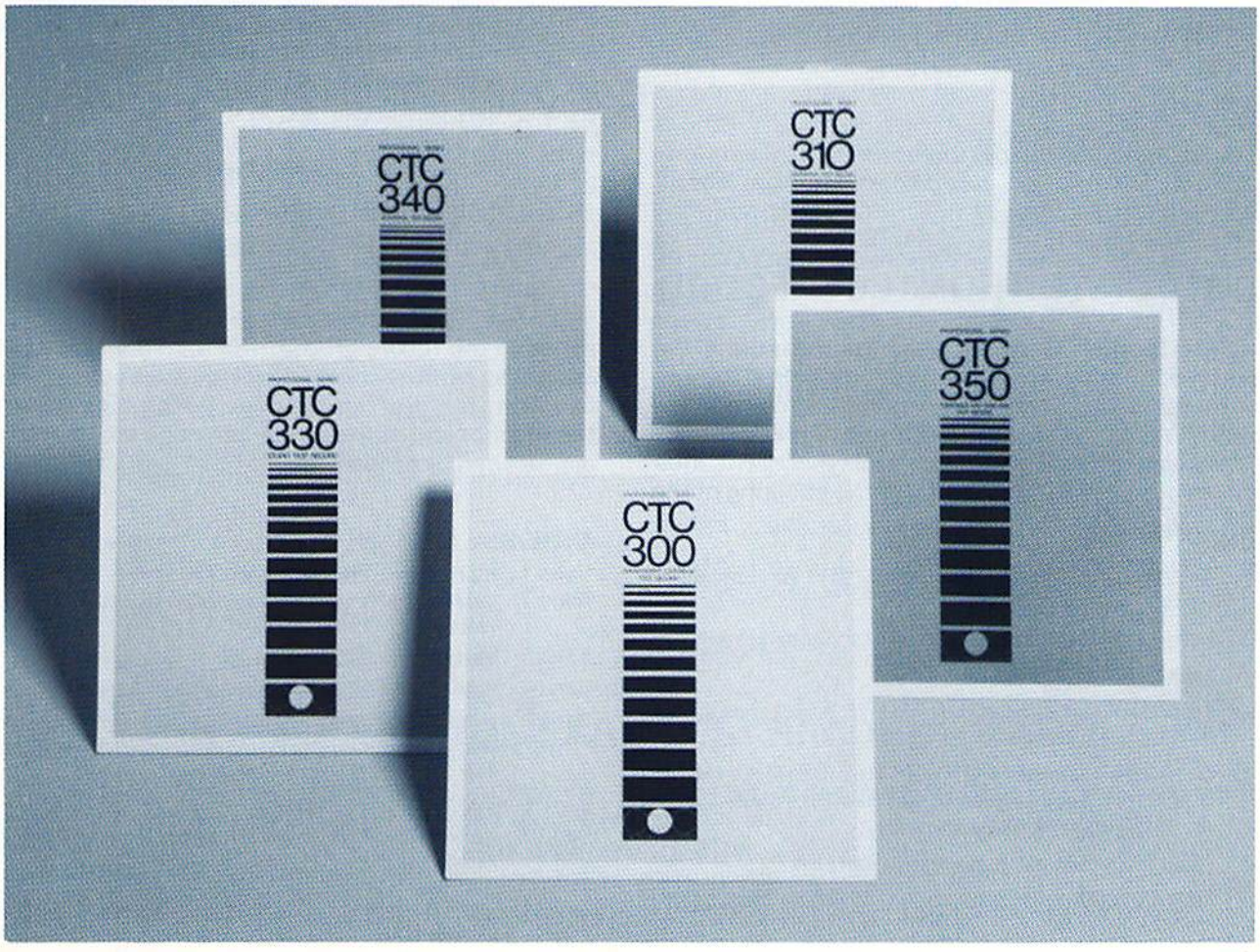
CBS Technology Center

227 High Ridge Road, Stamford, CT 06905 USA

PROFESSIONAL SERIES

TEST RECORDS



CBS Technology Center's Professional Series Test Records are unique, high precision signal sources designed to assist both the audio engineer and audiophile in the evaluation of audio components, studio equipment and reproduction systems. Each record contains a series of tests designed for a particular application, thus eliminating the need for numerous test records.

