

DESCOTECH

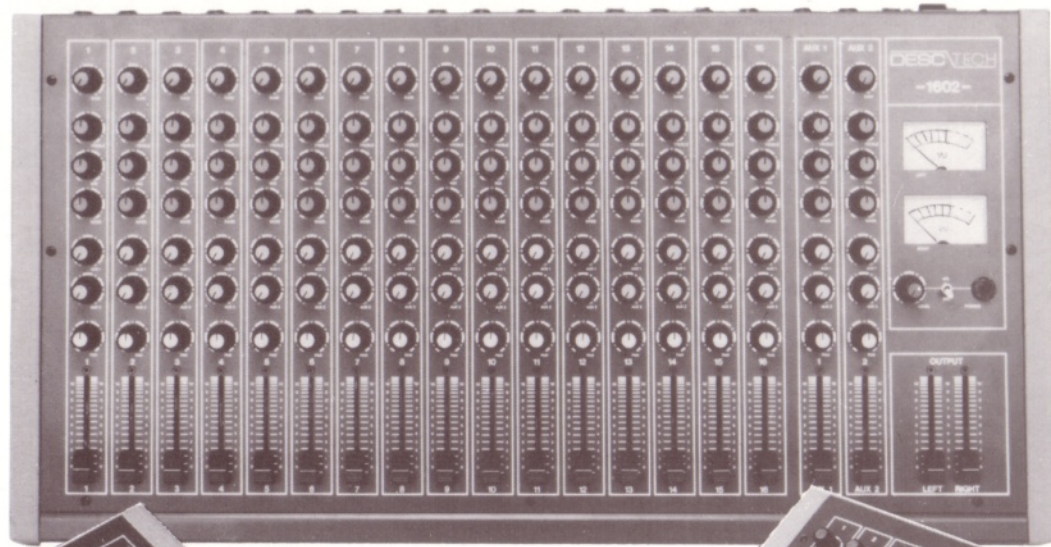
Compact Mixing Consoles



USERS MANUAL

Models DT 602 DT 1202 DT 1602
DT 602X DT 1202X DT 1602X

DESCOTECH is a Division of LANEY ELECTRONICS



DT 1602
DT 1602X



DT 602
DT 602X



DT 1202
DT 1202X

DESCTECH DT SERIES

The ever growing demand for quality portable mixing consoles that will faithfully mix vocals, effects units and instruments with the degree of sophistication required by modern day technology both on stage and in recording situations has lead to the design and development of the DT series range of DESCTECH mixers.

Since DESCTECH is a division of 'LANEY ELECTRONICS LIMITED' you the user will enjoy the comprehensive back-up facilities of an internationally renowned electronic audio manufacturer.

Close examination of DESCTECH mixers will leave you in little doubt of their superiority when compared with any competitors.

DESCTECH DT mixers are available in "6 into 2", "12 into 2" and "16 into 2" format each with XLR mic inputs as optional.

Each model embraces the latest technology and is constructed using quality selected components throughout.

Each channel has "Balanced low impedance" microphone and "line" inputs with full equalisation, pan and two auxillary send controls.

Mic's, instruments, effects units and fold back monitors can all be accommodated with ease.

The DT series is designed in such a way that each auxillary input can be used as an additional line channel with full EQ and pan control.

Headphone monitoring is featured with pre or post fader switching and a level control.

The two most common uses for your mixer will probably be: Public Address/Disco or for Recording and a typical interconnecting diagram is shown Fig. 1.

