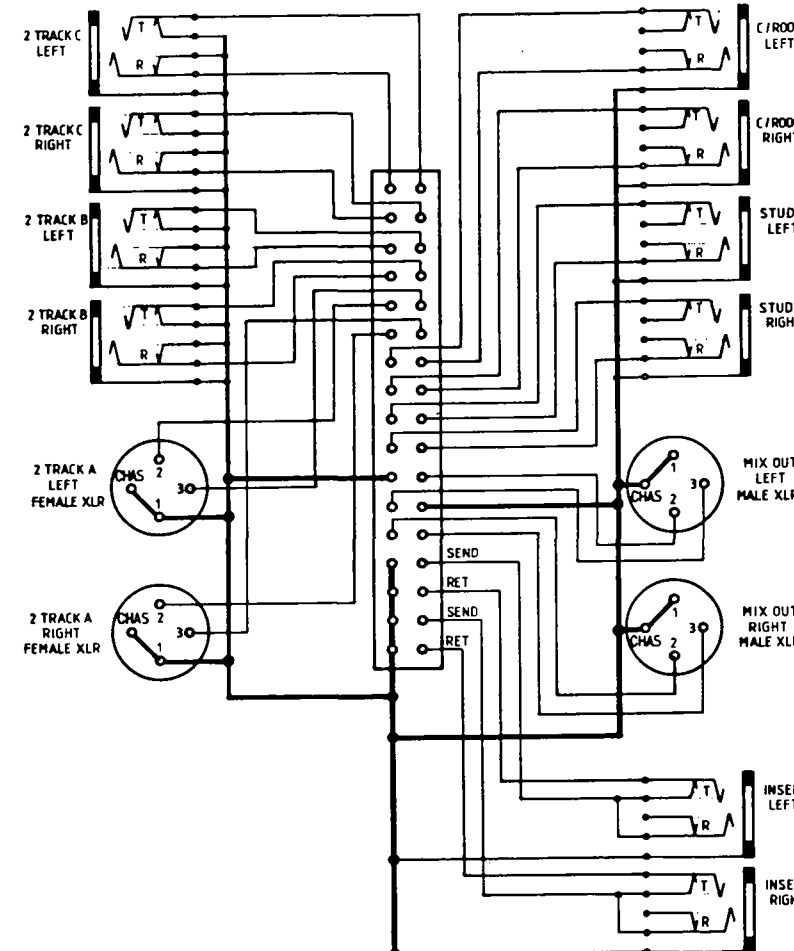
AUX OUTPUT (On group rear conn. card)



GROUP OUTPUT (1 of 8)



MASTER REAR CONN.
(Connector viewed from cable entry side of PCB)



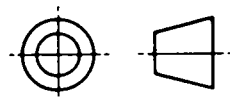
Soundcraft Electronics Limited own the copyright of this drawing which is not to be copied, reproduced or disclosed, in part or whole, to a third party without written permission.

NOTES.
XLR CONNECTORS - PIN 2 = HOT (+), PIN 3 = COLD (-)
JACK SOCKETS (INPUTS/OUTPUTS) TIP = HOT (+), RING = COLD (-)
JACK SOCKETS INSERTS: TIP = RETURN, RING = SEND

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.

THIRD ANGLE PROJECTION



MATL. —

FINISH. —

SCALE. —

DRG. Mark

TRCD.

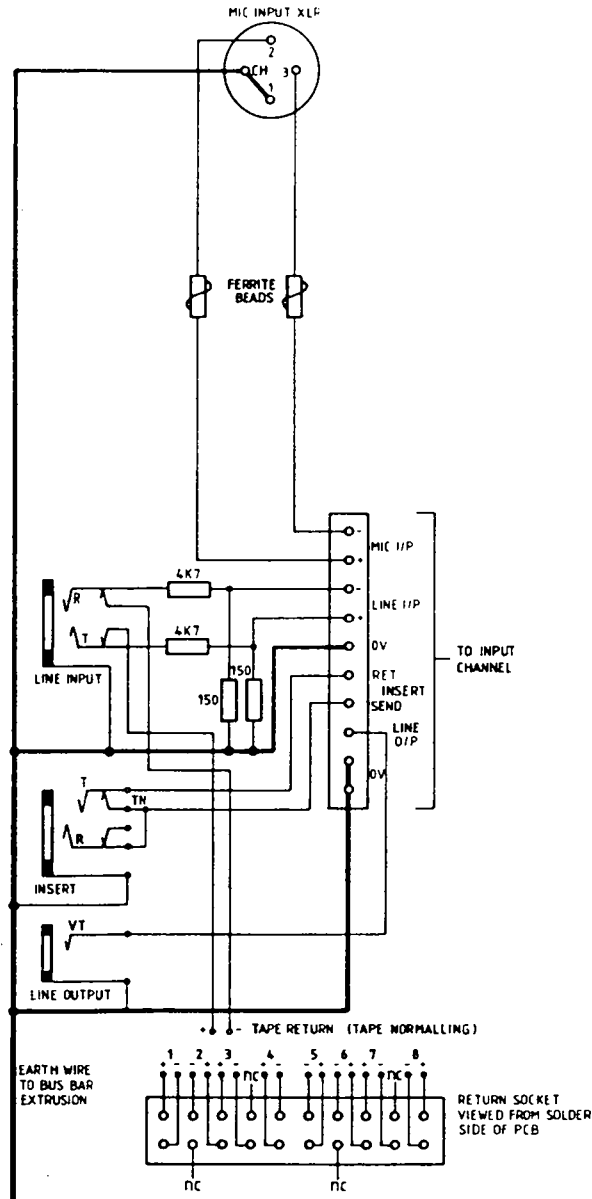
CHKD.

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON. EC4V. 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN. EC1
TELEX. UK No. 21198. USA No. 01-2203

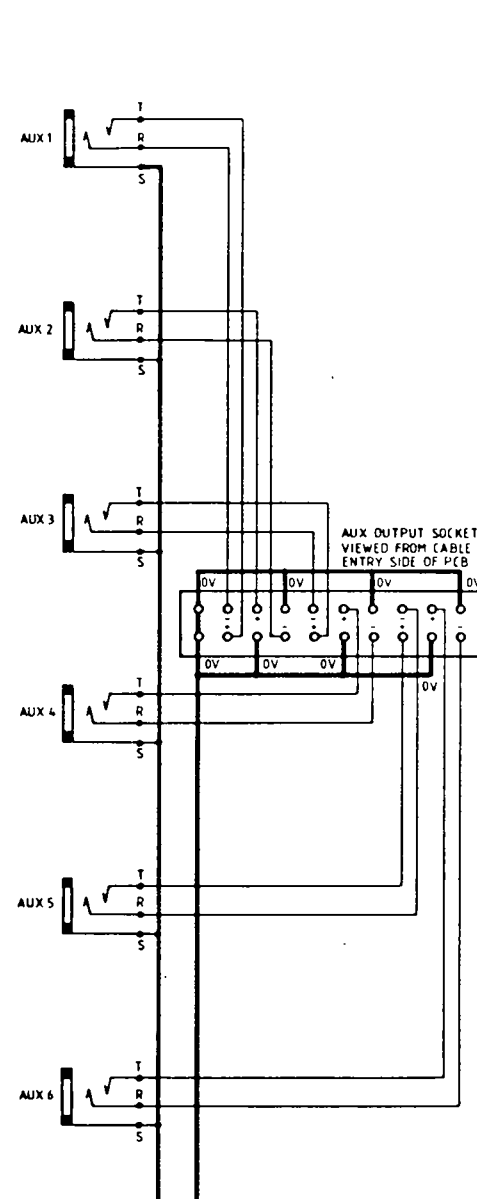
TITLE. S600
REAR CONNECTOR
DIAGRAMS

DRG No. ED2210

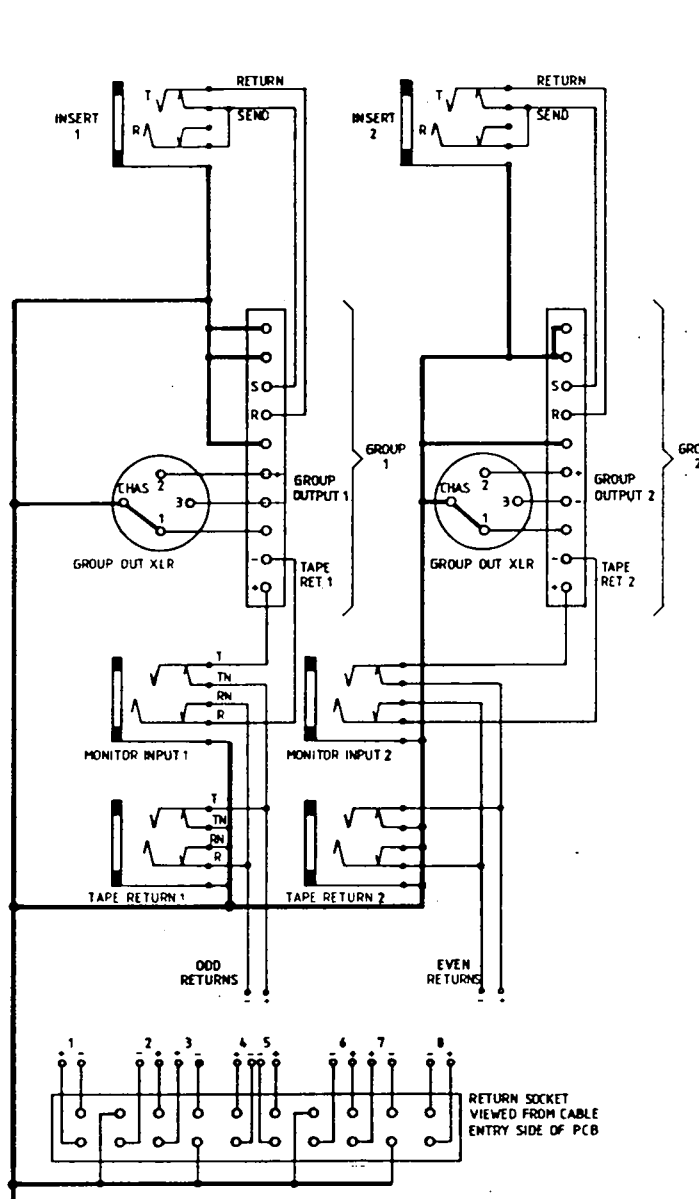
INPUT REAR CONN. (One of eight sections shown)



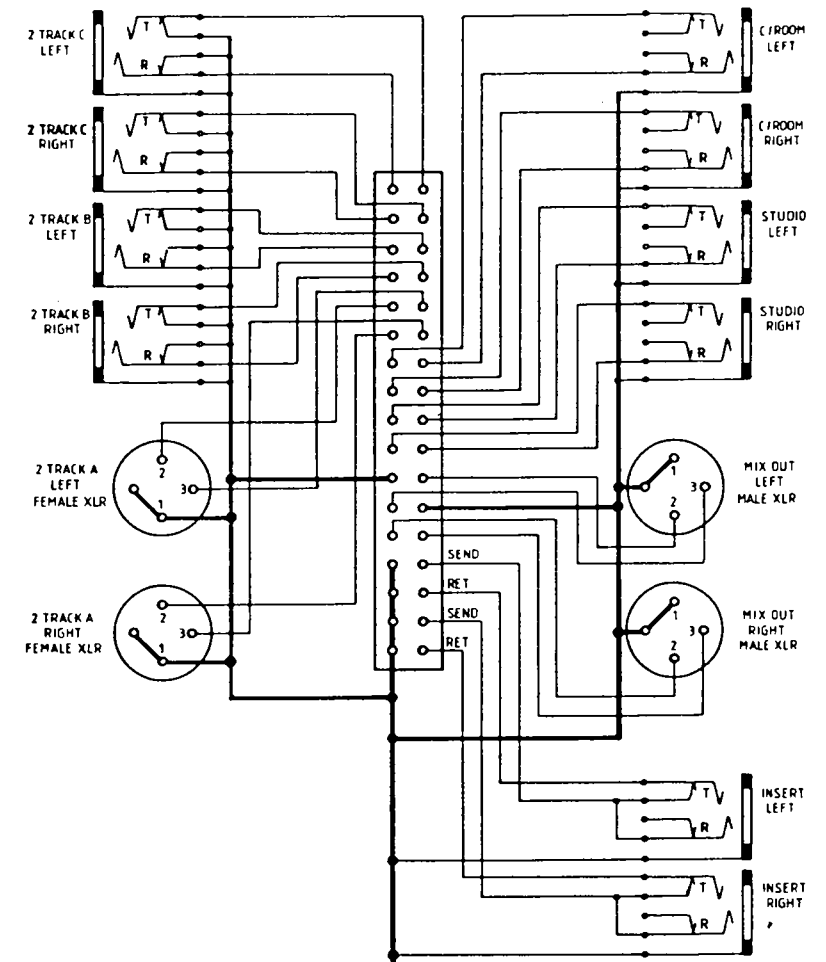
AUX OUTPUT (On group rear conn. card)



GROUP OUTPUT (1 of 8)



MASTER REAR CONN.
(Connector viewed from cable entry side of PCB)



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NOTES.
XLR CONNECTORS - PIN 2 = HOT (+), PIN 3 = COLD (-)
JACK SOCKETS (INPUTS/OUTPUTS) TIP = HOT (+), RING = COLD (-)
JACK SOCKETS INSERTS TIP = RETURN, RING = SEND

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated.

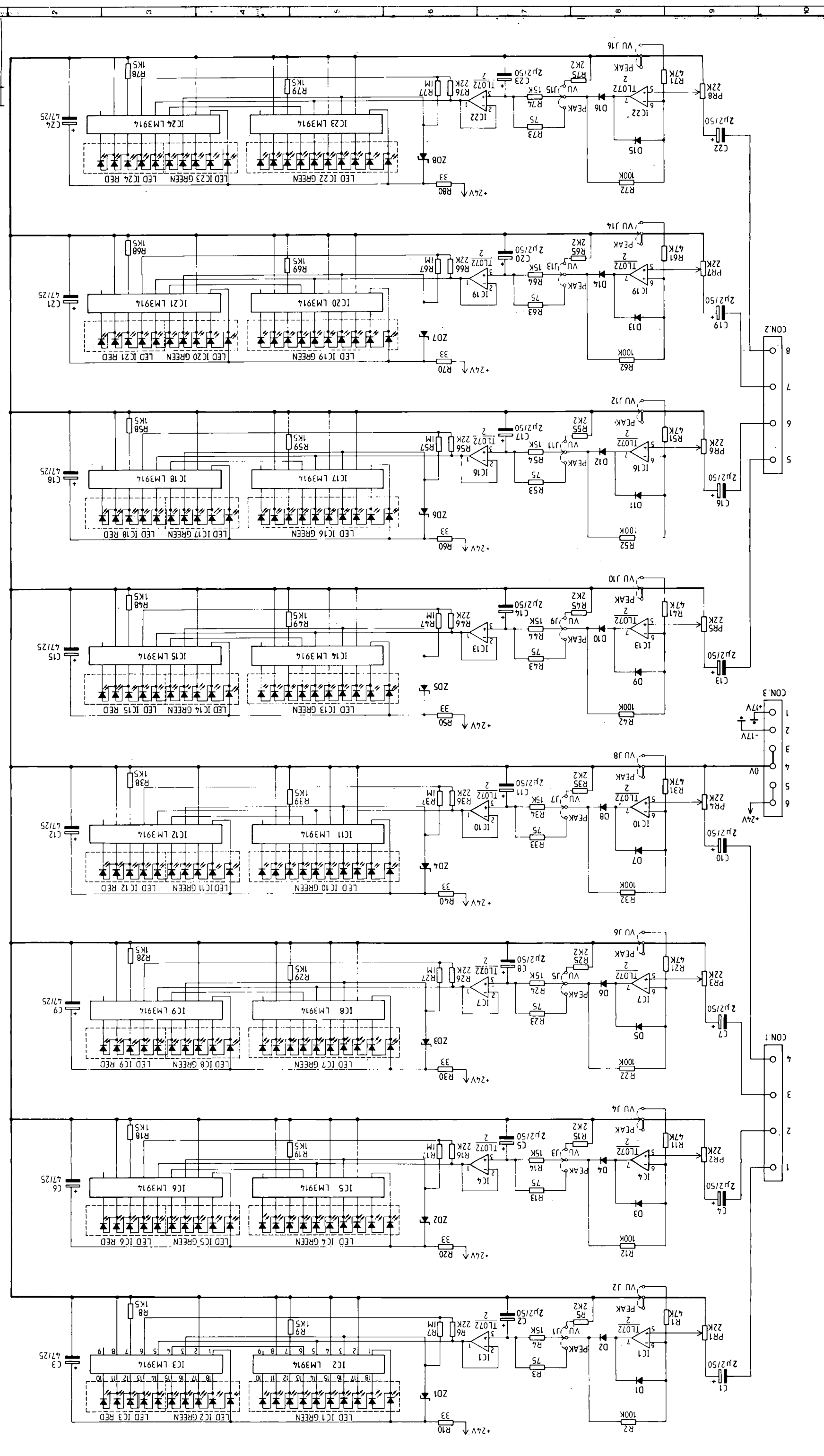
THIRD ANGLE PROJECTION

MATL. —
FINISH. —
SCALE. —

DRG. Mark
TRCD.
CHKD. [Signature]

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC4V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN. EC1
TELEX. UK No. 21198, USA No. 01-2203

TITLE. S500 REAR CONNECTOR DIAGRAMS
DRG No. ED 2230



COMPONENT	DEVICE	PART No.
DUAL OP-AMPS	TL072	BE0403
LED DRIVERS	LM3914	BE0427
DIODES	1N4148	BA0001
ZENERS	6.2V/400mW	BB0104
LED IC (10WAY)	GREEN	JA0017
LED IC (5WAY)	GREEN	JA0019
LED IC (5WAY)	RED	JA0018

NOTES:
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TOLERANCE:
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.5^\circ$
Unless otherwise stated.

HOLE INDEX:

THIRD ANGLE PROJECTION

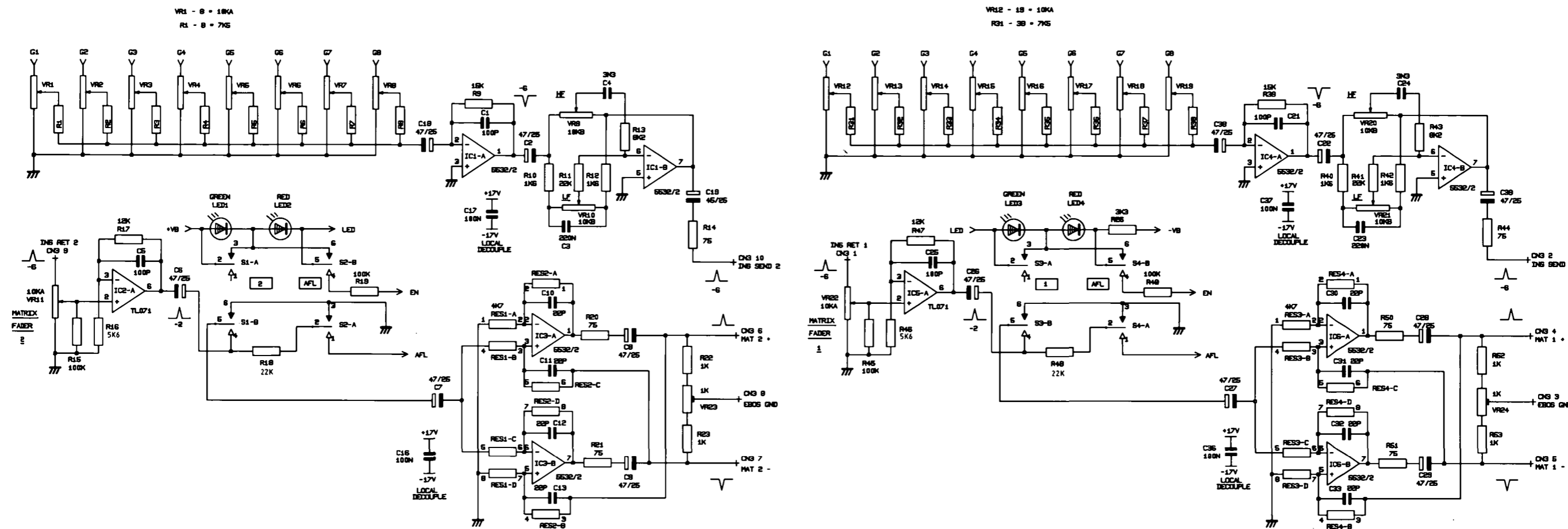
MATL. FINISH. SCALE.

