

YBO-BSB Base Sounder Beacon Tones & Volumes APPLICATION NOTE

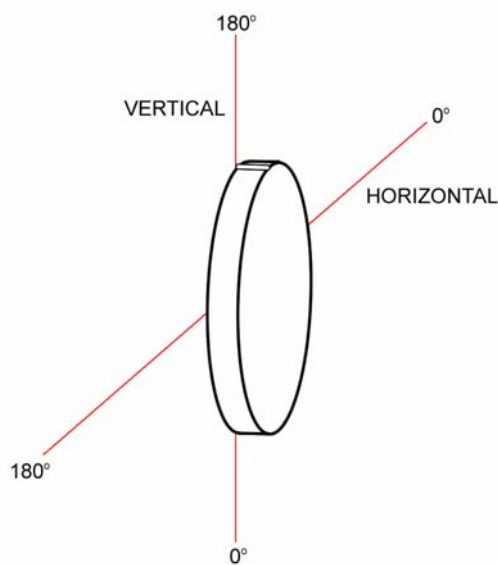
This Application Note covers the YBO-BSB Base Sounder Beacon.

Description

The YBO-BSB Base Sounder Beacon is designed to fit onto either a Standard Mounting Base (YBN-R/3) or a Short-Circuit Isolator Mounting Base (YBO-R/SCI – from batch number 6044 only) with the facility to accommodate any of the ESP Range of Sensors, Beacon devices or Cap (for use as a wall sounder). The YBO-BSB is an EN 54-3 Type A audible alarm device.

EN54-3 Approved Tones

The following tables give the minimum sounder performance (dB(A)@1m) of each Tone when tested under EN54-3 test conditions. Figures are given for six horizontal and six vertical directions, measured when the YBO-BSB mounting base is installed as shown in Fig. 1.



Mounting orientation with sensor alignment mark on base positioned vertically, at top.

Fig.1

NOTE: The sound pressure level (SPL) is dependent on current setting selected for the sounder, and also on the tone setting.

			TONE 1 (CHQ-BS Tone 1)											
925Hz/0.25s 628Hz/0.25s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	72	70	62	63	60	63	73	68	71	72	71	72
80	2.0	07	65	66	64	65	64	62	67	63	66	67	66	66
85	3.0	09	75	77	75	76	78	75	77	75	78	78	79	78
88	4.5	0A	78	79	77	80	79	77	80	77	81	81	82	81
90	6.5	0B	79	80	78	79	81	78	80	78	82	81	83	81
93	8.0	0C	81	81	75	76	78	71	82	76	79	81	79	80
94	10	0D	82	81	75	76	79	73	82	77	80	81	80	80
95	11	0E	82	81	75	76	79	72	82	77	80	81	80	80
98	16	0F	83	82	75	76	79	72	82	78	80	82	81	81

TONE 2 (CHQ-BS Tone 2)														
925Hz			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	58	59	59	57	62	64	59	66	62	64	64	64
80	2.0	07	57	60	59	57	60	64	61	68	64	65	63	64
85	3.0	09	63	66	65	64	66	70	67	71	70	71	70	71
88	4.5	0A	70	72	71	70	72	76	74	76	77	78	77	78
90	6.5	0B	71	73	72	71	73	77	75	78	78	79	77	78
93	8.0	0C	72	74	72	72	74	78	75	79	79	80	78	79
94	10	0D	72	74	72	72	74	78	76	80	79	80	79	79
95	11	0E	72	74	72	72	74	78	76	80	79	80	79	80
98	16	0F	73	75	73	72	75	79	76	82	80	80	79	80

TONE 3 (CHQ-BS Tone 3)														
628Hz			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	58	60	61	62	63	68	66	65	69	69	68	68
80	2.0	07	63	64	64	66	66	70	69	67	71	71	71	71
85	3.0	09	78	76	75	77	80	83	78	82	84	84	83	83
88	4.5	0A	79	77	76	78	81	84	79	83	85	85	84	85
90	6.5	0B	80	77	76	78	81	84	79	83	85	86	85	85
93	8.0	0C	67	67	67	69	76	82	79	79	84	83	83	83
94	10	0D	70	71	71	73	77	83	80	80	85	84	84	84
95	11	0E	69	69	69	71	77	83	80	80	85	84	84	84
98	16	0F	69	69	70	72	77	84	80	81	85	84	85	84

TONE 4 (CHQ-BS Tone 4)														
554Hz/0.1s 440Hz/0.4s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	64	66	65	67	67	69	68	65	64	64	64	66
80	2.0	07	72	74	71	73	73	73	73	71	72	71	73	73
85	3.0	09	75	77	75	75	75	75	77	77	75	75	77	77
88	4.5	0A	75	77	75	75	70	75	77	77	76	75	77	77
90	6.5	0B	75	78	76	76	76	75	78	78	76	75	77	78
93	8.0	0C	76	78	76	76	76	75	79	78	76	75	77	78
94	10	0D	76	78	76	76	77	75	78	78	76	76	77	78
95	11	0E	76	78	76	76	76	75	78	78	76	75	77	78
98	16	0F	77	80	78	77	79	77	80	80	76	75	77	78

