

# MAGNETIC REFERENCE LABORATORY, INC.

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## Broadband Pink-Noise Tapes With 1 kHz Tone

Calibration tapes are available with broadband (20 Hz...20 kHz) random noise of either "pink" spectrum or "white" spectrum (see Pub. 702 on other side), followed by 30 s of 1 kHz tone at 0 dB for gain setting.

The pink spectrum is especially suited to analysis by a frequency- proportional bandwidth (for example, a 3rd octave) filter.

The white spectrum noise is especially suited to setting the azimuth angle of tape recorders, and to analysis by a constant-bandwidth filter.

### BANDWIDTH AND NOISE LEVEL

The noise generator used for these tapes is sharply band limited by a 4-pole high-pass filter at 14 Hz, and a 6-pole low-pass filter at 22 kHz. This corresponds to the 32 3rd-octave bands with centers between 16 Hz and 20 kHz. The noise power level in each 3rd- octave band of the pink-noise signal is 15 dB below the total (wide- band) noise power level.

The total noise power level is dependent on the bandwidth

and the frequency response of the transmission system. Therefore unless the reproducer is flat over this entire band, the total noise power level may not agree with a sine-wave measurement at 1 kHz. Therefore we do not generally recommend using these noise tapes for setting the reproducer gain: use the 1 kHz sine-wave tone after the noise.

### OTHER NOISE TAPES

Contact us for a part number and prices if you need pink noise for a playing time of 16, 32, or 64 minutes, or if you need a different reference fluxivity, tones and noise, etc.

See "Choosing and Using MRL Calibration Tapes for Audio Tape Recorder Standardization", MRL Publication Choo&U, for more information on choosing and converting between different equalizations and levels, as well as descriptions of other test signals that are available from MRL, and notes on using Calibration Tapes.

**Table of Broadband Pink-Noise Tapes With 1 kHz Tone**

Medium	Tape Speed	Equalization Standard	Level of Noise Signals	4 minutes total			8 minutes total		
				Catalog Number for Reference Fluxivity of:		Price	Catalog Number for Reference Fluxivity of:		Price
				250 nWb/m ("+3 dB")	355 nWb/m ("+6 dB")		250 nWb/m ("+3 dB")	355 nWb/m ("+6 dB")	
¼ in	3.75 in/s	IEC & NAB	-10 dB	221-803-480-101	221-803-510-107	100 \$	221-803-480-127	221-803-510-123	140 \$
	7.5 in/s	IEC (IEC1)	-10 dB	231-803-480-108	231-803-510-104		231-803-480-124	231-803-510-120	
		NAB (IEC2)	-10 dB	233-803-480-104	233-803-510-100		233-803-480-120	233-803-510-126	
	15 in/s	IEC (IEC1)	0 dB	241-802-480-108	241-802-510-104		241-802-480-124	241-802-510-120	
		NAB (IEC2)	0 dB	243-802-480-104	243-802-510-100		243-802-480-120	243-802-510-126	
30 in/s	AES (IEC2)	0 dB	251-802-480-105	251-802-510-101	105 \$	251-802-480-121	251-802-510-127	155 \$	
½ in	3.75 in/s	IEC & NAB	-10 dB	321-803-482-108	321-803-512-104	145 \$	321-803-482-124	321-803-512-120	225 \$
	7.5 in/s	IEC (IEC1)	-10 dB	331-803-482-105	331-803-512-101		331-803-482-121	331-803-512-127	
		NAB (IEC2)	-10 dB	333-803-482-101	333-803-512-107		333-803-482-127	333-803-512-123	
	15 in/s	IEC (IEC1)	0 dB	341-802-482-105	341-802-512-101		341-802-482-121	341-802-512-127	
		NAB (IEC2)	0 dB	343-802-482-101	343-802-512-107		343-802-482-127	343-802-512-123	
30 in/s	AES (IEC2)	0 dB	351-802-482-102	351-802-512-108	170 \$	351-802-482-128	351-802-512-124	250 \$	
1 in	3.75 in/s	IEC & NAB	-10 dB	421-803-482-107	421-803-512-103	265 \$	421-803-482-123	421-803-512-129	415 \$
	7.5 in/s	IEC (IEC1)	-10 dB	431-803-482-104	431-803-512-100		431-803-482-120	431-803-512-126	
		NAB (IEC2)	-10 dB	433-803-482-100	433-803-512-106		433-802-482-126	433-803-512-122	
	15 in/s	IEC (IEC1)	0 dB	441-802-482-104	441-802-512-100		441-802-482-120	441-802-512-126	
		NAB (IEC2)	0 dB	443-802-482-100	443-802-512-106		443-802-482-126	443-802-512-122	
30 in/s	AES (IEC2)	0 dB	451-802-482-101	451-802-512-107	305 \$	451-802-482-127	451-802-512-123	475 \$	
2 in	7.5 in/s	IEC (IEC1)	-10 dB	531-803-482-103	531-803-512-109	375 \$	531-803-482-129	531-803-512-125	570 \$
		NAB (IEC2)	-10 dB	533-803-482-109	533-803-512-105		533-803-482-125	533-803-512-121	
	15 in/s	IEC (IEC1)	0 dB	541-802-482-103	541-802-512-109		541-802-482-129	541-802-512-125	
		NAB (IEC2)	0 dB	543-802-482-109	543-802-512-105		543-802-482-125	543-802-512-121	
	30 in/s	AES (IEC2)	0 dB	551-802-482-100	551-802-512-106		420 \$	551-802-482-126	

Prices are in US\$, and do not include shipping or applicable taxes.

Prices may be changed without notice.