

The cold,  
hard facts.



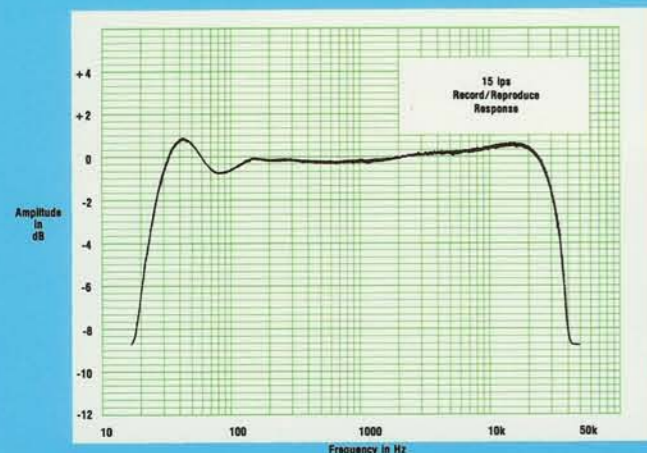
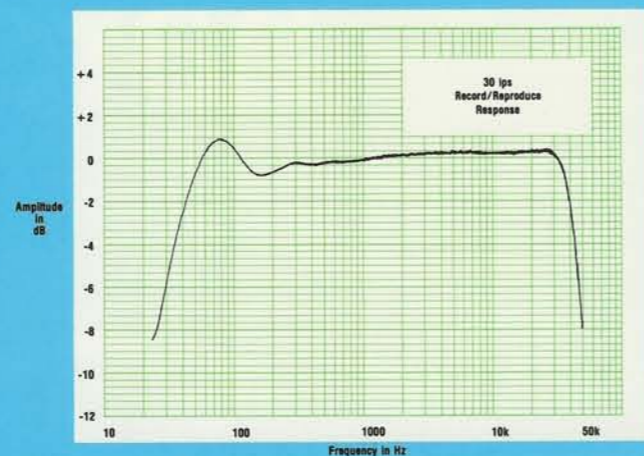
# Specifications speak for themselves.

MCI invites you to compare specifications for the JH-110B against those of any other tape recorder on the market today. No pretty pictures, no bright copy, just facts. The JH-110B...unsurpassed in a field of professionals. And that is a cold, hard fact.

Unless otherwise specified, the following conditions apply to all graphs:

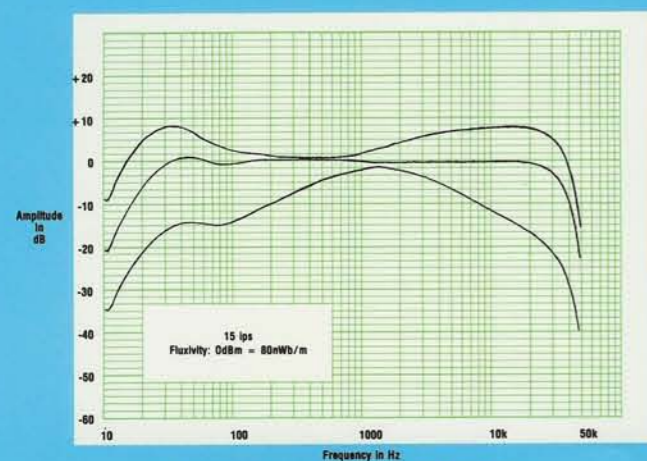
- Speed: 30 ips  
Overbias: 1.0dB @ 10kHz  
Fluxivity: 0dBm = 250nWb/m
- Speed: 15 ips  
Overbias: 3.0dB @ 10kHz  
Fluxivity: 0dBm = 250nWb/m
- Speed: 7½ ips  
Overbias: 3.0dB @ 10kHz  
Fluxivity: -10dBm = 80nWb/m

All tests were performed utilizing Scotch Type 226 Tape.



