**Model Shown
JH-110BC-VP**

PRODUCT CONFIGURATION AND SPECIFICATIONS

JH-110BC System
International Broadcast Recorder

★ ¼" DIN Standard Tape Recorder
★ NAB/IEC Switching Provided
★ Head alignment ultra stable
★ Electronics, transport, and power supply 19" rack mountable
★ No relays in transport—completely solid state with high response DC torque motors
★ Variable speed control
★ Constant tape tension (±¼ oz. for all speeds and reel sizes)
★ MVC (manual velocity control) of fast wind
★ "Paper Basket" and "Hand Spool" edit modes
★ Modular design enhances serviceability
★ Variable profile or all-aluminum high profile cabinets optional

★ Remote motion control available
★ Equipped with tape marker and scissors
★ RTZ III standard
    Microprocessor controlled
    Return to Zero function
    4 additional memories
    Presettable up/down counter
    Built in TVI (Tape Velocity Indicator)
★ 2 Speed, 7.5 and 15 ips, crystal controlled
★ Separate equalization and bias controls for 2 speeds
★ Transformer isolation on inputs and outputs
★ Mono/Stereo operation
★ Built in speaker/headphone monitoring
★ DIN Hub adaptors provided as standard equipment

DESCRIPTION	MODEL NUMBER
Stereo DIN standard broadcast recorder (including RTZ III)	JH-110BC-UM

OPTIONS FOR JH-110BC SYSTEMS

Comprehensive Service Manual, in addition to copy supplied with machine.	JH-110B-OPT-5
½" Format Stereo Head Assembly mounted in place of normal ¼" Format DIN Stereo Head Assembly	JH-110B-OPT-7

ACCESSORIES FOR ALL JH-110BC SYSTEMS

Variable profile cabinet	VP
High Profile overhead bridge cabinet	HP-4
Tape transport remote control including controls for MVC, RTZ III (return, reset), includes 35-foot Remote Cable.	JH-110B-R/C
Head assembly cover plate	JH-110B-HA/CP
Accessory stand for one Multitrack System remote control, or one AutoLock, including standard mounting bracket	JH-20
Mounting bracket for JH-20 to hold a maximum of three JH-110B-R/C	JH-20-3
Accessory stand capable of holding, side by side, one AutoLocator III and one AutoLock, or two AutoLocator IIIs, or two AutoLocks, including standard mounting bracket	JH-21
Phase Meter in remote style housing including power supply	JH-22
AutoLock, a SMPTE/EBU generator/reader/synchronizer	JH-45
"Annunciator Board" indicating logic status of transport	25B177
RTZ III Remote Readout, includes 35 foot remote cable	JH-47
Universal Adaptor, to adapt the JH-45 AutoLock for use with selected non-MCI masters.	JH-48
High Speed SMPTE/EBU Decoder for JH-48	JH-48-OPT-1
NTSC/PAL generator synchronization for JH-48	JH-48-OPT-2
Looping function for JH-48	JH-48-OPT-3
Transport Control Decoder for JH-48 (JH-48-OPT-1 must be installed)	JH-48-OPT-4

ADDITIONAL HEAD ASSEMBLIES,
equipped with scrape filter

DIN stereo head assembly (full track erase head), ¼"	HA-DIN-110B
2-track head assembly, ½"	HA-2½-110B

TAPE FORMAT CONVERSION KITS

¼" roller guides, set of 4	RG 1
½" roller guides, set of 4	RG 2

HEADS
for replacement, mounting hardware not included

2-track erase head ¼"	HE-2-110B
DIN stereo record head ¼"	HR-DIN-110B
DIN stereo playback head ¼"	HP-DIN-110B
2-track erase head ½"	HE-2½-110B
2-track record head ½"	HR-2½-110B
2-track playback head ½"	HP-2½-110B

MOUNTING HARDWARE FOR HEAD STACKS

Head bridge equipped with scrape filter (head stacks not included) ¼", 3 head stack mountings	JH-110B-HB/SF-1
Head bridge equipped with scrape filter (head stacks not included) ½", 3 head stack mountings	JH-110B-HB/SF-2
Head stack mounting complete for any ¼" stack	HM-¼-110B
Head stack mounting complete for any ½" stack	HM-½-110B

SYSTEM SPARE PARTS KITS

"Active Spares" Kit: contains transistors, IC's, and extender boards (applicable to all JH-110B Series Systems)	JH-110B-S-KIT-AA-1
"Switch Spares" Kit: contains switches and LED's (applicable to all JH-110B Series Systems)	JH-110B-S-KIT-AB-2
"PCA Spares" Kit: contains spare PC assemblies for transport and audio electronics	JH-110B-S-KIT-AG-3
"Mechanical Spares" Kit: contains solenoids, roller guides, motors, and RTZ III PC assemblies	JH-110B-S-KIT-AM-4