CTC 330 STUDIO TEST RECORD

The CTC-330 was developed to assist in evaluating the performance of audio disc playback equipment. It provides the range of test frequencies and levels required to measure phono cartridge sensitivity, frequency response and separation. Standard level signals can be used to set the gain and to identify the left and right channels. Other test bands are used to check system phase and measure the rotational speed of a turntable.

SIDE A:

Band 1 Left Sweep Frequency: 20 Hz - 20 kHz, 16.7 sec/decade sweep rate, 1 kHz @ -20 dB, RIAA (3180/318/75 µsec) characteristic

Band 2 Right Sweep Frequency: similar to Band 1A

Band 3 Lateral Sweep Frequency: similar to Band 1A

Band 4 Left Spot Frequency: 20 kHz - 20 Hz, 7 sec tones at 1/3-octave intervals

Band 5 Left Sweep Frequency: 20 Hz - 2 kHz, 16.7 sec/decade sweep rate

Band 6 Right Sweep Frequency: similar to Band 5A

Band 7 Left, 1 kHz reference tone, 45 sec, 36.4 mm/sec rms velocity

Band 8 Right, similar to Band 7A

SIDE B:

Band 1 Lateral Spot Frequency: similar to Band 4A

Band 2 Right Spot Frequency: similar to Band 4A

Band 3 Lateral; 1 kHz reference tone, 45 sec, 50.0 mm/sec rms velocity

Band 4 Vertical: similar to Band 3B

Band 5a Vertical strobe, 120 Hz, 33-1/3 rpm
Band 5b Vertical strobe, 100, Hz, 33-1/3 rpm

CTC 340 ACOUSTICAL TEST RECORD

The CTC-340 is intended to be used for measuring the performance of an entire reproducing system, including the loudspeakers. The program uses random noise, suitable for measurement with instruments or, in some cases, interpretation by ear.

SIDE A:

Band 1 Left Sweep Frequency: pink noise band, 1/3 octave, 20 Hz - 20 kHz, 16.7 sec/decade sweep rate, RIAA (3180/318/75 µsec) characteristic

Band 2 Right Sweep Frequency: similar to Band 1A

Band 3 Lateral Sweep Frequency: similar to Band 1A

Band 4 Left Spot Frequency: pink noise band, 1/3 octave, 20 kHz - 20 Hz, first tone 1 kHz calibration, each tone 7 sec

Band 5 Left: wide band pink noise, 20 Hz - 20 kHz, 1 min, RIAA (3180/318/75 µsec) characteristic

Band 6 Right: similar to Band 5A

Band 7 Left: 1kHz reference tone, 45 sec, 35.4 mm/sec rms velocity

Band 8 Right: similar to Band 7A

SIDE B:

Band 1 Lateral Spot Frequency: similar to Band 4A

Band 2 Right Spot Frequency: similar to Band 4A

Band 3 Left & Right: wide band noise in phase, (lateral), 20 Hz-20 kHz RIAA (3180/318/75 µsec) characteristic

Band 4 Left & Right: wide band noise, random phase

Band 5 Lateral: 1 kHz reference tone, 45 sec, 50.0 mm/sec rms lateral velocity

CTC 350 TURNTABLE AND TONE ARM TEST RECORD

The CTC-350 provides the signals necessary to measure the key performance parameters of turntables and tone arms. Other test records in this series have been specifically designed for measuring phono cartridge performance.

SIDE A:

Band 1 Left: 1 kHz reference tone, 1 min, 35.4 mm/sec rms velocity

Band 2 Right: similar to Band 1A

Band 3 Wow and Flutter: 5 min, lateral 3150 Hz @ 50 mm/sec rms velocity

Band 4 Lateral Sweep Frequency: tone arm resonance, 2 Hz - 100 Hz, 16.7 sec/decade sweep rate, constant 22.5 µm peak displacement

Band 5 Vertical Sweep: similar to Band 4A

SIDE B:

Band 1 Rumble Reference Tone: 315 Hz, left, right, vertical, lateral

Band 2 Rumble: quiet grooves, 5 min

Band 3 Lateral: 1 kHz reference tone, 1 min, 50.0 mm/sec rms velocity

Band 4 Vertical: similar to Band 3B

Band 5a Vertical strobe, 120 Hz, 33-1/3 rpm
Band 5b Vertical strobe, 100 Hz, 33-1/3rpm

CTC 300 PHONOGRAPH TEST RECORD

The CTC-300 is used for measuring the frequency response, crosstalk, low frequency resonance, polarity, compliance, and tracking ability of phonograph cartridges. It contains swept frequency left and right channel test bands, in both audio and infrasonic ranges. Logarithmic frequency sweeps are compatible with the chart speeds of many graphic level recorders.

SIDE A:

Band 1 Left Sweep Frequency: 20 Hz - 20 kHz markers at 300 Hz, 1 kHz, 5 kHz

Band 2 Right Sweep Frequency: similar to Band 1A

Band 3 Left Separation: 1 kHz @ +3 dB, 10 kHz @ +3 dB, 1 kHz @ +6 dB, 10 kHz @ +6 dB

Band 4 Right Separation: similar to Band 3A

Band 5 Lateral Polarity: 500 Hz square wave 3:7 duty cycle, 30 sec, positive is outward motion of groove

Band 6 Vertical Polarity: similar to Band 5A

Band 7 Left: 1 kHz Reference Tone 1 min

Band 8 Right: 1 kHz Reference Tone 1 min

SIDE B:

Band 1 Lateral Sweep Frequency: 2 - 100 Hz tone arm resonance

Band 2 Vertical Sweep Frequency: similar to Band 1B

Band 3 Lateral Compliance: 100 Hz, 7 sec/step; 22.5, 28.3, 35.7, 44.9, 56.5, 71.2 µm peak lateral displacement (0, +2, +4, +6, +8, +10 dB re 22.5 µm peak lateral displacement)

Band 4 Vertical Compliance: 100 Hz, 7 sec/step; 22.5, 28.3, 35.7, 44.9, 56.5, 63.4 µm peak vertical displacement (0, +2, +4, +6, +8, +9 dB re 22.5 µm peak vertical displacement)

Band 5 Lateral Tracking: 300Hz, 7 sec/step; 22.5, 28.3, 35.7, 44.9, 56.5, 63.4, 71.2, 79.8, 89.6, 100.6, 112.8, 126.5 µm peak lateral displacement (0, +2, +4, +6, +8, +9, +10, +11, +12, +13, +14, +15 dB re 22.5 µm peak lateral displacement)

Band 6 Vertical Tracking: 300 Hz, 7 sec/step; 22.5, 28.3, 35.7, 44.9, 56.5, 63.4 µm peak vertical displacement (0, +2, +4, +6, +8, +9 dB re 22.5 µm peak vertical displacement)

CTC 310 DISTORTION TEST RECORD

The CTC-310 has been designed for measuring the distortion of phonograph pickup cartridges due to non-linear relationships between the stylus velocity and the output voltage from the cartridge, and other factors such as to the shape of the cutting and the playback styli, their effective vertical tracking angles, or the coupling of the stylus to the record groove. The total distortion usually increases with recorded level throughout the normal operating range of the cartridge, becoming very large as the mechanical limits of the cartridge components are approached or exceeded.

SIDE A:

Band 1 Left, two tone sweep, 1 - 50 kHz, Δf=315 Hz constant velocity sweep

Band 2 Left, 1 kHz square wave, 35.4 mm/sec constant velocity

Band 3 Right, similar to Band 2A

Band 4 Left Spot Frequency: 20 kHz - 20 Hz, 7 sec tones at 1/3-octave intervals

Band 5 Left Intermodulation: 4 kHz + 400 Hz, phase locked, 4 kHz @ 17.7 mm/sec rms velocity; 400 Hz off, 0, +3, +6, +9, +12 dB re 16 µm peak displacement

Band 6 Right Intermodulation: similar to Band 5A

Band 7 Left: 1kHz reference tone, 1 min, 35.4 mm/sec rms velocity

Band 8 Right: similar to Band 7A

SIDE B:

Band 1 Right, similar to Band 1A

Band 2 Lateral, 1 kHz square wave, 50.0 mm/sec constant velocity

Band 3 Vertical, similar to Band 2B

Band 4 Right Spot Frequency: similar to Band 4A

Band 5 Lateral Intermodulation: 4 kHz + 400 Hz, phase locked, 4 kHz @ 25 mm/sec velocity; 400 Hz off, 0, +3, +6, +9, +12, +15 dB re 22.5 µm/sec peak displacement

Band 6 Vertical intermodulation, similar to Band 5B

Band 7 Noise band, 1/3 octave, 16 kHz 50 mm/sec rms lateral velocity

CBS CD-1 COMPACT TEST DISC

The CD-1 is a highly accurate signal source specifically designed for making a full range of demanding performance measurements on Compact Disc players. This test disc includes all of the Electronic Industries Association (EIA) specified test signals and several CBS enhancements which allow the user the ability to obtain more critical performance data than those required by the corresponding EIA measurement standard.

Track 1 Reference, L & R, O dB, 1 kHz
Track 2 Left Separation: O dB, 1K, 125, 4K, 10K, 16K Hz
Track 3 Right Separation: similar to Track 2
Track 4 Output Noise, L & R, Digital Zero w/o emphasis
Track 5 Dynamic Range, L & R, 1 kHz, -60 dB w/o emphasis
Track 6 Frequency Response, L & R, O dB, 4, 8, 17, 31 Hz
Track 7 61, 127, 251, 499 Hz
Track 8 997, 1999, 4001, 7993 Hz
Track 9 10 007, 12 503, 16 001, 17 989 Hz
Track 10 19 997 Hz (also used for Pitch Error)
Track 11 Sweep Frequency Response, O dB, 5 Hz - 22.05 kHz
Track 12 De-emphasis Error, L & R, 1K, 125, 4K, 10K, 16K Hz
Track 13 Intermodulation Distortion (SMPTE, Twin Tone) L & R, 60 Hz +7 kHz, 11 kHz +12 kHz
Track 14 Linearity, 997 Hz, L & R, O dB, -1, -3, -6, -10, -30, -39.99, -49.97, -59.94, -70.31, -80.77, -90.31 dB
Track 15 Wow & Flutter, L & R, O dB, 3150 Hz
Track 16 Access Time, L & R, O dB, 317 Hz
Track 17 Square Wave, L & R, O dB, 1002.27 Hz
Track 18 Linearity with Dither, 997 Hz, L & R, -70.31, -80.77, -90.31, -100 dB
Track 19 Impulse & Polarity Test, O dB, L & R
Track 20 Fade to Noise, L & R, -60 dB, 500 Hz
Track 21 Monotonicity, L & R, 1105.5 Hz, 10 LSB

STR 101 SEVEN STEPS TO BETTER LISTENING

Though easy to make tests and simple narrative, this test record for home use will help you blend electronic components, room acoustics and the characteristics of your own ears into one well-tuned system for the enjoyment of all recorded sound. You will be able to assure yourself that your equipment functions properly, and also learn to "tune" your record player to your own hearing and to the acoustics of the room in which you are listening.

A booklet of detailed operational procedures by the noted author, Edward Tatnall Canby, is also included.

SIDE A: STEREO TESTS

Band 1 Left-Right Identification
Band 2 Phasing Test
Band 3 Loudspeaker Balance
Band 4 Tone Control Setting (one-third octave noise bands)
Band 5 Alternate Phasing Test

SIDE B: STEREO-MONAURAL TESTS

Band 1 Tone Control Setting (one-third octave noise tone)
Band 2 Buzz and Rattle Elimination (high level glide tone)
Band 3 Lateral Tracking Test
Band 4 Verticle Tracking Test

ORDERING INFORMATION

Please write or call:

CBS, Inc.
Columbia Special Products
8th Floor
51 West 52nd Street
New York, NY 10019
(212) 975-4321

CTC Professional Series Test Records ..... $30.00 each
CBS CD-1 Compact Test Disc ..... $45.00 each
STR 101 Seven Steps to Better Listening..... $8.98 each

Quantity discount prices available on request.
Add $3.00 for handling with each order.