DRG. FRCD. CHKD.

TITLE: S600 8 WAY LED METER (CIRCUIT DIAGRAM)

DRG No. ED 2202

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC 4V, OXB.
TELEPHONE: 01-251-3631/2/3
TELEGRAMS: SOUNDCRAFT LON, EC1
TELEX: UK No. 21198, USA No. 01-2203

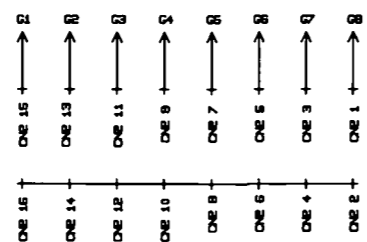
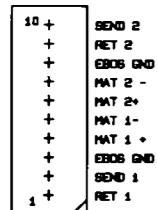


VR1 - 8 = 10kA
R1 - 8 = 7k5

VR12 - 18 = 10kA
R31 - 38 = 7k5

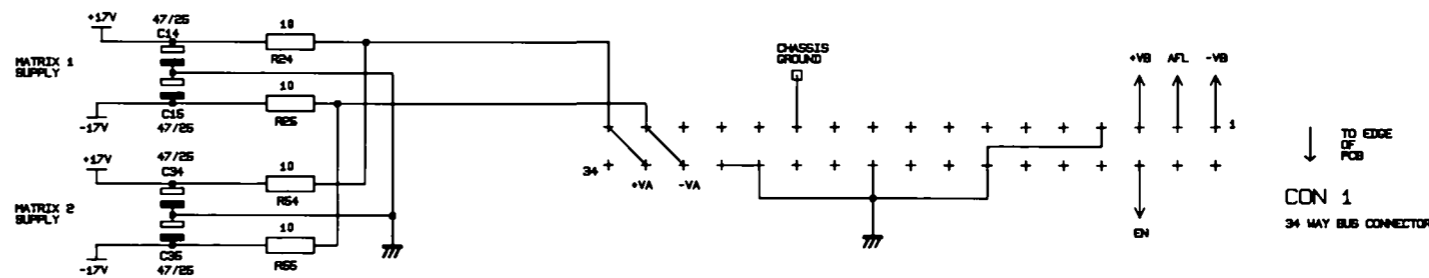
CON 3

10 WAY TO REAR CON



CON 2

16 WAY IDC FROM INTERFACE PCB



CON 1
34 WAY BUS CONNECTOR

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NOTES

HOLE INDEX



TOLERANCES

HOLE SIZES AFTER PAINTING

0-3mm	+0.10
	-0.00
OVER 3-6mm	+0.12
	-0.00
OVER 6-10mm	+0.15
	-0.00
OVER 10-18mm	+0.18
	-0.00
OVER 18-25mm	+0.21
	-0.00
OVER 25mm	+0.25
	-0.00

GENERAL TOLERANCES

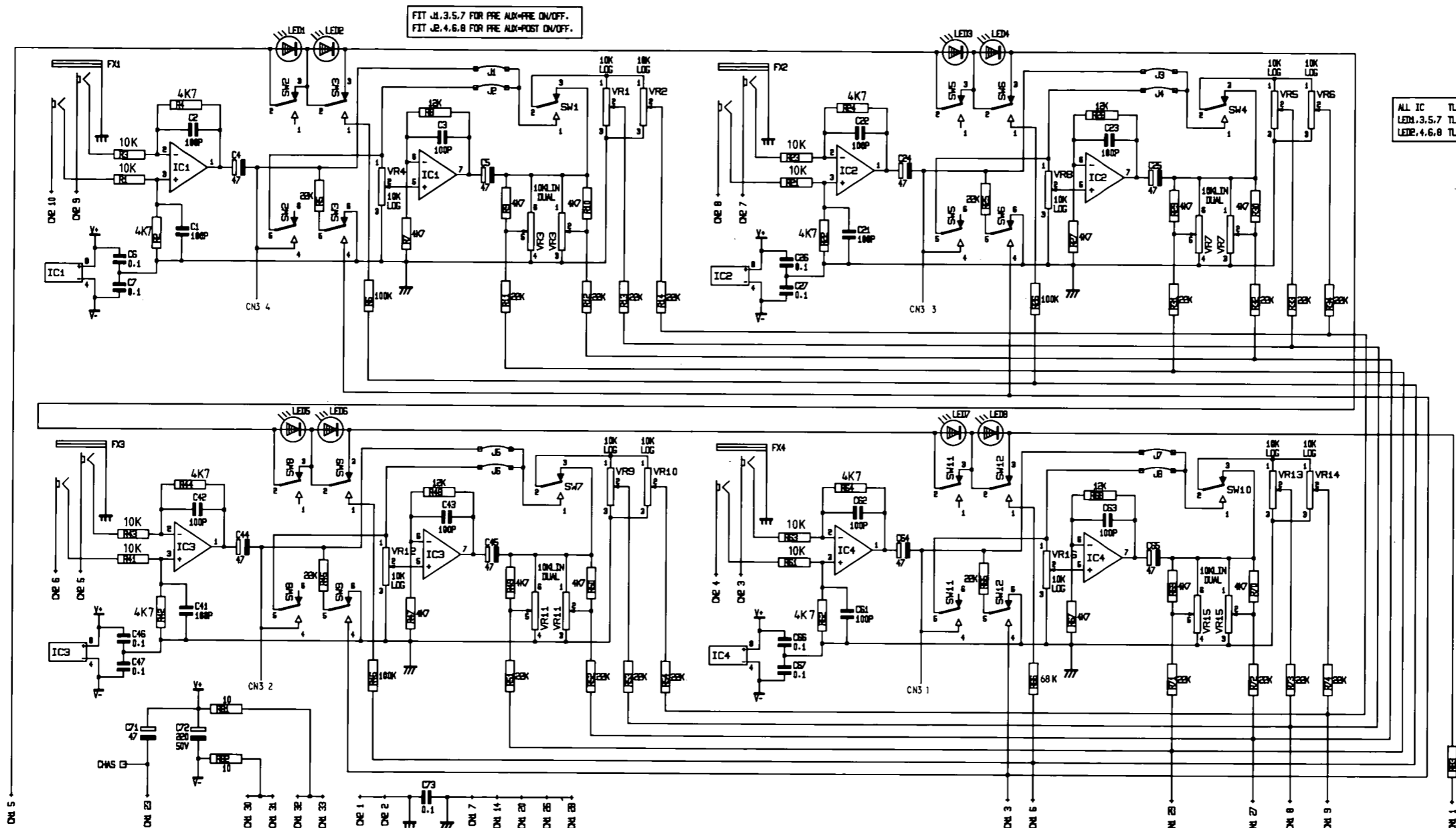
Delete where not applicable.
± 0.50 mm (0.020")
± 0.25 mm (0.010")
± 0.12 mm (0.005")
All angles ± 0.50°
Hole centres ± 0.004"

Unless otherwise stated.

MATL	DRN
FINISH	TRCD
SCALE	CHKD
THIRD ANGLE PROJECTION THIS DRAWING TO COMPLY TO BS308.	

SOUNDCRAFT ELECTRONICS LTD
UNIT 2,
BOREHAMWOOD INDUSTRIAL PARK,
ROWLEY LANE,
BOREHAMWOOD,
HERTFORDSHIRE WD6 5PZ.
TELEPHONE: 01-207-5050
FACSIMILE No. 2070194

TITLE:
S500 MATRIX MODULE



NOTES

ALL RESISTORS IN OHMS
CAPACITORS IN MICRO FARADS
UNLESS OTHERWISE STATED.

HOLE INDEX

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

TOLERANCES

HOLE SIZES AFTER PAINTING

0-3mm	+0.10
	-0.00
OVER 3-6mm	+0.12
	-0.00
OVER 6-10mm	+0.15
	-0.00
OVER 10-18mm	+0.18
	-0.00
OVER 18-25mm	+0.21
	-0.00
OVER 25mm	+0.25
	-0.00

GENERAL TOLERANCES
Delete where not applicable.
± 0.50mm (0.020")
± 0.25mm (0.010")
± 0.12mm (0.005")
All angles ± 0.50°
Hole centres ± 0.004"
Unless otherwise stated.

MATL	DRN
FINISH	GHB
SCALE	TRCD
	CHKD

THIRD ANGLE PROJECTION
THIS DRAWING TO COMPLY
TO BS308.

SOUNDCRAFT ELECTRONICS LTD
UNIT 2,
BOREHAMWOOD INDUSTRIAL PARK,
ROWLEY LANE,
BOREHAMWOOD,
HERTFORDSHIRE WD8 5PZ.
TELEPHONE: 01-207-5050
FACSIMILE No.2070194

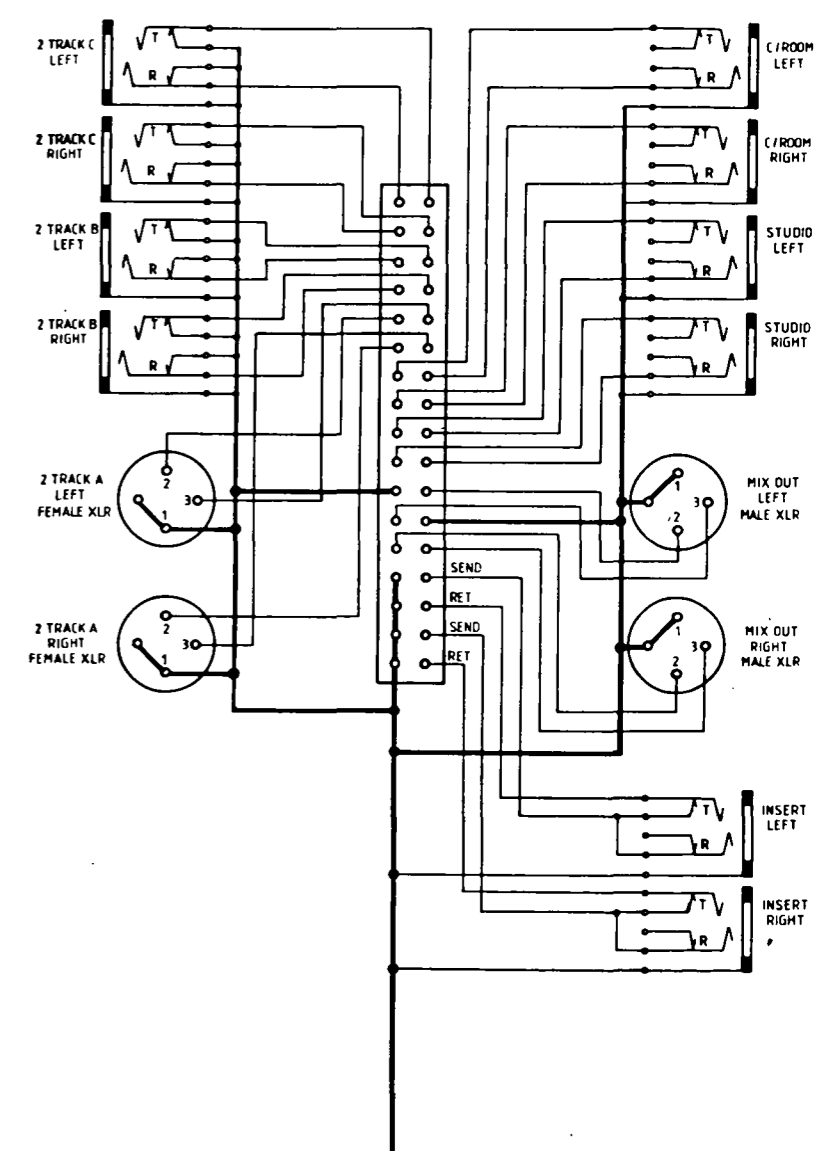
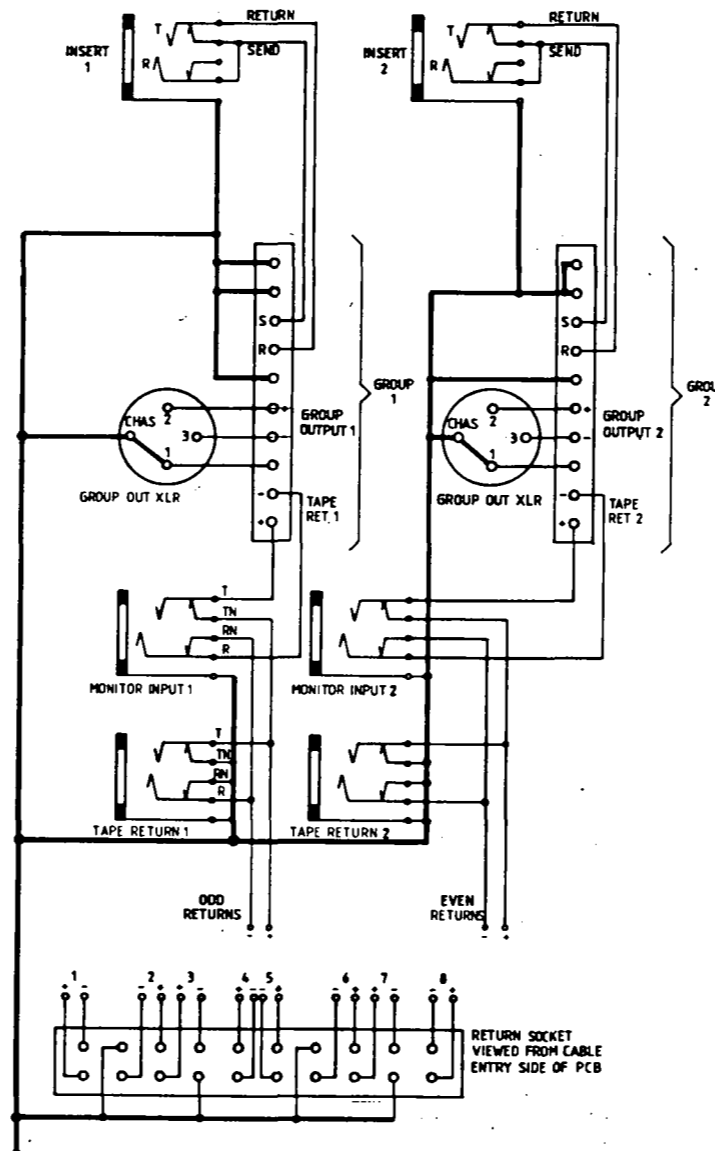
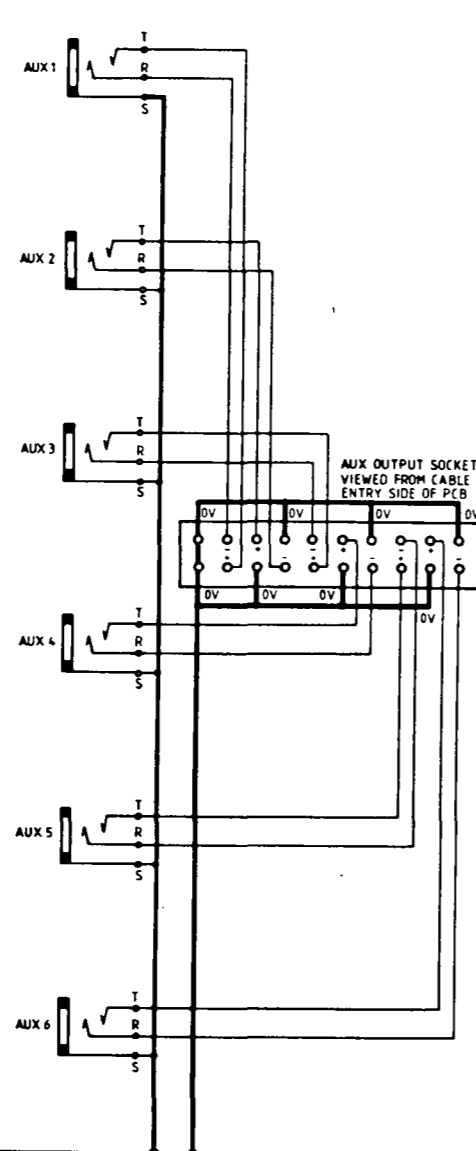
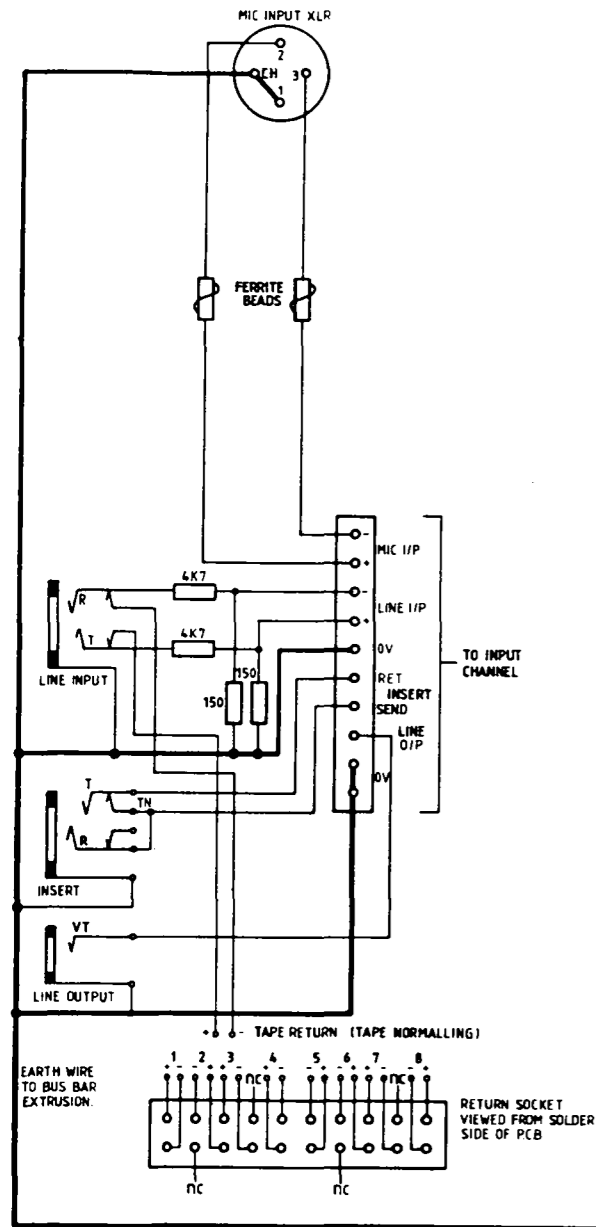
TITLE
S600 FX RETURN

INPUT REAR CONN. (One of eight sections shown)

AUX OUTPUT (On group rear conn. card)

GROUP OUTPUT (1 of 8)

MASTER REAR CONN.
(Connector viewed from cable entry side of PCB)



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NOTES.
XLR CONNECTORS - PIN 2 = HOT (+), PIN 3 = COLD (-)
JACK SOCKETS (INPUTS/OUTPUTS) TIP = HOT (+), RING = COLD (-)
JACK SOCKETS INSERTS, TIP = RETURN, RING = SEND

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.

