TASCAM

Product Information

Digital Surround Monitor Controller DS-M7.1

The DS-M7.1 surround monitor controller was developed to provide professional sound engineers with an easy way of playing back surround mixes in various formats. However very few medium-range digital mixing consoles support “downmixing”, the conversion of surround formats with several channels into formats with fewer channels. But this is no problem for the DS-M7.1, which can convert, for instance, a 7.1 mix into a 5.1 mix or a 6.1 mix into a stereo signal without having to create a new mix. At the same time this flexible system allows you to connect a surround stem recorder, a digital mixing console (e.g. Tascam DM-24) and a master recorder.

The DS-M7.1 is easy to operate: the most important and most commonly used functions have illuminated pushbuttons – mute buttons, for example, can be used to mute any given channel – , whilst other functions can be accessed via the main menu. The entire unit is made up of a 3U 19-inch chassis. The operating panel can be removed and used as a remote control.

Various different formats are available for downmixing, including 7.1, 6.1, 5.1, 4.1, LCRS, stereo and mono. Every channel has a delay option for compensating signal delay in larger environments, and can be set to given levels – a process which is simplified considerably thanks to the integrated pink noise generator and LED display. The DS-M7.1 also has an integrated bass management function which generates the sub-bass signal and which can be used to simulate systems with and without subwoofer. Output signals are given in digital (AES/EBU) and analog formats, and for further digital formats there are three expansion slots which can be fitted with Tascam interface cards (IF-AE/DM, IF-TD/DM, IF-AD/DM).

The DS-M7.1's versatility and flexibility make it an ideal solution for surround monitoring control applications ranging from post-production for film and video to surround production for music, theatrical production and television broadcast.

Main features

- Standard 8 channel TDIF, AES/EBU and ADAT interfaces for connection with a stem recorder
- Standard TDIF interface for connection with console (AES/EBU and ADAT available on optional cards)
- 8 input channels / 8 output channels
- 44.1k, 48k, 88.2k, 96k sampling frequency operation
- 32 bit floating point processing
- Pull up/down operation via external master clock
- Flexible mixdown from any surround format to a format using fewer channels
  - 7.1 or 6.1 > 5.1, LR, Mono
  - 5.1 > LCRS, 4.1, LR, Mono
  - LCRS > LR, Mono
  - LR > Mono
- Bass management for simulation of various consumer speaker systems
- Mute / Solo / Dimmer function
- Built-in Pink Noise Generator for monitor calibration
- Individual channel Mute/Solo
- LED SPL display
- Individual channel delay compensation
- Input summing router
- Output router for track assignment of external devices
- Adjustable Dim, Mono switch and Alternate speakers switch
- Integrates with your existing console control room monitor output
- Standard AES/EBU insert for through-encoder monitoring (Analogue available on optional card)
- Analogue and AES/EBU surround monitor outputs
- Control panel can be removed from the main unit and be used from remote locations

Specifications

Digital Master Recorder input/output terminals

No. of channels	8 input, 8 output channels
AES/EBU	D-sub 25pin female, AES-1992 format
TDIF	D-sub 25pin female, TDIF-1 format
ADAT	TOS-link optical x2 (IN/OUT), ADAT optical format

Digital Console input/output terminals

No. of channels	8 input, 8 output channels
TDIF	D-sub 25pin female, TDIF-1 format
SLOT1	PCI 120pin Card edge, TASCAM TDMCS format, for optional interface cards

Digital Tracking Recorder input/output terminals

No. of channels	8 input, 8 output channels
TDIF	D-sub 25pin female, TDIF-1 format
SLOT2	PCI 120pin Card edge, TASCAM TDMCS format, for optional interface cards

Optional Interface cards

IF-AE/DM	AES/EBU interface Hi-sampling mode (Hi-speed only)
IF-AD/DM	ADAT interface (SYNC connector is not available)
IF-TD/DM	TDIF interface (REMOTE OUT connector is not available)
IF-AN/DM	Analogue interface (use with 20dB headroom) Hi-sampling mode
Note: Only one IF-AN/DM (Analogue card) is available for SLOT1 - SLOT3	

