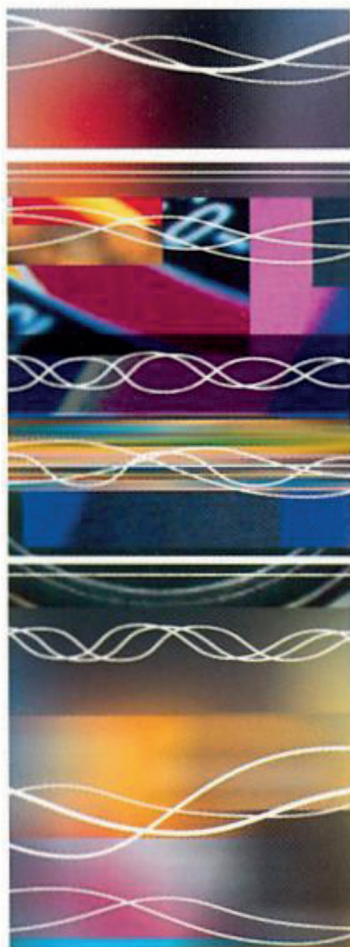


Product Information Sheet

25-321 CANFORD INTERNATIONAL BROADCAST STANDARDS TESTS CD



INTERNATIONAL BROADCAST STANDARDS TESTS



Correct alignment and monitoring of programme material is of paramount importance for broadcast engineers and organisations. 'International Broadcast Standards Tests' provides a convenient source of international reference and measurement signals.

- 1-8 Alignment signals**
- 9-17 System test signals**
- 18-30 VU meter (IEC268-17) test signals**
- 31-43 PPM meter (IEC268-10) generic test signals**
- 44-49 PPM meter (IEC268-10) Type I specific test signals**
- 50-57 PPM meter (IEC268-10) Type II specific test signals**
- 58-67 Phase meter test signals**
- 68-91 Loudness meter test signals**
- 92-96 Peak/rms test signals**
- 97-99 Other signals**

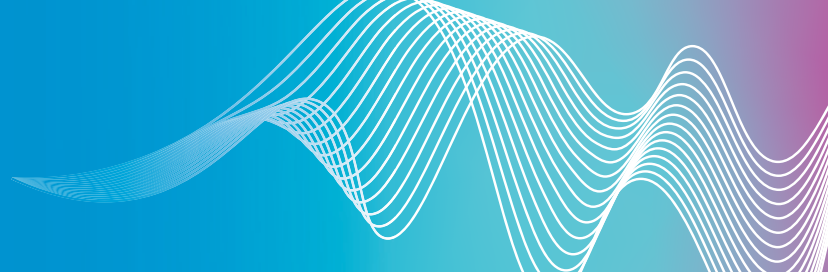
All tracks digitally generated by Dr. John Emmett, BPR Ltd, except tracks 98-99 digitally recorded for Canford Audio by BBC Radio Production Resources:

Studio:	B15, BBC Broadcasting House (reverberation time 0.2s)
Microphone:	Neumann U87, cardioid setting
Reader:	Peter Donaldson

Track 98 Text by Washington Irving, edited by Simon Kahn
Track 99 Shipping Forecast by permission of The Met. Office
Mastered by *BITS & PIECES*, engineer Simon Kahn

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02-598



TRACK LISTINGS

Alignment Tracks

1	1kHz	-18dBFS	Line-up	(EBU R49)	L interrupted, R continuous	02:00
2	1kHz	-20dBFS	Line-up	(SMPTE RP-155)		02:00
3	1kHz	-14dBFS	Line-up	(recording studios etc.)		02:00
4	1kHz	-12dBFS	CD exchange alignment level(EBU R89)			02:00
5	1kHz	-18dBFS	GLITS line-up		L&R different periods, see text	02:00
6	1kHz	-18dBFS	Left	Dual language line-up		02:00
	(400Hz	-18dBFS	Right)			
7	Pink noise		-20dB mean level.(SMPTE RP-155)			
			20Hz - 20kHz		L&R non-coherent	02:00
8	Pink noise		-18dB quasi-peak,(EBU/ITU) band limited		-3dB @ 200Hz, 5kHz, L&R non-coherent	02:00