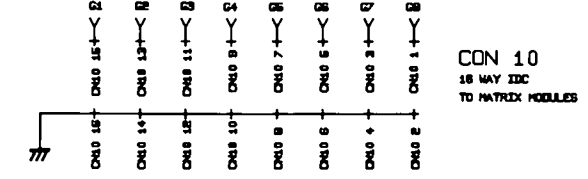
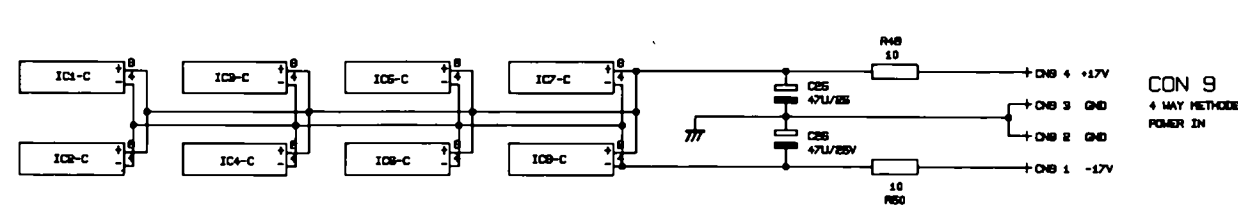
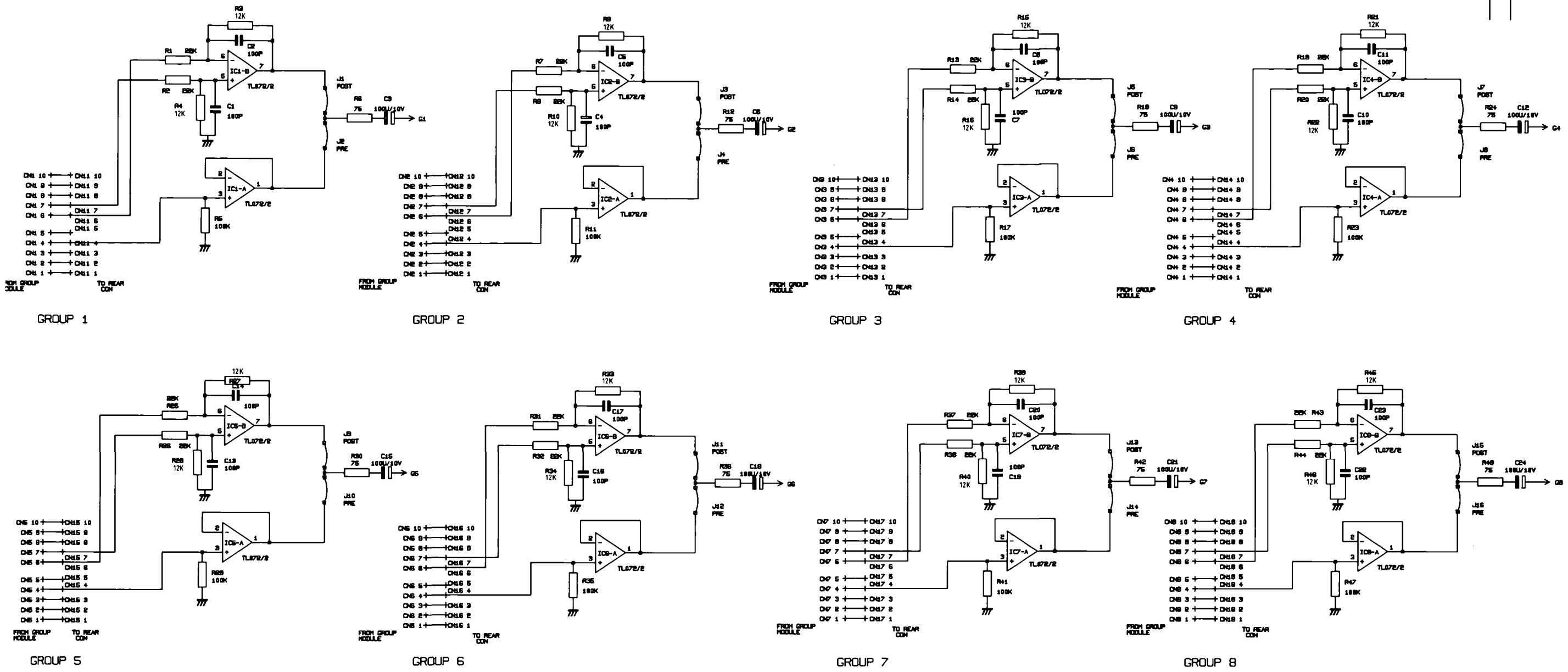
THIRD ANGLE PROJECTION

MATL. —
FINISH. —
SCALE. —

DRG. Mark
TRCD.
CHKD. *al*
DATE. 01.2

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC4V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN. EC1
TELEX UK 21 01 2

TITLE. S500 REAR CONNECTOR DIAGRAMS
DRG No. ED 2230



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NOTES

HOLE INDEX	
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

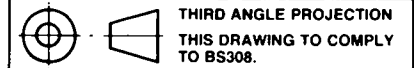
TOLERANCES	
HOLE SIZES AFTER PAINTING	
0-3mm	+0.10
OVER 3-6mm	+0.12
OVER 6-10mm	+0.15
OVER 10-18mm	+0.18
OVER 18-25mm	+0.21
OVER 25mm	+0.25

MATL	DRN
FINISH	TRCD
SCALE	CHKD

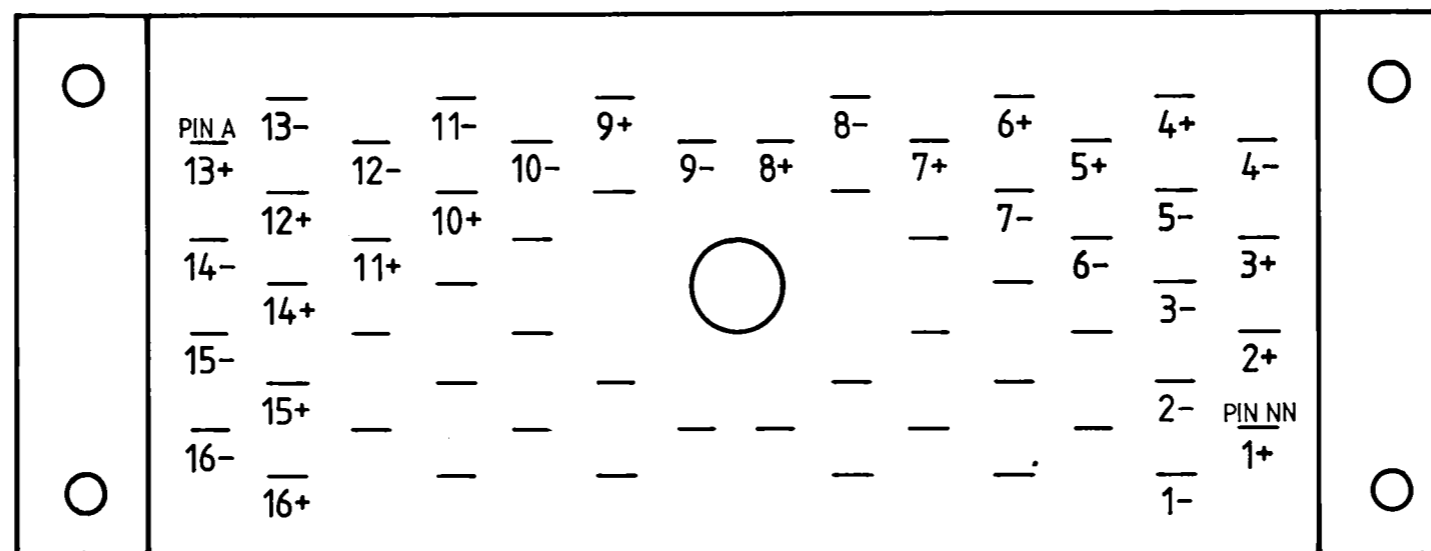
SOUNDCRAFT ELECTRONICS LTD
 UNIT 2,
 BOREHAMWOOD INDUSTRIAL PARK,
 ROWLEY LANE,
 BOREHAMWOOD,
 HERTFORDSHIRE WD6 5PZ.
 TELEPHONE: 01-207-5050
 FACSIMILE No. 2070194

TITLE:
 S500 MATRIX
 INTERFACE BOARD

DRG No. ED 2659



Unless otherwise stated.



VIEWED FROM SOLDER SIDE OF FREE CONNECTOR

TOLERANCES
HOLE SIZES AFTER PAINTING

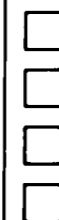
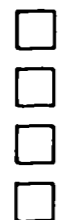
0-3mm	- + 0.10
	- 0.00
OVER 3-6mm	- + 0.12
	- 0.00
OVER 6-10mm	- + 0.15
	- 0.00
OVER 10-18mm	- + 0.18
	- 0.00
OVER 18-25mm	- + 0.21
	- 0.00
OVER 25mm	- + 0.25
	- 0.00

GENERAL TOLERANCE
Delete where not applicable.

± 0.50mm (0.020")
± 0.25mm (0.010")
± 0.12mm (0.006")

HOLE CENTRES ± 0.004"
ALL ANGLES ± 0.50°
Unless otherwise stated.

HOLE INDEX



MATL

FINISH

SCALE

DRN
BTB

TRCD

CHKD

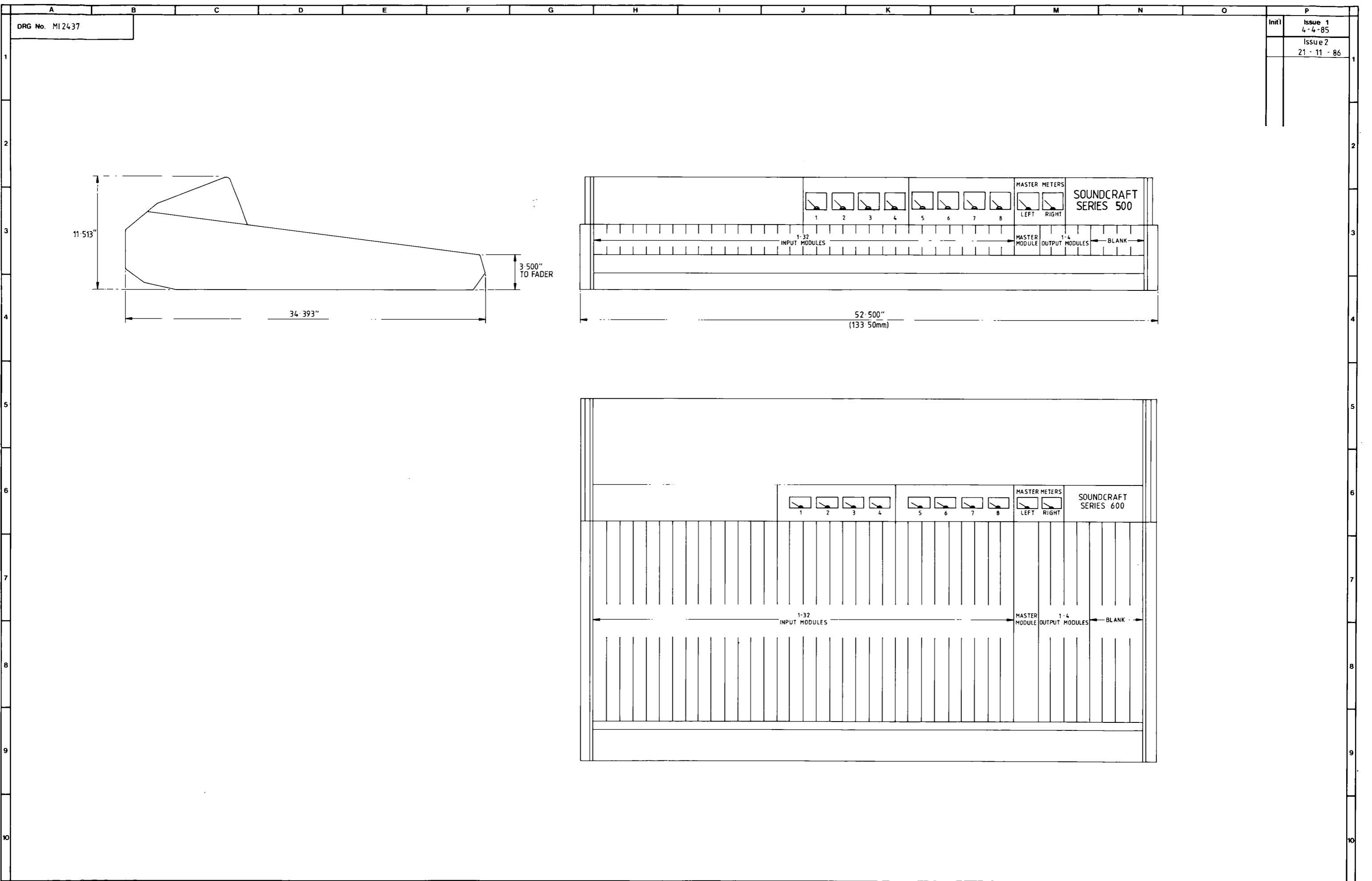


THIRD ANGLE PROJECTION
THIS DRAWING TO COMPLY
TO BS308.

SOUNDCRAFT ELECTRONICS LTD
UNIT 2,
BOREHAMWOOD INDUSTRIAL PARK,
ROWLEY LANE,
BOREHAMWOOD,
HERTFORDSHIRE WD6 5PZ.
TELEPHONE: 01-207-5050
FACSIMILE No. 2070194

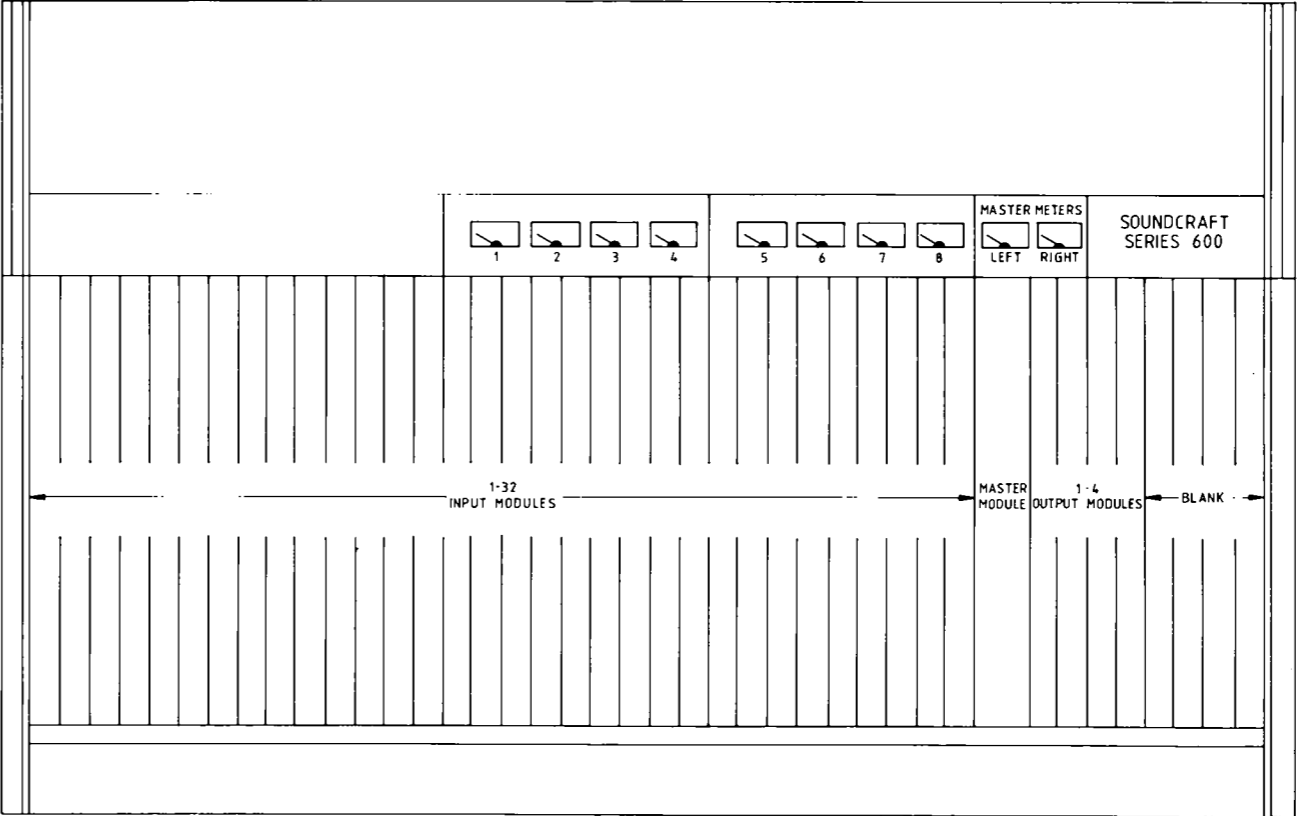
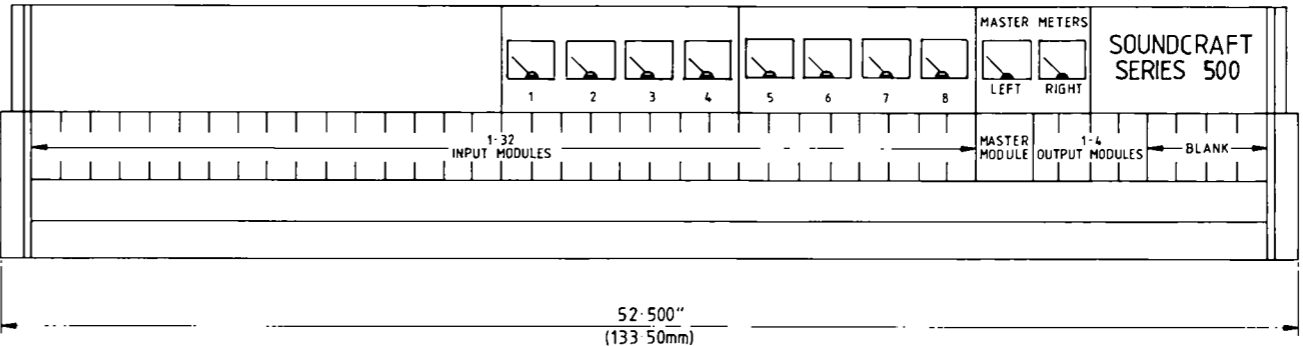
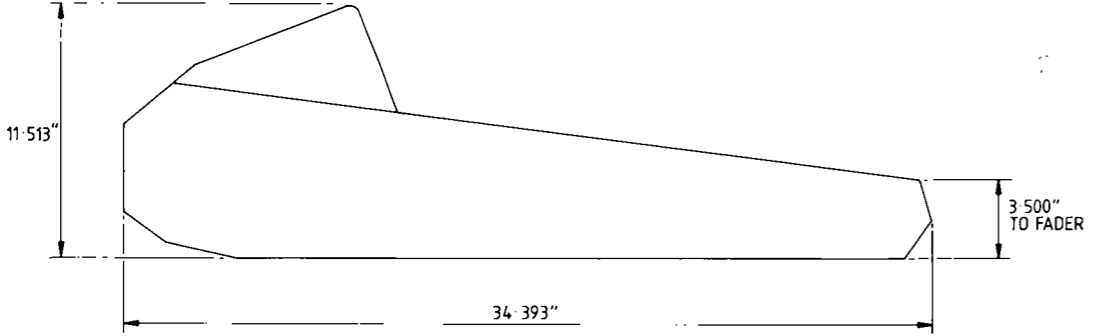
TITLE
S600 PATCHBAY
VARELCO BALANCED
TIE LINES

DRG. No. MI 2579



DRG No. MI 2437

Issue 1
4-4-85
Issue 2
21-11-86

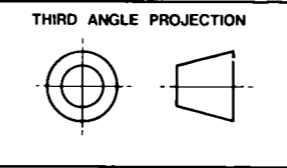


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third party without written permission.

NOTES.
16 I/P LENGTH = 825.50mm
24 I/P LENGTH = 1079.50mm

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.