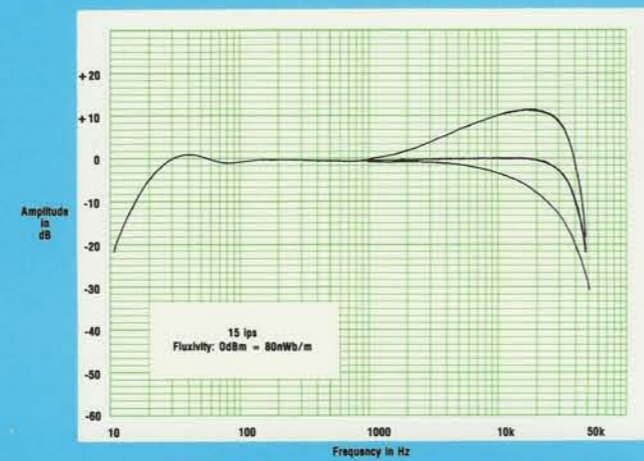
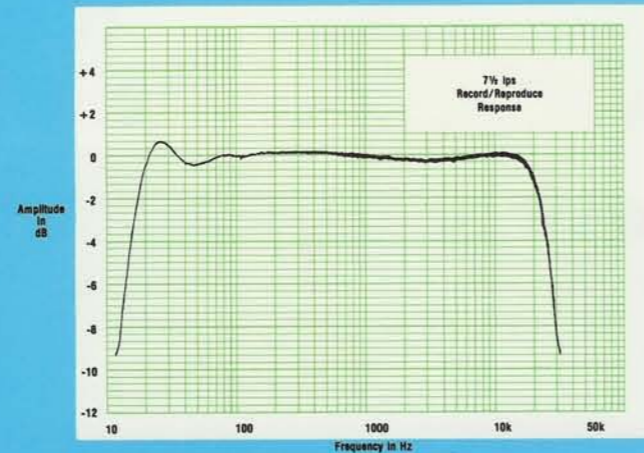
## RECORD/REPRODUCE RESPONSE

These graphs represent the frequency response of the recorder on and off tape, assuming a constant input level. They demonstrate the flat and extended response of the JH-110B Recorder.



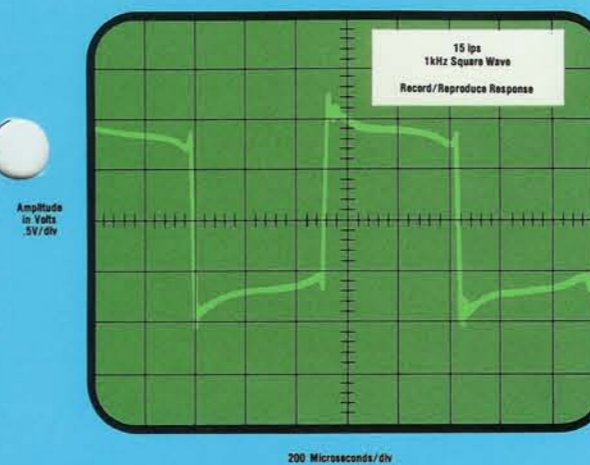
## REPRODUCE EQ RANGE

A wide range of reproduce equalization adjustment ensures that the JH-110B will conform to NAB, IEC and AES standard response curves. There is sufficient range to compensate for head wear and to align to reference tones on aged or degraded tape copies.



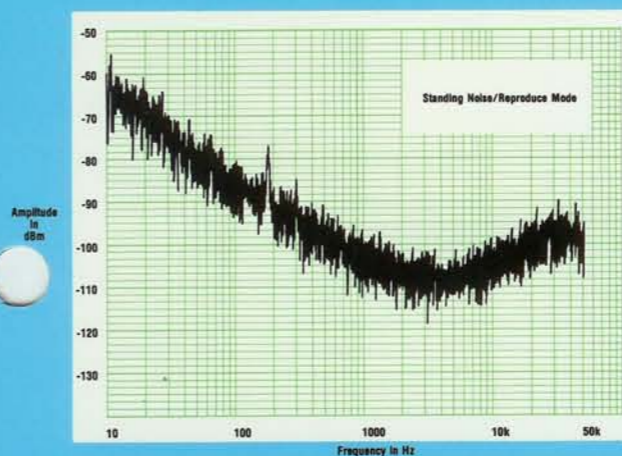
## RECORD EQUALIZER RANGE

The record circuitry of a recorder is aligned to complement the reproduce response previously aligned to match standard curves. The JH-110B features a wide range of adjustment to allow alignment using any of the range of tapes available today.



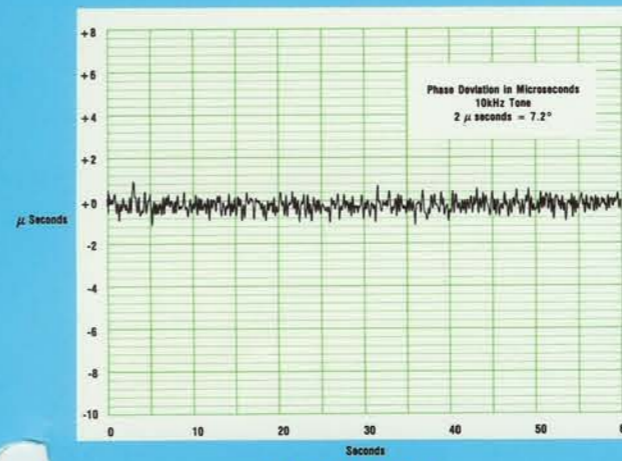
## SQUARE WAVE RESPONSE

Square Wave Response demonstrates both transient response and phase linearity throughout the recording process. Response such as with the JH-110B produces excellent reproduction of live, dynamic material and reduces copy to copy degradation.



