

# TEST CD

## For Checking CD Players and CD Drives

### TCD-784

#### 1. Purpose of use, Features

TCD-784 is a Test Disc designed for measurement of Audio Characteristics and various kinds of evaluation and adjustment of HF Signal, Eye Pattern, Block Error rate, Servo adjustment and Access Check etc., of CD Player and Drives etc.. As for Audio characteristics, measurement of Frequency Response, Dynamic Range, S/N Ratio, Channel Separation, De-Emphasis and Tone Control are available to confirm.

On track No. 19, it is recorded Index from 1 to 8. Announcements of Index No. are recorded on each Index, it is available to confirm Index Search Playback.

On track No.23 and 24, low frequency sweep signals for confirmation of sympathetic resonance and vibrations of cabinet are recorded.

Since Eccentricity, Tilt, Birefringence, Modulation, Jitter and Block error rate are strictly managed than CD Specifications, stable evaluation and adjustment are available.

#### 2. Specifications

- Disc type : CD-DA
- Recorded time : 71min. 42sec.
- Physical Characteristics: Complies with Compact Disc Digital Audio System.

However, following parameters are managed as described specifications.

| Parameters            | Managed Specifications   | CD Specifications |
|-----------------------|--------------------------|-------------------|
| Outer diameter        | 120 ± 0.3 mm             | 120 ± 0.3 mm      |
| Center hole diameter  | 15.0 +0.1/ -0 mm         | 15.0 +0.1/ -0 mm  |
| Substrate thickness   | 1.2 ± 0.03 mm            | 1.2 ± 0.1 mm      |
| Scanning velocity     | 1.25 m/s (for reference) | 1.2 ~ 1.4 m/s     |
| Track pitch           | 1.6 μm (for reference)   | 1.6 ± 0.1 μm      |
| Eccentricity          | ≤ 40 μm (0-p)            | ≤ 70 μm (0-p)     |
| Radial tilt (β angle) | ≤ ± 0.1° (ave.) at R38mm | ≤ ± 0.6°          |
| Birefringence         | ≤ ± 80 nm                | ≤ ± 100 nm        |
| Reflectivity          | ≤ 75%                    | ≤ 70%             |
| Modulation(I11/I11H)  | ≤ 73%                    | ≤ 60%             |
| Modulation(I3/I11H)   | ≤ 42%                    | 30 ~ 70%          |
| Asymmetry             | -5 ~ +2%                 | -15 ~ +5%         |
| Jitter (3T Pit)       | ≤ 25 ns                  | ≤ 35ns            |
| Block error rate      | ≤ 70 (max.)              | ≤ 220             |

## 3. Content

| Track No.                                     | Index | Time |     | Contents                  | Channel | Level dB | Emphasis | Purpose                                 |
|---|-------|------|-----|---------------------------|---------|----------|----------|---|
|   |       | min  | sec |                           |         |          |          |   |
| 1   | 1     | 3    | 32  | Minuetto                  | L & R   | -        | ON       | Access                                  |
| 2   | 1     | 0    | 56  | 1kHz Sine wave            | L & R   | 0        | OFF      | Reference level                         |
| 3   | 1     | 0    | 56  | 20Hz Sine wave            | L & R   | 0        | OFF      | Frequency response<br>THD vs. frequency |
| 4   | 1     | 0    | 56  | 100Hz Sine wave           | L & R   | 0        | OFF      |   |
| 5   | 1     | 0    | 56  | 10kHz Sine wave           | L & R   | 0        | OFF      |   |
| 6   | 1     | 0    | 56  | 20kHz Sine wave           | L & R   | 0        | OFF      |   |
| 7   | 1     | 0    | 56  | Infinity 0                | L & R   | -∞       | OFF      | S/N                                     |
| 8   | 1     | 0    | 56  | 1kHz Sine wave            | L       | 0        | OFF      | Channel separation                      |
| 9   | 1     | 0    | 56  | 10kHz Sine wave           | L       | 0        | OFF      |   |
| 10  | 1     | 0    | 56  | 1kHz Sine wave            | R       | 0        | OFF      |   |
| 11  | 1     | 0    | 56  | 10kHz Sine wave           | R       | 0        | OFF      | De-emphasis error                       |
| 12  | 1     | 0    | 56  | 5kHz Sine wave            | L & R   | -4.53    | ON       |   |
| 13  | 1     | 0    | 56  | 16kHz Sine wave           | L & R   | -9.04    | ON       | Tone control<br>Frequency response      |
| 14  | 1     | 0    | 56  | 100Hz Sine wave           | L & R   | -20      | OFF      |   |
| 15  | 1     | 0    | 56  | 1kHz Sine wave            | L & R   | -20      | OFF      |   |
| 16  | 1     | 0    | 56  | 10kHz Sine wave           | L & R   | -20      | OFF      | Dyanic range                            |
| 17  | 1     | 0    | 56  | 1kHz Sine wave            | L & R   | -60      | OFF      |   |
| 18  | 1     | 3    | 28  | Clair de Lune             | L & R   | -        | ON       | General                                 |
| 19  | 1~8   | 39   | 33  | 1 ère Gymnopédie          | L & R   | -        | OFF      | Index                                   |
| 20  | 1     | 3    | 20  | Ouverture Miniature       | L & R   | -        | OFF      | General                                 |
| 21  | 1     | 0    | 05  | Drums                     | L & R   | -        | OFF      | Access                                  |
| 22  | 1     | 0    | 23  | Trepak(Dance Russe)       | L & R   | -        | OFF      |   |
| 23  | 1     | 0    | 56  | Log Sweep 20Hz~2kHz *     | L & R   | -6       | OFF      | Loud speaker test(playsbility)          |
| 24  | 1     | 0    | 56  | Linear Sweep 80Hz~300Hz * | L & R   | -6       | OFF      |   |
| 25  | 1     | 3    | 03  | Blank                     | L & R   | -        | OFF      | Blank for long time access              |
| 26  | 1     | 0    | 04  | 1kHz Sine wave            | L & R   | 0        | OFF      | End signal                              |
| TOTAL TIME (Including pause time) 71min 42sec |       |      |     |                           |         |          |          |   |

note) No pause time on track No.21, 22, 25 and 26.

\* Log Sweep signal on Track No. 23 ascends 20Hz through 2kHz, repeating each cycle in 5 seconds.

Linear Sweep signal on Track No. 24 ascends 80Hz through 300Hz, then descends 300Hz through 80Hz, repeating each cycle in 5.5 seconds.

Values in this sheet are measured by the equipments ALMEDIO-owned. Appearance and specifications are subject to change without notice.

<Proper handling of the disc>

Do not write on the surface with a pen and others, nor put a sticker on it.

Do not expose the disc to direct sunlight, nor leave it in the place of high temperature and high humidity.

After playing, store the disc in its own case.

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