TONE 5 (CHQ-BS Tone 5)														
660Hz/0.15s 0Hz/0.15s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	66	65	65	63	63	63	65	66	70	69	69	69
80	2.0	07	74	74	70	71	75	70	74	77	80	79	78	78
85	3.0	09	75	70	70	70	76	70	74	78	81	80	79	79
88	4.5	0A	75	71	71	70	76	70	74	78	81	80	79	79
90	6.5	0B	75	72	70	71	75	71	75	77	81	79	79	79
93	8.0	0C	76	72	71	71	77	71	75	78	82	81	80	80
94	10	0D	77	71	71	70	77	70	75	71	82	81	80	80
95	11	0E	76	71	72	71	77	70	75	79	82	81	80	79
98	16	0F	76	72	72	71	77	70	75	79	82	81	80	80

TONE 6 (CHQ-BS Tone 6)														
925Hz/0.15s 0Hz/0.6s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	64	66	65	64	66	70	68	67	72	72	70	71
85	3.0	09	65	67	66	64	67	71	68	67	72	73	71	72
88	4.5	0A	65	67	66	65	67	71	69	67	72	73	71	72
90	6.5	0B	65	67	66	66	68	72	69	67	72	73	72	73
93	8.0	0C	65	67	66	66	68	72	69	68	73	73	72	73
94	10	0D	66	68	66	66	68	72	69	68	73	74	72	73
95	11	0E	66	68	66	66	68	72	69	68	73	74	72	73
98	16	0F	66	68	66	66	68	72	69	69	73	74	72	73

TONE 7 (CHQ-BS Tone 7)														
670Hz/0.25s 845Hz/0.37s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05	62	61	61	62	64	65	59	63	65	66	64	66
78	1.5	06	70	69	69	70	72	72	67	71	72	73	71	73
80	2.0	07	73	73	74	75	77	75	71	72	75	76	74	76
85	3.0	09	78	78	80	80	82	80	76	78	80	81	79	81
88	4.5	0A	80	80	81	81	83	82	78	80	82	83	81	83
90	6.5	0B	81	81	82	82	84	83	79	82	83	84	82	83
93	8.0	0C	82	82	83	83	85	84	80	82	84	85	83	86
94	10	0D	82	82	83	83	85	84	80	82	84	85	83	86
95	11	0E	82	82	83	83	86	84	80	83	84	85	83	86
98	16	0F	82	82	84	84	86	85	81	83	85	86	84	86

TONE 8														
500Hz-1200Hz/3s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	67	67	65	65	64	65	66	64	67	68	69	68
80	2.0	07	71	71	71	72	72	70	71	71	73	73	74	73
85	3.0	09	75	75	75	76	77	75	76	76	77	78	78	77
88	4.5	0A	75	76	76	77	78	76	77	76	79	78	79	78
90	6.5	0B	78	79	79	79	80	78	78	79	80	80	81	80
93	8.0	0C	78	80	79	80	80	78	79	79	81	81	81	80
94	10	0D	79	80	80	80	81	78	79	79	82	81	81	81
95	11	0E	79	81	81	81	81	79	79	79	82	81	82	81
98	16	0F	80	81	81	81	82	79	80	80	83	82	82	81

TONE 9														
1200Hz/0.5s 500Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	70	70	71	72	73	74	70	74	76	76	76	76
80	2.0	07	71	69	70	71	72	74	70	73	75	76	75	75
85	3.0	09	73	72	72	73	74	75	71	75	77	77	77	77
88	4.5	0A	77	74	75	76	76	77	74	77	79	80	78	79
90	6.5	0B	77	78	80	79	79	81	76	79	81	82	82	82
93	8.0	0C	77	78	81	80	80	81	76	79	82	83	82	83
94	10	0D	77	79	81	80	80	81	77	80	82	83	82	83
95	11	0E	78	79	81	80	80	81	77	80	82	83	83	83
98	16	0F	77	79	81	81	81	81	77	80	82	83	83	83

TONE 10														
970Hz/0.5s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	56	56	55	56	52	59	60	62	65	62	61	61
80	2.0	07	62	65	62	63	59	67	67	69	72	69	69	68
85	3.0	09	68	68	68	69	65	74	74	76	78	76	75	75
88	4.5	0A	69	69	69	71	67	75	75	77	80	78	77	76
90	6.5	0B	69	69	69	70	67	75	76	78	80	78	77	76
93	8.0	0C	69	70	70	71	67	76	76	78	81	79	78	77
94	10	0D	70	71	70	72	69	77	78	80	83	80	80	79
95	11	0E	71	72	71	72	69	78	79	81	83	82	81	80
98	16	0F	71	73	71	74	71	80	81	83	86	84	83	82