OVERALL PERFORMANCE

Frequency Response

	Record/Reproduce		
15 ips, IEC	30 Hz - 20 kHz	+.75/−1.5 dB
7.5 ips, IEC	30 Hz - 18 kHz	+.75/−1.5 dB

Signal-to-Noise
Record/Reproduce, reference to 510 nWb/m

Unweighted, 20 Hz - 20 kHz	mono	stereo
15 ips, IEC	65	64
7.5 ips, IEC	63	62

Weighted, dB(A) RMS	mono	stereo
15 ips, IEC	72	69
7.5 ips, IEC	68	66

Weighted, CCIR 468, RMS	mono	stereo
15 ips, IEC	62	60
7.5 ips, IEC	58	56

Distortion

Harmonic distortion, 510 nWb/m, 1 kHz fundamental

3rd harmonic:	15 ips, IEC	<.52%
	7.5 ips, IEC	<1.6%
2nd harmonic:	15 ips, IEC	<.10%
	7.5 ips, IEC	<.10%
3% 3rd harmonic:	15 ips, IEC	1020 nWb/m
fluxivity level	7.5 ips, IEC	1000 nWb/m

Distortion is primarily a function of tape formulation and bias setting used. All specifications are typical and may vary.

Bias and Erase Frequency
120 kHz

Depth of Erasure
At 1 kHz better than 86 dB

Amplifier Electronics

Input impedance	10k ohms balanced
Output impedance	150 ohms balanced
Output clipping	+24 dBm

TRANSPORT

Speeds
Fixed	7.5 and 15 ips
Variable	±20% around fixed speeds

Reel sizes
NAB A (3, 5 or 7 inch), NAB B (10½)
DIN 1000m (11½ inch)

Tension
5½ oz. ±¼ at all play speeds, beginning to end of reel

Long term speed stability
Better than .02%

Wow Flutter
15 ips <.030% DIN 45507 weighted
7.5 ips <.045% DIN 45507 weighted

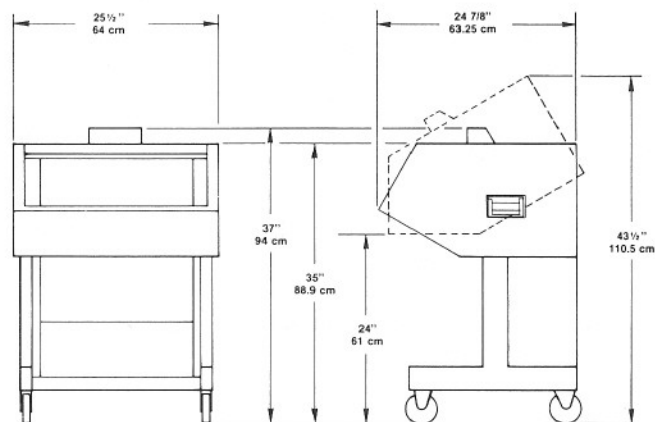### Start time
·to 0.1% DIN 45507 flutter

15 ips	500 msec
7.5 ips	500 msec

Rewind time
2400 ft.	110 seconds
4800 ft.	170 seconds

SYSTEM WEIGHT

Transport unmounted	34 lbs.
Electronic drawers, each	19 lbs.
Variable profile cabinet (VP)	73 lbs.
High profile cabinet (HP)	118 lbs.

SYSTEM DIMENSIONS

VP CABINET
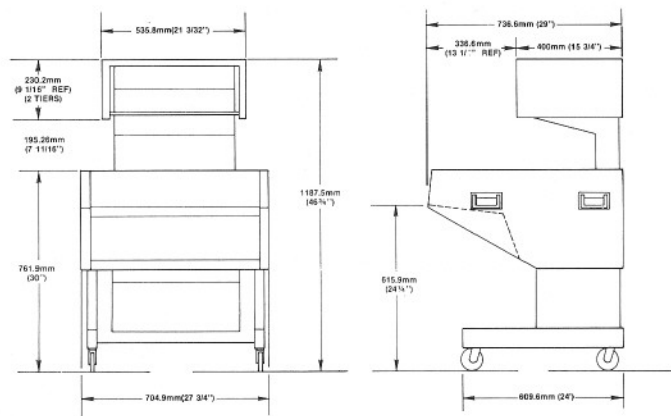
HP CABINET

Specifications subject to change as innovative advancements in technology are incorporated.