System Test Tracks

9	1kHz	-18dBFS	ITU BS645 Alignment Level (AL)			02:00
10		-9dBFS	ITU BS645 Permitted Maximum Level (PML), @AL+9dB), pulsed 80Hz, 1kHz, 5kHz, 10kHz			02:00
11		-10dBFS	TU BS645 Permitted Maximum Level (PML), @AL+8dB), pulsed 80Hz, 1kHz, 5kHz, 10kHz			02:00
12		-30dBFS	ITU BS645 Measurement Level (ML), @AL-12dB 1kHz, then sweeps 40Hz to 16kHz			02:00
13	80Hz	0dBFS	Pulses			00:30
14	80Hz	+1dBFS	Pulses			00:30
15			Digital silence			01:00
16	1kHz	-78dB FS	No dither		Alternating L/R at 1 second intervals	01:00
17			Line test sequence (EBU R27) repeated, (no ident)		L&R differ, see Figure 2	02:00

VU Tests, (IEC 60268-17)

18	1kHz	-14dBFS	Reference level	(To set 0VU)		00:30
19	31.5Hz	-14dBFS	LF check	(0VU)		00:10*
20	16kHz	-14dBFS	HF check	(0VU)		00:10*
21	1kHz	-11dBFS	Scale check	(+3VU)		00:10*
22	1kHz	-17dBFS	Scale check	(-3VU)		00:10*
23	1kHz	-24dBFS	Scale check	(-10VU)		00:10*
24	1kHz	-34dBFS	Scale check	(-20VU)		00:10*
25	1kHz	-14dBFS	Dynamic response		265ms on, 1s off (see text)	00:10*
26	1kHz	-14dBFS	Dynamic response		270ms on, 1s off (see text)	00:10*
27	1kHz	-14dBFS	Dynamic response		330ms on, 1s off (see text)	00:10*
28	1kHz	-14dBFS	Dynamic response		1s on, 300ms off	00:10*
29			IEC reversibility test positive phase, 0VU level			00:10*
30			IEC reversibility test negative phase, 0VU level			00:10*

PPM Tests (IEC 60268-10)

31	1kHz	-9dBFS	IEC reference level (Type I scale = 0dB, Nordic and IIb = +9dB)	00:30
32	1kHz	-10dBFS	IEC reference level (Type IIa, BBC Scale = "6")	00:30
33	1kHz	-18dBFS	Alignment Level (Type I = -9dB, Nordic and IIb = "Test", BBC = "4")	00:10*
34	31.5Hz	-18dBFS	Alignment Level (Type I = -9dB, Nordic and IIb = "Test", BBC = "4")	00:10*
35	16kHz	-18dBFS	Alignment Level (Type I = -9dB, Nordic and IIb = "Test", BBC = "4")	00:10*
36	1kHz	-6dBFS	Scale check (Nordic and IIb = +12dB, BBC = "7")	00:10*
37	1kHz	-14dBFS	Scale check (Nordic and IIb = +4dB, BBC = "5")	00:10*
38	1kHz	-22dBFS	Scale check (Nordic and IIb = -4dB, BBC = "3")	00:10*
39	1kHz	-26dBFS	Scale check (Nordic and IIb = -8dB, BBC = "2")	00:10*
40	1kHz	-30dBFS	Scale check (Nordic and IIb = -12dB, BBC = "1")	00:10*
41	1kHz	-49dBFS	Scale check (Type I = -40dB, Nordic = -31dB)	00:10*
42		-18dBFS	IEC reversibility test positive-phase, Alignment Level	00:10*
43		-18dBFS	IEC reversibility test negative-phase, Alignment Level	00:10*