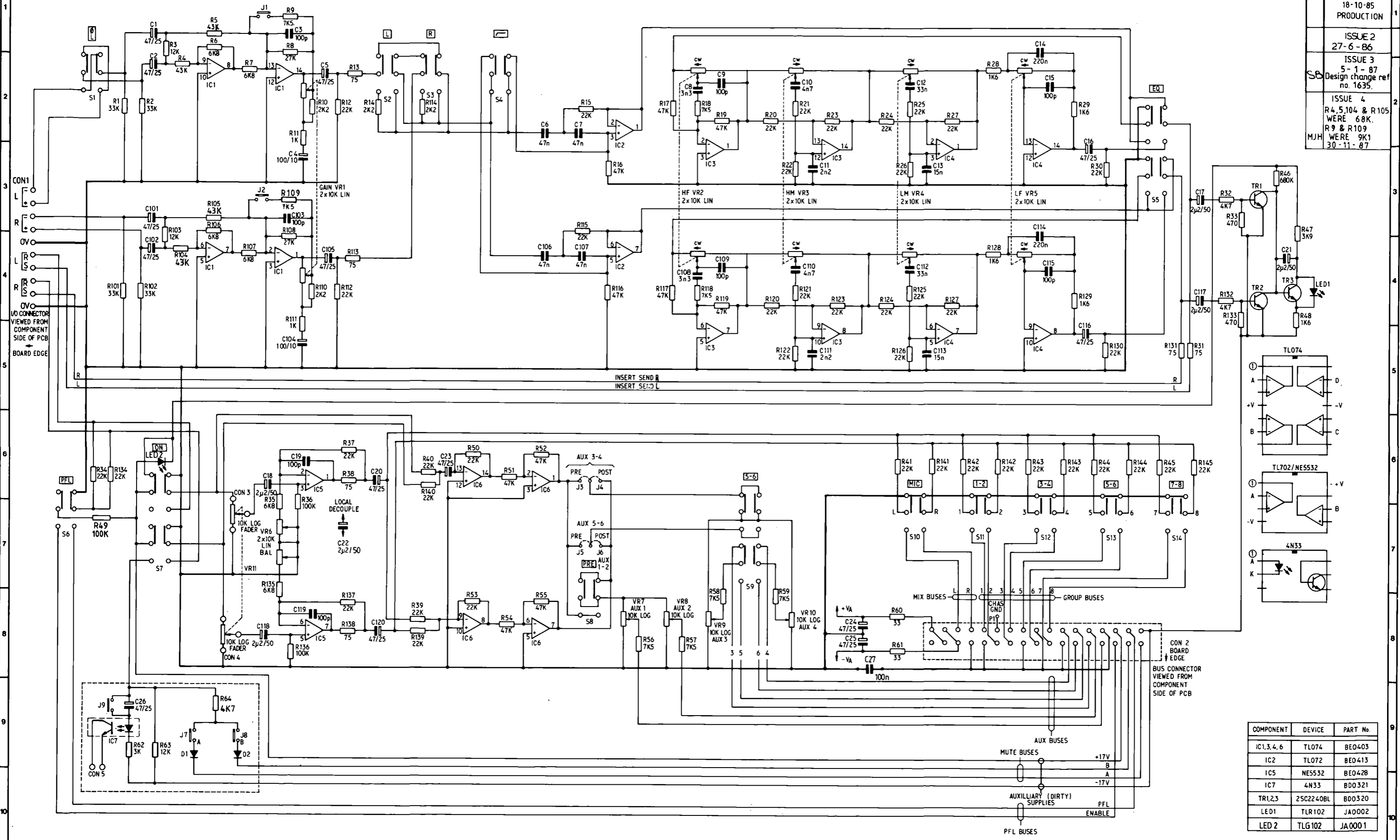
MATL.
FINISH.
SCALE.

DRG.
TRCD.
CHKD.

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON. EC1V. OBX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN. EC1
TELEX. UK No. 2119B. USA No. 01-2203

TITLE.
S500
CONSOLE SCHEMATIC
LAYOUT
DRG No. MI 2437

Issue P1	26-7-85
ISSUE 1	18-10-85
PRODUCTION	
ISSUE 2	27-6-86
ISSUE 3	5-1-87
Design change ref	no. 1635.
ISSUE 4	
R 4, 5, 104 & R 105	WERE 68K.
R 9 & R 109	WERE 9K1
MJH	30-11-87



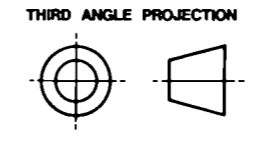
COMPONENT	DEVICE	PART No.
IC1,3,4,6	TL074	BEO403
IC2	TL072	BEO413
IC5	NE5532	BEO428
IC7	4N33	B00321
TR1,2,3	2SC2240BL	B00320
LED1	TLR102	JA0002
LED 2	TLG102	JA0001

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NOTES.

HOLE INDEX.

TOLERANCE.
 All imperial dimensions ± 0.010
 All metric dimensions $\pm 0.25\text{mm}$
 All angles $\pm 0.50^\circ$
 Unless otherwise stated.



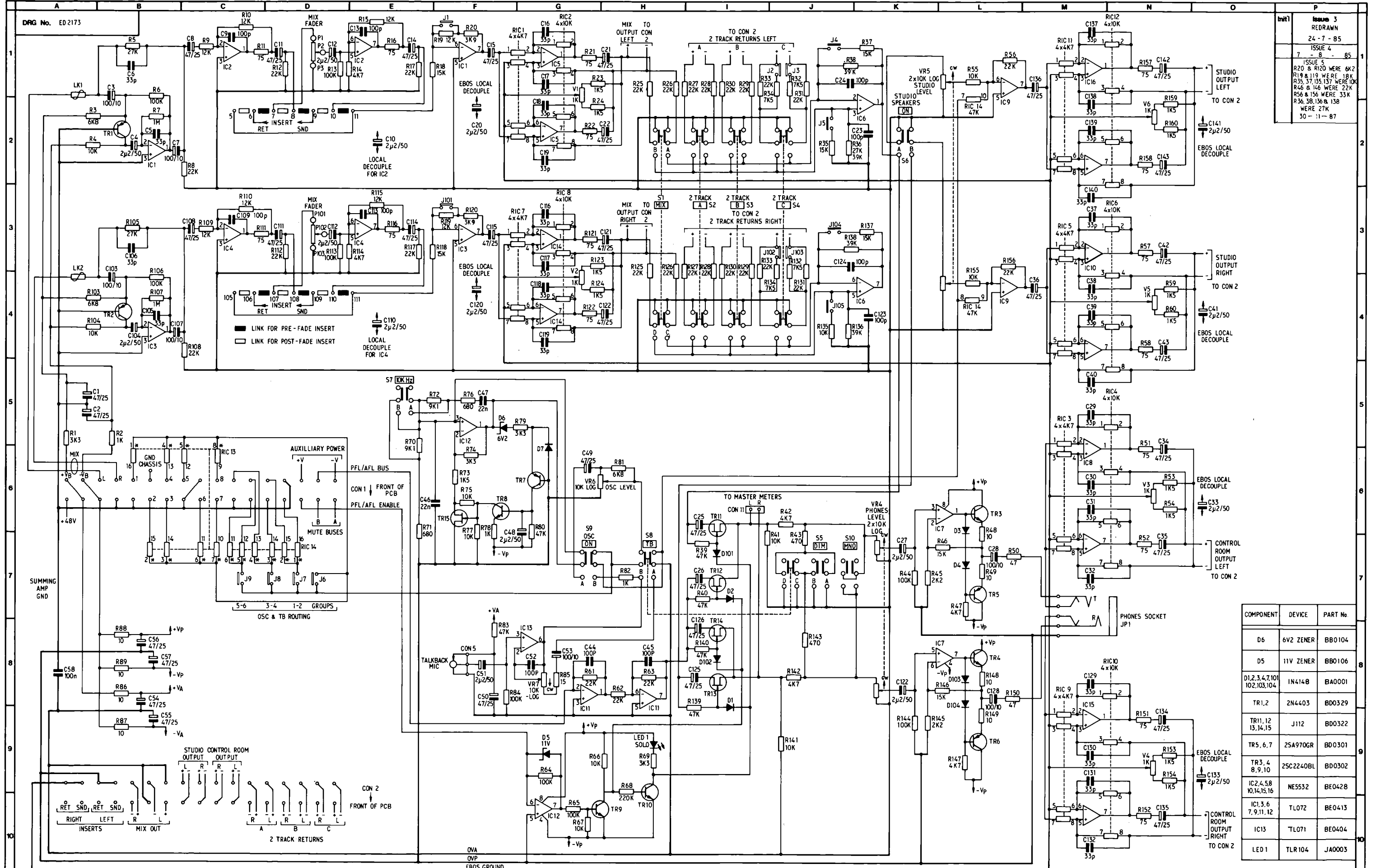
MATL.
 FINISH.
 SCALE.

DRG. CHRIS
 TRCD.
 CHKD.

SOUNDRAFT ELECTRONICS LTD.
 5-8 GREAT SUTTON STREET
 LONDON. EC4V 0BX.
 TELEPHONE. 01-251-3831/2/3
 TELEGRAMS. SOUNDRAFT LDN. EC1
 TELEX. UK No. 21198. USA No. 01-2203

TITLE.
 S600
 STEREO INPUT MODULE
 CIRCUIT DIAGRAM

DRG No. ED2323



DRG No. ED 2173

ISSUE 3 REDRAWN 24-7-85

ISSUE 4 7-8-85

ISSUE 5 R20 & R202 WERE 6K2 R19 & R119 WERE 18K R35, 37, 135, 137 WERE 10K R46 & R144 WERE 22K R56 & R156 WERE 33K R36, 38, 136 & 138 WERE 27K 30-11-87

COMPONENT	DEVICE	PART No.
D6	6V2 ZENER	BB0104
D5	11V ZENER	BB0106
D12, 3, 4, 7, 101, 102, 103, 104	1N4148	BA0001
TR1, 2	2N4403	BD0329
TR11, 12, 13, 14, 15	J112	BD0322
TR5, 6, 7	2SA970GR	BD0301
TR3, 4, 8, 9, 10	2SC2240BL	BD0302
IC2, 4, 5, 8, 10, 14, 15, 16	NE5532	BE0428
IC1, 3, 6, 7, 9, 11, 12	TL072	BE0413
IC13	TL071	BE0404
LED 1	TLR104	JA0003

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NOTES.
 1. ALL CONNECTORS VIEWED FROM COMPONENT SIDE OF PCB.
 2. ALL GAIN SELECTOR LINKS SHOWN IN +48V POSITION.
 3. LINK INSERTED NO LINK

HOLE INDEX.

TOLERANCE.
 All imperial dimensions ±0.010
 All metric dimensions ±0.25mm
 All angles ±0.50°
 Unless otherwise stated.

THIRD ANGLE PROJECTION

MATL.

FINISH.

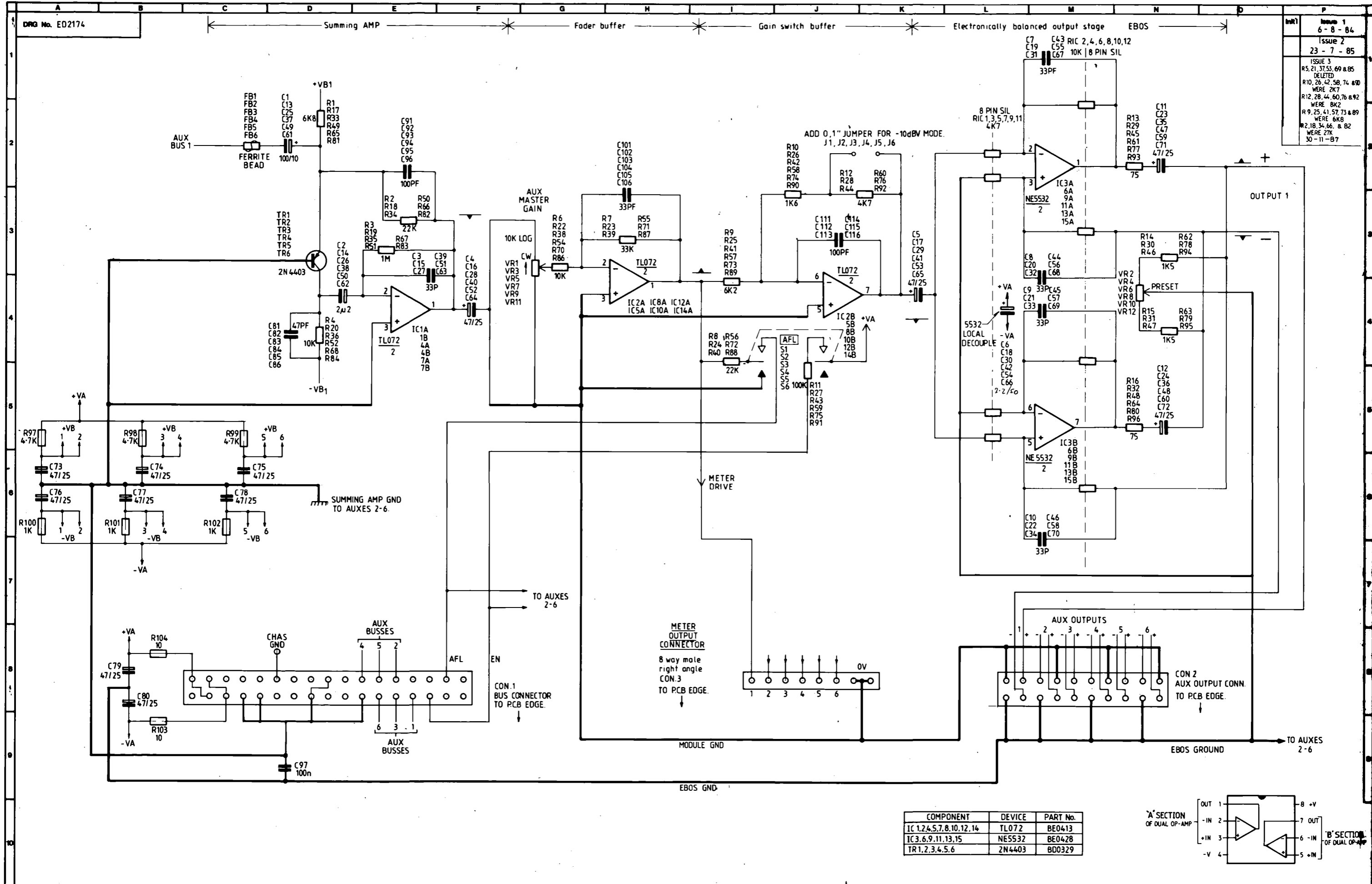
SCALE.

DRG. G.J. CONNOR
TRCD.
CHKD. G.J.C 27-7-85

SOUNDRAFT ELECTRONICS LTD.
 5-8 GREAT SUTTON STREET
 LONDON, EC1V 0BX.
 TELEPHONE. 01-251-3631/2/3
 TELEGRAMS. SOUNDRAFT LDN. EC1
 TELEX. UK No. 21198. USA No. 01-2203

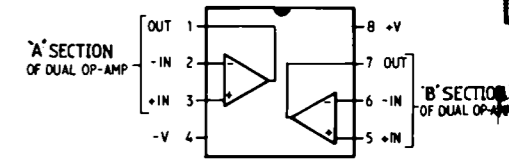
TITLE.
 5500/600
 R.H. MASTER PCB
 CIRCUIT DIAGRAM

DRG No. ED2173 (SC 1494 ISS5)



ISSUE 1	6-8-84
ISSUE 2	23-7-85
ISSUE 3	R5, 21, 37, 53, 69 & 85 DELETED
	R10, 26, 42, 58, 74 & 80 WERE 2K7
	R12, 28, 44, 60, 76 & 82 WERE 8K2
	R9, 25, 41, 57, 73 & 89 WERE 6K8
	R2, 18, 34, 66, & 82 WERE 27K
	30-11-87

COMPONENT	DEVICE	PART No.
IC 1,2,4,5,7,8,10,12,14	TL072	BE0413
IC 3,6,9,11,13,15	NE5532	BE0428
TR 1,2,3,4,5,6	2N4403	BD0329

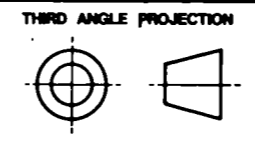


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NOTES.
Only 1 section shown the other 5 sections are identical, component numbers shown for all 6, with Aux 1 at the top.
All connectors viewed from component side of P.C.B.

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.



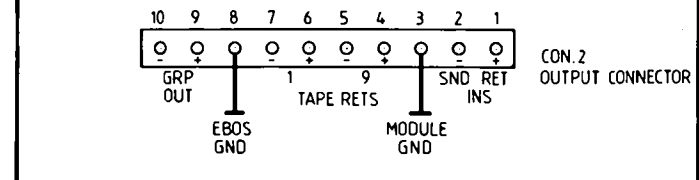
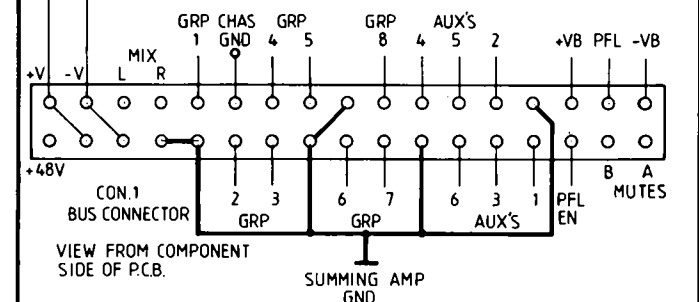
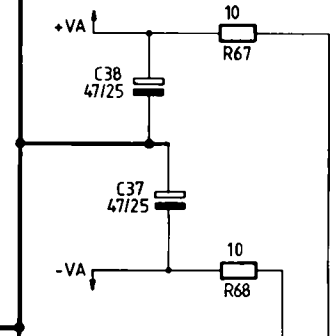
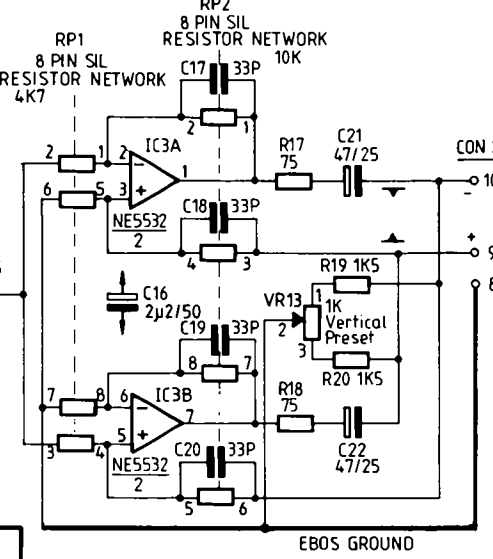
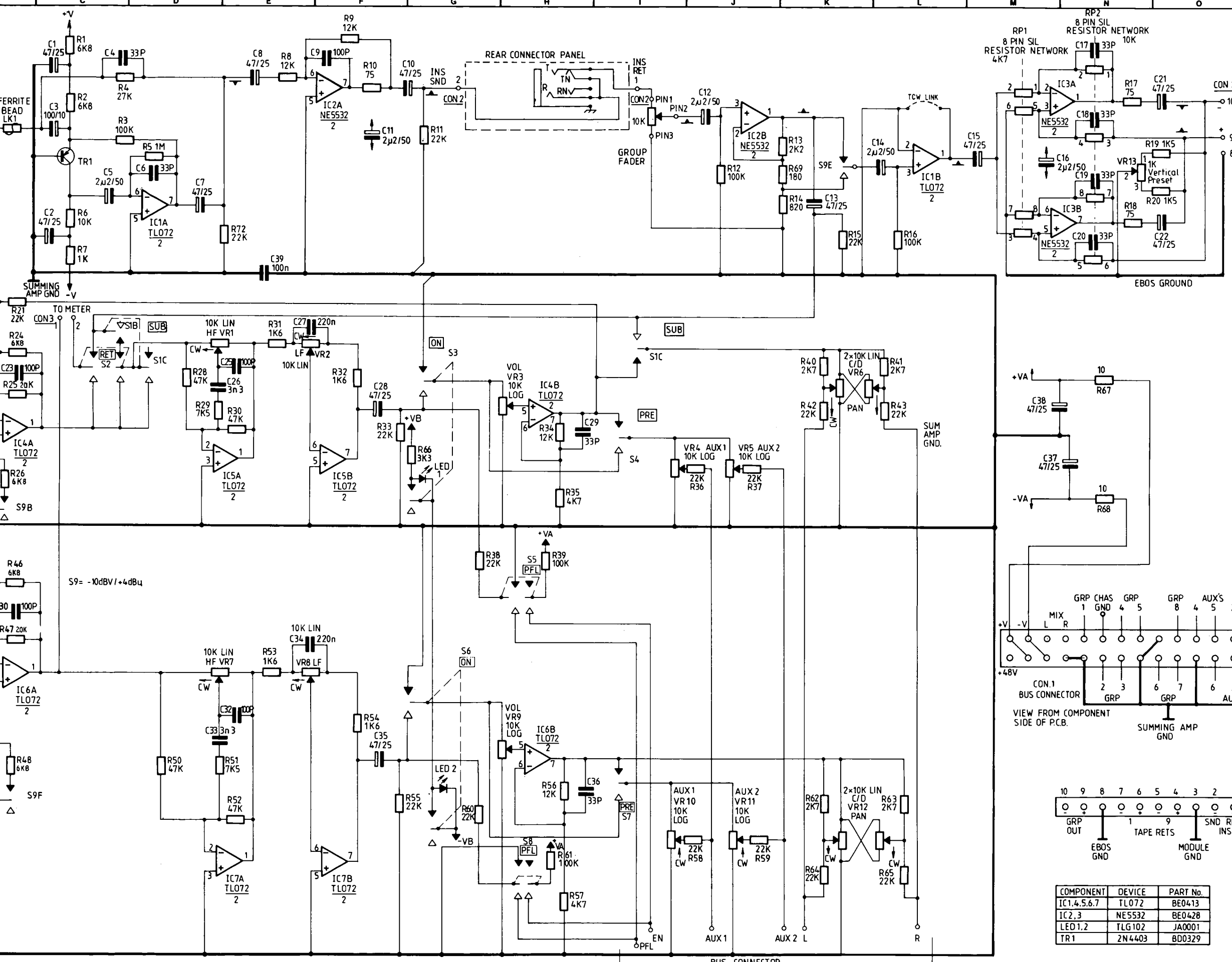
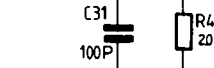
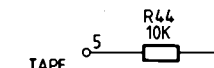
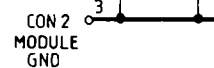
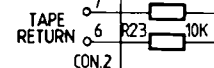
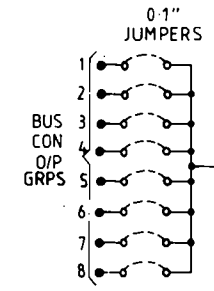
MATL.
FINISH.
SCALE.

