

SECK MULTITRACK RECORDING CONSOLES OPERATOR'S MANUAL

GENERAL INTRODUCTION

SECK have combined innovative design and constructional techniques with state-of-the-art components and materials to produce the smallest, lightest and most cost-effective multichannel recording consoles available.

Comprehensive in-line monitoring with a very versatile tape replay, channel and equaliser assignment system permits the full application of professional multitrack recording techniques such as overdubbing, track shifting, dropping-in, etc.

The system has been designed for complementary operation with popular multitrack tape machines, such as the FOSTEX E16, but is equally at home in the live P.A. environment.

Combining in-line monitoring with a discrete Group area allows full length faders to be accommodated, resulting in excellent fader resolution for accurate mix-down and P.A. applications.

All signal sockets are readily visible for easy verification of input, effects and output patching.

Note - Throughout the manual, the output section is drawn as it appears on the 1882. Although this is an eight buss mixer like the 1282, it is primarily intended for the 16 track user - the extra eight track outputs, and the switches used to select these outputs, are not included on the 1282 version.

Therefore, references to the 'Track Select' Lo/Hi switch' and 'Track Select indicator' should only be read as applying to the model 1882; drawings showing 18 input channels and 16 track outputs should be treated the same way.

The 8 track operator will not find that the lack of these controls hinders the full operation of the console; the versatility behind the design approach of the 1882 will be fully apparent when operating the smaller mixer.

CONSTRUCTION

Custom aluminium extrusions form a rigid, attractive and protective shell. Injection moulded controls-exclusive to Seck - complement the looks and give a truly ergonomic 'feel'. Low profile, plug-in printed circuit board assemblies provide reliability with easy access for servicing.

The steel front panel and aluminium shell screen the electronics from radio and hum interference.

The aluminium carrying handle, running the full length of the console, is very comfortable to use. It is designed to form an adjustable Tilt Bar with large knurled knobs to lock the console at different angles.

The slim profile makes the console easy to carry around crowded back-stage areas and unobtrusive both on location and in storage.

FACILITIES

(See later in the Manual for detailed descriptions of individual control functions)

Every Input Channel features separate input sockets for Microphone, Line and Tape return signals, an Insertion point for individual channel effects, continuously variable Gain control, full 3-band Equalisation with Sweepable Mid-range, separate Channel and Monitor Foldback controls and two Post-Channel-fader Auxiliary controls; Stereo Monitor Echo facilities, in addition to full stereo Monitor routing from every input channel, cater for a broad range of monitor and stereo effects requirements.

Master Left/Right and Stereo Group mixing is routed via a long - throw Fader and stereo Pan Control.

Each group section provides a separate Sub-mix Control; on 16 output desks there is also individually illuminated Track Select switching.

A Pre-fader Insertion point allows for individual group signal processing, with a Long-throw Fader providing precise level control.

A Pre-fader, Post-Insertion-Point Solo button facilitates easy monitoring of group mix levels and insertions.

A separate output socket is provided for each Track output in addition to the Master Mix outputs (left & right) which are controlled by a long-throw Stereo Fader.

Each Auxiliary and Fold-back Send output has a separate output socket controlled by a separate rotary Level control with post-level-control Solo button. A Mix button enables Foldbacks 1 and 2 to be summed together to provide, for instance, a Tape Replay and Voice mix for overdubbing purposes. The Monitor Echo Send output has separate left and right output sockets controlled by a stereo level control with a post level control Solo facility.

Each Auxiliary Return has a separate (line level) input socket, rotary level control, two band Equalisation, and a stereo Pan control with assignment buttons for Master/Left Right and Stereo Group routing, plus a Solo button.

Comprehensive Talk-back, Slate and Headphone Listening facilities are provided. These will be described, in detail, later in the manual. Three Monitor switches enable the operator to select the normal Stereo Monitor Mix, the Stereo Master Mix or an external Stereo (2 Track) Signal.

CARE OF YOUR SECK RECORDING CONSOLE

Your SECK console has been built using the latest materials and constructional techniques. The printed circuit boards are fibre-glass and are shatter-proof. Absence of wired internal connections ensures high reliability. The console is both portable and rugged but some potential hazards should be avoided:

MOISTURE - The power supply unit should be placed in a well ventilated area, sheltered from water and condensation.

As with any metal object brought in from a cold vehicle or left indoors in the evening, condensation may form temporarily but should clear if the unit is given a few minutes to temperature settle.

For regular outdoor, mobile use a sunshade/umbrella or canopy is recommended.

HEAT - Avoid leaving your recording console in direct sunlight, near heaters or in vehicles parked in the sun.

DIRT - To prevent a mixture of dust and perspiration etc. finding its way into faders and switches, dust the console with a wide soft brush in directions away from the fader areas.

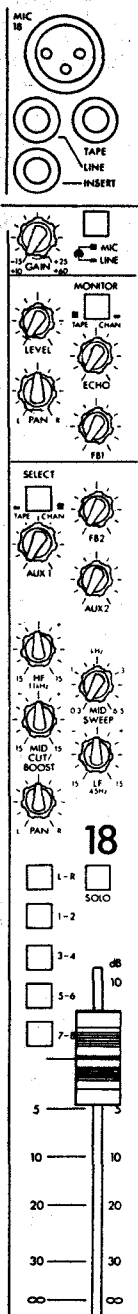
Sound recording can be a demanding task, but try to avoid placing drinks and smoking materials on or near the console. Sticky drinks and cigarette ash will soon clog up faders and switches.

FUNCTIONAL DETAILS - Input Section

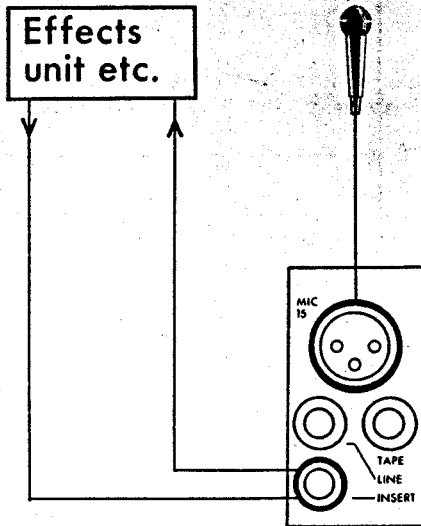
MIC socket	Accepts inputs, balanced or unbalanced, from -58dBV to -8dBV (Pin 3 HOT)
LINE socket	Accepts inputs, balanced or unbalanced from -23dBV to + 17dBV. (Tip HOT)
TAPE socket	Accepts inputs of -1 0dBV from Tape Machine Playback or Sync. (Tip HOT)
INSERT Socket	Break-Point in Channel Signal Path. Normally Closed, Switched Jack. (Tip SEND, Ring RETURN)
MIC/LINE switch	When OUT selects MIC input signal, when IN selects LINE input signal
GAIN control	Varies MIC or LINE input sensitivity. Continuously Variable.
MONITOR TAPE/CHAN switch	When OUT, routes TAPE signal to MONITOR section when IN, routes MIC or LINE signal to Monitor Section
MONITOR LEVEL control	Varies level of signal routed to the (Stereo) MONITOR OUTPUT section.
MONITOR ECHO control	Varies level of signal routed to the stereo MONITOR ECHO OUTPUT section.
MONITOR PAN control	Varies stereo position of signal routed to MONITOR and MONITOR ECHO OUTPUTS.
FB1 control	Varies MONITOR signal routed to the FB1 OUTPUT. Not affected by the MON LEVEL CONTROL.
SELECT CHAN/TAPE switch	When OUT routes MIC or LINE to Channel and routes Pre-Fader (Equalised MIC or LINE) signal to CHAN position of Monitor switch. When IN routes TAPE signal to Channel and MIC or LINE Signal to CHAN position of Monitor switch.
FB2 control	Varies level of Pre-Fader CHANNEL signal to FB2 OUTPUT
AUX 1 control	Varies level of Post-Fader CHANNEL signal to AUX SEND 1 OUTPUT
AUX 2 control	Varies level of Post-Fader CHANNEL signal to AUX SEND 2 OUTPUT
HF CUT/BOOST control	Varies amount of TREBLE boost or cut. Flat in (detented) central position.
MID SWEEP control	Varies the frequency at which the MID CUT/BOOST control is most effective.
MID CUT/BOOST control	Varies the amount of MID frequency boost or cut. Flat in (detented) central position.
LF CUT/BOOST control	Varies amount of BASS boost or cut. Flat in (detented) central position
CHANNEL PAN control	Varies stereo position of Channel signal routed to odd (left) and even (right) stereo GROUP pairs and STEREO MASTER OUTPUTS
SOLO switch	Routes post-pan, pre-fader signal to stereo MONITOR OUTPUTS, HEADPHONES and METERS.
L-R switch	Routes post-pan, post-fader signal to STEREO MASTER OUTPUT SECTION
1-2 switch	Routes post-pan, post-fader signal to GROUP 1 (left) and GROUP 2 (right)
3-4 switch	Routes post-pan, post-fader signal to GROUP 3 (left) and GROUP 4 (right)
5-6 switch	Routes post pan, post fader signal to GROUP 5 (left) and GROUP 6 (right)
7-8 switch	Routes post-pan, post-fader signal to GROUP 7 (left) and GROUP 8 (right)
CHANNEL FADER	Varies ROUTING LEVEL to Groups and Master Outputs.