TONE 11														
800-970Hz/0.14s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	65	63	64	64	66	67	63	66	68	69	67	69
80	2.0	07	75	73	73	74	76	77	73	76	78	79	77	79
85	3.0	09	74	72	72	73	75	77	73	76	78	78	77	78
88	4.5	0A	77	75	76	76	79	80	77	79	81	82	81	82
90	6.5	0B	79	77	78	78	80	82	79	81	83	84	83	84
93	8.0	0C	79	77	78	78	81	82	79	81	84	84	83	84
94	10	0D	79	78	78	79	81	82	79	82	84	84	83	84
95	11	0E	79	78	78	79	81	83	79	82	84	84	83	84
98	16	0F	79	78	78	79	81	83	79	82	84	85	84	84

TONE 12														
800-970Hz/1s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	66	66	65	64	60	62	66	66	69	69	70	69
80	2.0	07	74	71	73	73	76	75	75	75	79	78	80	78
85	3.0	09	76	75	73	74	76	75	76	76	79	79	80	79
88	4.5	0A	79	78	77	77	79	78	80	79	82	82	83	82
90	6.5	0B	81	80	79	79	81	80	82	81	84	84	85	83
93	8.0	0C	81	80	79	79	81	80	82	81	85	85	85	84
94	10	0D	81	80	79	79	81	80	82	81	85	85	85	84
95	11	0E	82	81	79	80	82	80	82	81	85	85	86	84
98	16	0F	82	81	79	80	82	80	82	82	85	85	86	84

TONE 13														
800-970Hz/0.02s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	64	63	65	64	66	67	64	65	68	68	67	69
80	2.0	07	69	69	71	69	71	71	65	68	70	71	71	72
85	3.0	09	71	71	73	72	73	74	70	71	74	75	74	75
88	4.5	0A	73	73	76	75	76	77	74	76	79	79	78	78
90	6.5	0B	75	75	77	77	77	79	76	78	81	81	80	80
93	8.0	0C	75	75	77	77	78	79	77	79	82	81	81	81
94	10	0D	75	76	78	78	78	80	78	80	83	82	81	81
95	11	0E	75	76	78	78	79	80	78	80	83	82	82	81
98	16	0F	76	77	79	79	80	82	80	82	85	84	83	83

TONE 14														
2400-2850Hz/0.14s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	66	67	70	69	67	67	69	62	66	69	66	67
85	3.0	09	74	75	77	76	75	75	72	71	74	75	73	74
88	4.5	0A	76	77	79	78	77	77	76	74	76	77	76	76
90	6.5	0B	81	81	84	82	81	81	77	79	82	82	81	81
93	8.0	0C	85	85	88	87	86	86	78	84	86	87	86	86
94	10	0D	86	86	88	87	86	86	78	84	87	87	87	86
95	11	0E	86	86	89	88	87	86	78	84	87	87	87	87
98	16	0F	86	87	89	88	87	87	80	85	88	88	87	87

TONE 15														
2400-2850Hz/1s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	72	73	72	71	65	70	72	71	75	74	76	75
85	3.0	09	71	71	72	73	73	73	74	72	76	75	77	76
88	4.5	0A	75	74	76	76	77	76	77	76	79	79	80	80
90	6.5	0B	77	75	77	78	78	78	79	77	81	81	82	81
93	8.0	0C	80	78	79	80	83	82	82	82	85	85	86	85
94	10	0D	82	80	81	82	84	84	84	84	87	87	88	85
95	11	0E	83	82	83	83	86	85	85	85	88	88	90	88
98	16	0F	84	82	83	84	86	85	86	85	89	89	90	89
			85	83	84	85	87	86	86	86	90	89	91	90

TONE 16														
300-1200Hz/1s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	66	67	69	69	69	68	65	66	68	68	68	68
85	3.0	09	71	71	73	73	73	72	69	71	73	73	73	72
88	4.5	0A	75	76	77	77	77	76	74	76	78	77	77	76
90	6.5	0B	78	79	80	80	80	79	76	79	80	80	80	79
93	8.0	0C	79	80	81	81	81	80	77	80	81	81	81	80
94	10	0D	80	80	82	82	81	81	78	80	82	82	82	81
95	11	0E	80	81	82	82	81	81	78	81	82	82	82	82
98	16	0F	81	82	83	83	83	82	79	81	83	83	83	82
			82	83	84	84	84	83	80	82	84	84	84	83

TONE 17														
970Hz/0.5s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05	62	57	58	58	55	56	62	60	64	65	63	62
78	1.5	06	67	65	64	64	61	61	67	65	70	71	69	68
80	2.0	07	75	73	70	71	67	67	73	72	77	77	75	73
85	3.0	09	77	75	73	73	69	69	75	73	79	79	77	76
88	4.5	0A	77	74	72	73	69	68	74	73	78	79	76	75
90	6.5	0B	78	75	73	74	69	69	75	74	79	80	77	76
93	8.0	0C	79	77	74	75	71	70	77	75	81	82	79	78
94	10	0D	80	78	75	76	71	71	78	77	82	83	81	78
95	11	0E	81	78	75	77	72	72	78	77	82	84	81	80
98	16	0F	82	79	77	78	73	73	80	78	84	85	83	81