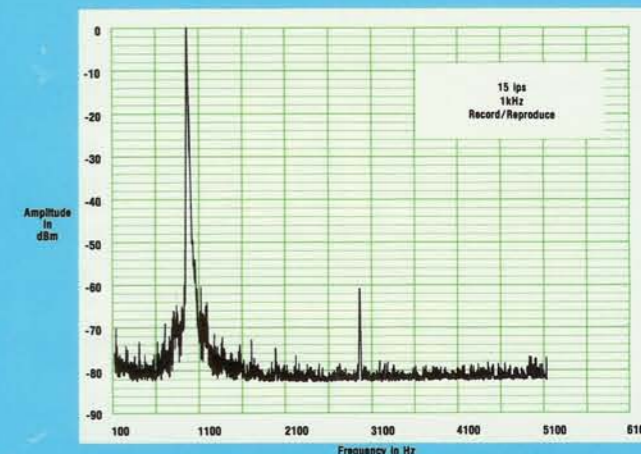
## STANDING NOISE/REPRO MODE

This is an amplitude versus frequency plot of the various noise components generated internally by the electronic circuitry. Use of latest technology and high specification components ensures low noise figures on the JH-110B.



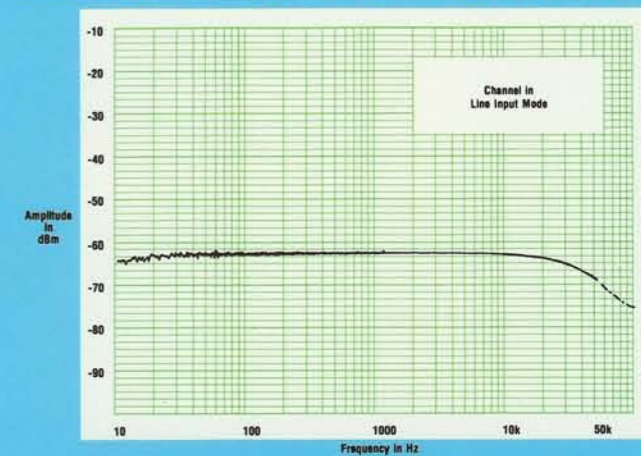
## TAPE WALK

Phasing between tracks is very important and is a function of the machine's tape path stability. The JH-110B transport and head assembly design yield a most stable tape path for maximum phase integrity.



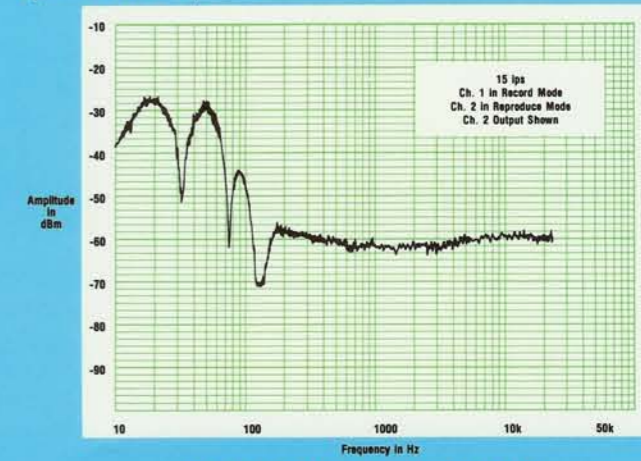
## DISTORTION/PURITY OF SIGNAL

Both flutter, or variations in tape speed caused by transport eccentricities, and distortion degrade the purity of recorded signals. Using latest technology op amp design, the JH-110B minimizes second order distortion, while maintaining a wide dynamic range and very low noise floor. This, in combination with the closed loop servo capstan drive system and standard scrape flutter filter provides purity of signal unsurpassed by any other professional recorder. Odd order harmonic distortion and modulation noise are functions of the tape used.



## COMMON MODE REJECTION RATIO

Common Mode Rejection is the ability of the electronics circuitry to reject any signal applied equally to both sides of its balanced input, signals such as RF, hum, etc. The JH-110B design ensures a high Common Mode Rejection Ratio, making it ideal for use in any operational atmosphere.



## REPRODUCE CROSSTALK

Crosstalk is the leakage from one track or channel to another, and is primarily a function of the heads. The JH-110B exhibits excellent crosstalk figures across the frequency spectrum, including minimizing of the low frequency nodes encountered in typical head design.