Phantom Power of 48V is available on all MIC input sockets with balanced, resistive coupling to protect dynamic (unpowered) microphones from damage.

Care should be taken when using unbalanced sources as an offset voltage will be present across the pins of the XLR connector.



INSERT POINTS

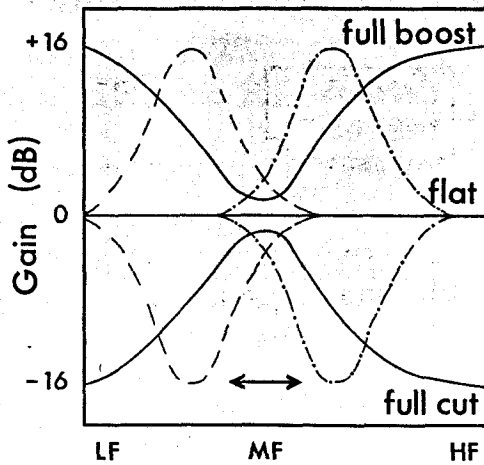


The channel INSERT point is a break point in the input channel signal path. It allows an input channel signal to be taken out of the mixer, through an external piece of equipment, and then back again to continue its journey. The INSERT point is normally closed when not in use. This is accomplished by using a standard quarter inch, 3 pole switched jack socket with console signal available on the TIP connection and return to console input on the RING connection. When not in use, the socket switches the console signal straight back into the console via its switch contacts. When a 3-pole jack is plugged in, it opens the switch contacts, breaking the signal path to external equipment - such as limiters - to be INSERTED into the signal path.

Signal levels at the INSERT point are compatible with all normal external processing equipment and are adjustable using the input GAIN control. Being placed before the equaliser controls in the signal path, the insert point allows any noise generated by the inserted equipment to be reduced with a little HF cut.

EQUALISER SECTION

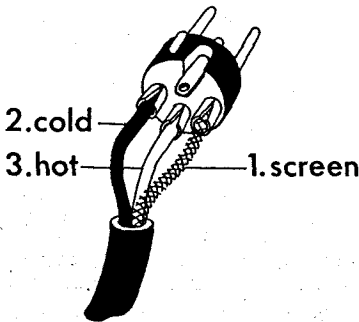
The Equaliser section provides HF (treble) and LF (bass) boost and cut controls, plus a MID range boost and cut control with adjustable centre frequency. The HF and LF controls have shelving characteristics to affect all frequencies equally beyond a certain turn-over point. This avoids overload or distortion at maximum boost settings giving a very wide control range without fear of tape overload or dirty sound.



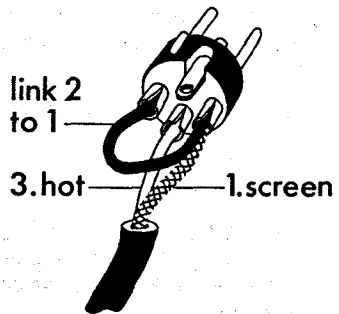
The HF and LF ranges have been carefully set to avoid interfering with the MID range frequencies. The MID range boost/cut control affects a frequency area that depends on the setting of the SWEEP control which can be adjusted from 330 Hz (low mid) to 6.5 KHz (high mid).

This wide range of controls enables particular sound sources to be brought forward or pushed back to give the operator complete control over the 'presence' of that channel, thus avoiding a cluttered final mix without losing depth or timbre.

CABLE TYPES



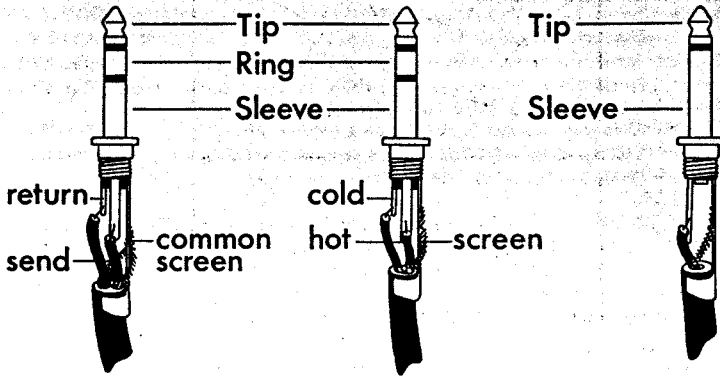
Balanced



Unbalanced

3 POLE (stereo) JACK

2 POLE (mono) JACK



Insert Point	
TIP	SEND
RING	RETURN
SLEEVE	COMMON

Balanced Line + Tape Input	
TIP	I/P HOT
RING	I/P COLD
SLEEVE	SCREEN

Unbalanced Signals Aux Send/Aux Return + Outputs	
TIP	SIGNAL
SLEEVE	SCREEN

*Please note that Auxiliary Sends, Outputs and Auxiliary Return Inputs are wired unbalanced inside the mixer, ie., RING and SLEEVE are internally connected. If you wish to use a 3 Pole Jack, in place of a two Pole Jack, please note that no connection to the ring is necessary as this is taken to ground within the mixer.

Unbalanced sources may be run via balanced cable with the COLD and SCREEN joined or, via an unbalanced cable through a mono jack plug, which automatically shorts the three pole jack socket RING and SLEEVE to unbalance the console input.

Note: many modern audio/musical instruments have electronically balanced outputs which should not be unbalanced by shorting one leg to screen. Always use your SECK console inputs balanced where feasible and consult your dealer if in doubt.

FUNCTIONAL DETAILS - Output Section

Group and Track Output Section

GROUP INSERT socket	Break-point in GROUP Signal Path, Normally Closed, Switched Jack (Tip SEND, Ring RETURN).
TRACK OUTPUT socket	Provides output of +4dBu (unbal.) for Multitrack Tape Recorder Inputs. (Tip HOT)
MASTER output socket	Provides output of +4dBu (unbal.) for Stereo Tape Recorder Inputs etc. (Tip HOT)
GROUP TO MASTER switch	Routes post-fader GROUP signal to MASTER output section. (Odd groups to Left) (Even groups to Right)
TRACK SELECT LO/HI switch (not on 1282)	Routes post-fader GROUP signal to a choice of two of the sixteen Track Outputs- Group 1 to Tracks 1 & 9, 2 to 2 & 10, 3 to 3 & 11 etc.
TRACK SELECT LED's	illuminate to show Group to Track assignments. (not available on 1282)
SOLO switch	Routes pre-fader signal to Stereo Monitor Outputs, Headphones and Meters. (Odd Groups to Left, Even Groups to Right)
GROUP fader	Varies Routing Level to Track Outputs and Master Outputs (if selected).
STEREO MASTER fader	Varies Left and Right Master Output levels.

Talkback Section

TALKBACK MIC	Enables voice communications (via Fold Back system) or cueing (on tape)
TALKBACK LEVEL	Varies Talk Back Microphone section sensitivity
TAPE switch	Routes Talk Back Mic signal via Groups to selected Track or Master Outputs. Not affected by Group Faders.
FB switch	Routes Talk Back Mic signal to Foldback outputs.
SLATE switch	Routes low frequency tone (30Hz) to Track Outputs. Tone audible during fast forward or rewind for off-tape cueing.

Meter Section

BARGRAPH indicator	Illuminates Green LEDs up to OVU, Red LEDs for +1VU and above
PEAK HOLD switch	Stores maximum signal level indications for a short time. Stops operator missing instantaneous high levels that may have overloaded tape.
SOLO ACTIVE indicator	Illuminates when any Solo button is pressed to show that the normal Monitor Outputs, Headphones and Meter signals are overridden by the selected SOLO.
DIM ACTIVE indicator	Illuminates to show that the Master Outputs have been reduced in level to avoid howl round during Talk Back operations etc.