DRG. DS
TRCD. Sharon
CHKD.

SOUNDRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON. EC1V. 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDRAFT LDM. EC1
TELEX. UK No. 21198. USA No. 01-2203

TITLE. S5001/600
AUX MASTER L.H.
(CIRCUIT DIAGRAM)

DRG No. E02174



COMPONENT	DEVICE	PART No.
IC1,4,5,6,7	TL072	BE0413
IC2,3	NE5532	BE0428
LED1,2	TLG102	JA0001
TR1	2N4403	BD0329

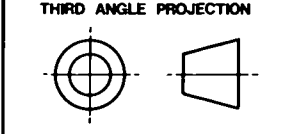
Issue	Date
Issue 1	29 - 8 - 84
Issue 2	17 - 12 - 84
Issue	16 - 1 - 85
Issue 4	18 - 2 - 85
Issue 5	25 - 7 - 85
ISSUE 6	R24, 26, 46 & 48 WERE 4K3 R25, 27, 47 & 49 WERE 12K ALSO R70 DELETED R71 REPLACED BY TCW LINK 30/11/87

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NOTES.
All resistors in ohms.
All capacitors in micro farads.
Unless otherwise stated.

HOLE INDEX.
LAST USED R70
C39

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.



MATL.
FINISH.
SCALE.

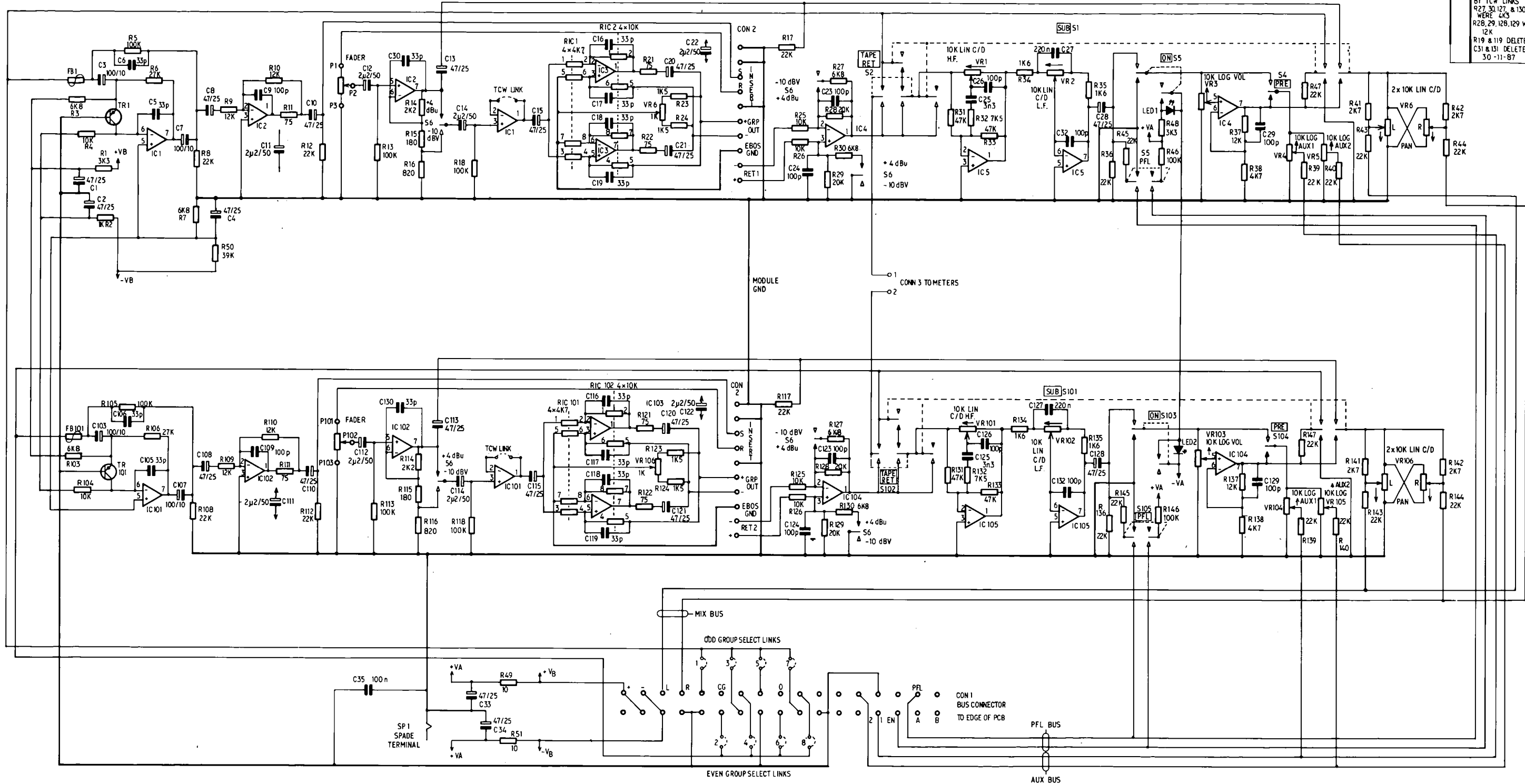
DRG.
TRCD. Sharon
CHKD. G. Gibbons

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC4V 0BX.
TELEPHONE. 01-251-3831/2/3
TELEGRAMS. SOUNDCRAFT LDM, EC1
TELEX. UK No. 21198. USA No. 01-2203

TITLE. S 600
STANDARD OUTPUT
CIRCUIT DIAGRAM

DRG No. ED2177

Issue 5 REDRAWN 24 - 7 - 85
Issue 6 COMPONENTS ADDED 7 - 8 - 85
Issue 7 R20 & R120 REPLACED BY TCW LINKS R27, 30, 127, & 130 WERE 4K5 R28, 29, 128, 129 WERE 12K R19 & 119 DELETED C31 & 131 DELETED 30 - 11 - 87



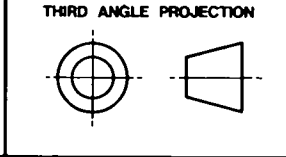
COMPONENT	DEVICE	PART NO
IC 2,3,102,103	NE 5532	BE0 428
IC 1,4,5,101,104,105	TL072	BE0 413
TR 1,101	2N4403	BDO 329
LED 1,2	TLG102	JA0001

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NOTES.

HOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated.



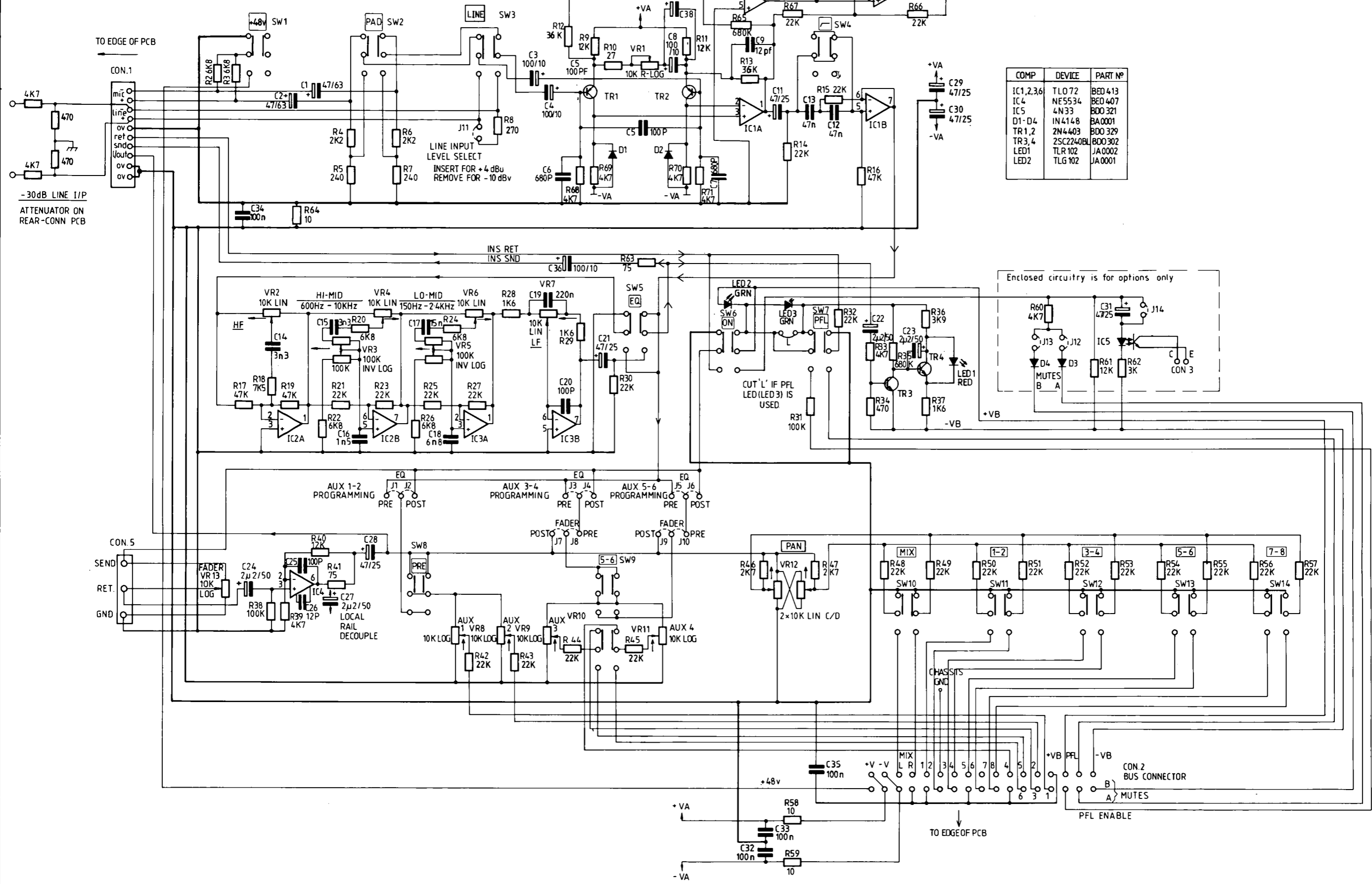
MATL.
FINISH.
SCALE.

DRG. CHRIS
TRCD.
CHKD.

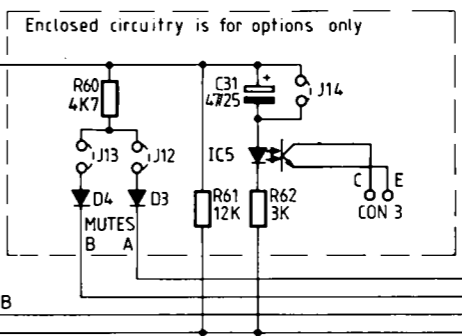
SOUNDRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON, EC 4V, OBX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDRAFT LDN. EC1
TELEX. UK No. 21198. USA No. 01-2203

TITLE. S 500
STANDARD 0/P

DRG No. ED 2176 (SC 1493 ISS 3)



COMP	DEVICE	PART N°
IC1,2,3,6	TLO 72	BED 413
IC4	NE5534	BEO 407
IC5	4N33	BDO 321
D1-D4	IN4148	BA0001
TR1,2	2N4403	BDO 329
TR3,4	2SC2240BL	BDO 302
LED1	TLR 102	JA0002
LED2	TLG 102	JA0001



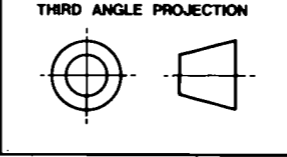
Issue	Date	Notes
Issue 1	21-8-84	
Issue 2	18-10-84	
Issue 3	19-7-85	
Issue 4	17-1-86	
Issue 5		FADER TERMINATE AT CON. 5
Issue 6		MIC AMP CIR. AND C36 ADDED 2-3-87
Issue 7		Remove R1 & C10 R11-12 was 7K5 R68-R72 replace RIC 1. R58/R59-10 was 75 26-6-87
Issue 8		R12 & R13 WERE 75K 30-11-87

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NOTES. ALL CONNECTORS VIEWED FROM COMPONENT SIDE OF PCB

HOLE INDEX.

TOLERANCE.
 All imperial dimensions ± 0.010
 All metric dimensions $\pm 0.25\text{mm}$
 All angles $\pm 0.5^\circ$
 Unless otherwise stated.



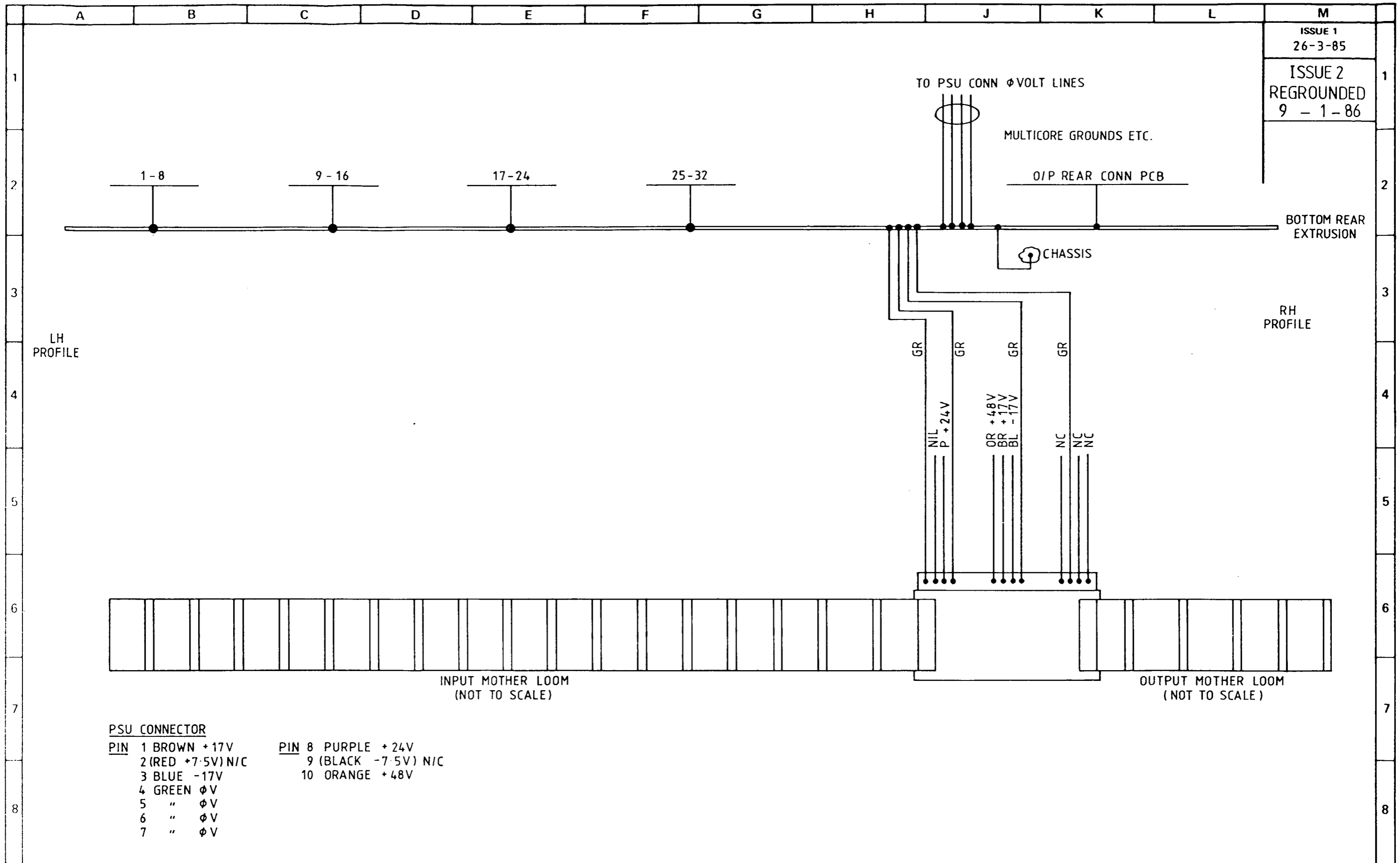
MATL. _____
FINISH. _____
SCALE. _____

DRG. _____
TRCD. Sharon
CHKD. _____

SOUNDCRAFT ELECTRONICS LTD.
 5-8 GREAT SUTTON STREET
 LONDON. EC1V. OBX.
 TELEPHONE. 01-251-3631/2/3
 TELEGRAMS. SOUNDCRAFT LDN. EC1
 TELEX. UK No. 21198. USA No. 01-2203