# JH-110B Specifications

## Frequency Response

Record/Reproduce

30 ips, AES 40 Hz - 28 kHz +.75/ - 2 dB  
 15 ips, NAB 30 Hz - 24 kHz +.75/ - 2 dB  
 7.5 ips, NAB 30 Hz - 20 kHz +.75/ -1.5 dB

Record/Sync

30 ips, AES 50 Hz - 16 kHz +.75/ - 2 dB  
 15 ips, NAB 30 Hz - 10 kHz +.75/ - 2 dB  
 7.5 ips, NAB 30 Hz - 4 kHz +.75/ - 2 dB

## Signal-to-Noise

Record/Reproduce, reference to 510 nWb/m

Unweighted, 20 Hz - 20 kHz

	mono	2TK	4TK
30 ips, AES	70	66	66
15 ips, NAB	68	64	64
7.5 ips, NAB	67	63	63

Weighted, dB(A)

30 ips, AES	74	71	70
15 ips, NAB	70	68	68
7.5 ips, NAB	70	67	67

## Distortion

Harmonic distortion,

510 nWb/m, 1 kHz fundamental

3rd harmonic: 30 ips, AES <.35%  
 15 ips, NAB <.52%  
 7.5 ips, NAB <1.6%

2nd harmonic: 30 ips, AES <.10%  
 15 ips, NAB <.10%  
 7.5 ips, NAB <.10%

3% 3rd harmonic: 30 ips, AES 1040 nWb/m  
 15 ips, NAB 1020 nWb/m  
 level 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, 15 and 30 ips  
 Variable  $\pm 20\%$  around fixed speeds

## Configurations

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

## Reel sizes

Available with NAB A (3,5 or 7 inch), NAB B (10 1/2 or 14 inch), DIN 1000m (11 1/2 inch)

## Tension

5 1/2 oz.  $\pm 1/4$  at all play speeds, beginning to end of reel

## Long term speed stability

Better than .02%

## Wow Flutter

30 ips <.022% DIN 45507 weighted  
 15 ips <.035% DIN 45507 weighted  
 7.5 ips <.055% DIN 45507 weighted

## Rewind time

2400 ft.	110 seconds
4800 ft.	170 seconds

## Start time

to o.1% DIN 45507 flutter, 10 1/2" reels

30 ips	900 msec
15 ips	500 msec
7.5 ips	500 msec

## System Weight

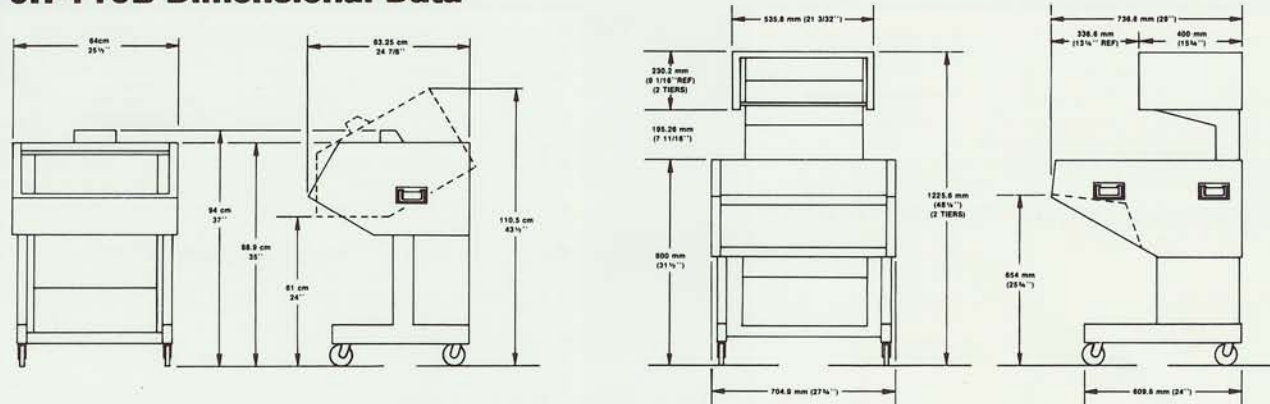
Transport unmounted	34 lbs.
Electronic drawer, dual channel	19 lbs.
Variable profile cabinet (VP)	73 lbs.
High profile cabinet (HP)	115 lbs.
Power supply	23 lbs.



## FLEXIBILITY TO MEET YOUR NEEDS.

The JH-110B is available stock in mono, stereo, 4-track and 8-track formats for use with 1/4", 1/2" and 1" tape on reels from 5" up to 10 1/2" in diameter (14" diameter optional). Ready for mounting in the MCI variable profile (VP) cabinet with electronics under the transport or in the MCI high profile (HP) cabinet with electronics over the transport, it can also be mounted in your 19" rack or custom console.

## JH-110B Dimensional Data



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