Aux Send Section

AUX SEND sockets	Provide nominal +4dBu (unbalanced) outputs from AUX Send 1 and AUX Send 2 sections.
FB SEND sockets	Provide nominal +4dBu (unbalanced) outputs from FB1 and FB2 sections.
FB1 control	Varies FB1 output level.
FB1 SOLO Switch	Routes FB1 signal to Monitor Outputs, Headphones and Meters. Signal taken after FB1 control.
FB2 control	Varies FB2 output level.
FB2 SOLO switch	Routes FB2 signal to Monitor Outputs, Headphones and Meters. Signal taken after FB2 control
MIX FB1 & FB2 switch	When IN both FB1 & FB2 outputs are the sum of FB1 & FB2 signals
AUX 1 control	Varies AUX 1 output level
AUX 1 SOLO	Routes AUX 1 signal to Monitor Outputs, Headphones and Meters. Signal taken from AUX 1 control
AUX 2 control	Varies AUX 2 output level
AUX 2 SOLO	Routes AUX2 signals to Monitor, Outputs, Headphones and Meters. Signal taken from AUX 2 control
MONITOR ECHO STEREO control	Varies Monitor Echo L & R output levels
MONITOR ECHO SOLO	Routes sum of Monitor Echo signals to Stereo Monitor Outputs, Headphones and Meters

Aux Return Section

AUX RETURN socket	Accepts unbalanced inputs from effects units etc. (Tip HOT).
H.F. BOOST/CUT control	Varies amount of Treble boost or cut. Flat in (detented) central position.
L.F. BOOST/CUT control	Varies amount of Bass boost or cut. Flat in (detented) central position.
AUX RETURN LEVEL	Varies ROUTING Level to Groups and Master Outputs.
AUX RETURN PAN control	Varies stereo position of Aux Return signal routed to odd (left) and even (right) stereo group pairs and to STEREO MASTER OUTPUTS.
L-R switch	Routes post-pan, post-level control signals to STEREO MASTER OUTPUT Section.
1-2 switch	Routes post-pan, post-level control signal to GROUP 1 (left) and group 2 (right).
3-4 switch	Routes post-pan, post-level control signal to GROUP 3 (left) and group 4 (right).
5-6 switch	Routes post-pan, post-level control signal to GROUP 5 (left) and GROUP 6 (right)
7-8 switch	Routes post-pan, post-level control signal to GROUP 7 (left) and GROUP 8 (right).
SOLO switch	Routes post-pan, pre-level control signal to Stereo Monitor Outputs, Headphones and Meters.

Monitor Output Section

L & R MONITOR ECHO SEND sockets	Provide extra post-monitor pan output of +4dBu (unbal.) for stereo effects etc. (Tip HOT)
L & R MONITOR ECHO RETURN sockets	Accept input from stereo effects units, echo chambers etc. (Tip HOT)
L & R MONITOR OUTPUT sockets	Provide main Monitor outputs of +4dBu (unbalanced) to drive monitor amplifier/high quality loudspeaker system
2TX INPUT sockets	Accept input from 2-track Tape machine. Enables playback of 2-track mixdown through Monitor system
MON ECHO TO FB control	Varies level of stereo Mon. Echo return signal routed to FB section (Left to FB 1)(Right to FB2)
MON ECHO TO MONS control	Varies level of stereo Mon. Echo return signal routed to main Stereo Monitor Output Section
MON LEVEL control	Varies Main Stereo Monitor Output level
DIM switch	Reduces main stereo Monitor Output level to avoid howlround during Talkback operations or to enable control room conversation without upsetting level settings

Headphone Output Section

HEADPHONE VOLUME	Varies stereo headphone level
HEADPHONE 1 socket	Provides 2 watts Stereo Headphone drive via 1/4 inch Stereo Jack socket
HEADPHONE 2 socket	Allows connection of 2nd set of 'phones of same impedance as Headphone 1

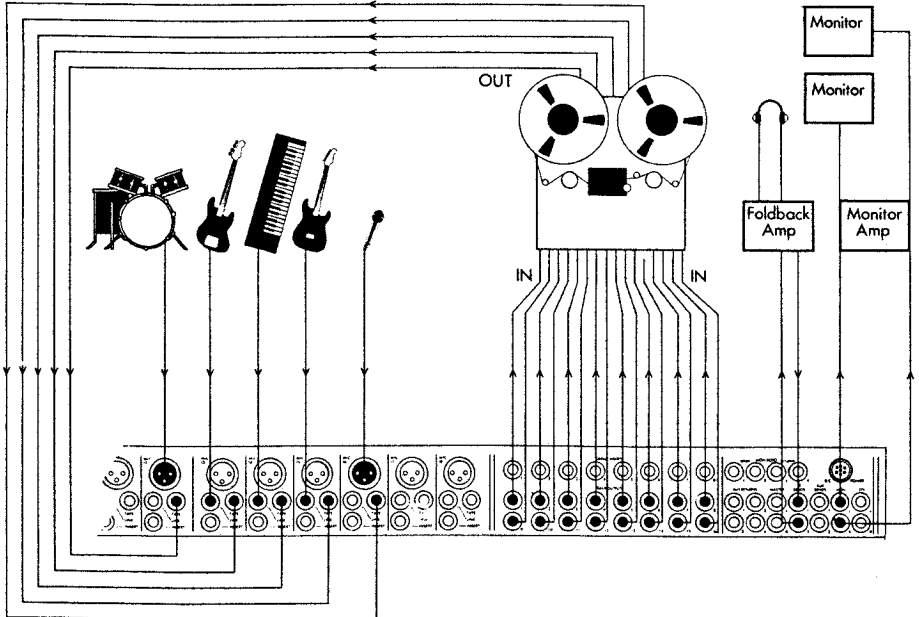
APPLICATIONS

The many versatile features of your SECK console make it suitable for a vast range of different operational techniques and styles.

Experienced operators will recognise the potential use of most controls, but for initial familiarisation with the main control settings for Recording, Playback, Overdub and P.A. applications, the following notes should provide a useful starting reference.

For details of AUX and FOLDBACK applications, see pages 20 and 22.

RECORDING



1. Set INPUT, GROUP, TRACK, TALKBACK, MONITOR, HEADPHONE and all AUX controls as listed in table 1 overleaf.
2. Apply an example of the maximum input level expected to be recorded via each input and set each input channel GAIN control as follows:-
 - a. Press channel SOLO IN
 - b. Adjust GAIN for about 0 to +3 indication on the relevant (Left or Right) BAR-GRAPH display.
 - c. Release channel SOLO button.
 If H.F., MID or L.F. equaliser controls are adjusted later, recheck the GAIN setting.
3. Set each GROUP FADER, in turn, as follows:-
 - a. Apply an example of maximum input level, via an input channel.
 - b. Switch the MULTITRACK TAPE MACHINE so that its input levels are indicated on its TRACK METERS
 - c. Adjust the GROUP FADER for nominal RECORD LEVEL indication on the TAPE MACHINE. See TAPE MACHINE manual for recommended levels.
4. Set up the MONITOR OUTPUT LEVEL as follows:-
 - a. Apply an example of maximum expected level via an input channel.
 - b. Press the channel SOLO IN.
 - c. Adjust the main MON level control (near the output section of the console) for a safe maximum sound pressure level from the MONITOR LOUDSPEAKERS.
 - d. Release channel SOLO button.

A STEREO MONITOR mix can now be set up using the input CHANNEL MONITOR LEVEL and MONITOR PAN controls.

5. CHANNEL inputs may now be routed to the required TRACK outputs via GROUPS 1-8 as follows:
 - a. Decide which CHANNEL inputs are to be mixed together to form a GROUP and press the same 1-2, 3-4, 5-6, 7-8 button on each of those channels. If, for instance, a drum mix is to be built up on GROUP 1, PRESS BUTTON 1-2 ON EACH CHANNEL fed with a drum signal and rotate each CHANNEL PAN control fully LEFT.

Note that the PAN controls feed channel signals to ODD numbered GROUPS when fully left and EVEN numbered GROUPS when fully RIGHT. The eight groups may be used in up to four stereo pairs with the CHANNEL PAN controls then being used as LEFT-RIGHT positional controls.

Using our drum mix example, a stereo drum mix may be built up on GROUPS 1-2 if each drum CHANNEL PAN control is adjusted to position that particular input signal within the stereo mix. (e.g. The bass/kick drum would normally be set in the centre, with tom-toms being positioned from left to right according to tuning.)