Digital insert terminals

No. of channels	8 input, 8 output channels
AES/EBU	D-sub 25pin female, AES-1992 format
SLOT3	PCI 120pin Card edge, TASCAM TDMCS format, for optional interface cards

Monitor output terminals

No. of channels	8 output channels
ANALOG	D-sub 25pin female, balanced
Output impedance	<100 ohm
Nominal output level	+4dBu
Max. output level	+24dBu
DAC resolution	24bit
AES/EBU	D-sub 25pin female, AES-1992 (AES/EBU) format

Stereo CR inputs

No. of channels	2 input channels
ANALOG	TRS jack x 2, balanced
Input impedance	>10k ohm
Nominal input level	+4dBu
ADC resolution	24bit

Other input/output terminals

MUTE/DIM	Mini TRS jack (Tip: MUTE, Ring: DIMMER, Sleeve: GND), TTL level input (detects down edge of signals)
REMOTE IN 1	D-sub 9pin female

REMOTE IN 2	D-sub 9pin female
WORD IN	BNC, TTL level input with 75 ohm terminate switch
RS-232C (no function available)	D-sub 9pin male

Analogue audio output performance

Master recorder input (AES/EBU) ->Monitor output (Analogue)	
Total Harmonic Distortion	<0.004%, 1kHz, 0dBFS input, fs=48kHz
S/N ratio	>113dB, fs=48kHz, A-weighted
Dynamic range	>113dB, 1kHz, –60dBFS input, fs=48kHz, A-weighted
Frequency response	20Hz – 20kHz ±0.5dB, 1kHz, 0dBFS input, fs=48kHz 20Hz – 40kHz +0.5/-1.5dB, 1kHz, 0dBFS input, fs=96kHz
Crosstalk	<–100dB, 1kHz, 0dBFS input, fs=48kHz

Master recorder input (AES/EBU) ->Analogue insert output (SLOT3: IF-AN/DM)	
Total Harmonic Distortion	<0.006%, 1kHz, 0dBFS input, fs=48kHz
S/N ratio	>111dB, fs=48kHz, A-weighted
Dynamic range	>111dB, 1kHz, –60dBFS input, fs=48kHz, A-weighted
Frequency response	20Hz – 20kHz ±0.5dB, 1kHz, 0dBFS input, fs=48kHz 20Hz – 40kHz ±1.0dB, 1kHz, 0dBFS input, fs=96kHz
Crosstalk	<–100dB, 1kHz, 0dBFS input, fs=48kHz

Analogue audio input performance

Stereo CR input (AES/EBU) ->Monitor output (AES/EBU)	
Total Harmonic Distortion	<0.003%, 1kHz, +24dBu input, fs=48kHz
S/N ratio	>113dB, fs=48kHz, A-weighted
Dynamic range	>113dB, 1kHz, –36dBu input, fs=48kHz, A-weighted
Frequency response	20Hz – 20kHz ±0.5dB, 1kHz, +24dBu input, fs=48kHz
	20Hz – 40kHz ±0.5dB, 1kHz, +24dBu input, fs=96kHz
Crosstalk	<–100dB, 1kHz, +24dBu input, fs=48kHz

Analogue insert input (SLOT3 : IF-AN/DM) ->Monitor output (AES/EBU)	
Total Harmonic Distortion	<0.003%, 1kHz +24dBu input, fs=48kHz
S/N ratio	>106dB, fs=48kHz, A-weighted
Dynamic range	>106dB, 1kHz, –36dBu input, fs=48kHz, A-weighted
Frequency response	20Hz – 20kHz ±0.5dB, 1kHz, +24dBu input, fs=48kHz 20Hz – 40kHz ±0.5dB, 1kHz, +24dBu input, fs=96kHz
Crosstalk	<–100dB, 1kHz, +24dBu input, fs=48kHz

Power supply and other specifications

Voltage requirements	120V AC, 60Hz / 230V AC, 50Hz
Power consumption	32 W
Dimensions (W x H x D)	482mm x 148mm x 401mm (overall) 316mm x 38.6mm x 113mm (control panel)
Weight	8.65kg (main unit) 0.85kg (control panel)

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