

VERTICAL DEVIATION TEST CD

For Checking CD Players and CD Drives

TCD-731RA/ -732RA

1. Purpose of use, Features

These are Vertical Deviation Test Discs designed for confirmation of focus servo ability, evaluation, measurement and adjustment of CD Drives and Players etc..

- Vertical deviation of TCD-731RA is 1.00mm at Track 15. Eccentricity is made less than $20 \mu\text{m}$ (0-p) by raising the precision of center hole dimension to scale back the influence of eccentricity.
- TCD-732RA is suitable for checking of thin type mechanism.

Vertical deviation of TCD-732RA is 1.00mm at Track 16.

Vertical deviation spreading and Eccentricity are the same specification as TCD-731RA.

2. Specifications

- Disc type : Vertical deviation CD-DA Disc

- Basic parameters

Model name	Material disc	Recorded time	Scanning velocity (for reference)	Track pitch (for reference)
TCD-731RA	TCD-791	43min. 5sec.	1.25 m/sec	$1.6 \mu\text{m}$
TCD-732RA	TCD-793	1hr. 14min. 42sec.	1.20 m/sec	$1.6 \mu\text{m}$

- Disc dimension

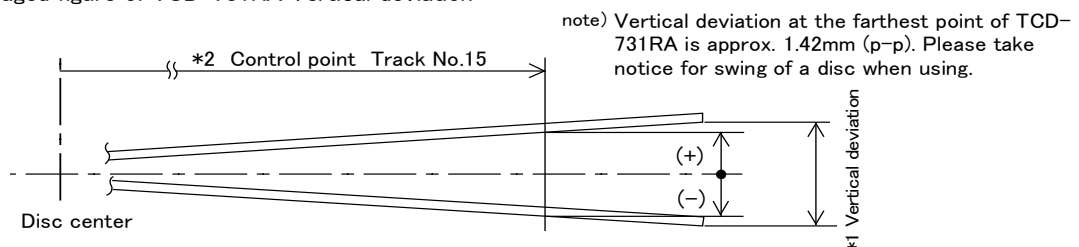
Model name	Outer diameter	Center hole diameter	Disc thickness	Eccentricity
TCD-731RA/ -732RA	$120 \pm 0.3 \text{ mm}$	$15 +0.04/ -0 \text{ mm}$	$1.2 +0.3/ -0.1 \text{ mm}$, including label and protective layer	$< 20 \mu\text{m}$ (0-p)

- Specification of Vertical deviation

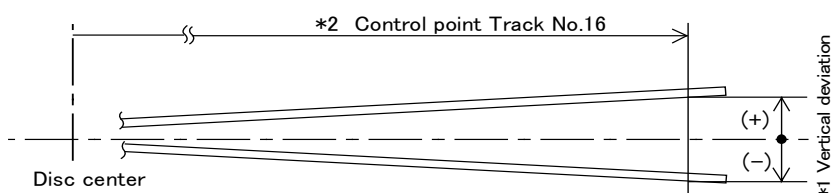
Model name	*1 Vertical deviation mm	Vertical deviation spreading mm		*2 Control point mm
		(+)	(-)	
TCD-731RA	1.00 ± 0.05	0.50 ± 0.05	-0.50 ± 0.05	Track No.15 ($\phi 93$)
		0.50 ± 0.05	-0.50 ± 0.05	
TCD-732RA	1.00 ± 0.05	0.50 ± 0.05	-0.50 ± 0.05	Track No.16 ($\phi 116$)
		0.50 ± 0.05	-0.50 ± 0.05	

- *1 We define Vertical deviation here is the difference between max. and min. shift value of the recorded layer at the control point in vertical direction when a disc rotating one revolution.
Therefore, the Vertical deviation of this table is indicated as p-p.

Imaged figure of TCD-731RA Vertical deviation



Imaged figure of TCD-732RA Vertical deviation



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

3. Content

• TCD-731RA

Track No.	Time		Contents	Start Radius * mm	Vertical * Deviation mm
	min	sec			
1	3	15	Minuetto	24.9	(0.54)
2	2	32	2 ème Gymnopédie	27.3	(0.59)
3	3	02	Ouverture Miniature (Casse-noisette Op. 71a)	29.0	(0.63)
4	2	36	Marche (Casse-noisette Op. 71a)	30.9	(0.67)
5	3	09	Clair de Lune	32.5	(0.71)
6	3	12	Nocturne (Op. 9-2)	34.3	(0.74)
7	2	26	Danse de la Fée-Dragée (Casse-noisette Op. 71a)	36.0	(0.78)
8	2	29	Danse Arabe (Casse-noisette Op. 71a)	37.3	(0.81)
9	2	51	Fantaisie-Impromptu (Op. 66)	38.5	(0.84)
10	2	02	Hungarian Dance No.5	39.9	(0.87)
11	3	38	Prélude < Raindrop >	40.9	(0.89)
12	3	15	Maiden's Prayer	42.5	(0.92)
13	3	08	Valse des Fleurs (Casse-noisette Op. 71a)	43.9	(0.96)
14	2	54	1 ère Gymnopédie	45.3	(0.98)
15	2	06	Danse des Mirlitons (Casse-noisette Op. 71a)	46.5	1.0
TOTAL TIME (Including pause time) 43min 5sec					

• TCD-732RA

Track No.	Time		Contents	Start Radius * mm	Vertical * Deviation mm
	min	sec			
1	2	01	1 ère Gymnopédie	24.9	(0.43)
2	2	10	1 ère Gymnopédie	26.4	(0.45)
3	2	17	1 ère Gymnopédie	27.9	(0.48)
4	2	24	1 ère Gymnopédie	29.4	(0.50)
5	2	32	1 ère Gymnopédie	30.9	(0.53)
6	2	40	1 ère Gymnopédie	32.4	(0.56)
7	2	47	1 ère Gymnopédie	33.9	(0.58)
8	5	34	1 ère Gymnopédie	35.4	(0.61)
9	3	46	1 ère Gymnopédie	38.2	(0.65)
10	4	25	1 ère Gymnopédie	40.0	(0.69)
11	5	37	1 ère Gymnopédie	42.0	(0.72)
12	6	56	1 ère Gymnopédie	44.4	(0.76)
13	12	22	1 ère Gymnopédie	47.1	(0.81)
14	8	22	1 ère Gymnopédie	51.7	(0.89)
15	9	45	1 ère Gymnopédie	54.6	(0.94)
16	0	04	1kHz -20dB L&R	57.8	1.0
TOTAL TIME (Including pause time) 74min 42sec					

* Start Radius and Vertical Deviation (dimension) at respective tracks are calculated reference value.

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<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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