- b. Adjust each CHANNEL FADER for the required level balance within the GROUP mix.
- c. On 16 output desks route each GROUP to the required tape TRACK output. Leaving the TRACK SELECT buttons OUT on Groups 1-8 will route those GROUPS to TRACKS 1 to 8 respectively; pressing them IN will route the GROUPS to TRACKS 9-16 respectively.

A multitrack recording may, therefore, be built up by recording percussion and rhythm backing, for example, first on TRACKS 1-8 with TRACK SELECT buttons OUT, then adding, say, vocals and instrumentals on TRACKS 9-16 with the TRACK SELECT buttons IN.

Remember to set the appropriate tracks, on the tape machine, into RECORD or PLAYBACK (SYNC) each time.

For playing back previously recorded tracks as new tracks are being recorded, see the OVERDUB section later.

INITIAL SETTINGS TO RECORD (Table 1)

Input Section

MIC socket	Source from Low/Medium output microphones
LINE socket	Source directly from Inst. or High O/P Mics
TAPE socket	Source from (Mon., Sync., Playback) Multitrack O/P
INSERT socket	Leave unused, initially
MIC/LINE switch	Out for Mic., IN for Line, as required.
GAIN control	CCW (Counterclockwise, i.e. turned right down).
MONITOR TAPE/CHAN switch	IN for Fostex E16, Release to check Multitrack Record Input Signal.
MONITOR LEVEL control	CCW, initially.
MONITOR ECHO control	CCW
MONITOR PAN control	Centred initially
FB1 control	CCW
SELECT CHAN/TAPE switch	Out
FB2 control	CCW
AUX 1 control	CCW
AUX 2 control	CCW
HF CUT/BOOST control	Centred
MID SWEEP control	Centred
MID/CUT BOOST control	Centred
LF CUT/BOOST control	Centred
CHANNEL PAN control	Left for Odd Right for Even
SOLO switch	Out
L-R switch	Out
1-2 switch)
3-4 switch)
5-6 switch) see text
7-8 switch)
CHANNEL FADER	Set to '0' position

Group & Track Output

GROUP INSERT socket	Leave unused initially
TRACK OUTPUT socket	Drive for Multitrack Recorder inputs
MASTER output socket	Unused initially
GROUP TO MASTER switch	Out
TRACK SELECT LO/Hi switch (not on 1282)	See Text
TRACK SELECT (not on 1282)	indicators show
SOLO switch	Tracks selected
GROUP FADER	Out
MASTER FADER	set to '-10' position
	Down

Talkback Section

TALKBACK MIC	Used for recording vocal cues on tape,
TALKBACK LEVEL control	Set for comfortable Talkback level
TAPE switch	Use when recording vocal Cue to Tape
FB switch	Push to talkback
SLATE switch	Used to record F.Fwd/Rwd

Meter Section

BARGRAPH indicator	Should give appropriate reading for each SOLO pressed
PEAK HOLD switch	IN
SOLO ACTIVE indicator	Illuminates when any SOLO is pressed
POWER ON indicator	Check that it is illuminated

Power Supply unit

Green + Amber (-) Indicators	Check that these are illuminated
PHANTOM ON/OFF Integral indicator	on as required

Monitor Output Section

MONITOR ECHO SEND sockets	Unused initially
MONITOR ECHO RETURN sockets	Unused initially
MONITOR OUTPUT sockets	Drive for stereo Monitor Amplifier/Speakers
2TX INPUT sockets	Unused initially
MONITOR SOURCE CHAN MON switch)
MONITOR SOURCE L-R switch	IN)interlocked Pressing any MON SOURCE
MONITOR SOURCE 2TX switch	OUT)switch cancels other)Monitor signals
GROUP INSERT socket	OUT)
MONITOR ECHO TO FB control	Leave unused initially
MON ECHO TO MONS control	CCW
MON LEVEL control	CCW
DIM switch	CCW initially
	OUT

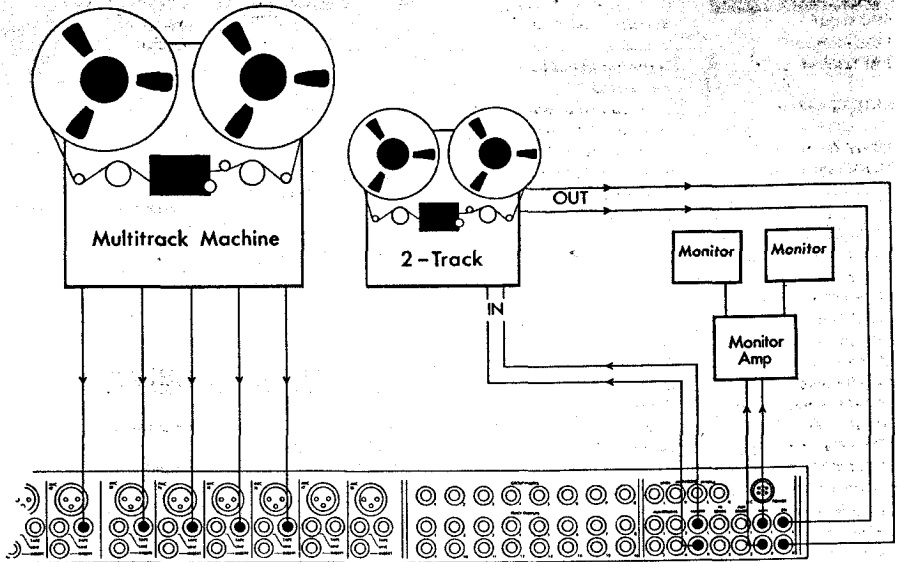
'Phone Output Section

HEADPHONE VOLUME control	CCW initially
HEADPHONE 1 socket	Drive for high quality stereo headphones

Aux Send & Return

All sockets	Unused initially
All switches	Out, initially
All level controls	CCW, initially

PLAYBACK/MIX-DOWN



1. Set INPUT, GROUP, TRACK, TALKBACK, MONITOR, HEADPHONE and AUX controls as shown in table 2 overleaf.
2.
 - a. Press the L-R switch if an individual channel is to be routed directly to the MASTER (LEFT & RIGHT) STEREO mix.
 - b. Press the appropriate 1-2, 3-4, 5-6 or 7-8 switch if a channel is to be mixed with others for overall GROUP level adjustment in the MASTER STEREO mix using the GROUP FADER.
3. During TAPE playback advance the MON OUTPUT LEVEL control for a comfortable MONITOR LOUDSPEAKER level.
4.
 - a. Use each CHANNEL FADER control to adjust its level in the mix.
 - b. Press the appropriate CHANNEL SOLO button to hear an individual channel on its own. Release SOLO button to return to the overall MONITOR MIX.
5. Use the Stereo MASTER FADER to adjust the Left and right Master OUTPUTS for a nominal level suitable for the TWO-TRACK TAPE MACHINE (to be used to record the STEREO MASTER) whilst an example of maximum recorded level being played back from the MULTITRACK TAPE MACHINE via the console

INITIAL SETTINGS TO PLAYBACK/MIXDOWN (Table 2)

Input Section

MIC socket	Unused
LINE socket	Unused
TAPE socket	Source from Multitrack Playback O/P
INSERT socket	Leave unused, initially
MIC/LINE switch	Unused
GAIN control	CCW, Unused
MONITOR TAPE/CHAN switch	In for Fostex E16, Release to check Multitrack Record Input Signal.
MONITOR LEVEL control	CCW, initially.
MONITOR ECHO control	CCW
MONITOR PAN control	Centred initially
FB1 control	CCW
SELECT CHAN/TAPE switch	In
FB2 control	CCW
AUX 1 control	CCW
AUX 2 control	CCW
HF CUT/BOOST control	Centred
MID SWEEP control	Centred
MID/CUT BOOST control	Centred
LF CUT/BOOST control	Centred
CHANNEL PAN control	Centred initially
SOLO switch	Out
L-R switch	}
1-2 switch	}
3-4 switch	}
5-6 switch	}
7-8 switch	} see text
CHANNEL FADER	Set to '0' position

Group & Track Output

GROUP INSERT socket	Leave unused initially
TRACK output socket	Unused initially
MASTER output socket	Drive for 2 track Recorder inputs
GROUP TO MASTER switch	In
TRACK SELECT	
LO/HI switch (not on 1282)	See Text
TRACK SELECT indicators	not relevant
SOLO switch	Out
GROUP FADER	set to '0' initially
MASTER FADER	set to '-10' initially