TONE 18														
2850Hz/0.5s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05	68	65	66	65	64	65	57	57	61	60	57	60
78	1.5	06	76	72	74	71	71	73	63	64	68	67	65	68
80	2.0	07	70	65	69	68	59	54	60	60	63	63	61	64
85	3.0	09	76	71	75	74	64	58	65	66	69	69	67	70
88	4.5	0A	77	72	76	76	65	59	66	67	71	70	68	71
90	6.5	0B	76	71	75	75	64	57	64	65	69	69	67	70
93	8.0	0C	77	72	76	75	65	58	65	66	70	69	67	70
94	10	0D	76	71	75	74	64	58	65	65	70	69	67	69
95	11	0E	77	72	76	76	65	58	65	66	69	69	67	70
98	16	0F	82	76	80	80	69	73	70	71	74	74	72	75

TONE 19														
800Hz/0.25s 970Hz/0.25s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	61	62	68	69	68	68	61	65	71	71	69	69
80	2.0	07	67	60	73	73	72	73	58	65	76	76	74	75
85	3.0	09	69	68	76	77	76	76	66	71	79	79	77	77
88	4.5	0A	72	73	80	80	79	79	72	76	82	82	81	80
90	6.5	0B	74	75	81	82	81	81	74	79	83	84	83	82
93	8.0	0C	74	76	82	83	82	82	76	80	84	84	84	83
94	10	0D	75	77	83	84	82	83	76	81	85	85	84	84
95	11	0E	75	77	83	85	83	83	77	81	85	86	85	84
98	16	0F	76	79	85	86	84	85	79	83	87	87	86	85

TONE 20														
2850Hz			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	71	54	70	71	67	67	69	62	70	74	71	72
80	2.0	07	69	52	67	68	64	65	66	59	67	71	69	70
85	3.0	09	72	54	70	71	67	68	69	63	71	74	72	73
88	4.5	0A	78	61	76	77	73	74	75	68	77	80	78	79
90	6.5	0B	77	60	75	77	72	73	75	68	76	79	77	79
93	8.0	0C	78	61	76	77	73	74	75	68	77	80	78	79
94	10	0D	77	60	75	76	72	73	74	67	76	79	77	79
95	11	0E	78	61	76	77	73	74	75	68	77	80	78	79
98	16	0F	83	66	81	82	78	79	79	71	81	84	82	79

TONE 21														
2400Hz/0.25s 2850Hz/0.25s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	64	58	72	72	70	71	66	63	74	75	73	74
80	2.0	07	66	660	72	72	71	72	60	64	75	75	73	74
85	3.0	09	66	59	73	73	72	72	67	65	75	76	74	75
88	4.5	0A	71	65	77	77	77	77	67	69	80	80	79	79
90	6.5	0B	75	67	82	82	81	81	71	73	84	85	83	84
93	8.0	0C	76	68	82	83	82	82	72	74	85	86	84	85
94	10	0D	77	69	83	83	83	83	72	74	85	86	85	85
95	11	0E	77	69	84	84	83	84	73	75	86	87	85	86
98	16	0F	78	71	85	85	84	85	77	76	87	88	86	87

TONE 22														
800Hz/0.5s 970Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	63	61	70	69	68	68	61	65	71	71	70	69
80	2.0	07	66	61	74	73	72	72	59	66	75	76	74	74
85	3.0	09	71	68	78	77	76	76	67	72	79	79	78	77
88	4.5	0A	74	73	82	80	79	79	72	76	82	82	81	80
90	6.5	0B	76	74	83	82	81	81	74	79	83	84	83	82
93	8.0	0C	77	75	84	83	81	82	76	80	84	85	84	83
94	10	0D	78	77	85	84	82	83	77	80	85	85	84	84
95	11	0E	78	77	85	84	83	83	77	81	85	86	85	84
98	16	0F	80	79	87	86	84	85	79	83	87	87	86	85

TONE 23														
2850Hz/0.5s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	62	56	72	72	67	68	69	63	72	75	72	73
80	2.0	07	58	55	68	68	63	64	65	60	67	71	68	69
85	3.0	09	64	58	73	73	69	70	71	65	73	76	74	75
88	4.5	0A	66	60	75	75	71	71	73	66	75	78	75	77
90	6.5	0B	64	58	74	74	69	70	72	65	74	77	75	76
93	8.0	0C	65	60	74	74	70	71	72	66	74	77	75	76
94	10	0D	65	59	74	74	69	70	71	65	73	77	74	76
95	11	0E	65	60	75	75	70	71	72	66	74	77	75	77
98	16	0F	70	66	79	79	75	76	77	69	78	82	80	81

