



Digital Option



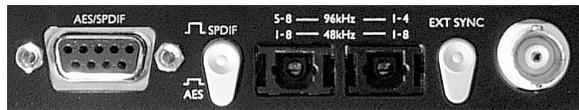
OctoPre Digital Option Operation Guide

Overview

The OctoPre digital interface card contains 8 separate analogue to digital converters allowing all 8 OctoPre channels to be accessed simultaneously on the rear panel as either analogue or digital signals. The interface card is available in two feature options: -

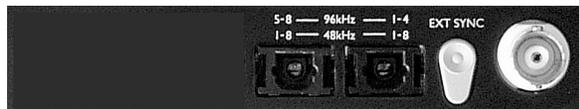
1. AES/SPDIF/ADAT™

The 8 channels of the OctoPre are converted simultaneously to either AES or SPDIF standard and to ADAT™ standard.



2. ADAT™

The 8 channels of the OctoPre are converted only to ADAT™ standard.



These instructions refer to both feature options. Note: Where the instructions refer to features that are only available on the "AES/SPDIF/ADAT™" version these will be marked with an "*".

Digital Outputs

*AES

The 8 channels of OctoPre audio in AES digital format are made accessible by connecting the AES cable to the 9 pin D-type connector and switching "out" the AES/SPDIF switch on the rear panel. The AES cable has four colour coded XLR type connectors, each carries a pair of digital audio channels as follows: -

| OctoPre Channel Number (Analogue Output) | AES/SPDIF Connector Ring Colour | Channel label in digital stream. |
|--|---------------------------------|----------------------------------|
| 1 | BLACK | A |
| 2 | | B |
| 3 | RED | A |
| 4 | | B |
| 5 | YELLOW | A |
| 6 | | B |
| 7 | BLUE | A |
| 8 | | B |

*SPDIF

The 8 channels of OctoPre audio in SPDIF digital format are made accessible by connecting the SPDIF cable to the 9 pin D-type connector and switching "In" the AES/SPDIF switch on the rear panel. The SPDIF cable has four colour coded Phono/RCA type connectors and pairs of digital audio are sent down each cable, see above for colour to channel identification.

ADAT™

The 8 channels of OctoPre audio in ADAT™ format are made accessible via two light pipe sockets. The function of these connectors is dependent upon the sample rate set for digital conversion on the front panel. At either 44.1KHz or 48KHz sample rates both sockets transmit all 8 channels of digital audio simultaneously giving two identical parallel outputs of all 8 channels. At either 88.2KHz or 96KHz sample rates the digital outputs are spread across the two connectors as follows: -

| OctoPre Channel Number (Analogue Output) | Audio transmitted in digital stream | |
|--|-------------------------------------|-----------------------------------|
| | Sample Frequency 44.1KHz or 48KHz | Sample Frequency 88.2KHz or 96KHz |
| 1 | 1 | 1 (1-4 connector) |
| 2 | 2 | 2 (1-4 connector) |
| 3 | 3 | 3 (1-4 connector) |
| 4 | 4 | 4 (1-4 connector) |
| 5 | 5 | 1 (5-8 connector) |
| 6 | 6 | 2 (5-8 connector) |
| 7 | 7 | 3 (5-8 connector) |
| 8 | 8 | 4 (5-8 connector) |

Note: The operation of splitting the 8 channels of 88.2/96KHz digital audio across two light pipe sockets conforms to the S/MUX² standard. This standard is required for the ADAT™ connectors to transmit at 88.2/96KHz because of a limitation in the transmission speed of the original ADAT™ standard. The S/MUX² standard of operation can only be used when connecting to equipment capable of receiving audio data conforming to this standard, check your equipment operating instructions for compatibility.

S/MUX² is the copyright of Sonorus Inc, Newburgh, NY, USA
ADAT™ is the trademark of Alesis Corp

Rear Panel Controls

EXT SYNC Switch

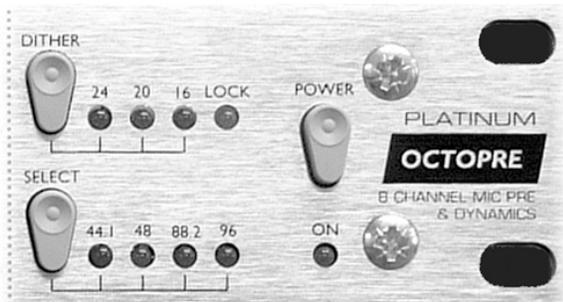
Pressing "In" the EXT SYNC switch forces the 8 OctoPre analogue to digital converters to synchronise to the clock signal connected to the rear panel BNC style connector.
Note: When using an external clock source always select the front panel frequency switch to match the sample rate of the incoming signal. Without this the unit cannot lock to the external clock signal.

*AES/SPDIF Switch

When the switch is in the "In" position the digital signals present at the 9 pin D Type connector conform to the "Professional" AES digital format standard. When the switch is in the "Out" position the digital signals present at the 9 pin D Type connector conform to the "Consumer" SPDIF digital format standard.

Front Panel Controls

When the digital interface card is fitted into the OctoPre, the Frequency Select and Dither switches and indicators become active.



Frequency Select

Pressing the SELECT switch increments the converter sample frequency from 44.1KHz through to 96KHz, when either 88.2KHz and 96KHz is selected the operation of the ADAT™ sockets automatically switch to the S/MUX² operation.

Dither

Pressing the DITHER switch selects the digital output word length to either 24, 20 or 16 bit, this is achieved by dithering the converted signal and truncating the unused bits.

Lock Indicator

The lock indicator is lit when the rear panel EXT SYNC switch is pressed in and the unit is synchronised to the incoming signal connected to the BNC connector.

Note: In case of discontinuity in the external clock connection or extreme variation in external clock frequency the OctoPre Lock indicator may switch off indicating the unit has lost lock. To recover lock in this situation, re-select the correct sample frequency from the OctoPre front panel.

Audio Operation

The signal which is converted to digital is taken just before the analogue output where 0dBfs (the maximum level before digital overload) is equivalent to a 21dBu level at the analogue output. The maximum analogue level can be prevented from exceeding 0dBfs by using the channel dynamics controls - see the OctoPre user guide for full instructions.

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