Talkback Section

TALKBACK MIC	Unused initially
TALKBACK LEVEL control	CCW
TAPE switch	Out
FB switch	Out
SLATE switch	Out

Meter Section

BARGRAPH indicator	Should give appropriate reading for each SOLO pressed
PEAK HOLD switch	In
SOLO ACTIVE indicator	Illuminates when any SOLO is pressed
POWER ON indicator	Check that it is illuminated

Power Supply unit

Green + Amber(-) indicators	Check that these are illuminated
PHANTOM ON/OFF integral indicator	on as required

Monitor Output Section

MONITOR ECHO SEND sockets	Unused initially
MONITOR ECHO RETURN sockets	Unused initially
MONITOR OUTPUT sockets	Drive for stereo Monitor Amplifier/Speakers
2TX INPUT sockets	Source from 2-track machine output sockets
MONITOR SOURCE CHAN MON switch	Out. Interlocked
MONITOR SOURCE L-R switch	In initially. (Monitors Master Outputs. Interlocked)
MONITOR SOURCE 2TX switch	Out initially. (Monitors 2-track return)
MONITOR ECHO TO FB control	CCW
MON ECHO TO MONS control	CCW
MON LEVEL control	CCW initially
DIM switch	OUT

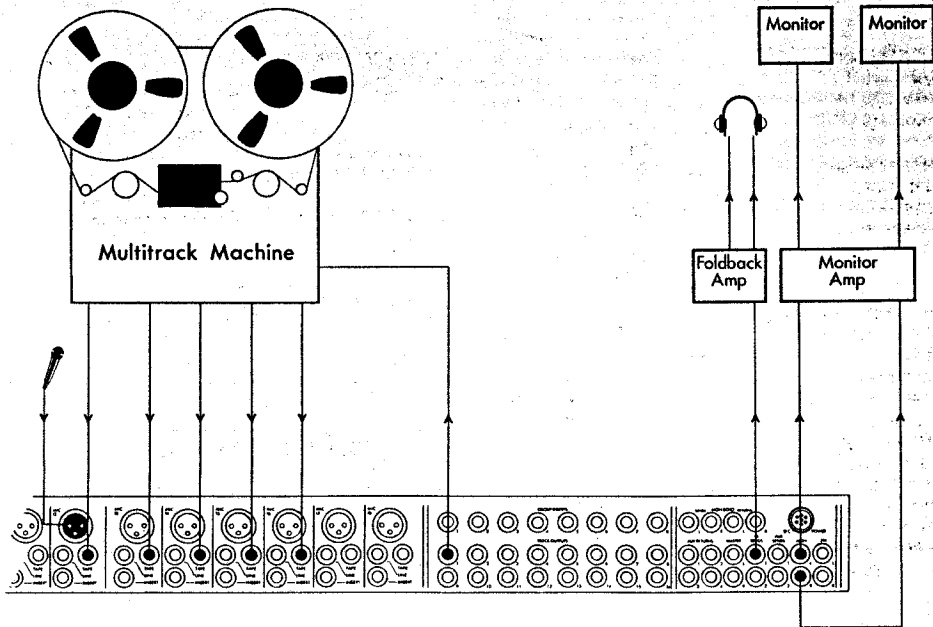
'Phone Output Section

HEADPHONE VOLUME control	CCW initially
HEADPHONE 1 socket	Drive for high quality stereo headphones

Aux Send & Return

All sockets	Unused initially
All switches	Out, initially
All level controls	CCW, initially

OVERDUBBING



This is a technique that allows one or more tape tracks to be recorded as other tracks are being played back, to enable new tracks to be added or existing tracks to be re-recorded.

1. Set appropriate INPUT, GROUP, TRACK, TALKBACK, MONITOR, HEADPHONE and AUX controls as shown in table 3 overleaf.
2. Set the MULTITRACK TAPE MACHINE, initially, so that all channels are in Synchronised Playback (Sync) mode.
3. During Tape Playback, set up a rough FOLDBACK mix, for the overdub artist, using CHANNEL FB1 OUTPUT control (near the output section of the console).

Note that FB1 signals follow the Channel Monitor TAPE/CHAN switch so that the artist can hear the previous take, before he begins, if the switch is released, and can hear himself when it is pressed in again.

4. Advance the MON OUTPUT LEVEL control (with tape still playing) until a comfortable MONITOR LOUDSPEAKER level is achieved.
5.
 - a. Use each CHANNEL FADER and PAN control to adjust its level and position in the rough MASTER mix.
 - b. Press the appropriate channel SOLO button to hear an individual channel on its own. Releasing the SOLO button will return the rough monitor mix.
6. Switch the MULTITRACK MACHINE channel to be overdubbed from (Sync) PLAYBACK to RECORD ensuring all other channels are in PLAYBACK only.
7. When the TAPE MACHINE START is pressed, overdubbing can commence.

INITIAL SETTINGS TO OVERDUB (Table 3)

Input Section

MIC socket
LINE socket
TAPE socket
INSERT socket
MIC/LINE switch
GAIN control
MONITOR TAPE/CHAN
MONITOR LEVEL control
MONITOR ECHO control
MONITOR PAN control
FB1
SELECT CHAN/TAPE switch
FB2 control
AUX 1 control
AUX 2 control
HF CUT/BOOST control
MID SWEEP control
MID/CUT BOOST control
LF CUT/BOOST control
CHANNEL PAN control
SOLO switch

L-R switch
1-2 switch
3-4 switch
5-6 switch
7-8 switch
CHANNEL FADER

Overdub/Record Input

Source from Low/Medium O/P mikes
 Source from Instrument etc
 Source from Multitrack O/P
 Leave unused, initially
 Out for Mic., IN for Line,
 Set for 0/+3 on meter when solo 'in'
 In (Out to check previous take)
 CCW, initially.
 CCW
 Centred initially
 Adjust as required
 Out
 CCW
 CCW
 CCW
 CCW
 Centred
 Centred
 Centred
 Centred
 Fully left or right
 Out (In to set gain with example
 of max expected input level)
 Out
)
)
) as required to route to
) appropriate O/P group
 set to '0' position

Playback Input

Unused
 Unused
 Source from Multitrack O/P
 Unused
 Unused
 (CCW) Unused
 Out
 CCW
 CCW
 Centred initially
 Adjust as required
 In (for rough mixdown)
 CCW
 CCW
 CCW
 Centred
 Centred
 Centred
 Centred
 Centred
 Out

 In (for rough mix-down)
 Out
 Out
 Out
 Out
 '0' initially

Group & Track Output

GROUP INSERT socket
TRACK OUTPUT socket

MASTER output socket
GROUP TO MASTER
 switch
TRACK SELECT
 LO/HI switch
 (not on 1282)
TRACK SELECT LED's
SOLO switch
GROUP FADER
MASTER FADER

Unused
 For Multitrack recorder
 (Overdub channel only required)
 Unused

 Out
 As required to route
 overdub to required track

 confirm selection
 Out
 set to '-10' initially
 set to '0' initially

Meter Section

BARGRAPH indicator

PEAK HOLD switch
SOLO ACTIVE indicator

POWER ON indicator

Should give appropriate
 reading for each SOLO
 pressed
 In
 Illuminates when
 any SOLO is pressed
 Check that it is illuminated

Talkback Section

TALKBACK MIC

TALKBACK LEVEL
 control
TAPE switch
FB switch
SLATE switch

Used to communicate with
 overdub artist
 set for comfortable
 Talkback level
 Out
 Push to talkback
 Out

Power Supply unit

Green + Amber(-)
 indicators
PHANTOM ON/OFF
 integral indicator

Check that these are
 illuminated

 on as required

Aux Send & Return

All sockets Unused initially
 All switches Out, initially
 All level controls CCW, initially

