

Model Shown:  
JH-110BX-2-VP

## PRODUCT CONFIGURATION AND SPECIFICATIONS

### JH-110BX System

- ★ Totally transformerless electronics
- ★ Mono and stereo models available
- ★ 2 speed timed bias ramp for Quiet Initiation Of Record (QUIOR)
- ★ Separate equalization and bias controls for 2 speeds
- ★ Head alignment ultra stable
- ★ Electronics, transport and power supply 19 inch rack mountable
- ★ 2 speed quartz controlled transport—7½ and 15 ips
- ★ No relays in transport—completely solid state with high response DC torque motors
- ★ Variable speed control
- ★ Constant tape tension ( $\pm 1/4$  oz. for all speeds and reel sizes)
- ★ MVC (manual velocity control) of fast wind
- ★ “Paper Basket” and “Hand Spool” edit modes
- ★ Variable profile or high profile cabinets optional
- ★ Modular design enhances serviceability
- ★ Remote motion control available
- ★ Compatible with the MCI AutoLock synchronizer
- ★ RTZ III standard on all recorders
  - Microprocessor controlled
  - Return to Zero function
  - 4 additional memories
  - Presettable up/down counter
  - Built in TVI (Tape Velocity Indicator)



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1400 West Commercial Blvd., Fort Lauderdale, Florida 33309/Phone (305) 491-0825/Telex 514362

DESCRIPTION	MODEL NUMBER
RECORDING SYSTEMS (including RTZ III)	
Mono recorder 1/4"	JH-110BX-1-UM
2-track recorder 1/4"	JH-110BX-2-UM
PLAYBACK ONLY SYSTEMS	
Mono Reproducer, 1/4"	JH-110BX-1-PB-UM
Stereo Reproducer, 1/4"	JH-110BX-2-PB-UM
OPTIONS FOR JH-110BX SYSTEMS	
DIN stereo head assembly for 2-track systems only (stereo -0.75mm guard band, full track erase)	JH-110B-OPT-2
Tape marker and tape cutting scissors (30° angle) for 1/4" tape transport only	JH-110B-OPT-3
Comprehensive Service Manual, in addition to copy supplied with machine	JH-110B-OPT-5
Balanced transformer isolated line output, per channel (Output impedance = 120 Ω)	JH-110B-OPT-6-1
Balanced transformer isolated line input and output, per channel (Input impedance = 10k Ω bridging) (Output impedance = 120 Ω)	JH-110B-OPT-6-2
ACCESSORIES FOR ALL JH-110B SYSTEMS	
Variable profile cabinet for all systems	VP
High Profile overhead bridge cabinet for all systems. Two standard 19" MCI JH-110 electronic drawers can be fitted.	HP-4
Monitor panel—to adapt unit for NAB Broadcast use. (takes the space of one standard MCI JH-110 electronic drawer)	JH-110B-MON
Tape transport remote control including controls for MVC, <b>RTZ III</b> (return, reset) includes 35-foot Remote Cable	JH-110B-R/C
Head assembly cover plate	JH-110B-HA/CP
"DIN-HUB" adaptor with tape platter for maximum 1000m tape pancakes. Set of 2.	JH-110-D/H
Accessory stand for one Multitrack System remote control, or one <b>AutoLock</b> , 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 <b>AutoLocator III</b> and one <b>AutoLock</b> , or two <b>AutoLocator IIIs</b> , or two <b>AutoLocks</b> , including standard mounting bracket	JH-21
Phase Meter in remote style housing including power supply	JH-22
<b>AutoLock</b> , a SMPTE/EBU generator/reader/synchronizer	JH-45
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

DESCRIPTION	MODEL NUMBER
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
"Annunciator Board" indicating logic status of transport	25B177

#### ADDITIONAL ELECTRONICS

1 channel of complete record and playback electronics (drawer not included)	JH-110BX-R/E
1 channel of playback only electronics (drawer not included)	JH-110BX-PB/E
Electronic drawer with oscillator	JH-110B-EDO
Electronic drawer without oscillator	JH-110B-EO

