Film-Tech

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Dolby®

Model MPX500
Microphone Multiplexer

Users' Manual

Users' Manual

For

Model MPX500

Microphone Multiplexer

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Introduction

Intended for use with the Dolby CP500 Digital Cinema Processor, the Dolby
Model MPX500 Microphone Multiplexer ensures rapid and accurate theater
speaker equalization by enabling the simultaneous use of as many as four
microphones (supplied) placed throughout the auditorium.

The MPX500 rapidly switches between the four microphones and sends their
outputs to the CP500 over the special 31-meter (100-ft.) Dolby Cat. No. 582
input/output cable (supplied). Digital circuitry within the CP500 then averages the
mic outputs for display on its built-in real time analyzer and subsequent EQ
adjustments. This eliminates the time-consuming process of moving a single
microphone to different locations and manually averaging the results.

Four high-quality electret microphones are supplied with the MPX500 along with
6-meter (20-ft.) connecting cables that adapt the microphones' standard XLR
connectors to the "mini-XLR" style input connectors on the MPX500. The Cat.
No. 582 input/output cable for connecting the MPX500 to the CP500 contains two
individually shielded pairs, one for distribution of bi-directional RS-232 control
signals and the other for the multiplexed microphone signal.

A built-in microcontroller chip is programmed to control microphone selection,
switching rate between microphones, and the MPX500's LED display. There are no
user adjustments on the MPX500 itself.

Unit Set-Up
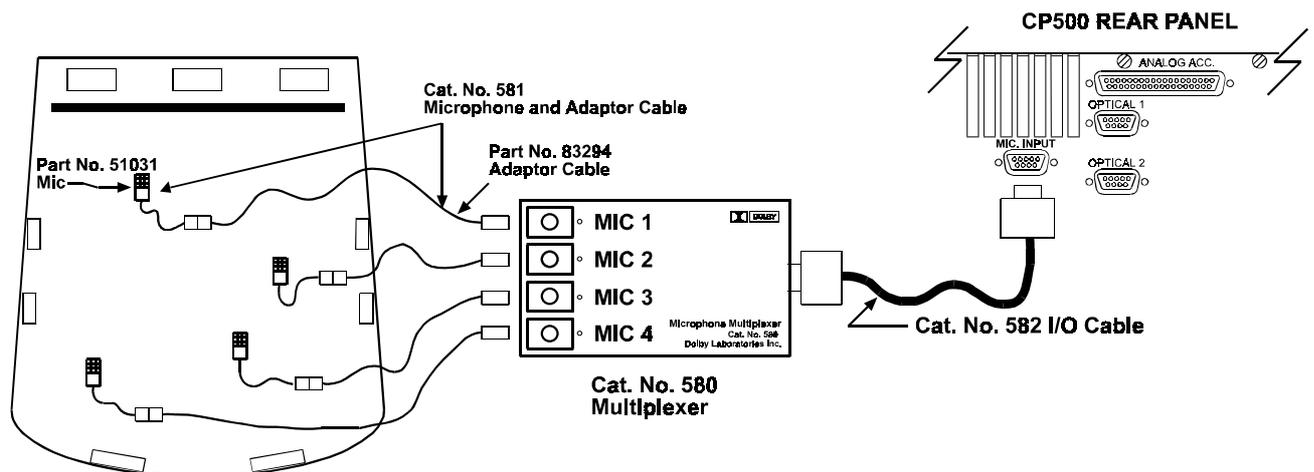
Position the MPX500 Multiplexer centrally in the listening area and connect the
four microphones to it using the four Cat. No. 581 adapter cables. Position the
microphones in the room so that they are substantially in the reverberant field
rather than receiving mostly direct energy from the speakers. A typical microphone

placement is shown above. Take care not to place any of the microphones on the central axes of the room, as standing waves and nodes at these positions can cause measurement errors. The microphones should normally be mounted at the listener's head height. However, if the seats have high backs, the microphones should be raised up so that they are at least 23cm (9 inches) above the top of the seat to avoid unwanted effects.

Connect the Cat. No. 582 input/output cable to the MPX500 Multiplexer and secure the hold down screws so that the cable cannot work loose. Route the cable to the location of the CP500 and connect it to the microphone connector on the back panel of the CP500.

The procedure for theater alignment can be found in the CP500 Installation Manual.

Components

Use the listed numbers for ordering replacement parts:

Cat. No. 580   Microphone Multiplexer Unit
Cat. No. 581   One Microphone with Adapter Cable (Part Nos. 51031 and 83294)
   Part No. 51031   Microphone with 6' (2 meter) cable
   Part No. 83294   Microphone-to-MPX500 Adapter Cable, 6 meter (20')
Cat. No. 582   MPX500-To-CP500 I/O Cable, 31 meter (100')

Operation
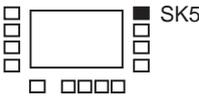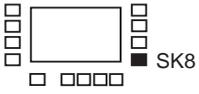
Display	Action
	Begin by entering the microphone multiplexer control screen on the CP500: Press the **Menu** key Press **ALIGNMENT** (SK2) (A system password may be required at this point) Press the **B-chain Alignment** key (SK1) Press the **Mic Mux** key (SK3) **Note:** While performing equalization, this multiplexer control screen may be entered directly by pressing soft key 5 (**SK5**).
	To scan through the microphones press the **Scan** key (SK8). The scan rate may be set by pressing the **Set scan rate** key (SK6). Rotate the front panel knob until the desired rate is displayed then press **OK**. The number displayed is the time spent connected to each microphone.
To **select one** mic: **SK1 - SK4** To **remove** one mic: **SK1 - SK4** ⇒ To **resume scan**: 	Pressing any soft key SK1 through SK4 will halt scanning and enable the corresponding microphone. To remove a microphone from the scan sequence, select the microphone by pressing the corresponding softkey, then press the **Enable/Disable** key (SK5). Resume scanning by pressing the **Scan** key (SK8)