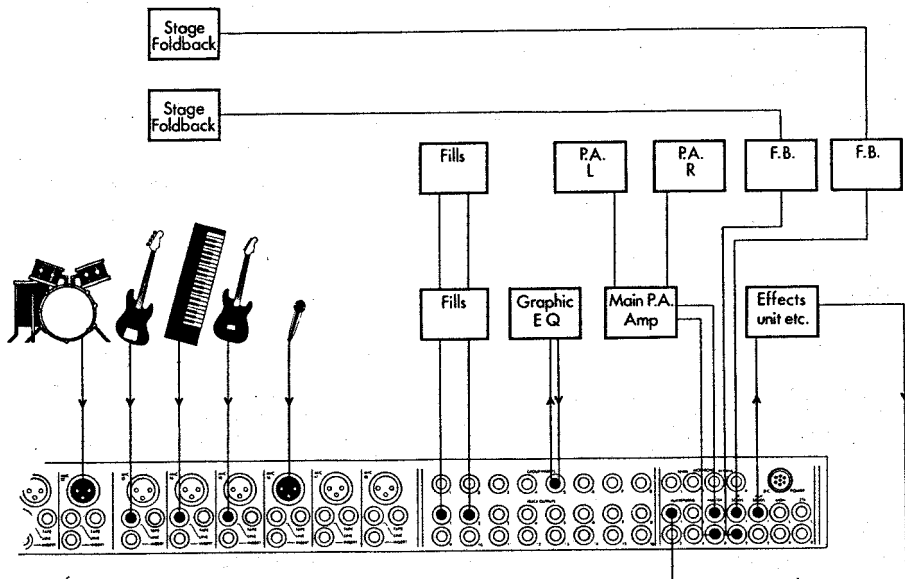
Monitor Output Section

MONITOR ECHO
 SEND sockets Unused initially
MONITOR ECHO
 RETURN sockets Unused initially
MONITOR OUTPUT
 sockets Drive for stereo Monitor Amplifier/Speaker
2TX INPUT sockets Unused initially
MONITOR SOURCE
 CHAN MON switch IN } interlocked Pressing
MONITOR SOURCE } any MON SOURCE
 L-R switch OUT } switch cancels other
MONITOR SOURCE } Monitor signals
2TX switch OUT)
 GROUP INSERT socket Leave unused initially
MONITOR ECHO TO FB
 control CCW
MON ECHO TO MONS
 control CCW
MON LEVEL control CCW initially
DIM switch OUT

Phone Output Section

HEADPHONE VOLUME
 control CCW initially
HEADPHONE 1 socket Drive for high quality stereo headphones

LIVE P.A.



1. Set INPUT, GROUP, TRACK, TALKBACK, MONITOR, HEADPHONE and AUX controls as listed in table 4.
2. Apply an example of the maximum input levels expected from each artist, via each input, and set each input channel GAIN control as follows:-
 - a. Press SOLO IN.
 - b. Adjust GAIN control for about 0 to +3 indication on the relevant (LEFT or RIGHT) BARGRAPH meter.
 - c. Release SOLO button.

If H.F., L.F. or MID equaliser controls are used later, recheck the GAIN setting.

3.
 - a. Press the L-R switch if an individual input channel is to be routed directly to the MASTER (LEFT & RIGHT) STEREO mix.
 - b. Press the appropriate 1-2, 3-4, 5-6 or 7-8 switch if a channel is to be sub-mixed with others before joining the MASTER (LEFT & RIGHT) STEREO mix.
4. Slowly advance the STEREO MASTER FADER to the '0' position.

Note: if you hear excessive noise, even with all the input faders down, check the main P.A. amplifier gains are not too high. If fitted with level controls, set them to 2 o'clock position.

5.
 - a. Use each CHANNEL FADER & PAN control to adjust its level and stereo position in the overall mix.
 - b. Press the appropriate CHANNEL SOLO button to hear an individual channel on HEADPHONES, using the HEADPHONE VOLUME control to obtain a comfortable reference level.
6.
 - a. Adjust each submix level, in the STEREO MASTER mix, using the GROUP FADER.
 - b. Press in the GROUP SOLO button to hear a GROUP mix on HEADPHONES.
7. Use the STEREO MASTER FADER to adjust the LEFT & RIGHT MASTER OUTPUTS for the main P.A. stacks.

Note that with the input channel MONITOR TAPE/CHAN switch IN and the SELECT CHAN/TAPE switch OUT, FB1 and FB2 provide two input channel pre-fader controls to enable two separate stage foldback mixes to be constructed independent of input channel fader (P.A. mix) settings.

To build a foldback mix, set the required FOLDBACK OUTPUT LEVEL control (near the console output section) to the 2 o'clock position, initially. Adjust the relevant input channel FB1 or FB2 controls until a satisfactory foldback is obtained.

A compromise is normally required to obtain adequate foldback level while avoiding acoustic 'howlround'.

INITIAL SETTINGS FOR LIVE P.A. (Table 4)

Input Section

MIC socket	Source from Low/Medium output microphones
LINE socket	Source directly from Inst. or High O/P Mics
TAPE socket	Leave unused unless recording as well
INSERT socket	Leave unused, initially
MIC/LINE switch	Out for Mic., IN for Line, as required.
GAIN control	CCW (Counterclockwise, i.e. turned right down).
MONITOR TAPE/CHAN switch	In
MONITOR LEVEL control	CCW, initially.
MONITOR ECHO control	CCW
MONITOR PAN control	Centred initially
FB1 control	CCW
SELECT CHAN/TAPE switch	Out
FB2 control	CCW
AUX 1 control	CCW
AUX 2 control	CCW
HF CUT/BOOST control	Centred
MID SWEEP control	Centred
MID/CUT BOOST control	Centred
LF CUT/BOOST control	Centred
CHANNEL PAN control	Left for Odd Right for Even
SOLO switch	Out
L-R switch	Out
1-2 switch)
3-4 switch)
5-6 switch) see text
7-8 switch)
CHANNEL FADER	Down initially

Group & Track Output

GROUP INSERT socket	Leave unused initially
TRACK OUTPUT sockets	May be used for vocal clusters, fills, etc
MASTER output socket	Drive for main P-A
GROUP TO MASTER switch	Left and Right stacks
TRACK SELECT switch	In
LO/MI switch (not on 1282)	Not used
TRACK SELECT indicators	Not relevant
SOLO switch	Out
GROUP FADER	Set to '0' initially
MASTER FADER	Set down initially

Talkback Section

TALKBACK MIC	Use for talkback
TALKBACK LEVEL control	Set for comfortable Talkback level
TAPE switch	Out
FB switch	Push to talkback
SLATE switch	Out

Meter Section

BARGRAPH indicator	Should give appropriate reading for each SOLO pressed
PEAK HOLD switch	In
SOLO ACTIVE indicator	Illuminates when any SOLO is pressed
POWER ON indicator	Check that it is illuminated

Power Supply unit

Green+ Amber(-) indicators	Check that these are illuminated
PHANTOM ON/OFF integral indicator	on as required

Monitor Output Section

MONITOR ECHO SEND sockets	Unused initially
MONITOR ECHO RETURN sockets	Unused initially
MONITOR OUTPUT sockets	Drive for stereo Monitor Amplifier/Speaker system if mixing from booth
2TX INPUT sockets	Unused initially
MONITOR SOURCE CHAN MON switch	Out
MONITOR SOURCE L-R switch	In
MONITOR SOURCE 2TX switch	Out
MONITOR ECHO TO FB control	CCW
MON ECHO TO MONS control	CCW
MON LEVEL control	CCW initially
DIM switch	Out

Phone Output Section

HEADPHONE VOLUME control	CCW initially
HEADPHONE 1 socket	Drive for high quality stereo headphones

Aux Send & Return

All sockets	Unused initially
All switches	Out, initially
All level controls	CCW, initially

AUX APPLICATIONS

The channel controls AUX 1 and AUX 2, as their name implies, route input channel signals to outputs that are separate from the TRACK or MASTER outputs and suitable for a variety of extra applications. They are derived after the channel fader and therefore follow the fader level. They are often used to drive extra effects, such as echo units or delay lines, where the effect is required to follow the dry (original) signal.

Note that the output from such effects units would normally be returned to the Group section via the AUX RETURN facility.

The AUXILIARY SEND (OUTPUT) controls determine the output level at the AUX SEND sockets. Nominal output level is +4dBu.

Having set up the console, initially, effects may be applied using the AUX SEND and RETURN facilities as follows:-

- a. Feed the effects unit input from the required AUX SEND output socket.
- b. Feed the AUX RETURN input socket from the effects unit output.
- c. Decide which CHANNEL signals are to be treated, and advance the required CHANNEL AUX 1 or 2 control to about the 2 o'clock position.
- d. Press the relevant AUX SEND (OUTPUT) SOLO button (on the far right-hand side of the console).
- e. With an example of maximum signal being fed into the appropriate CHANNEL advance the AUX SEND (OUTPUT) level control for a bargraph reading of about 0 to +3VU.
- f. Set the AUX RETURN level control to about the 2 o'clock position and press the AUX RETURN SOLO button.
- g. Listen on HEADPHONES or MONITORS and carefully adjust the effects unit for the required sound, ensuring it does not overload by adjusting its input level control.
- h. Route the AUX RETURN signal to the appropriate GROUP mix, using the AUX RETURN 1-2, 3-4, 5-6 & 7-8 buttons, and adjust the level and position of the treated signal, in the mix, with the AUX RETURN LEVEL & PAN controls.