TYPICAL CONNECTIONS FOR P.A. AND RECORDING

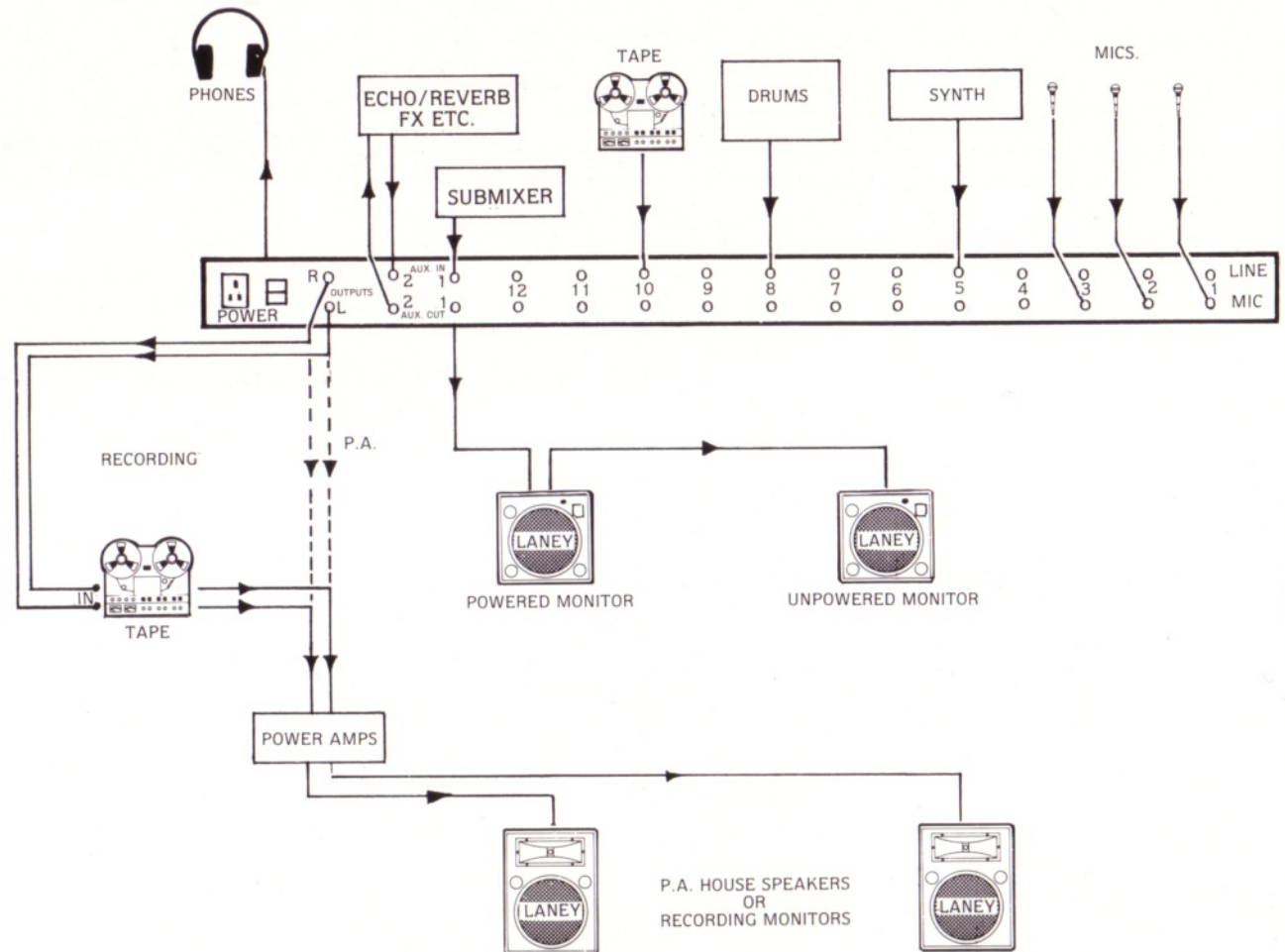


FIG. 1

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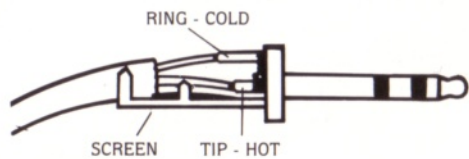
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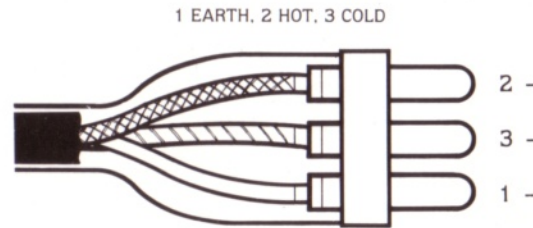
CONNECTING UP

As with most applications where audio equipment is linked together it is essential to use good quality cable and connectors in order to minimise distortion, hum, hiss and there by optimise the signal to noise ratio.