#### ADDITIONAL HEAD ASSEMBLIES, equipped with scrape filter

Mono head assembly, 1/4"	HA-1-110B
2-track head assembly, 1/4"	HA-2-110B
1/4 track head assembly, 1/4"	HA-1/4-110B
DIN stereo head assembly (full track erase head), 1/4"	HA-DIN-110B

#### HEAD STACKS

for fourth head position or replacement, mounting hardware not included

Mono erase head 1/4"	HE-1-110B
Mono record head 1/4"	HR-1-110B
Mono playback head 1/4"	HP-1-110B
2-track erase head 1/4"	HE-2-110B
2-track record head 1/4"	HR-2-110B
2-track playback head 1/4"	HP-2-110B
DIN stereo record head 1/4"	HR-DIN-110B
DIN stereo playback head 1/4"	HP-DIN-110B
1/4 track stereo erase head 1/4"	HE-1/4-110B
1/4 track stereo record head 1/4"	HR-1/4-110B
1/4 track stereo playback head 1/4"	HP-1/4-110B

#### MOUNTING HARDWARE FOR HEAD STACKS

Head bridge equipped with scrape filter (head stacks not included) 1/4", 3 head stack mountings	JH-110B-HB/SF-1
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#### 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 LEDs	JH-110B-S-KIT-AT-2
"PCA Spares" Kit, contains spare PC assemblies for transport and audio electronics	JH-110B-S-KIT-AU-3
"Mechanical Spares" Kit, contains solenoids, roller guides, motors and RTZ III PC assemblies	JH-110B-S-KIT-AJ-4

## OVERALL PERFORMANCE

### Frequency Response

Record/Reproduce

15 ips, NAB	30 Hz - 24 kHz	+75/	- 2 dB
7.5 ips, NAB	30 Hz - 20 kHz	+75/	-1.5 dB

### Signal-to-Noise

Record/Reproduce, reference to 510 nWb/m

Unweighted, 20 Hz - 20 kHz

	mono	2TK
15 ips, NAB	68	64
7.5 ips, NAB	67	63

Weighted, dB(A)

15 ips, NAB	70	68
7.5 ips, NAB	70	67

### Distortion

Harmonic distortion, 510 nWb/m, 1 kHz fundamental

3rd harmonic:	15 ips, NAB	<.52%
	7.5 ips, NAB	<1.6%
2nd harmonic:	15 ips, NAB	<.10%
	7.5 ips, NAB	<.10%

3% 3rd harmonic:

fluxivity level	15 ips, NAB	1020 nWb/m
	7.5 ips, NAB	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

(Ref. 250 nWb/m)  
At 1 kHz better than 80 dB

### Amplifier Electronics

Input impedance	10k ohms balanced
Output impedance	120 ohms balanced
Output clipping	+24 dBm

## TRANSPORT

### Speeds

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

### Configurations

1/4 inch	Full track
1/4 inch	2 track

### Reel sizes

available with NAB A (3, 5 or 7 inch), NAB B (10 1/2 inch), DIN 1000m (11 1/2 inch)

### Tension

5 1/2 oz. ±1/4 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, 10 1/2" reels

15 ips	500 msec
7.5 ips	500 msec

### Rewind time

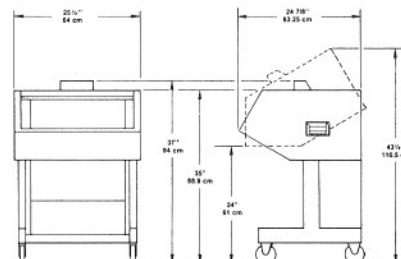
2400 ft.	110 seconds
4800 ft.	170 seconds

## SYSTEM WEIGHT

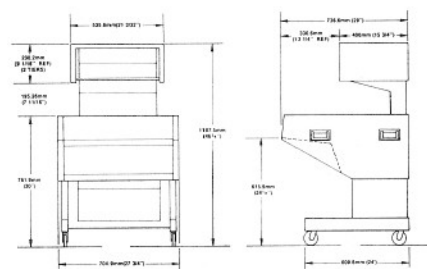
transport unmounted  
electronic drawer, dual channel  
variable profile cabinet (VP)  
high profile cabinet (HP)

34 lbs.  
19 lbs.  
73 lbs.  
118 lbs.

## SYSTEM DIMENSIONS



VP CABINET



HP CABINET

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



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