

## CD-R Premaster Testing

### Full Digital and Logical Analysis and Byte-to-Byte Comparison For CD, CD-R and CD-RW

CD-Rs are analyzed for playability at speeds up to 24X. If a CD-R fails at 24X, we automatically slow down and retest to find at what speed the CD-R will play. All CD-Rs should be tested for high-speed playability, as all drives are now high-speed. CD-Rs written for data storage and archival purposes are tested for verification of data integrity. Testing verifies the exact data transfer on CD-R and RW. Byte-to-Byte verification can be used in CD replication or CD-R duplication to match duplicated data to the CD-R source. If a CD-R fails, full digital analysis graphs and sector data print outs allow the engineer to isolate where the error occurred. In addition to extensive technical CD-R analysis.

#### Measurements:

Measurements for BLER, BRST and UNCR errors as well as E11, E21, E31, E12, E22, E32 and also for CD-ROM: L-ECC recoverables, CIRC unrecoverables, and L-ECC unrecoverables (Mode 1). Error types are displayed in both 1 & 10 second running averages.

#### VTOC Information:

##### Track information:

- Q Mode 1 - Control bits, # channels, Pre-emphasis, Copybit, Data/Music
- Q Mode 2 - UPC/EAN code
- Q Mode 3 - International Standard Recording Code
- Q Mode 5 - Session Information (Closed sessions only)

#### Additional Measurements:

##### Sector Information:

- CD-R Mode and Form
- Volume Descriptor Information
- Linking Block Detection
- Transfer Rate Graph

##### Full Subcode Analysis:

- CRC Error Count
- Track Indexes
- Pause Areas
- Track Starts

#### CD-ROM Specific Measurements:

- Postgap Verification
- Subcode To Header Skew
- Full CD-R file organization and directory structure
- "Byte-to-Byte" image comparison for both data and audio CD-Rs
- Speed selectable: 1X, 2X, 4X, 8X, 24X (CAV) real-time speeds
- CD-R positions selectable for display in CD-R time, track time, and logical sector formats
- ISO 9660 specification verification

#### CD-R Type Information:

- PSEC and Control Bits
- CD, CD-R, CD-RW, CD-DA, CD-ROM, CD-ROM XA, CD-I, Mixed Mode, Enhanced CD
- CD Bootability (El Torito Specification)
- Format Extension Detection (Joliet Specification)
- Volume Descriptor Information