Note: Use the AUX SEND SOLO to hear the original 'dry' sound and the AUX RETURN SOLO to hear the treated sound.

The desired balance of 'dry' and treated sound may be obtained in the GROUP mix by finely adjusting the AUX RETURN controls.

The AUX RETURN H.F. & L.F. controls may be used for extra tonal effect or to reduce any unwanted noise from the effects units.

MONITOR ECHO

The Monitor Echo facility enables features like chorus effects or reverberation to be mixed into the MONITOR or FOLDBACK outputs. This is particularly helpful in avoiding a confusing, very dry vocal foldback. Most vocalists find it much easier to harmonise with a treated foldback sound providing depth and strength without resorting to high levels of foldback that approach 'howlround'. A little reverberation on the MONITORS enhances what would be a rather dry, rough-mix sound, enabling producers and musicians to assess the recording very early, before 'sweetening'. Clicks, pops, wow and flutter become more audible, allowing detection and editing before the final mix-down.

To use this facility, set up a MONITOR mix as previously described, decide which CHANNEL signals are to be treated and advance the ECHO control on those channels to about the 2 o'clock position, initially.

With a (stereo) effect unit driven from the MONITOR ECHO SEND outputs, adjust the MON ECHO (STEREO) output level control for an indication of about 1 to +3 on the bargraph meters when the MON ECHO (STEREO) SOLO button is pressed. Feed the stereo effects unit into the MONITOR ECHO RETURN inputs and adjust the MON ECHO to FB or MON ECHO to MONS to the desired levels required in the FOLDBACK or MONITOR systems respectively.

With a (stereo) effect unit driven from the MONITOR ECHO SEND outputs, adjust the MON ECHO (STEREO) output level control for an indication of about 1 to +3 on the bargraph meters when the MON ECHO (STEREO) SOLO button is pressed. Feed the stereo effects unit into the MONITOR ECHO RETURN inputs and adjust the MON ECHO to FB or MON ECHO to MONS to the desired levels required in the FOLDBACK or MONITOR systems respectively.

Readjust the input channel ECHO controls for the required mix balance if necessary. Adjust the MON ECHO (STEREO) output level control and the effect unit level control for a clean signal, from the effect unit, without overload.

Remember that what you hear on the monitors is not necessarily the signal being routed to the final mix or being recorded. Use individual SOLO buttons regularly, to check inputs and outputs.

FOLDBACK

The channel FOLDBACK CONTROLS FB1 and FB2 enable two separate foldback mixes to be constructed:

FB1 is derived from the MONITOR chain of each input section and may be used for TAPE reviewing or LIVE/TAPE comparisons.

FB2 is derived from the CHANNEL chain and is post-insert, post-equaliser. It may be used as stage foldback during a live performance.

Both foldback controls are unaffected by the channel fader or monitor level controls. In conjunction with the channel SELECT CHAN/TAPE and MONITOR TAPE/CHAN switches, many foldback combinations are possible.

The FOLDBACK (OUTPUT) controls 1 & 2 set the individual foldback output levels. The MIX FB1 & FB2 button allows the two foldback systems to be instantly added for Channel & Tape comparisons -particularly useful during overdubs or drop-ins. In this mode both FOLDBACK OUTPUT sockets are driven with the same, composite mix, and the level of each foldback mix is reduced by 6dB, to avoid excessive jumps in volume resulting from the summing of these signals.

A Note on Microphone Placement: *A Microphone can be a very accurate and creative tool and should be placed to obtain the required 'sound' avoiding the use of excessive equalisation if possible. Careful microphone placement can result in a much cleaner and more dynamic sounding mix, leaving equalisation available for unforeseen problems or special effects. Allow for possible microphone failures. Aim to keep one channel set up with a spare microphone (particularly for lead vocals or dancing vocalists).*

SECK VERSATILITY

Your SECK Multitrack Recording Console has been designed for a very wide variety of applications. The following notes can only hint at its incredible flexibility, enabling it to fulfil the needs of the most demanding tasks.

MORE INPUT FACILITIES

Inputs are not restricted to the number of channels; extra inputs are available via the four AUX RETURN inputs. Each one will function as a high quality LINE input with H.F. & L.F. equalisation controls and full routing facilities to the eight GROUPS and STEREO MASTER outputs. In addition to the LEVEL and PAN controls, each AUX RETURN has a SOLO button. This enables you to monitor the post-equaliser AUX RETURN input but is unaffected by the LEVEL control.

MORE OUTPUT FACILITIES

Recording/Playback/Mix-down.

The INSERT send signals may be used, without breaking the signal path, by shorting the INSERT jack TIP and RING terminals. (If in doubt see your SECK dealer.) This then enables all input channels to provide DIRECT (IN-LINE) outputs for MULTI-TRACK RECORDING. These DIRECT outputs are before the CHANNEL Equaliser or Fader controls so may be used, during a live performance, unaffected by the PA mix settings.

The eight GROUP INSERTS may be used to provide DIRECT outputs for 8 TRACK RECORDING. These outputs are unaffected by the GROUP Fader settings. Any AUX SEND, FOLDBACK, MONITOR or MONITOR ECHO outputs may be used as 2 TRACK RECORDING outputs if the Stereo Master Outputs are already in use for P.A. Similarly, any of these outputs may be used to provide an instant rough-mix during a session.

It is, therefore, possible with the 1882 to provide 2 TRACK, 8 TRACK, 16 TRACK and 24 TRACK RECORDING plus a P.A. mix from the one SECK console!

Multitrack master tapes could be mixed down to 16 TRACKS, 8 TRACKS and 2 TRACKS simultaneously, for a variety of FILM and BROADCAST applications.

INSERT POINTS

Effects units may be employed using the AUX SEND & RETURN sections, as previously described, or individual CHANNEL or GROUP effects may be INSERTED. See Functional Details section for a description of an INSERT point.

Note that when an effects unit is inserted into an input channel some readjustment of the GAIN control (on the console) may be required to avoid overloading or premature limiting within the effects unit. If this is done, use the effects unit level control to reset a suitable indication on the bargraph meter when the solo button is pressed.

When an effects unit is inserted into a GROUP INSERT point, some readjustment of the GROUP FADER may be required to reset the TRACK OUTPUT level or the GROUP level within the MASTER OUTPUTS.

PUBLIC ADDRESS

The 16 TRACK outputs may be used to drive extra LOUDSPEAKER CLUSTERS from particular GROUP sub-mixes (e.g. Vocals for extra P.A. clarity).

In addition to FB 1, the STEREO MONITOR and STEREO MONITOR ECHO outputs may be used for extra foldback if the input CHANNEL MONITOR TAPE/CHAN switches are pressed IN.

Any AUX, FOLDBACK, MONITOR, or MONITOR ECHO outputs may be used as extra GROUP or FOLDBACK outputs. The FOLDBACK or MONITOR mixes are then provided with two extra inputs via the STEREO MONITOR ECHO sockets.

REMEMBER THAT THE LABELS ON THE CONSOLE CONTROLS ARE FOR SUGGESTED FUNCTIONS ONLY - THEY MAY ALL BE USED TO PROVIDE EXTRA MIXES FOR ANY NUMBER OF DIFFERENT APPLICATIONS.

MAINTENANCE/SERVICE

The SECK recording console has been designed for use without regular maintenance, but, as with any portable equipment, mains cables and plugs should be inspected for wear and tear.

For safety reasons, Mains Grounds should never be removed. Ground-loops should be avoided by breaking excess screens between balanced units only. Removing Mains Grounds from individual units is extremely hazardous and is not recommended. Microphones and musical instruments should always have continually screened leads and should always be grounded. If in doubt, consult your dealer.

Should a fault develop, check that things are set up correctly and check the integrity of all plugs, sockets and cables. If the problem persists, contact your dealer or return the unit directly to the manufacturer, in its original box, with a full description of the fault. For work under guarantee, proof of original purchase must be submitted.

Some Final Words

Your SECK console has been designed for easy use. With a little practice you will soon find operating the console becomes 'second nature', allowing you to give full attention to the creative aspects of the work. You will be able to serve the performers and their producers, etc., without the equipment getting in the way, as so often happens with confusingly laid out consoles.