TONE 24														
925Hz/0.25s 0Hz/1s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05	62	58	68	68	65	65	62	66	67	68	69	69
78	1.5	06	64	59	69	69	67	67	63	66	70	69	69	67
80	2.0	07	70	65	76	75	73	73	69	72	75	75	75	73
85	3.0	09	72	67	78	77	75	76	71	75	78	78	77	73
88	4.5	0A	70	66	76	76	73	74	70	73	76	76	76	74
90	6.5	0B	71	67	77	77	74	75	70	74	77	77	76	75
93	8.0	0C	74	69	80	79	77	78	73	76	80	79	79	76
94	10	0D	75	70	81	80	78	78	74	78	81	81	80	78
95	11	0E	75	70	81	81	78	79	74	78	81	81	80	79
98	16	0F	75	71	82	82	79	80	75	79	82	82	82	80

TONE 25														
970Hz			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	66	66	68	67	66	65	64	68	70	70	67	63
80	2.0	07	70	70	73	72	70	69	68	72	75	74	72	65
85	3.0	09	75	75	78	77	75	74	73	78	81	80	78	69
88	4.5	0A	78	78	81	80	78	77	76	80	83	83	80	73
90	6.5	0B	79	79	82	81	79	77	77	81	84	84	81	73
93	8.0	0C	80	80	83	82	80	79	78	83	85	85	82	73
94	10	0D	81	81	85	83	81	80	79	84	86	86	84	74
95	11	0E	82	81	85	84	81	80	80	84	87	86	84	75
98	16	0F	83	83	87	85	83	82	82	86	89	88	86	76

TONE 26														
660Hz/1.8s 0Hz/1.8s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	61	65	65	65	63	63	61	61	65	64	62	63
80	2.0	07	71	75	76	75	72	76	71	71	76	75	73	71
85	3.0	09	71	76	78	76	73	76	71	72	78	77	75	70
88	4.5	0A	72	76	79	77	74	76	73	73	79	78	76	71
90	6.5	0B	72	76	78	77	74	76	73	73	78	77	75	72
93	8.0	0C	73	77	79	78	76	78	73	74	80	79	77	73
94	10	0D	73	78	80	79	76	77	73	74	80	79	77	72
95	11	0E	73	78	80	79	76	77	73	74	80	80	77	72
98	16	0F	73	78	80	78	76	78	74	75	80	80	77	73

TONE 27														
660Hz/6.5s 0Hz/13s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	62	66	66	65	63	65	62	61	66	65	63	65
80	2.0	07	68	72	73	72	70	71	68	68	74	72	70	69
85	3.0	09	74	78	80	78	76	78	74	74	80	79	77	73
88	4.5	0A	75	80	81	80	77	79	75	76	82	81	78	74
90	6.5	0B	76	80	81	80	77	79	75	76	81	80	78	76
93	8.0	0C	76	81	82	81	79	80	76	77	83	82	80	75
94	10	0D	76	81	83	81	79	80	76	77	83	82	80	74
95	11	0E	76	81	83	81	79	81	76	77	83	82	80	74
98	16	0F	77	81	83	82	79	81	77	78	83	83	80	75

TONE 28														
660Hz			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	62	66	66	65	63	64	62	61	66	65	63	65
80	2.0	07	68	72	73	72	70	71	68	68	73	72	70	69
85	3.0	09	74	78	80	78	76	78	74	74	80	79	77	73
88	4.5	0A	75	80	81	80	77	79	75	76	82	81	79	74
90	6.5	0B	76	80	81	80	77	79	76	76	81	80	78	76
93	8.0	0C	76	81	83	81	79	80	76	81	83	82	80	75
94	10	0D	76	81	83	81	79	80	76	81	83	82	80	74
95	11	0E	76	81	83	81	79	81	76	81	83	82	80	74
98	16	0F	77	81	83	82	79	81	77	78	83	83	80	75S

TONE 29														
554Hz/0.5s 440Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	66	67	70	71	71	69	69	69	71	70	70	67
80	2.0	07	72	71	73	74	74	72	72	72	73	71	73	67
85	3.0	09	76	76	77	78	78	76	76	77	78	76	77	72
88	4.5	0A	77	76	77	78	79	77	76	77	78	76	78	73
90	6.5	0B	77	77	78	79	79	77	77	78	78	77	78	73
93	8.0	0C	78	77	79	79	80	78	77	78	79	77	79	73
94	10	0D	78	78	79	79	80	78	78	78	79	78	79	73
95	11	0E	78	78	79	79	80	78	77	78	79	78	79	73
98	16	0F	79	79	80	81	80	79	79	80	81	79	78	74

TONE 30														
660Hz/0.5s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	63	66	67	65	64	65	62	62	67	66	64	64
80	2.0	07	72	76	78	76	74	76	72	72	78	77	75	72
85	3.0	09	72	77	78	77	75	76	72	73	79	78	76	71
88	4.5	0A	72	77	79	77	75	77	73	74	79	78	76	71
90	6.5	0B	73	77	78	77	75	76	73	73	78	77	76	73
93	8.0	0C	73	78	80	78	76	77	74	74	80	79	77	75
94	10	0D	73	77	80	78	76	78	73	74	80	79	78	74
95	11	0E	73	78	80	79	76	78	73	74	80	80	78	74
98	16	0F	74	78	80	79	77	78	74	75	81	80	78	75