TITLE.
 S500/600 STD I/P
 CIRCUIT DIAGRAM

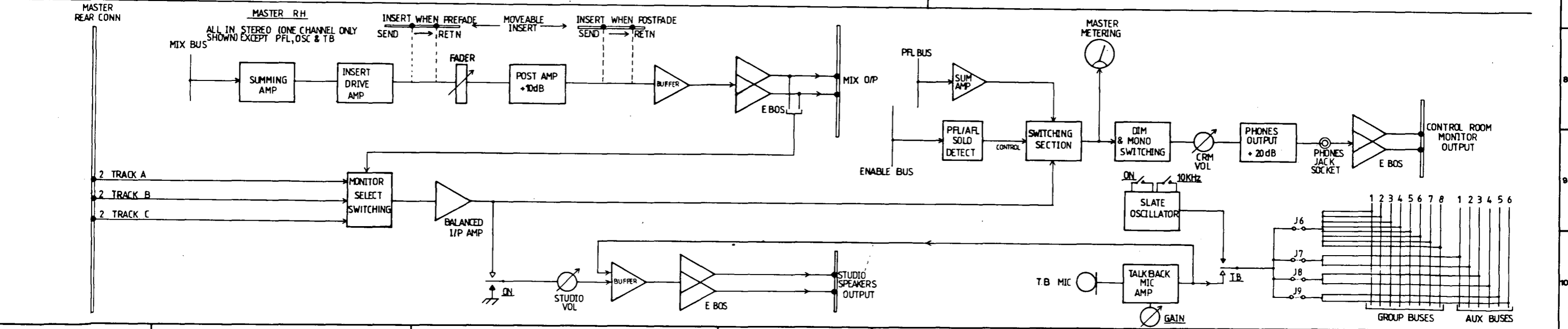
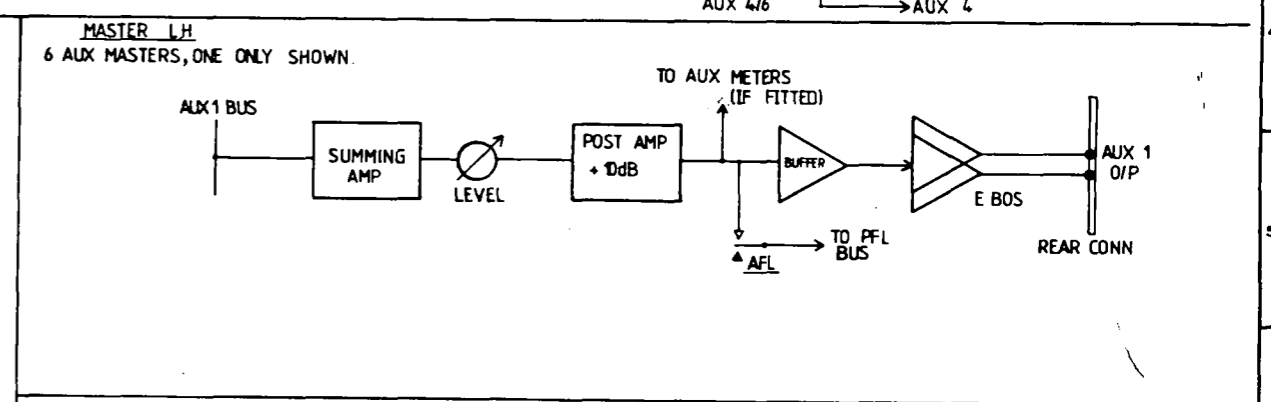
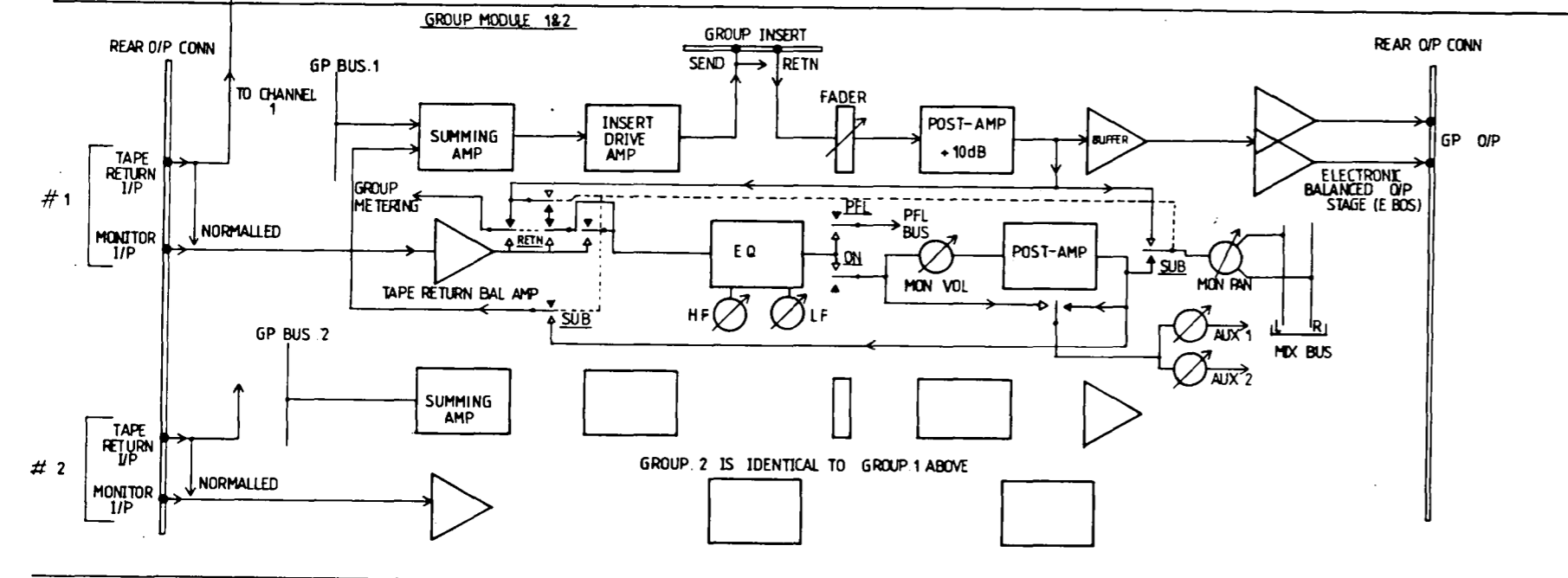
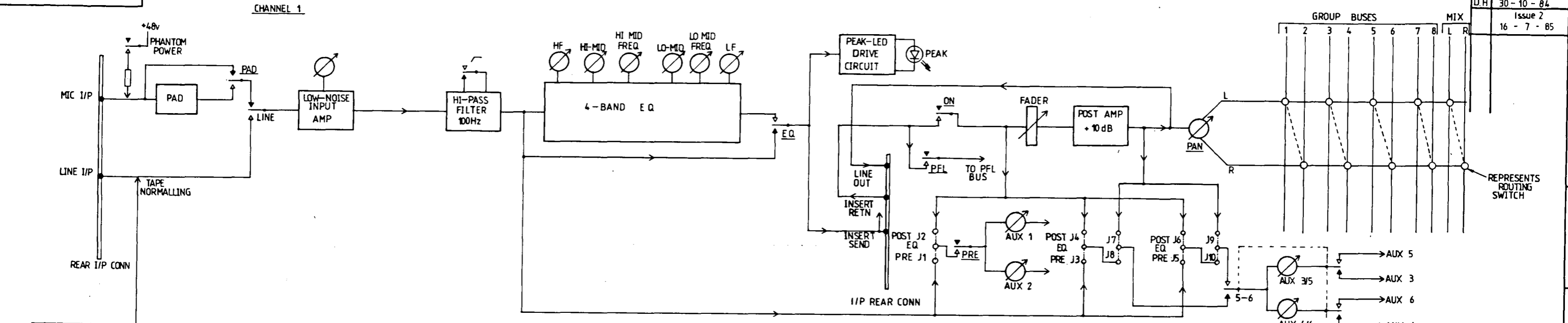
DRG No. ED 2162



ISSUE 1
26-3-85

ISSUE 2
REGROUNDED
9-1-86

	THIRD ANGLE PROJECTION	TOLERANCE All imperial dimensions ± 0.010 All metric dimensions $\pm 0.25\text{mm}$ All angles $\pm 0.50^\circ$ Unless otherwise stated	HOLE INDEX	MATL	DRN TRCD <i>C. J. Hamilton</i>	SOUNDRAFT ELECTRONICS LTD 5-8 GREAT SUTTON STREET LONDON EC1V 0BX. TELEPHONE. 01-251-3631/2/3 TELEGRAMS. SOUNDRAFT LDN EC1 TELEX. UK. No. 21198. USA. No. 224408	TITLE S500/600 CONSOLE WIRING DIAGRAM
	SCALE	CHKD	DRG. No. MI 2432				



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NOTES.
DETAILS OF GAIN SWITCHING NOT SHOWN

MOLE INDEX.

TOLERANCE.
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.

THIRD ANGLE PROJECTION

MATL.
FINISH.
SCALE.

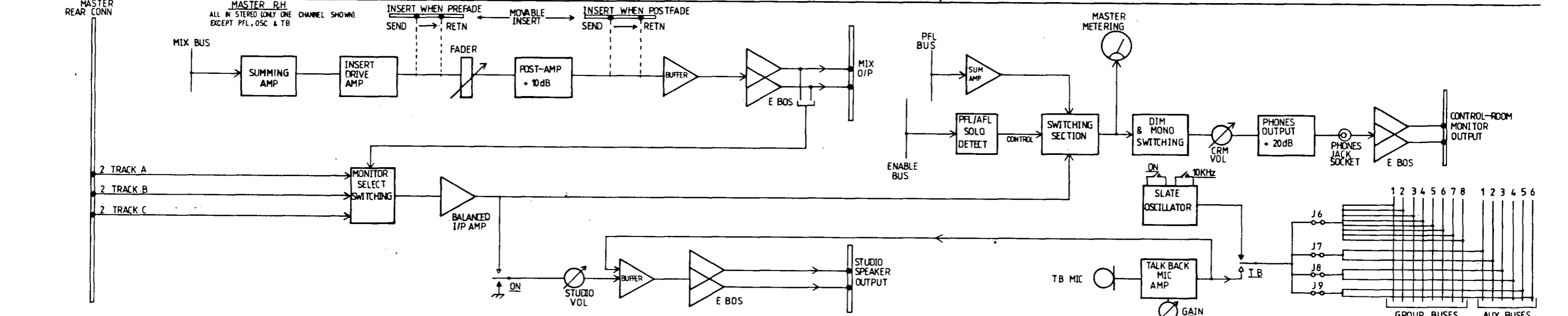
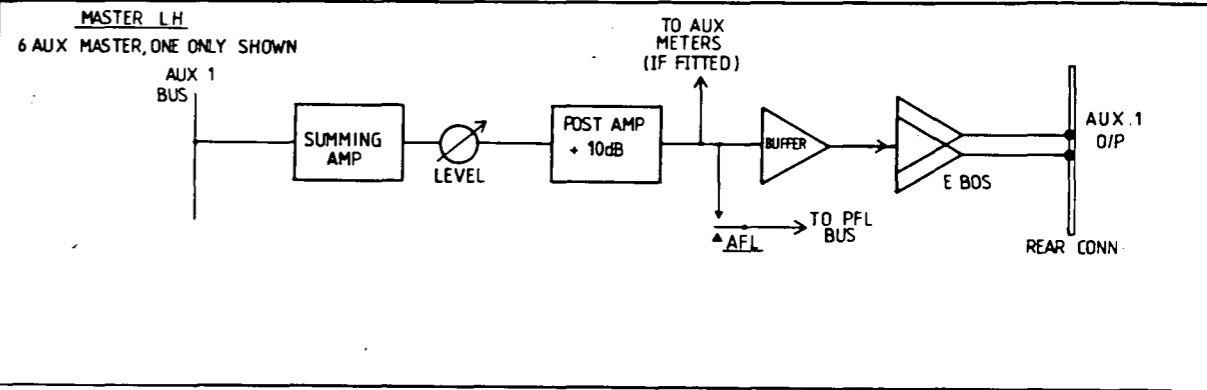
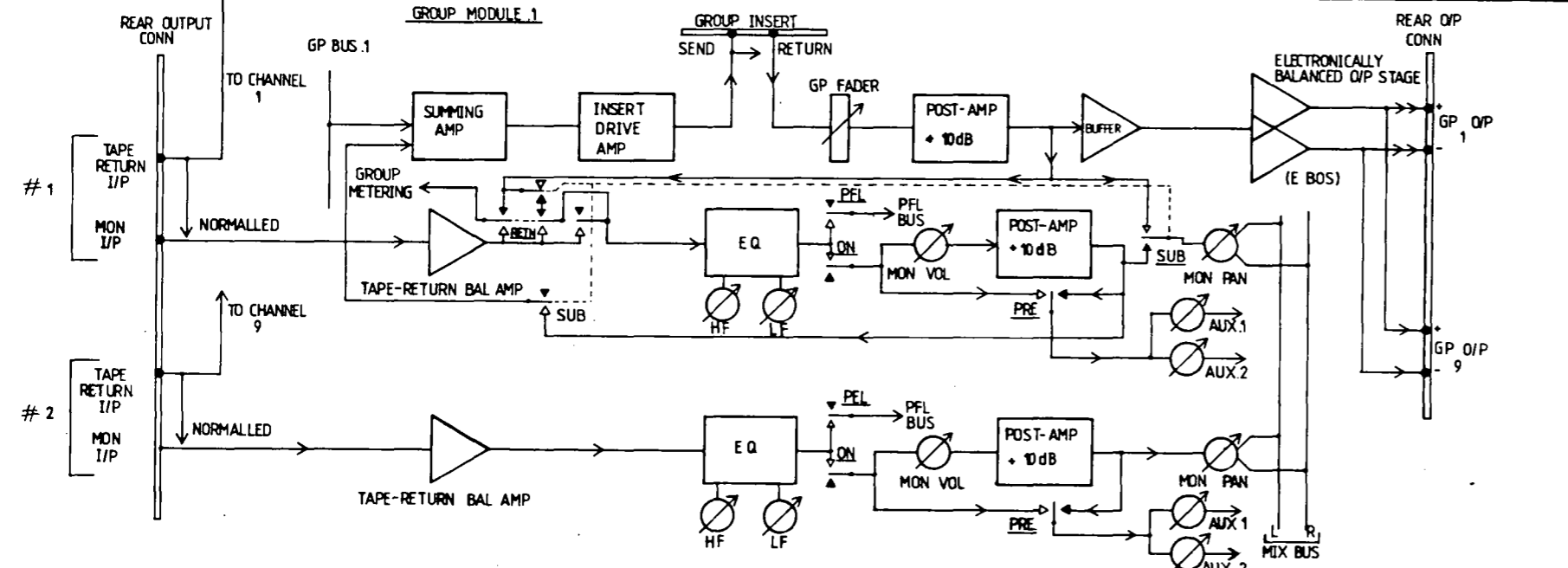
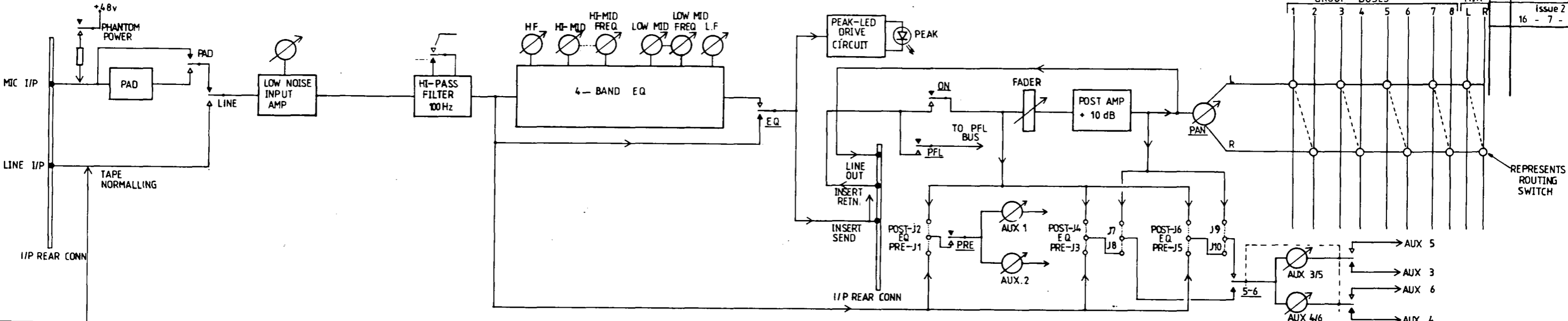
DRG. DH
TRCD.
CHKD.

SOUNDRAFT ELECTRONICS LTD.
5-8 GREAT SUTTON STREET
LONDON. EC4V. 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDRAFT LDN. EC1
TELEX. UK No. 21198. USA No. 01-2203

TITLE. S500
BLOCK DIAGRAM

DRG No. ED 2206

CHANNEL 1

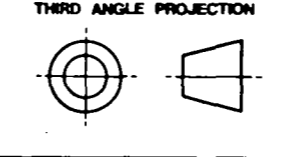


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NOTES:
DETAILS OF GAIN-SWITCHING NOT SHOWN

HOLE INDEX:

TOLERANCE:
All Imperial dimensions ± 0.010
All metric dimensions $\pm 0.25mm$
All angles $\pm 0.50^\circ$
Unless otherwise stated.



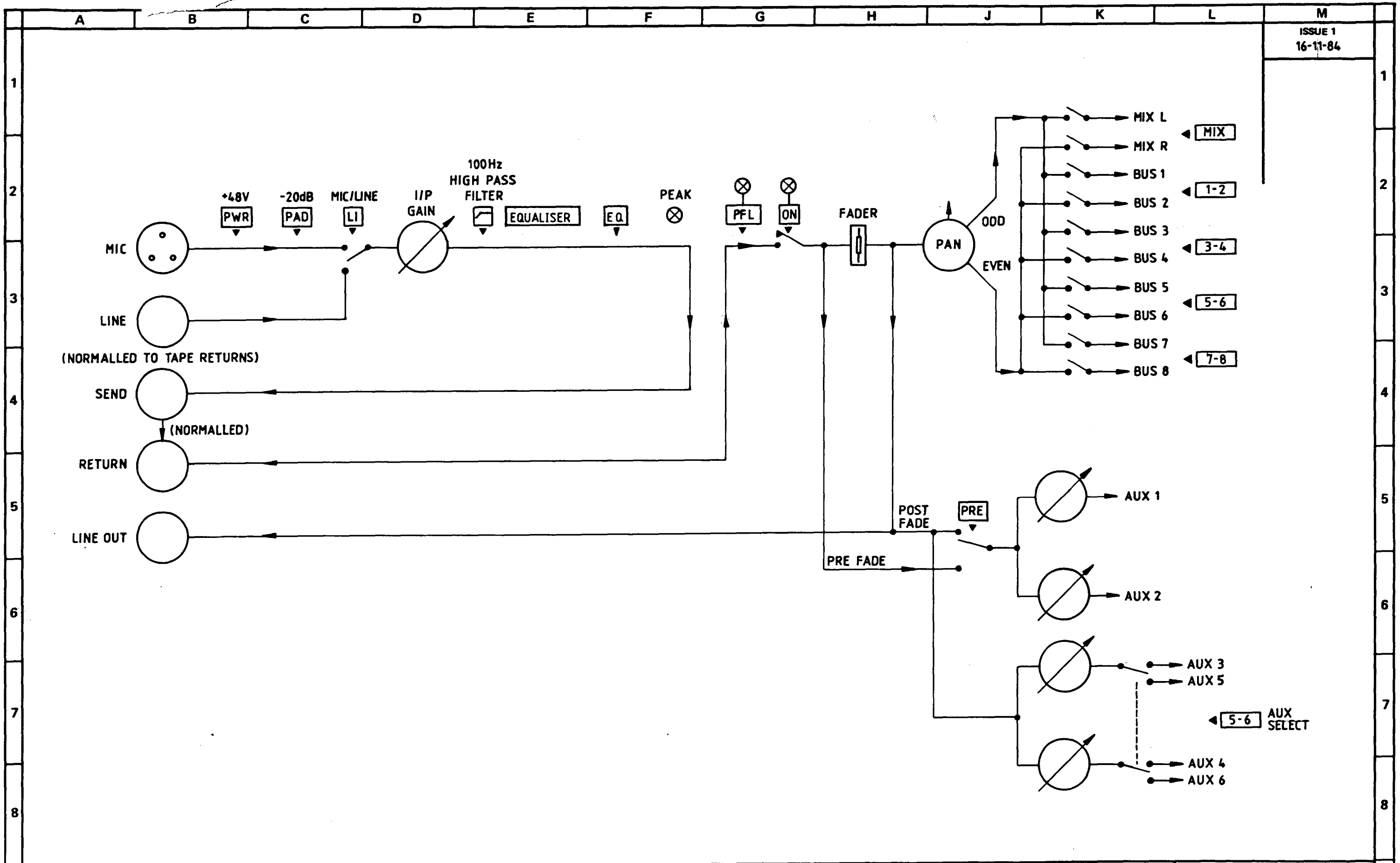
MATL.
FINISH.
SCALE.

