

Fostex®



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D-15

Professional Timecode DAT



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With applications such as video post production, multimedia authoring, digital audio recording and broadcast technology merging closer each day, it has become even more important to choose studio solutions which can deliver in all working environments. And choosing a DAT machine is no exception.

INNOVATORS

Fostex - the true inventors of timecode DAT - not only pioneered 'transparent' sub-code SMPTE/EBU timecode recording to the DAT format, but also engineered the mechanical and electronic solutions which make this possible. Today this facility is commonplace but usually only on machines with 'professional' price tags. To meet the versatile application criteria now expected, Fostex have now engineered a DAT machine with comprehensive timecode features at a truly competitive price.

THE FOSTEX D-15

Based on technology first seen in the market leading D-10, the D-15 features 8 Mbit of DRAM on-board

to provide instant start, 'RAM scrub' and 'RAM repeat' with 100 accuracy for precision cueing, with advanced jog/shuttle techniques. In addition, this facility has been utilised to provide the simulated 'vari-speed' required to enable a linear DAT transport to perform the chase synchronisation offered when the optional 8335 timecode expansion board is fitted.

TIMECODE

The 8335 board enables the D-15 to playback and assemble record externally generated timecode, as with the D-10, which is essential for, say, 'spinning in' timecoded audio program material to a digital audio editing system. Furthermore, the 8335 board brings the D-15's new chase mode into its own by synchronising to external LTC when playing back with the option of referencing to external Word, Video and AES/EBU.

USABILITY

Fostex's reputation for ergonomic design is enhanced in the D-15's clear and concise front panel which features a large multi-function

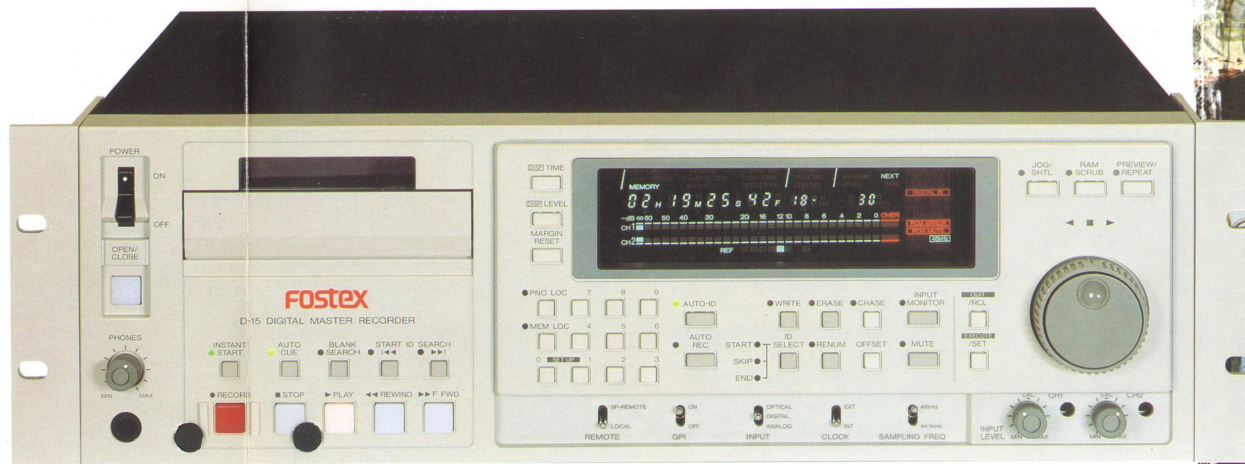
fluorescent display with 7 modes (5 different time scales plus 'non-hold' and 'permanent') of peak metering, soft touch illuminated transport keys, a large jog/shuttle wheel and the logical layout of other buttons and switches.

INTERFACING

The D-15 is equipped with a full complement of all standard audio interfaces such as balanced +4dBu XLR I/Os and -10dBV RCA connectors as well as standards not often implemented on a machine in this class. AES/EBU and optical S/P-DIF are provided along with a 37-pin parallel interface for connection to cabled remote controls. Also a General Purpose Interface (GPI) is present - useful for remote and fader starts plus S-ID location - while the optional 8336 RS-422 board allows control of the machine via 9-pin protocol*.

SOLUTIONS

With such a comprehensive feature-set from a company with an unrivalled DAT pedigree, the D-15 is the perfect solutions machine.



Essential professional features..