TONE 31														
2850Hz/0.15s 0Hz/0.1s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	60	61	70	69	66	66	59	64	73	73	63	69
80	2.0	07	57	58	66	65	62	62	57	60	69	68	60	65
85	3.0	09	62	63	72	71	67	68	61	66	75	74	65	71
88	4.5	0A	66	66	75	74	71	72	65	69	78	78	68	74
90	6.5	0B	63	64	73	72	69	69	62	67	76	76	66	72
93	8.0	0C	65	65	74	73	70	70	63	68	77	76	67	72
94	10	0D	64	64	73	72	69	70	63	68	76	76	66	72
95	11	0E	65	65	74	73	70	70	64	68	77	77	67	73
98	16	0F	69	70	79	78	88	75	68	73	82	81	71	77

TONE 32														
2400-2850Hz/0.02s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	69	68	74	73	72	72	69	68	74	72	71	73
80	2.0	07	68	68	75	73	72	72	68	69	73	70	72	73
85	3.0	09	70	70	75	74	73	73	70	69	75	73	72	74
88	4.5	0A	72	72	79	78	77	76	72	73	78	75	76	77
90	6.5	0B	78	78	84	83	82	82	78	79	83	81	82	83
93	8.0	0C	79	79	85	84	83	83	79	80	84	81	83	83
94	10	0D	80	80	86	85	84	84	80	80	85	82	83	84
95	11	0E	80	80	86	85	84	84	80	81	85	82	84	84
98	16	0F	81	81	87	86	85	85	81	82	86	84	85	85

TONE 33														
800-970Hz/0.5s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	64	67	68	68	68	66	63	62	64	66	68	65
80	2.0	07	73	76	78	77	77	76	73	71	73	75	77	74
85	3.0	09	75	77	78	77	77	76	75	76	77	78	78	76
88	4.5	0A	78	80	81	81	80	79	78	79	80	81	81	79
90	6.5	0B	80	82	83	83	82	81	79	82	82	84	83	82
93	8.0	0C	80	83	83	83	83	82	79	82	84	84	83	82
94	10	0D	81	83	83	83	83	82	80	82	84	84	83	82
95	11	0E	81	83	84	83	83	82	80	82	85	84	84	82
98	16	0F	81	83	84	84	83	82	80	83	85	84	84	82

TONE 34														
988Hz/0.25s 645Hz/0.25s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	68	70	71	70	70	69	66	71	71	70	71	71
80	2.0	07	72	73	74	73	73	72	70	74	75	74	75	74
85	3.0	09	75	76	77	76	76	76	74	79	79	78	78	78
88	4.5	0A	77	77	79	78	78	77	76	81	81	80	80	79
90	6.5	0B	76	77	79	77	77	77	75	79	80	79	79	79
93	8.0	0C	79	77	79	77	71	78	78	83	84	82	80	81
94	10	0D	80	77	80	77	72	78	79	84	85	83	80	81
95	11	0E	81	78	81	78	73	79	80	85	86	84	81	82
98	16	0F	82	79	82	80	74	81	81	86	87	85	83	84

TONE 35														
510Hz/0.25s 610Hz/0.25s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	71	73	75	74	74	71	66	68	67	67	73	69
80	2.0	07	72	74	76	76	75	73	70	71	72	73	75	71
85	3.0	09	74	78	78	78	78	76	76	77	79	79	79	75
88	4.5	0A	76	79	80	80	80	78	76	78	80	80	80	76
90	6.5	0B	77	80	81	81	81	79	77	79	80	81	81	77
93	8.0	0C	78	81	82	82	82	80	78	80	81	81	82	78
94	10	0D	78	81	83	82	82	80	78	80	81	81	83	79
95	11	0E	78	82	83	83	83	80	78	80	81	82	83	79
98	16	0F	78	82	83	83	83	80	78	81	82	82	83	79

TONE 36														
800-970Hz/0.11s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	66	66	67	67	67	66	63	62	65	65	67	65
80	2.0	07	73	76	77	78	77	76	73	72	75	75	77	74
85	3.0	09	75	77	77	77	77	76	74	76	78	78	77	76
88	4.5	0A	78	80	81	81	80	79	77	79	82	81	81	79
90	6.5	0B	80	82	83	83	82	81	79	82	84	83	83	81
93	8.0	0C	81	82	83	83	82	81	79	82	84	84	83	82
94	10	0D	81	83	83	83	83	82	80	82	84	84	83	82
95	11	0E	81	83	83	83	83	82	80	82	84	84	83	82
98	16	0F	81	83	84	83	83	82	80	83	85	84	84	82