DRG. D.H.
TRCD.
CHKD.

SOUNDCRAFT ELECTRONICS LTD.
5-8 GREAT BUTTON STREET
LONDON, EC4V 0BX.
TELEPHONE: 01-251-3631/2/3
TELEGRAMS: SOUNDCRAFT LDM, EC1
TELEX: UK No. 21198, USA No. 01-2203

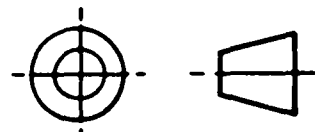
TITLE: S600
BLOCK DIAGRAM.

DRG No. ED 2207



ISSUE 1
16-11-84

THIRD ANGLE PROJECTION



TOLERANCE

All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

HOLE INDEX

MATL

FINISH

SCALE

DRN

TRCD

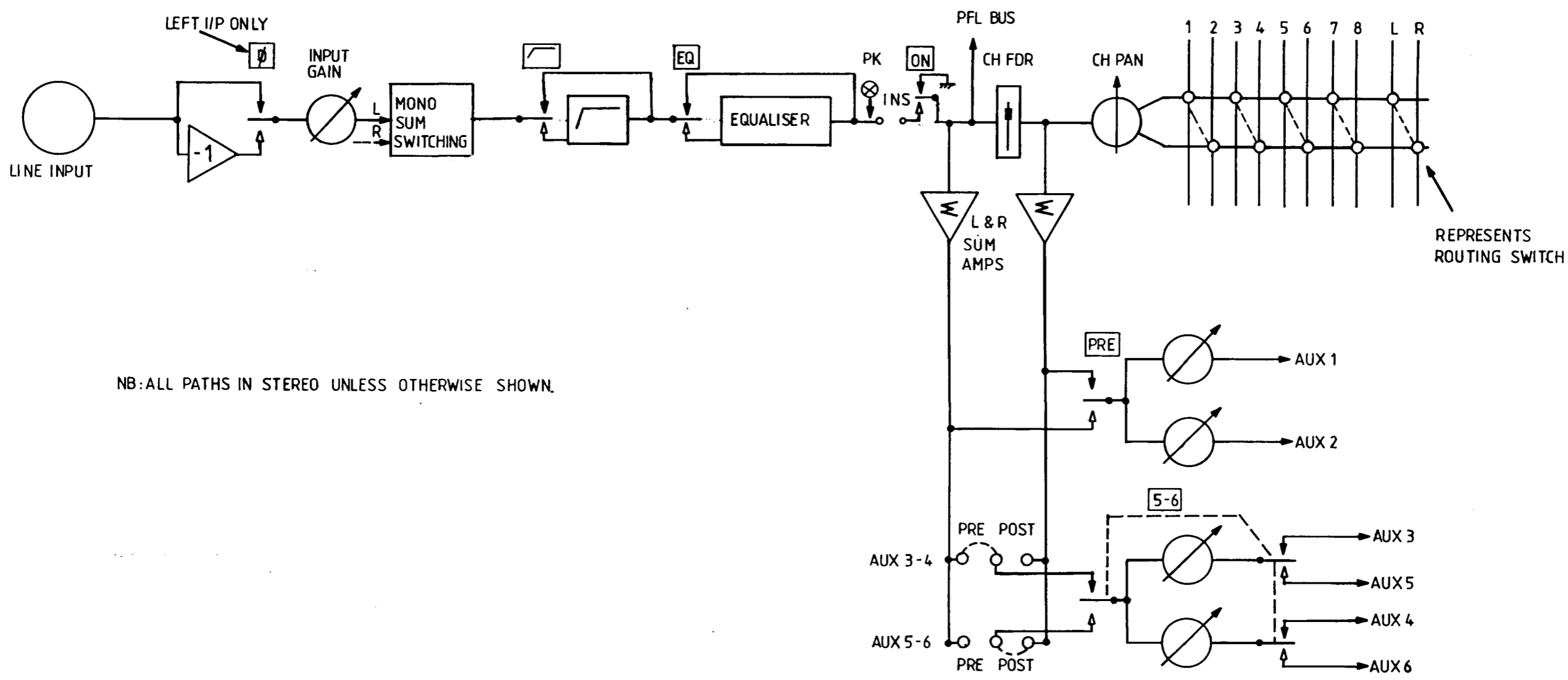
CHKD

SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE

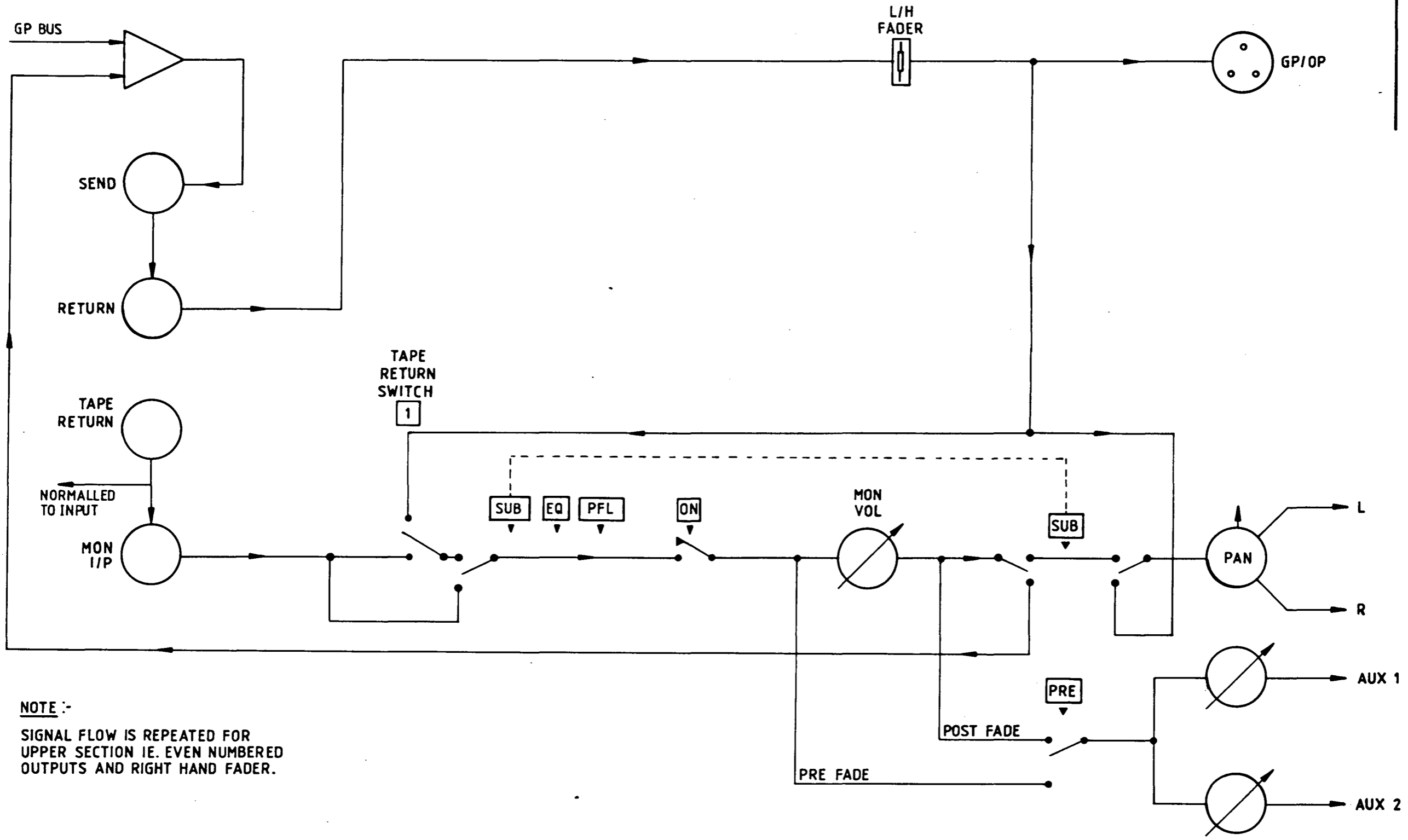
S500 /600
INPUT MODULE
(SIGNAL FLOW)

DRG. No. ED 2212



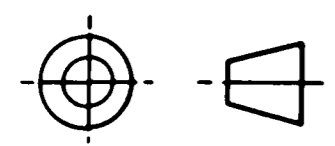
NB: ALL PATHS IN STEREO UNLESS OTHERWISE SHOWN.

<p>TOLERANCES HOLE SIZES AFTER PAINTING</p> <p>0-3mm + 0.10 - 0.00</p> <p>OVER 3-6mm + 0.12 - 0.00</p> <p>OVER 6-10mm + 0.18 - 0.00</p> <p>OVER 10-18mm + 0.18 - 0.00</p> <p>OVER 18-25mm + 0.21 - 0.00</p> <p>OVER 25mm + 0.25 - 0.00</p>	<p>GENERAL TOLERANCE</p> <p>Delete where not applicable.</p> <p>± 0.50mm (0.020")</p> <p>± 0.25mm (0.010")</p> <p>± 0.12mm (0.005")</p> <p>HOLE CENTRES ± 0.004"</p> <p>ALL ANGLES ± 0.60°</p> <p>Unless otherwise stated.</p>	<p>HOLE INDEX</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>MATL</p> <p>FINISH</p> <p>SCALE</p> <p>THIRD ANGLE PROJECTION THIS DRAWING TO COMPLY TO BS308.</p>	<p>DRN AB</p> <p>TRCD</p> <p>CHKD <i>R. J. Thomas</i></p>	<p>SOUNDCRAFT ELECTRONICS LTD UNIT 2, BOREHAMWOOD INDUSTRIAL PARK, ROWLEY LANE, BOREHAMWOOD, HERTFORDSHIRE WD6 5PZ. TELEPHONE: 01-207-5050 FACSIMILE No. 2070194</p> <p>TITLE S500/600 STEREO I/P SIGNAL FLOW DIAG.</p> <p>DRG.No. ED 2326</p>
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NOTE :-
SIGNAL FLOW IS REPEATED FOR UPPER SECTION IE. EVEN NUMBERED OUTPUTS AND RIGHT HAND FADER.

THIRD ANGLE PROJECTION



TOLERANCE

All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

HOLE INDEX

MATL

FINISH

SCALE

DRN

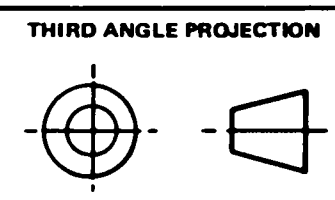
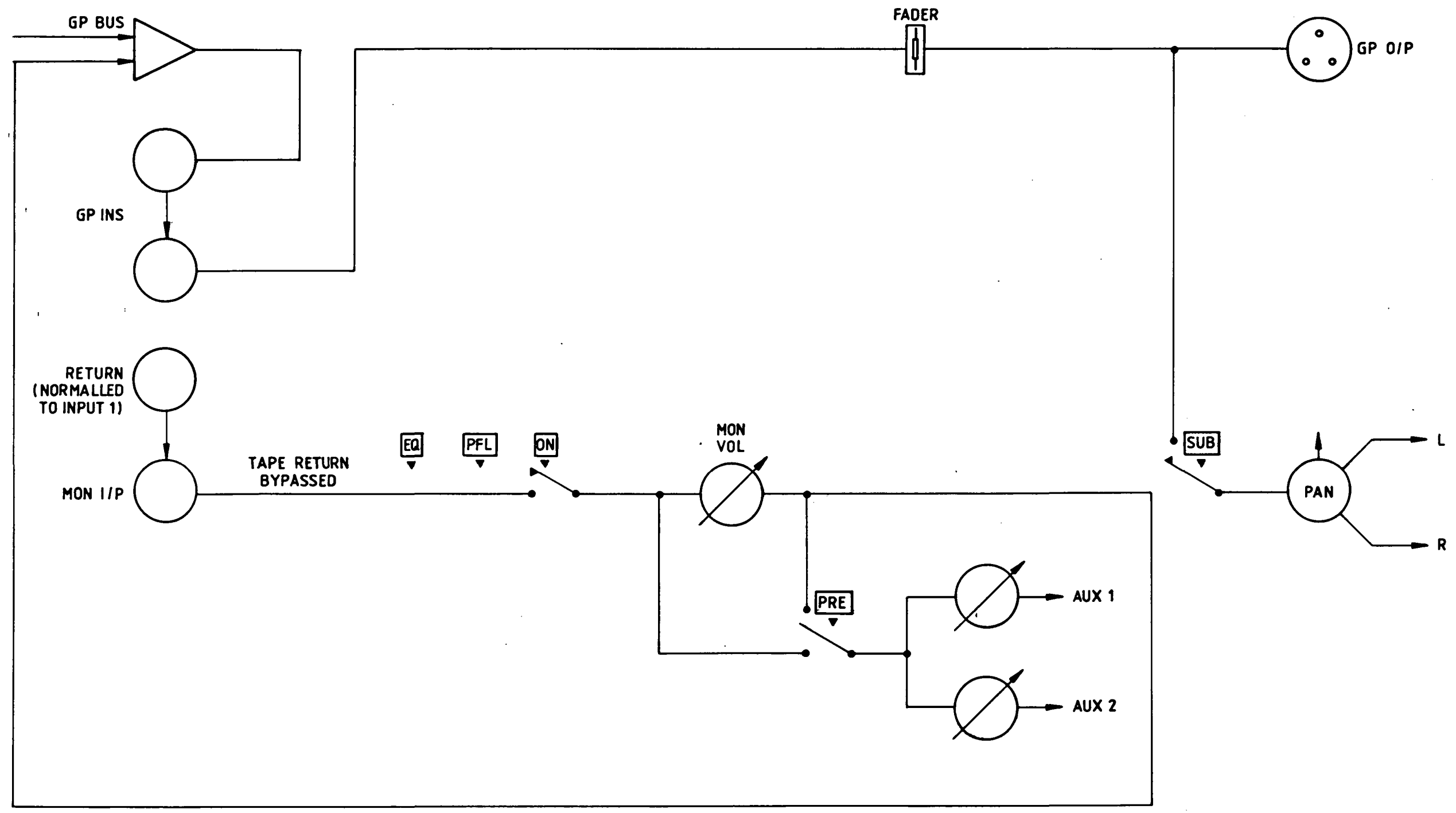
TRCD
Cheln

CHKD

SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-251-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE

S500
GROUP OUTPUT
MODULE SIGNAL FLOW DIA
ORG. No. ED 2215



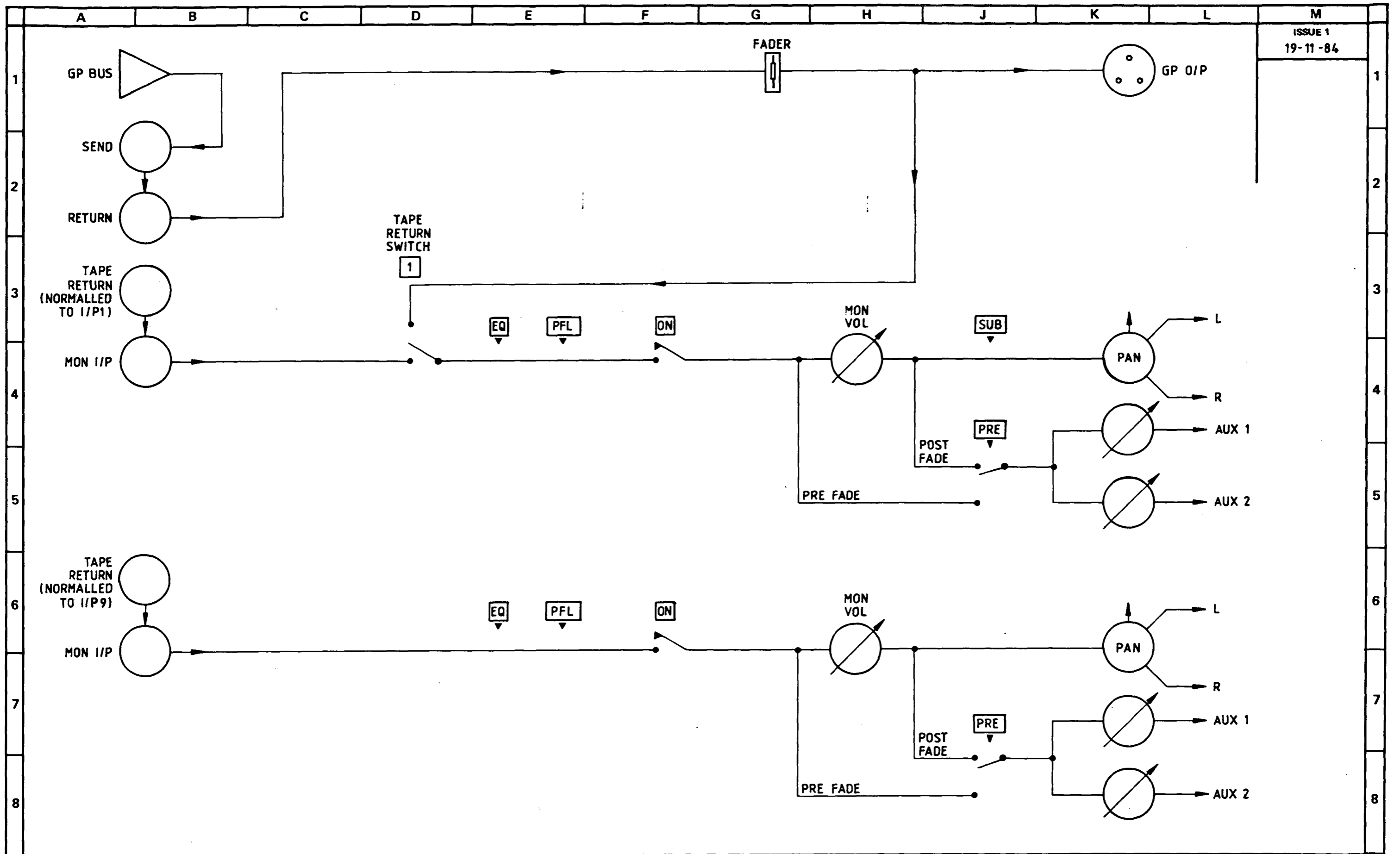
TOLERANCE
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

NOTES
FOR CLARITY, TAPE RETURN
9 NOT SHOWN, SEE ED 2213

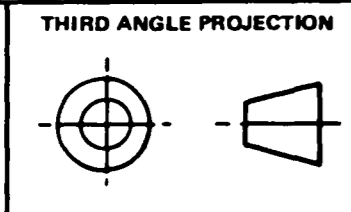
MATL	DRN
FINISH	TRCD <i>Exlyre</i>
SCALE	CHKD

SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-261-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE
S600
GROUP OUTPUT MODULE
WITH 'SUB' BUTTON IN
DRG. No. ED 2214