- Newly designed 4-motor transport for ultra-fast tape shuttling (120 minute tape in 60 seconds)
- Full S-ID implementation including write and erase of S-ID, SKIP-ID and END-ID plus locate to S-ID, program number and user defined points (100 locations available)
- Selectable reference levels: -12, -18 and -20dB with fine recording level adjustment on each channel
- 18bit 64x oversampling A/D converter and 20bit 128x oversampling D/A converter
- Front panel 'lock-out' via software command prevents unauthorised access
- D-SUB 37-pin parallel remote port provided as standard for optional controllers i.e. Fostex Model RMC-2 Remote Controller



MODEL 8335 TIMECODE/SYNC BOARD
This board allows the tape to playback LTC and assemble record externally generated timecode
7-1 TIME can also be converted to LTC. Option of referencing externally to Word, Video or AES/EBU



8336 RS-422 SERIAL BOARD
Complies to the RS-422 protocol with the exception of the vari-speed command enabling controllers to shuttle the D-15 to selected locations. The 8336 board must be used in conjunction with the 8335 timecode board.



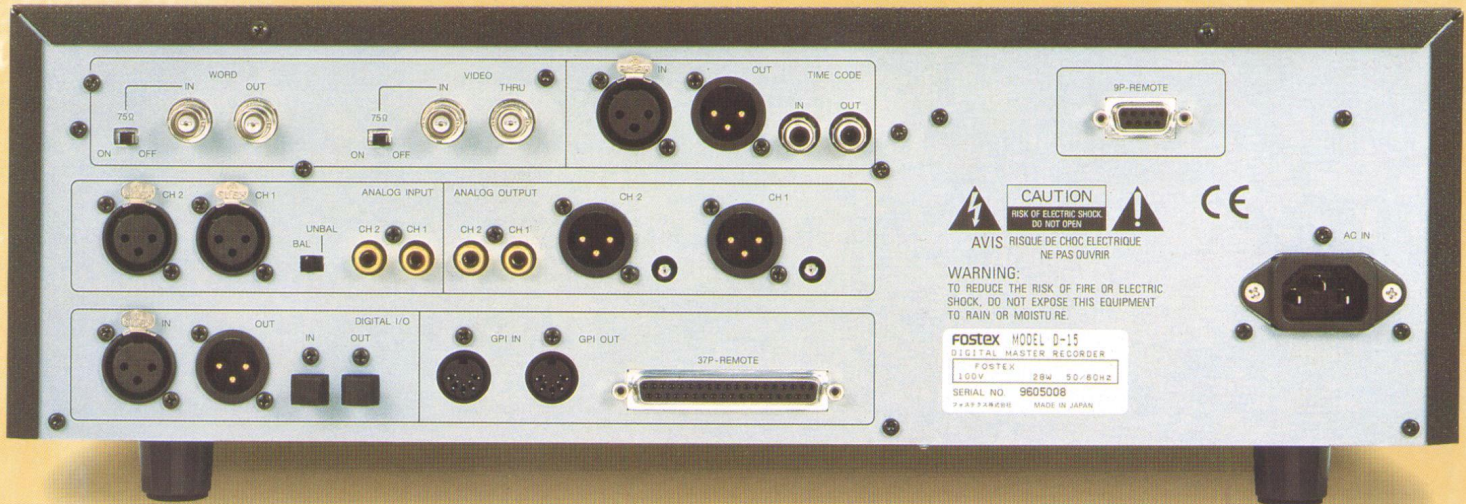
JOG/SHUTTLE WHEEL

The large jog/shuttle wheel allows quick and accurate location to a desired point on the tape and precise stereo scrubbing.



NUMERIC KEYPAD

The numeric keypad allows for quick and easy entry of cue points and set-up information. The 100 memory locations displayed in 7-1 TIME (or timecode when optional Model 8335 fitted), are therefore easily accessible.