If you do have a problem, remember that this often happens through operator error rather than through electronic or mechanical failure. Please cross-check all input, output and insertion wiring plus the mains supply. If these do not reveal the cause, then contact your nearest SECK dealer or distributor.

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 that such a person is authorised 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

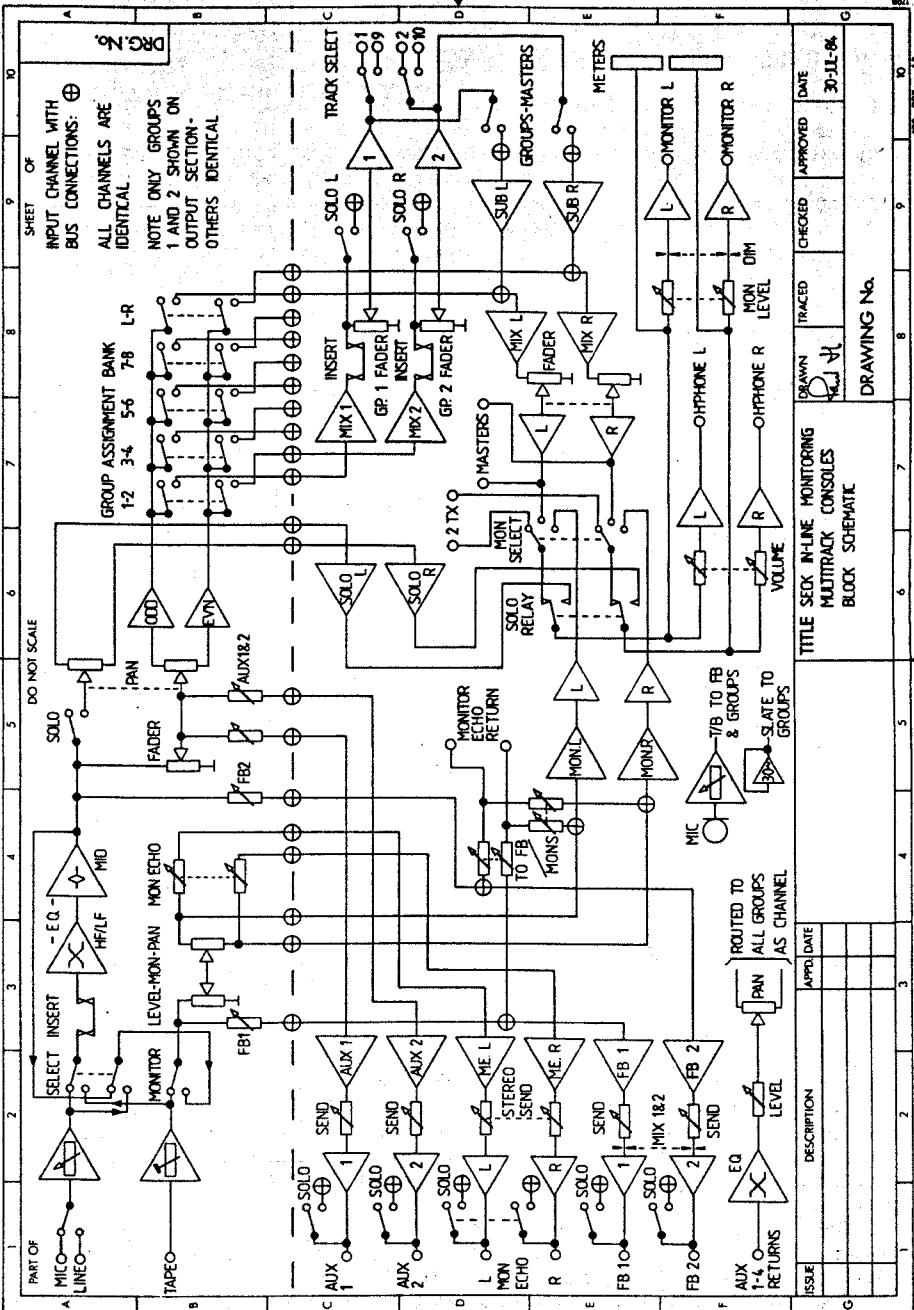
c). no persons other than authorised representatives of Soundcraft or the Dealer have effected any replacement of parts, maintenance adjustments or repairs to the Equipment; and

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.



DO NOT SCALE

GROUP ASSIGNMENT BANK
1-2 3-4 5-6 7-8 L-R

TRACK SELECT
01 02 03 04 05 06 07 08 09 10

SOLE L SOLE R

GROUPS-MASTERS
SUB L SUB R

MIX L MIX R

FADER

MON L MON R

MONITOR

MON LEVEL

MON DIM

OFFPHONE L OFFPHONE R

VOLUME

2 TX

SOLO RELAY

SOLO SELECT

MONITOR ECHO RETURN

MONS TO FB

7/8 TO FB & GROUPS

SLATE TO GROUPS

ROUTED TO ALL GROUPS AS CHANNEL

EQ

LEVEL

PAN

DATE	30-11-86
APPROVED	
CHECKED	
TRACED	
DRAWN	

TITLE SEEK IN-LINE MONITORING
MULTITRACK CONSOLES
BLOCK SCHEMATIC

DRAWING No.

ISSUE	DESCRIPTION	APPRO DATE
1		
2		
3		

General Specifications

Frequency Response	All outputs routed from Mic or line	better than +/-1 dB, 20Hz-20kHz
Signal to Noise Ratio	Mic input equivalent input noise ref 600Ω, max gain Group outputs, all inputs at unity gain Master Outputs, all inputs at unity gain Monitor outputs, all sends at max FB1 outputs, all sends at max FB2 outputs all FB2 sends at max Aux 1 & 2 output, all sends at max Mon Echo outputs, all sends at max	better than -124dBu (DIN 45 633) better than -80dB (ref, +4dBu) better than -80dB (ref, +4dBu) better than -86dB (ref, +4dBu) better than -86dB (ref, +4dBu) better than -81 dB (ref, +4dBu) better than -77 dBu (ref, 0dBu) better than -79dBu (ref 0dBu)
C.M.R.R	Mic input common mode rejection ratio, 1 kHz signal	60dB typical at max gain.
Distortion	Mic input (set to -30dBu) subgrouped to master outputs Intermodulation, mic to masters Line input (set to +4dBu) subgrouped to master outputs Intermodulation, line to masters	0.0085% T.H.D. at 1kHz; 0.012% at 20kHz 0.012% (SMPTE, 60Hz/7kHz) 0.0056% T.H.D. at 1kHz; 0.0067% at 20kHz 0.009% (SMPTE, 60Hz/7kHz)
Gain Setup	Mic to insert point Line to insert point Tape to insert point Maximum gain from mic to masters	variable, +10dB to +60dB variable -15dB to +25dB fixed, +12dB(from -10dBV to +4dBu) +90dB
Input Impedance	Mic, balanced (XLR female) Line, balanced (3 pole A-type jack) Tape, balanced (3 pole A-type jack) Insert points, (return, ring of 3 pole A-type jack)	greater than 1kΩ 50kΩ approx 20kΩ approx 10kΩ approx
Crosstalk	Channel to group, routed, fader down Pan attenuation, odd to even groups Channel to masters, routed, fader down	-88dB at 1kHz; -70dB at 20kHz -63dB at 1kHz; -62dB at 20 kHz -85dB at 1kHz; -67db at 10kHz
Output	Maximum output before clipping (600 Ohms load on groups masters and monitors, otherwise 2kOhm load or greater)	greater than +21 dBu at 20Hz -20kHz
Equaliser	Low Frequency Mid Frequency High Frequency	±15dB, at 45Hz shelving ±15dB at 330Hz-6.5kHz, (sweep peak/dip) ±15dB at 11kHz, shelving
Fader Type	Inputs, sub groups, masters	100mm sealed, carbon track
Headphone Out	Two stereo output jacks	400mW max into >8 Ohms
Meters	Twin peak reading 12-element bargraphs scaled -20 to +10dB. Scale expansion in 1 dB steps around 0dB. Follow stereo solo system when selected	Green for levels 0dB or less Red above 0dB
Power Requirement	220/240VAC 50Hz, UK/Europe, 110VAC US/Japan	(remote supply)
Dimensions	Mixer 1882, excluding handle Mixer 1282, excluding handle Power Supply Unit	48mm x 463mm x 995mm; 17.2kg 48mm x 463mm x 771 mm; 13.5kg 48mm x 133mm x 166mm; 1.4kg

All specifications subject to change without notice 0dBu corresponds to 0.775V referred to no load (open circuit) conditions

