

## HELIOS MUSIC RECORDING CONSOLE No. 1183

This is a 32 Input 24 track console with VCA fader control, designed to the requirements of La Maison Rouge Studio, London.

24 input channels are located in the straight section in front of the operator, together with the track monitor system, and the other eight are in the left hand section together with the echo systems.

Each input has a 3011 input module providing:

Microphone gain from 76 down to 16dB in 6dB steps, plus input pad 18dB.

Phase Reverse on mic and line.

Separate Line Input Level, steps of 5dB from +10 to -10 ref. standard line level.

Mic/Line switch, also remotely operable by 'Mixdown' switch.

High and Low Pass Filters, 12dB/octave.

3 section sweep equaliser, each section  $\pm 14$ dB at 40-700Hz, 0.7-7kHz, 7-17kHz.

Eq Cut and Insert switches.

The Auxilliary Module 2047 provides:

Stereo Pan with centre detent.

Four Echo Sends each with on-off switch, and one Echo Pre Fader switch.

Two Foldback Sends.

Solo and Cut switch with LED indicators.

Prefade Listen button (momentary).

Each channel is assigned by 2 rows of buttons (odd and even, left and right of pan pot when this is switched in) to the track mixing busses. There are also 2 extra buttons coloured red for use in quad mixing, which permit the signal to be panned along all four sides of the quad rectangle and across the diagonals.

From the track mixing bus amplifiers the signals pass directly to the 24 track machines without overall track gain controls.

Each channel has a standard Penny and Giles linear fader which operates a voltage controlled amplifier mounted on a Helios control card located under the fader. This card contains all necessary elements for combining the individual fader control voltage with that derived from group master faders and from an automation programmer. In the writing strip above the fader are a rotary selector switch placing the channel under the control of one of the eight group masters or in the position '0' leaving it independent.

A Write/Read/Update switch with two LED indicators is for use with the memory system.

To the right of the channel faders is the Quad Master fader, the eight VCA Group Masters, each having a 'Cut' switch above it, enabling selective muting of groups of channels, and the main monitor fader.

Above these is a general key and button panel carrying monitor, signal light and talkback functions, and a selector switch to present pairs of tracks, stereo, or external signals to the main stereo light beam meter.

The track monitoring section is constructed in three blocks of eight tracks each.

For each track the following controls are provided:

Monitor pan Left-Right, with Front-Back switch.

Echo Send with selector switch to groups A and B.

Four Foldback Sends.

Track Solo and Cut, with LED indicators.

Track Level control, small slide fader, calibrated +10 to -30dB from a reference point.

Alongside channels 25 to 32 in the left hand section are the four echo systems, each comprising a 3071 echo send/return module, two Penny and Giles 19mm return faders, and sets of track selection buttons identical to the input channels. The echo systems operate as follows:

The input to each module is selected to come from 'Normal' (which means from channels, Echo Send 1 to module 1, etc) or from monitor echo send mixes A or B.

After simple equalisation, overall gain control, and an insert point, the send signal may be passed through a delay device (tape or digital) with a "spin" or regeneration control producing an adjustable amount of repeat echo. In the Tape Echo Only position delay can be used alone, by passing the reverberation device.

The return signal from a stereo plate or chamber passes through a low-frequency filter, insert points, and the echo return faders, and then to two pan-pots allowing complete positioning of the return signals. These left and right return signals then go to the track select buttons.

In the left hand quarter section are found, nearest the operator, a duplicate set of talkback buttons, and above these the individual track mode buttons for a Studer A80 24 track recorder, and record indicator lights.

Next to these is space for the A80 autolocator, and variable speed controls for 3 recorders. Above these is the central monitor unit for control room and studio. The control room listening modes are 24 track, Quad, Quad-as-Stereo, Stereo (subdivided to 2 main recorders, Cassette and Disc) External, and Stereo-as-Mono. When the Check mode is operated, further buttons select the 4 foldbacks and 4 Echo Sends, to be heard singly or as stereo pairs on the main monitors.

There are buttons to mute individual speakers and to give stereo record from monitoring.

Studio playback modes are 24 track, Quad, Stereo (following the control room source selection) Foldback (1 and 2, with concentric volume controls) and External.

Higher on the quarter panel is a frame for 16 190x40mm modules. Initially fitted are 4 foldback sends, oscillator, talkback control, and a stereo pair of Audio and Design F760 compressors in Helios modules.

At the top of this section is a frame containing 24 Helios Noise Reduction Interface modules. These perform all switching functions and calibration associated with a set of Dolby Cat 22 noise reduction cards housed in the back of the console. dbx K9-22 and Telefunken cards may be directly plugged in, and derive power supply from the console supplies.

The left hand end pedestal of the console contains various 19-inch ancillary units and a standard jackfield of 364 jacks. At the rear of this section are the console input/output connectors and line transformers.

The right hand quarter section contains space for further 19-inch equipment, and four quad joystick pots. These have their inputs accessible in the jackfield, but normalised to track outputs 21 to 24. On-off switches apply their outputs to busses 1 to 4.

Below these are motion controls for two recorders, and buttons for the digital stop watch mounted above. Also in the top panel are two check VU meters and a communication loudspeaker. A large producer's table completes the right hand side of the console.