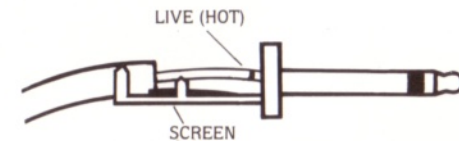
Audio leads can be purchased in 'pre packs' from your local dealer or you may produce your own and the following connecting illustrations should be helpful.



STEREO JACK - BALANCED MIC INPUT
FOR UNBALANCED USE - CONNECT SCREEN AND COLD
(USE MONO JACK IF PREFERRED)



XLR VERSION ONLY - MIC INPUT



STANDARD JACK - LINE INPUTS, AUX OUTPUTS, LEFT/RIGHT OUTPUTS

POWER CABLE

Mains cables are of course extremely important since wrongly wired can cause bodily harm. The correct wiring is as follows:

BLUE: NEUTRAL BROWN: LIVE GREEN/YELLOW: EARTH

POWER FUSE/VOLTAGE SELECTOR

A safety fuse is fitted in a pull out fuse drawer adjacent to the power socket. The drawer may be inserted in two ways allowing different supply voltages to be used. Check that the indicated voltage corresponds to the supply to be used.

In the unlikely event of a fuse being blown the replacement **MUST** be of the same type and rating as indicated on the rear panel. Failure to comply with this could result in a fire hazard.

MICROPHONE INPUTS

On the rear of your mixer you will see a mic input (Jack or XLR) for each channel. These are low impedance balanced line inputs and will accept a low impedance microphone that could well have run of 50 metres from the mixer without significant interference or loss of power.

Unbalanced mic's should have a mono jack or if stereo the screen wire should be connected to the ring and body of the plug.

LINE INPUTS

Adjacent to channel "mic input" sockets is a "line input" that is specifically for high output equipment such as electronic synthesizers, keyboards, drum machines, mixers, electric guitars etc.

Phono record turntables can be connected via a phono or RIAA pre amplifier.

MAIN OUTPUTS LEFT & RIGHT

Use to drive the line inputs of your power amplifier, tape machine or another mixer.

AUXILLARY 1 OUTPUT

Used to drive monitor amplifiers.

AUXILLARY 2 OUTPUT

Used to send signals to effects units.

AUXILLARY 1 & 2 RETURNS

Mono or stereo returns from effects units.

HEADPHONES

Headphone monitoring is available both pre or post main fader and a level control will prove to be a valuable feature.

Low impedance headphones will give the best results but any stereo headphones will suffice.

INITIAL SWITCHING ON

Firstly connect up all input and output cables, set all faders and channel gains to zero and to avoid any switch on noises set any connected slave amplifier gain controls to zero. Then switch on all power units including the mixer.

INITIAL SETTING UP

To start setting up your mixer it is advisable to begin with it adjusted to a flat setting as follows:

- 1) Set all faders to zero;
- 2) Set all channel gain controls to zero;
- 3) Set all EQ controls to 12 o'clock;
- 4) Set all auxillary level controls to zero;
- 5) Set all pan controls to 12 o'clock;
- 6) Set AFL/PFL switch to PFL;

SETTING CHANNEL GAIN

This control is used to match the mixer to the signal source for optimum noise/distortion performance, set too low will give high background noise, set too high may cause distortion.

To correctly set bring up the fader on the first channel to 10, now adjust the gain control so that the input signal registers on the VU metres peaking on the loudest passages at 0VU. (The onset of the red area). The signal may also be monitored on headphones during this operation with the AFL/PFL switch set to PFL (Pre Fader Listen).

Any major subsequent adjustment of the E.Q. may require resetting of the gain control. This procedure should be repeated for all channels being used, returning the fader to zero each time.

When this is completed the faders may be set to obtain the required musical mix. The main faders may now be set to give the desired overall volume level to the slave amplifiers or tape.

The AFL/PFL switch may also be set to AFL (After Fader Listen) to monitor the main output levels on phones & VU's.

PAN CONTROLS

The pan control functions like a balance on a hi-fi by fading the channel to either or both left and right outputs in varying degrees thus positioning the signal in the stereo image.

With the control at 12 o'clock the signal is fed equally to the left and right outputs. Turning anti-clockwise moves the signal to the left, turning clockwise moves it to the right.