TONE 37														
800-970Hz/0.33s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	64	66	68	68	67	66	63	62	65	65	67	65
80	2.0	07	73	76	78	78	77	75	73	72	75	75	77	74
85	3.0	09	75	77	78	77	77	76	74	76	78	78	77	76
88	4.5	0A	78	80	81	81	80	79	77	79	82	81	81	79
90	6.5	0B	80	82	83	83	82	81	79	82	84	83	83	81
93	8.0	0C	81	83	83	83	83	82	79	82	84	84	83	82
94	10	0D	81	83	83	83	83	82	80	82	84	84	83	82
95	11	0E	81	83	83	83	83	82	80	82	84	84	84	82
98	16	0F	81	83	84	84	83	82	80	83	85	84	84	82

TONE 38														
845Hz			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05	61	64	66	66	66	63	57	59	60	59	64	62
78	1.5	06	70	73	76	75	75	72	66	68	69	68	74	71
80	2.0	07	74	77	79	79	78	76	70	71	72	72	77	74
85	3.0	09	80	82	85	85	84	82	76	77	78	78	83	80
88	4.5	0A	81	83	86	86	86	83	76	78	79	79	84	81
90	6.5	0B	82	85	88	87	87	84	78	80	80	81	86	83
93	8.0	0C	83	85	88	88	87	85	79	80	81	82	86	83
94	10	0D	83	86	88	88	88	85	79	80	82	82	87	84
95	11	0E	83	86	89	88	88	85	79	81	82	82	87	84
98	16	0F	83	86	89	89	88	86	79	81	82	82	87	84

TONE 39														
970Hz/1s 0Hz/1s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	65	62	64	62	57	62	64	68	70	68	65	66
80	2.0	07	71	67	69	67	63	68	70	75	76	74	70	72
85	3.0	09	73	69	72	70	65	70	72	78	78	77	73	75
88	4.5	0A	74	69	72	70	65	71	72	77	78	77	73	75
90	6.5	0B	74	70	74	71	66	71	73	78	79	78	74	76
93	8.0	0C	76	72	75	72	67	73	75	80	81	79	75	77
94	10	0D	77	73	76	73	67	74	76	81	82	81	76	78
95	11	0E	77	73	77	74	68	75	76	82	83	81	77	79
98	16	0F	79	75	79	76	68	77	78	84	84	83	77	81

TONE 40														
800Hz/0.15s 970Hz/0.15s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	64	65	65	66	64	65	62	65	68	68	65	66
80	2.0	07	67	71	71	73	71	72	66	61	72	74	72	71
85	3.0	09	71	73	74	75	73	74	69	71	75	76	74	74
88	4.5	0A	74	75	77	77	75	76	73	77	80	80	77	77
90	6.5	0B	76	77	78	79	77	71	75	79	81	81	78	78
93	8.0	0C	77	77	79	79	77	78	75	80	82	82	79	79
94	10	0D	78	78	80	80	78	78	77	81	83	83	79	80
95	11	0E	78	78	80	80	77	80	77	82	83	83	80	80
98	16	0F	80	79	81	81	78	80	79	84	85	84	81	82

TONE 41														
2400-2850Hz/0.11s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	63	63	65	66	65	65	65	63	66	68	65	65
85	3.0	09	72	74	75	76	73	73	72	72	74	75	74	73
88	4.5	0A	74	76	78	78	76	75	74	74	76	77	76	76
90	6.5	0B	77	80	81	82	79	78	75	77	79	79	79	78
93	8.0	0C	82	85	87	87	84	83	81	82	85	85	85	84
94	10	0D	83	86	87	87	85	84	82	83	85	85	85	84
95	11	0E	83	86	87	88	85	84	82	83	85	86	86	84
98	16	0F	84	86	88	88	86	85	83	84	86	86	86	85

TONE 42														
2400-2850Hz/0.33s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	66	67	68	69	67	67	65	65	68	69	68	67
85	3.0	09	70	72	73	74	72	72	70	70	73	74	73	72
88	4.5	0A	75	77	78	79	76	76	74	74	77	71	77	76
90	6.5	0B	76	78	80	80	78	77	76	76	78	74	78	77
93	8.0	0C	79	82	83	83	81	80	78	79	81	72	81	80
94	10	0D	82	85	86	86	84	83	81	82	85	85	85	84
95	11	0E	83	85	87	87	84	84	82	83	85	85	85	84
98	16	0F	83	86	87	88	85	84	82	83	85	86	86	85
			84	86	88	88	86	85	83	84	86	86	86	85

TONE 43														
2850Hz/1s 0Hz/1s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	69	55	71	70	65	70	62	62	67	70	67	70
85	3.0	09	65	53	67	66	61	65	58	58	63	66	63	66
88	4.5	0A	71	58	73	72	67	70	64	64	68	71	68	72
90	6.5	0B	73	60	75	74	68	73	66	66	70	73	71	74
93	8.0	0C	72	58	74	73	68	72	65	64	69	73	70	73
94	10	0D	72	59	74	73	68	73	65	65	70	73	70	73
95	11	0E	72	58	74	73	68	72	65	65	69	73	69	73
98	16	0F	73	60	75	74	69	73	66	65	70	73	70	74
			77	65	79	78	74	77	71	70	75	77	75	79