Specific to Type I Meters

44	80Hz	-12dBFS		Interrupted for 1.70s every 5s	00:30
45	10kHz	-12dBFS	Tone bursts	10ms every 5s	00:30
46	10kHz	-12dBFS	Tone bursts	5ms every 5s (ITU-T test)	00:30
47	10kHz	-12dBFS	Tone bursts	3ms every 5s	00:30
48	10kHz	-12dBFS	Tone bursts	0.4ms every 5s	00:30
49	5kHz		Tone bursts	Alternate -12dB/-2dB FS, 1.5ms every 3s	00:30

Specific to Type II Meters

50	80Hz	-6dBFS		Interrupted for 2.80s every 5s	00:30
51	10kHz	-10dBFS		100ms every 5s	00:30
52	10kHz	-10dBFS		10ms every 5s	00:30
53	10kHz	-10dBFS	Tone bursts	5ms every 5s	00:30
54	10kHz	-10dBFS	Tone bursts	1.5ms every 5s	00:30
55	10kHz	-10dBFS	Tone bursts	0.5ms every 5s	00:30
56	5kHz	-10dB/0dBFS	Tone bursts	Alternates -10dB/0dB FS 1.5ms every 3s	00:30
57	5kHz	-40dBFS	Tone bursts	5ms every 5s	00:30

Phase Meter Tests

58	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	In phase	00:20
59	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 45 deg	00:20
60	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 90 deg	00:20
61	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 135 deg	00:20
62	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 180 deg	00:20
63	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	In phase	00:20
64	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 45 deg	00:20
65	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 90 deg	00:20
66	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 135 deg	00:20
67	918.75Hz	-18dBFS	R alternates - 18/-38dB FS	R lags 180 deg	00:20



Loudness Meter Tests (Thames/ITC (ISO 226))

68	1kHz	-18dBFS	Line up	0dBLD	00:15
69	63Hz	-5dBFS		0dBLD	00:15
70	80Hz	-8dBFS		0dBLD	00:15
71	100Hz	-11dBFS		0dBLD	00:15
72	125Hz	-14dBFS		0dBLD	00:15
73	160Hz	-17dBFS		0dBLD	00:15
74	200Hz	-20dBFS		0dBLD	00:15
75	250Hz	-21dBFS		0dBLD	00:15
76	315Hz	-21.5dBFS		0dBLD	00:15
77	400Hz	-22dBFS		0dBLD	00:15
78	500Hz	-22dBFS		0dBLD	00:15
79	630Hz	-21dBFS		0dBLD	00:15
80	800Hz	-19dBFS		0dBLD	00:15
81	1k25Hz	-18dBFS		0dBLD	00:15
82	1k6Hz	-19dBFS		0dBLD	00:15
83	2kHz	-21dBFS		0dBLD	00:15
84	2k5Hz	-23.5dBFS		0dBLD	00:15
85	3k15Hz	-26dBFS		0dBLD	00:15
86	4kHz	-27dBFS		0dBLD	00:15
87	5kHz	-26dBFS		0dBLD	00:15
88	6k3Hz	-21dBFS		0dBLD	00:15
89	8kHz	-15dBFS		0dBLD	00:15
90	10kHz	-12dBFS		0dBLD	00:15
91	Pink noise	-24dB Mean		0dBLD	L&R non-coherent 00:15

Peak/RMS Tests

92	100H**	-18dBFS peak, RMS = - 18dB FS, mean = - 18dB FS	00:30
93	100Hz**	18dBFS peak, RMS = -19.5dB FS, mean = -21dB FS	00:30
94	100Hz**	18dBFS peak, RMS = -21dB FS, mean = -24dB FS	00:30
95	100H2**	18dBFS peak, RMS = -28dB FS, mean = - 38dB FS	00:30
96	Pink noise	18dBFS true peak, mean = FS, mean = - 30dB FS	L&R non-coherent 00:30

Other Signals

97	440Hz	-18dBFS	Tuning "A"	02:00
98			Male speech, Prose, not limited	05:00
99			Male speech, "Shipping forecast" limited to UK MPL (AL+8dB)	05:00

NOTES:

All tracks have the same signal on left and right channels, unless otherwise stated.

*These tracks are 20 seconds in length on the DAT media.

**110Hz on 48kHz-sampled media