It is usual to pan bass instruments centrally to ensure both speaker systems are used to handle the high power content of bass instruments equally.

E.Q.

Three bands of E.Q. are incorporated on each channel of your mixer (TREBLE 10KHz, MIDDLE 1KHz, BASS 100Hz) allowing a wide range of tonal adjustment to the incoming signals.

AUX 1: SEND

The 'auxillary 1' controls allow a pre fade mix to be obtained at AUX 1 output socket. This is mainly used for foldback or monitoring purposes when fed to a slave amplifier and speaker systems. The levels set are unaffected by subsequent adjustments of the channel faders.

AUX 2: SEND

The 'auxillary 2' controls allow a post fader mix to be obtained at AUX 2 output socket. This is normally used for effects send to echo/reverb units etc. allowing varying degrees of effect on each channel as desired. The output/s from the effects box/s. (Set to allow 'effect only' since the dry signal path is through the mixer) should be returned via the AUX 1/2 input channels. When using stereo effects such as chorus with two outputs one may be fed to each Aux input with one panned to the left and one to the right for optimum effect.

N.B. When using Aux 1/2, with signals fed back into Aux 1/2 return channels the respective Aux channel Aux 1/2 SEND 'controls' should be set at zero to avoid feedback.

AFL/PFL SWITCH

This switch allows the VU meters and headphones to monitor the mix pre the main faders (PFL) or after the main faders (AFL).

PFL is useful when setting up a mix particularly in a P.A. system when audio output is undesirable (the main faders may be at zero). AFL is useful when the main output levels to tape or power amps require monitoring.

HEADPHONES

A stereo headphone socket with its own level control and amplifier is fitted to allow comfortable monitoring of main mix signals pre or post the main faders. (Low impedance phones will give the highest sound levels).

INDUCED HUM

Hum may be induced into your system in many ways. However the most common being when two or more mains powered units are connected together in an audio chain causing an 'earth loop'.

Earth loops can often be broken by disconnecting the audio screen inside a plug at one end.

Other causes of induced hum can be due to the existence of a transmitter in your locality or by the very siting of your mixer (perhaps close to magnetic source or even your power amplifier).

DURING USE OF YOUR MIXER

Whether on stage or a recording situation very often adjustments to equalisation, sound level and pan controls can be frequent and it is therefore essential that the sound engineer is familiar with all aspects of operation. By studying this manual including block and schematic diagrams a greater 'hands on' skill will be attained.

SPECIFICATIONS

MIC CHANNELS (602 x 6, 1202 x 12, 1602 x 16)

Input Sockets Mic, Stereo jack* for balanced low impedance 200-600 ohm microphones, wired tip hot, ring cold, body ground).

Inserting a mono jack allows low impedance unbalanced types to be used.

High impedance microphones must be used with a matching transformer.

* (An XLR option is available wired pin 1 ground, 2 hot, 3 cold).

Line, mono jack for line level inputs such as synths, tape, keyboards etc. (Mic and line inputs may be used simultaneously if required).

Gain Control Varies the gain of the mic input from 63dB to 23dB and the line 28dB to -10dB.

Input amplifier noise -115dBm E.I.N. 20Hz -20KHz

E.Q. Treble + 15dB @ 10KHz Shelving.
Mid + 15dB @ 1KHz.
Bass + 15dB @ 100Hz Shelving.

Aux. 1 Pre-fader output for foldback monitoring etc. Nominal output level 0dBm.

Aux. 2 Postfader output for effects send etc. Nominal output level 0dBm.

Pan Positions signal source to left and right main outputs to set stereo image. (Centre - 3dB)

Fader Controls channel output level to mix bus. 60mm slider type with integral dust cover.

AUXILLARY CHANNELS (2 On each model)

Input Socket Mono jack for line level devices such as effects returns tape, drums, keyboards etc.

Gain Control Varies the gain of the Aux input from 16dB to $-\infty$

E.Q., Aux. 1, 2, Pan As mic channel specification.

OUTPUTS CHANNELS

Meters: Indicate left and right output levels, switchable pre and post master faders using PFL /AFL switch, thereby allowing monitoring of a mix with master faders down.

Calibrations 0Vu = + 4dBm
Headroom 18dB.

Faders: Control the volume level to the left and right outputs.