Shown fitted with optional Model 8335 and Model 8336

D-15 Specification

GENERAL

Recording format	IEC DAT Standard Part 1
	IEC DAT Standard Part 5 (installed Model 8335)
Recording Tape	Digital Audio Tape
Number of channels	Audio x 2
Recording time	120 minutes (with 120 minute tape)
Head composition	Cylinder 2 head, ø30mm, 2000rpm
Error correction	Double Encoded Reed-Solomon code
Sampling frequency	48kHz, 44.1kHz
A/D converter	18bit delta Σ 64 times over sampling
D/A converter	20bit delta Σ 128 times over sampling
Quantisation	16 bit linear
De-emphasis	50µsec./15µsec.(Play mode only)
Copy guard	Not provided
Power requirements	120VAC 60Hz, 39W 230V 50/60Hz, 39W
Dimensions	482 (W) x 150 (H) x 371 (D) mm
Weight	Approx. 9Kg
MECHANICAL	
Motor construction	2DD 4Motors
Tape loading method	Tray method
Fast wind speed	max. 180 times from normal speed
Fast wind time	Approx. 60 seconds (with 120 minute tape)
Search speed	1/2, 1, 2, 3, 5, 9, 16 times
RAM	8 Mbit, 5sec. (48kHz max.)
RAM Search speed	0-1 times
ELECTRICAL	
R/P frequency response	20Hz-20kHz
S/N ratio	More than 92dB
Dynamic range	More than 92dB
T.H.D.	Less than 0.05% (1kHz, +4dBu)
Channel separation	More than 80dB (at 1kHz)
Wow & Flutter	Unmeasurable
Reference record level	-20dB/-18dB/-12dB (selectable) (default : -12dB)
INPUT/OUTPUT	
Analog audio input (balance)	
Connector	XLR-3-31 type x 2 (pin No.2 = HOT)
Reference input level	+4dBu
Input load impedance	20kΩ or more
Analog audio input (unbalance)	
Connector	RCA pin type x 2
Reference output level	-10dBV
Load impedance	10kΩ or more

Analog audio output (balance)

Connector	XLR-3-32 type x 2 (pin No.2 = HOT)
Reference output level	+4dBu
Load impedance	600Ω or more
Analog audio output (unbalance)	
Connector	RCA pin type x 2
Reference output level	-10dBV
Load impedance	10kΩ or more
AES/EBU Digital audio input	
Connector	XLR-3-31 type x 1 (Pin No.2 = HOT)
Format	IEC 958 part 2 (AES/EBU)
S/P-DIF Digital audio input	
Connector	Optical x 1
Format	IEC 958 part 2 (S/P-DIF)
AES/EBU Digital audio input	
Connector	XLR-3-32 type x 1 (Pin No.2 = HOT)
Output format	IEC 958 part 3 (AES/EBU)
S/P-DIF Digital audio output	
Connector	Optical x 1
Output format	IEC 958 part 2 (S/P-DIF)
	RAM playback is not available
Headphone output	
Connector	ø6 Stereo phone jack x 1
Max. output level	100mW (at 32Ω)
Output load impedance	8Ω or more
EXTERNAL CONTROL CONNECTORS	
37P Remote	
Connector	D-SUB 37 pin type x 1
Input	Parallel input (+5V, 4.7kΩ, pull up)
Output	Parallel output (open collector, +5V, 47kΩ, pull up)
GPI IN	
Connector	DIN 5 pin PNP type transistor input, low active (+5V, 4.7kΩ pull up)
	Pin No. 1 GND
	Pin No. 2 STOP
	Pin No. 3 PLAY
	Pin No. 4 S.ID SEARCH>>
	Pin No. 5 S.ID SEARCH<<
GPI OUT	
Connector	DIN 5 pin (Open collector, VCEO: 25V, I _c max: 25mA)
	Pin No. 1 GND, Pin No. 2 EVENT 1
	Pin No. 3 EVENT 0, Pin No. 4 NC
	Pin No. 5 NC

Model 8335

TIMECODE/SYNC EXPANSION BOARD

Format	SMPTE/EBU
Time Code In (balanced) - Connector XLR-3-31 type x 1	
Ref. input level	2Vp-p
Minimum input level	0.25Vp-p
Input impedance	20kΩ or more
Time Code In (unbalanced) - Connector RCA pin type x 1	
Ref. input level	1Vp-p
Minimum input level	0.25Vp-p
Input impedance	10kΩ or more
Time Code Out (balanced) - Connector XLR-3-32 type x 1	
Ref. output level	2Vp-p
Optimum impedance	600Ω or more
Time Code Out (unbalanced) - Connector RCA pin type x 1	
Ref. input level	1Vp-p
Optimum impedance	600Ω or more
EXTERNAL SYNC INPUT AND OUTPUT CONNECTORS	
Word input	BNC type x 1
Reference input level	TTL level
Input impedance	75Ω ON/OFF (switchable)
Word output	BNC type x 1
Reference input level	TTL level
Input impedance	75Ω
Video input	BNC type x 1
Format	Composite
Reference input level	1Vp-p
Input impedance	75Ω ON/OFF (switchable)
Video thru	BNC type x 1
Reference output level	Direct output of Video input
POWER SUPPLY - Supplied from the D-15 main unit	
	DC +5V, 100mA
	DC +15V, 50mA
	DC -15V, 50mA
Model 8336	
RS-422 SERIAL EXPANSION BOARD	
Connector	D-sub 9 pin x 1
Transmission type	RS-422
Protocol	SONY 9 PIN protocol
Remote	Controlled device
POWER SUPPLY - Supplied from the D-15 main unit	
	DC+5V, 10mA



Distributor / Authorised D-15 Dealer