ISSUE 1
19-11-84



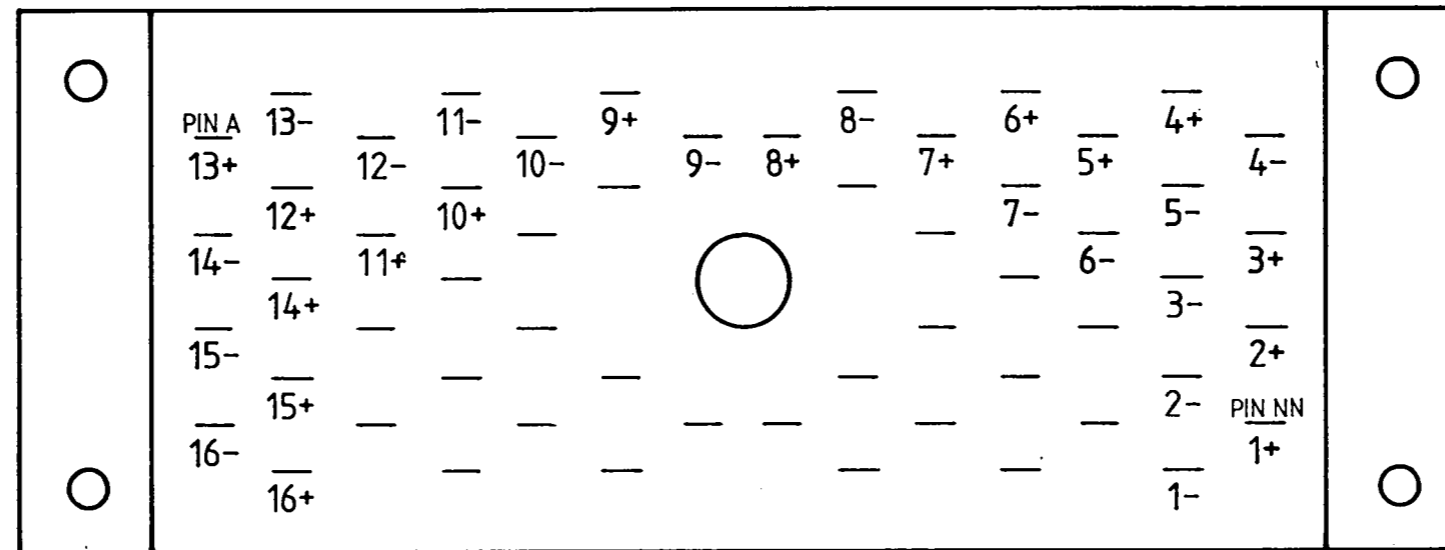
TOLERANCE
All imperial dimensions ± 0.010
All metric dimensions $\pm 0.25\text{mm}$
All angles $\pm 0.50^\circ$
Unless otherwise stated

HOLE INDEX

MATL	DRN
FINISH	TRCD <i>Dwyer</i>
SCALE	CHKD

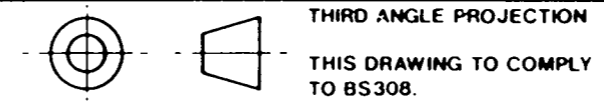
SOUNDCRAFT ELECTRONICS LTD
5-8 GREAT SUTTON STREET
LONDON EC1V 0BX.
TELEPHONE. 01-261-3631/2/3
TELEGRAMS. SOUNDCRAFT LDN EC1
TELEX. UK. No. 21198. USA. No. 224408

TITLE
S600
GROUP OUTPUT MODULE
WITHOUT 'SUB' BUTTON IN
DRG. No. ED 2213

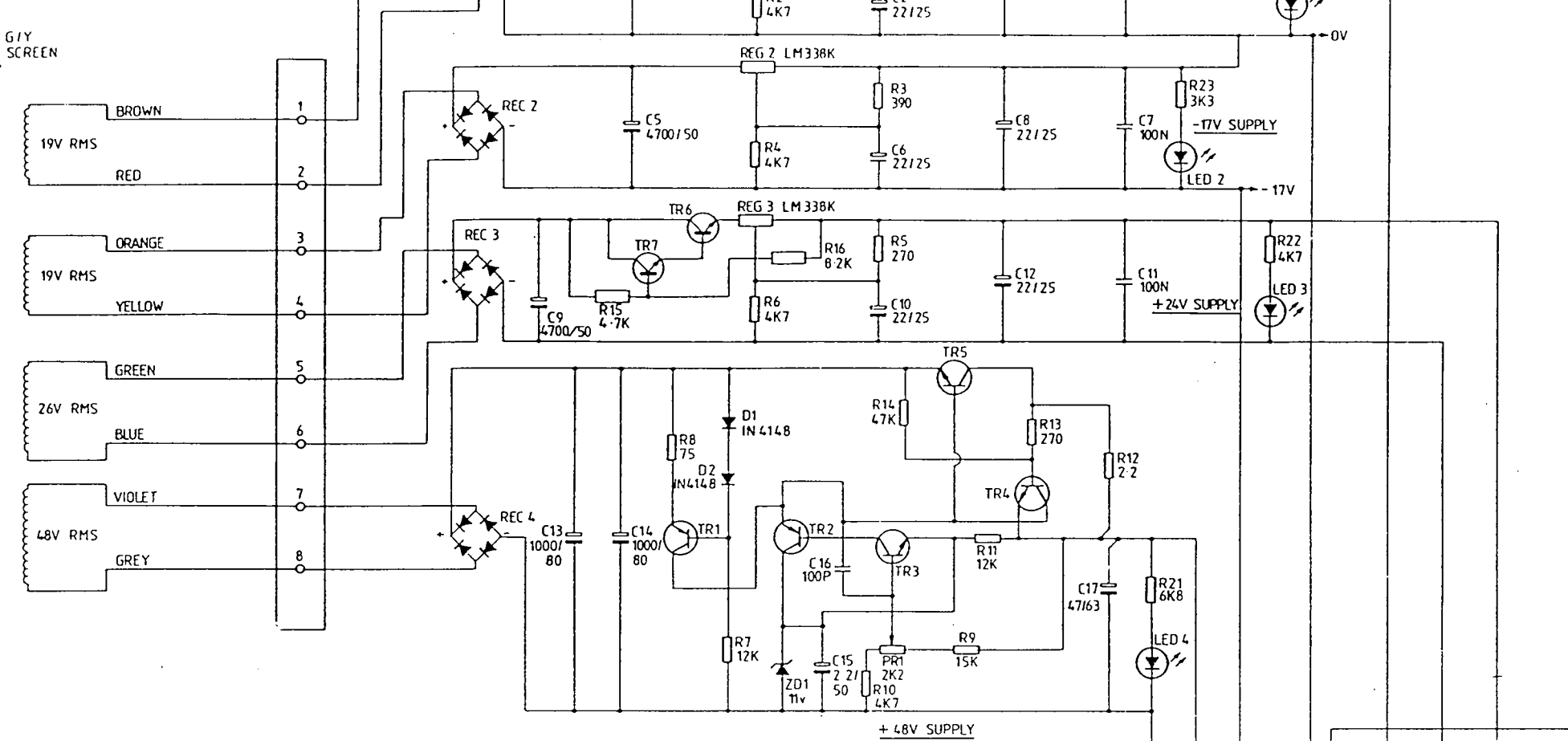
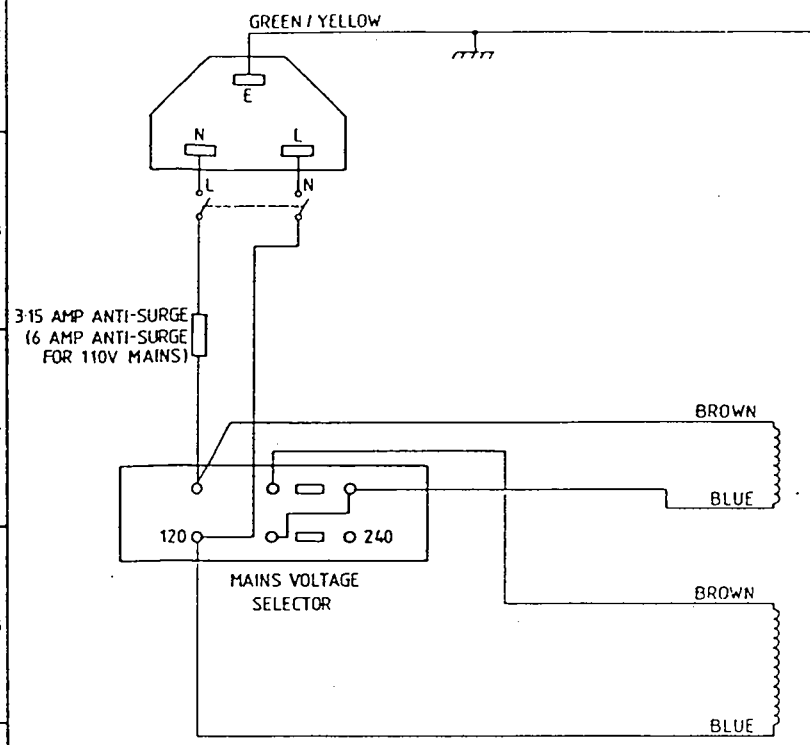


VIEWED FROM SOLDER SIDE OF FREE CONNECTOR

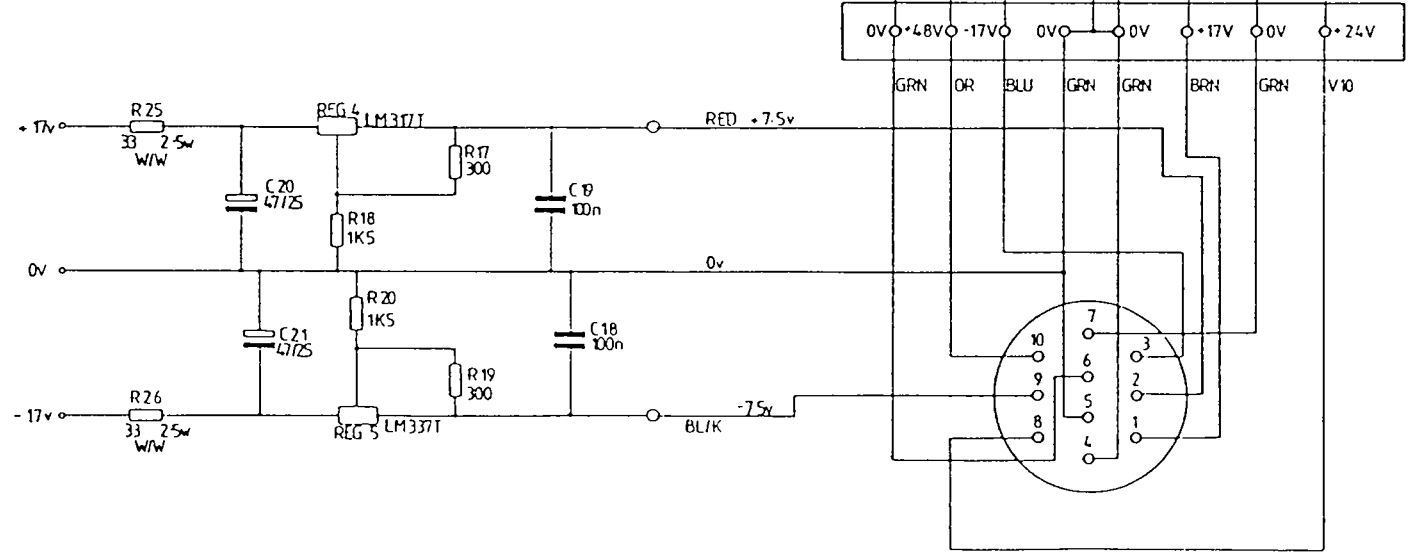
<p>TOLERANCES HOLE SIZES AFTER PAINTING</p> <p>0-3mm + 0.10 - 0.00</p> <p>OVER 3-6mm + 0.12 - 0.00</p> <p>OVER 6-10mm + 0.15 - 0.00</p> <p>OVER 10-18mm + 0.18 - 0.00</p> <p>OVER 18-25mm + 0.21 - 0.00</p> <p>OVER 25mm + 0.25 - 0.00</p>	<p>GENERAL TOLERANCE</p> <p>Delete where not applicable.</p> <p>± 0.50mm (0.020")</p> <p>± 0.25mm (0.010")</p> <p>± 0.12mm (0.005")</p> <p>HOLE CENTRES ± 0.04"</p> <p>ALL ANGLES ± 0.50°</p> <p>Unless otherwise stated.</p>	<p>HOLE INDEX</p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>MATL</p> <p>FINISH</p> <p>SCALE</p>	<p>DRN BTB</p> <p>TRCD</p> <p>CHKD</p>	<p>SOUNDCRAFT ELECTRONICS LTD UNIT 2, BOREHAMWOOD INDUSTRIAL PARK, ROWLEY LANE, BOREHAMWOOD, HERTFORDSHIRE WD6 5PZ. TELEPHONE: 01-207-5050 FACSIMILE No. 2070194</p>	<p>TITLE S600 PATCHBAY VARELCO BALANCED TIE LINES</p> <p>DRG. No. MI 2579</p>
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Issue 1	25-10-84
Issue 2	7-1-85
Issue 3	22/1/85
Issue 4	31-1-85



- TRANSISTORS**
- TR1 & TR2 = PNP 2SA 970 GR
 - TR3, 4, 7 = NPN 2SC 2240 BL
 - TR5 = NPN BD 135
 - TR6 = NPN 2N3055
- RECTIFIERS**
- REC1, REC2 & REC3 = KBF02
 - REC4 = KBP02



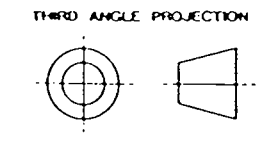
VIEWS FROM SOLDER PINS OF SIRC CONNECTOR

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NOTES:

HOLE INDEX:

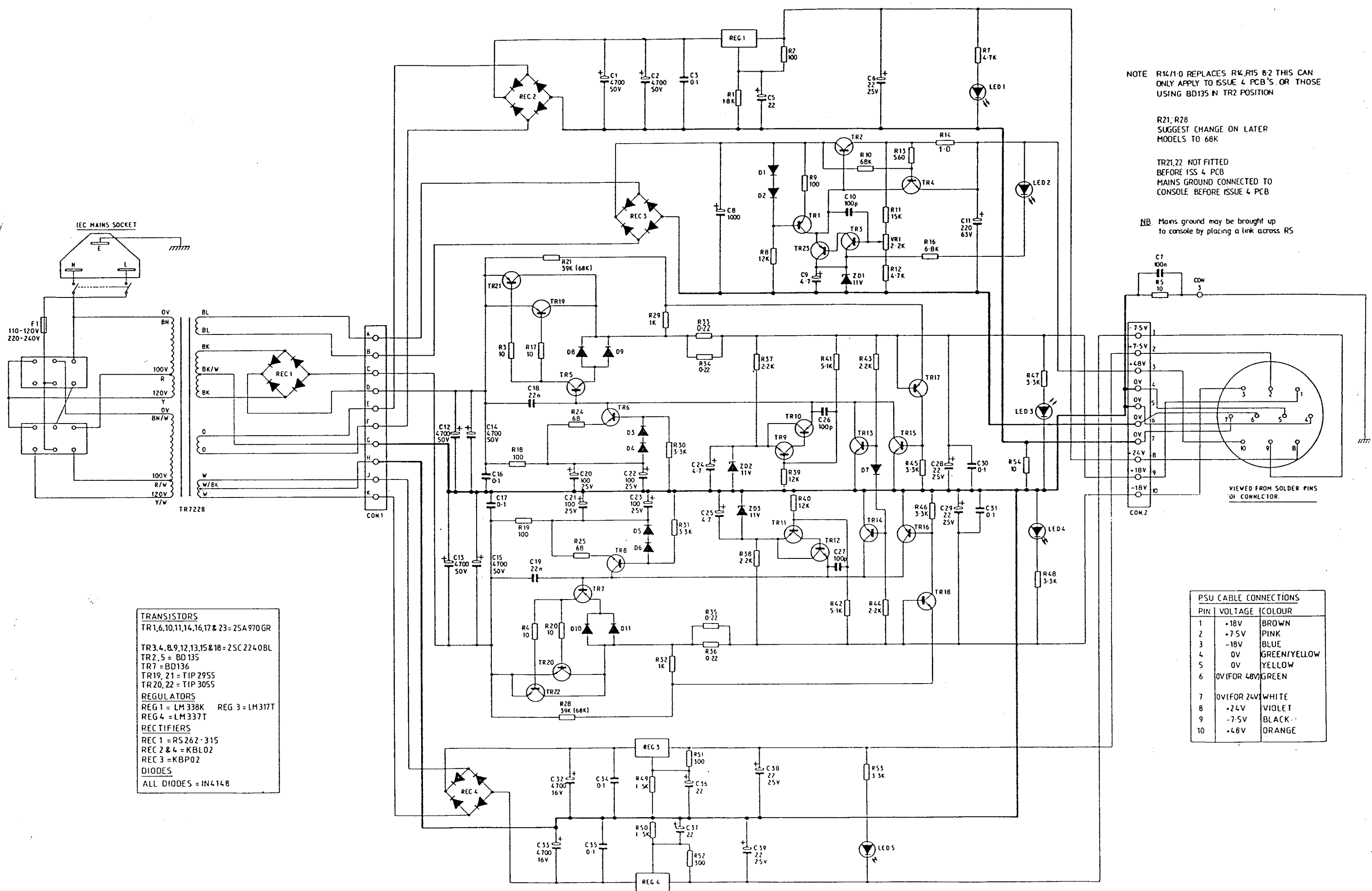
TOLERANCE:
 All imperial dimensions ± 0.010
 All metric dimensions $\pm 0.25mm$
 All angles $\pm 0.50^\circ$
 Unless otherwise stated.



MATL:
 FINISH:
 SCALE:

DRG. SOUNDSCRAFT ELECTRONICS LTD.
 5-8 GREAT SUTTON STREET
 LONDON, EC IV 0BX.
 TELEPHONE: 01-251-3631/2/3
 TELEGRAMS: SOUNDSCRAFT LDN EC1
 TELEX: UK No. 21198, USA No. 01-2203

TITLE: MEDIUM CONSOLE POWER SUPPLY SC1584
 DRG No. ED 2208



NOTE R14/110 REPLACES R4, R15 B2 THIS CAN ONLY APPLY TO ISSUE 4 PCB'S OR THOSE USING BD135 IN TR2 POSITION

R21, R28 SUGGEST CHANGE ON LATER MODELS TO 68K

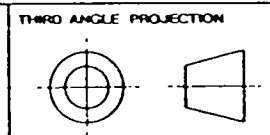
TR21, 22 NOT FITTED BEFORE ISS 4 PCB MAINS GROUND CONNECTED TO CONSOLE BEFORE ISSUE 4 PCB

NB. Mains ground may be brought up to console by placing a link across R5

- TRANSISTORS**
 TR1, 6, 10, 11, 14, 16, 17 & 23 = 2SA970GR
 TR3, 4, 8, 9, 12, 13, 15 & 18 = 2SC2240BL
 TR2, 5 = BD135
 TR7 = BD136
 TR19, 21 = TIP2955
 TR20, 22 = TIP3055
- REGULATORS**
 REG1 = LM338K REG3 = LM317T
 REG4 = LM337T
- RECTIFIERS**
 REC1 = RS262-315
 REC2 & 4 = KBLO2
 REC3 = KBP02
- DIODES**
 ALL DIODES = 1N4148

PSU CABLE CONNECTIONS		
PIN	VOLTAGE	COLOUR
1	+18V	BROWN
2	-7.5V	PINK
3	-18V	BLUE
4	0V	GREEN/YELLOW
5	0V	YELLOW
6	0V (FOR 4.8V)	GREEN
7	0V (FOR 2.4V)	WHITE
8	+2.4V	VIOLET
9	-7.5V	BLACK
10	+4.8V	ORANGE

Issue 1 12-11-81
 Issue 2 19-1-82
 Issue 3 3-3-82
 Issue 4 9-7-82
 Issue 5 16-11-83
 Issue 6 10-9-84



NOTES
 All resistors in ohms.
 All capacitors in microfarads, unless otherwise stated
 R33, 34, 35, 36 all 2.5W wirewound.
 FOR PART No. GD0336

TOLERANCE
 All imperial dimensions ±0.01
 All metric dimensions ±0.25mm
 All angles ±0.50°
 Unless otherwise stated

HOLE INDEX

MATL —
FINISH —
SCALE —

DRN MARK
TRCD
CHKD

SOUNDCRAFT ELECTRONICS LTD
 5-8 GREAT SUTTON STREET
 LONDON EC1V 0BX
 TELEPHONE: 01-251-3631/2/3
 TELEGRAMS: SOUNDCRAFT LDM EC1
 TELETYPE No. 21198, USA No. 224408

TITLE
 POWER SUPPLY CIRCUIT DIAGRAM (SC1218 Iss 4)
 DRG No. ED 2093