Phones: A stereo headphone output with level control is provided for monitoring the main outputs pre or post the left and right faders using the PFL /AFL switch. Headphone impedance 8 ohms nominal.

POWER UNITS An integral, low noise, self protecting power unit with a standard IEC input connection, double pole switch and voltage selector.

BLOCK DIAGRAM.

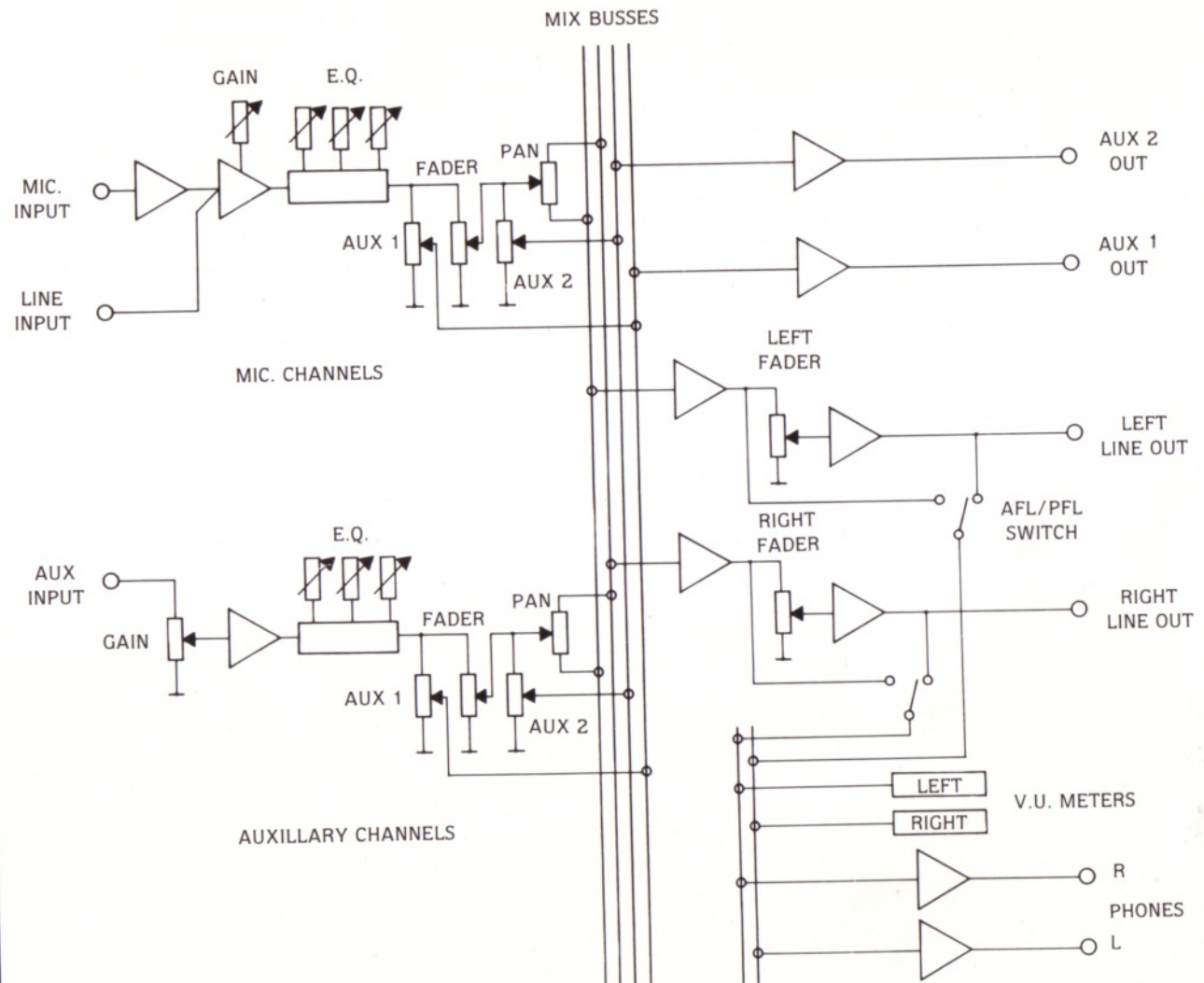


FIG. 2

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