



# CD Audio Test Signals

Precise Audio Signals

Vol. 1

Product Id CD10000

Track	Signal	Note
1	16 Hz	Sine
2	18 Hz	"
3	20 Hz	"
4	22 Hz	"
5	25 Hz	"
6	32 Hz	"
7	40 Hz	"
8	45 Hz	"
9	50 Hz	"
10	63 Hz	"
11	72 Hz	"
12	80 Hz	"
13	90 Hz	"
14	100 Hz	"
15	125 Hz	"
16	160 Hz	"
17	200 Hz	"
18	250 Hz	"
19	315 Hz	"
20	400 Hz	"
21	500 Hz	"
22	630 Hz	"
23	725 Hz	"
24	800 Hz	"
25	1000 Hz	"
26	1250 Hz	"
27	1600 Hz	"
28	2000	"
29	2500	"
30	3150	"
31	4000	"
32	5000	"
33	6300	"
34	7250	"
35	8000	"
36	10000	"
37	12500	"
38	16000	"
39	17500	"
40	20000	"
41	Pink Noise	30s
42	Pink Noise	30s, 10s..20s = Left Phase 180°
43	White Noise	30s
44	20Hz-20kHz	"All" Sweep Log, 30s
45	100Hz-20k	"Mid-Range"
46	20Hz-200Hz	"Sub-Range"
47	20Hz-200Hz	"Sub" Left only
48	20Hz-200Hz	"Sub" Right only
49	20Hz-20kHz	"All" Sweep Lin, 30s
50	100Hz-20kHz	"Mid-range"

Track	Signal	Note
51	20Hz-200Hz	„Sub-Range“
52	20Hz-200Hz	„Sub“ Left only
53	20Hz-200Hz	„Sub“ Right only
54	50Hz	Sine, channel Left
55	100Hz	"
56	500Hz	"
57	1kHz	"
58	5kHz	"
59	10kHz	"
60	15kHz	"
61	20kHz	"
62	50Hz	Sine, channel Right
63	100Hz	"
64	500Hz	"
65	1kHz	"
66	5kHz	"
67	10kHz	"
68	15kHz	"
69	20kHz	"
70	1k	THD: Sine, 0dBFS, 30s
71	1k	-6dBFS
72	1k	-12dBFS
73	100Hz	0dBFS
74	100Hz	-6dBFS
75	100Hz	-12dBFS
76	10k	0dBFS
77	10k	-6dBFS
78	10k	-12dBFS
79	SMPTE	IMD 30s, 4:1
80	DIN	IMD 30s, 4:1
81	13k + 14kHz	DFD 30s, 1:1
82	80Hz	20s, Phase: 0-5s =0°, 5-10s= Left 180°, 10-15s =0°, 15-20s= Right 180°
83	150Hz	"
84	2kHz	"
85	10kHz	"
86	1k	Square wave
87	Silence	30s

All tracks stereo, level -1dBFS , duration 10s, phase 0°, if not otherwise declared. Excepted noise level. All title with CD text.



Attention: Playing the test signals can damage your audio system or cause in hearing loss! Use at your own risk.



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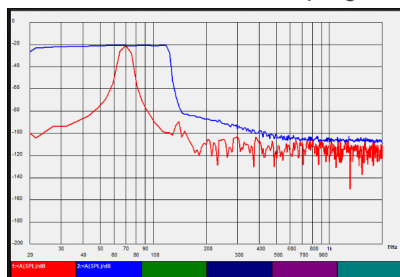
Product Id CD10000

Track	Application samples
	<b>Signal group "Sine"</b>
1-40	Signals for frequency response measurement, e.g amplifier or audio crossover or L/R phase check.
	<b>Signal group "Noise"</b>
41-42	Acoustical check of loudspeaker systems , frequency response measurement, EQ adjustment.
43	Frequency response measurement.
	<b>Signal group "Sweep"</b>
44-52	Frequency response measurement with FFT peak level analyser or vibration identification SUB: Signal range for a woofer, Mid: Range for Mid-Range and Tweeter, All: Range from Sub to Tweeter.
	<b>Signal group "Sine only channel Left or Right"</b>
53-60	Signal only channel Left. Channel identification, audio device cross-talk check.
61-68	Signal only channel Right. Channel identification, audio device cross-talk check.
	<b>Signal group "Sine for distortion measurement"</b> . Signals for acoustical and electrical measurement. Visualisation / measurement via FFT or audio analyser.
69-77	Sine signal for Total Harmonic Distortion (THD) and harmonics.
78	Two sine tone signal for Non Linear Distortion (NLD) measurement, SMPTE standard.
79	Two sine tone signal for Non Linear Distortion (NLD) measurement, DIN standard.
80	Two sine tone signal for Difference Distortion Measurement (DFD).
	<b>Signal group "Phase/ Driver Polarity ". Check loudspeaker systems.</b>
81	Woofer signal: Wrong polarity minimises sub/woofer sound level. Best result with Phase = 0°. If not, check the driver polarity.
82-83	Mid-range signal: Wrong polarity minimises sound level and results in a diffuse sound image. Best result / central sound image with Phase = 0°. If not, check the driver polarity.
84	Tweeter signal: Wrong polarity results in a diffuse sound image. Best result / central sound image with Phase = 0°. If not, check the driver polarity.
	<b>Signal group "Other"</b>
85	Square wave, check for example signal rise time for amplifier.
86	Silence for acoustical noise check or measurement.

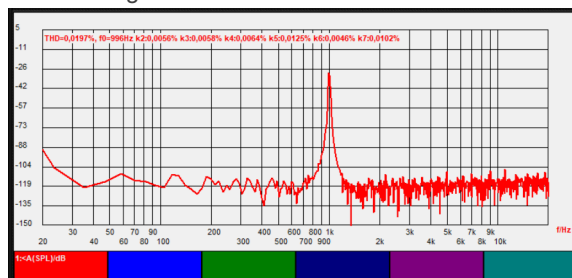
## Measurement examples with PC audio analyser x1Analyzer

x1Analyzer is not part of the CD offer

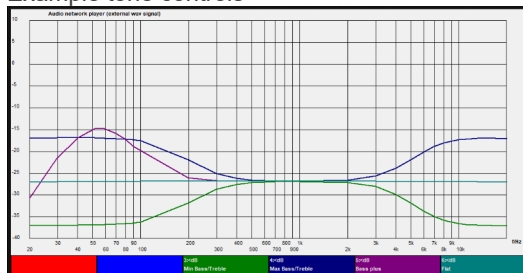
FFT "Peak mode" with sweep signal



FFT sine signal



Frequency response build via single sine signals:  
Example tone controls



Frequency response audio network player via FFT  
"Peak Mode" with White Noise