TONE 44														
2400Hz/0.15s 2850Hz/0.15s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	67	63	71	71	68	70	65	61	71	71	69	71
80	2.0	07	62	65	71	72	70	70	65	60	72	71	70	71
85	3.0	09	68	64	72	73	70	71	66	62	72	72	70	72
88	4.5	0A	68	70	76	77	74	75	70	65	77	76	75	77
90	6.5	0B	74	74	82	82	79	81	74	69	82	81	80	82
93	8.0	0C	75	75	82	83	80	81	75	70	82	82	80	82
94	10	0D	75	75	82	83	80	82	75	70	83	82	81	82
95	11	0E	76	76	83	83	81	82	76	71	83	83	81	83
98	16	0F	79	77	84	85	82	84	77	73	84	84	82	84

TONE 45														
1200-500Hz/1s 0Hz/0.01s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06												
80	2.0	07	70	71	71	71	71	70	69	71	72	71	72	70
85	3.0	09	77	78	78	78	78	77	76	78	79	78	79	77
88	4.5	0A	78	80	80	80	80	79	77	80	81	80	80	79
90	6.5	0B	80	81	81	81	82	80	79	82	82	81	82	80
93	8.0	0C	80	82	82	82	83	81	80	83	83	82	83	81
94	10	0D	81	83	82	83	83	82	80	83	84	83	84	82
95	11	0E	81	83	83	83	83	82	80	83	84	83	84	82
98	16	0F	81	83	83	83	84	83	81	84	84	83	84	82

TONE 46														
440Hz/0.6s 0Hz/0.6s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	73	75	73	75	76	75	75	74	74	73	74	71
80	2.0	07	71	73	72	73	74	73	73	71	72	71	73	70
85	3.0	09	75	76	76	77	78	77	76	75	75	75	76	74
88	4.5	0A	75	77	76	77	78	77	76	75	76	75	76	74
90	6.5	0B	76	77	77	78	79	78	78	77	77	76	78	76
93	8.0	0C	76	78	77	78	79	78	74	77	77	76	78	76
94	10	0D	76	78	77	78	79	78	78	77	77	76	78	76
95	11	0E	76	78	77	78	79	78	78	77	77	76	78	76
98	16	0F	79	81	80	81	82	81	81	80	80	79	81	78

TONE 47														
500-1200Hz/3.75s 0Hz/.025s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	63	66	66	66	65	65	64	64	65	65	66	64
80	2.0	07	71	72	73	73	73	72	72	72	73	73	73	71
85	3.0	09	75	77	77	77	78	75	76	76	78	77	77	76
88	4.5	0A	76	78	78	78	78	76	77	78	78	77	78	77
90	6.5	0B	79	81	81	81	81	80	80	80	81	80	81	79
93	8.0	0C	79	81	81	81	81	80	80	81	82	80	81	80
94	10	0D	80	82	82	82	82	80	81	82	82	81	82	80
95	11	0E	80	82	82	82	82	80	81	82	82	81	82	80
98	16	0F	81	83	82	82	83	81	82	82	83	82	83	81

TONE 48														
925/628Hz/0.25s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05	68	63	66	68	67	67	66	66	70	70	71	70
78	1.5	06	72	70	70	75	75	74	72	72	75	75	75	75
80	2.0	07	73	73	74	77	77	76	75	76	78	77	77	76
85	3.0	09	75	77	78	79	79	78	75	77	79	79	79	77
88	4.5	0A	76	78	78	80	79	78	76	77	80	80	80	78
90	6.5	0B	76	77	78	79	79	77	75	77	79	79	79	77
93	8.0	0C	77	77	77	81	81	79	77	79	81	81	81	79
94	10	0D	78	77	78	82	81	81	78	80	82	82	81	80
95	11	0E	77	77	78	81	81	81	78	79	82	81	81	80
98	16	0F	78	78	79	82	82	81	79	80	82	82	82	81

TONE 49														
300-1200Hz/0.5s 0Hz/0.5s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	67	70	70	70	70	70	66	69	69	70	67	70
80	2.0	07	70	72	71	72	72	72	68	72	72	72	72	72
85	3.0	09	74	77	76	77	77	76	73	76	76	76	77	76
88	4.5	0A	74	77	76	77	77	76	73	77	76	76	77	77
90	6.5	0B	75	78	78	78	78	78	75	78	78	78	79	78
93	8.0	0C	75	79	78	79	79	78	75	79	79	79	80	79
94	10	0D	76	80	79	80	79	79	76	79	79	79	80	79
95	11	0E	76	80	79	79	79	79	76	79	79	79	81	79
98	16	0F	77	80	79	80	79	79	76	79	79	79	81	79

TONE 50														
1200-300Hz/0.5s 0Hz/0.5s Sweep			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	62	66	64	66	65	65	61	63	65	65	64	66
80	2.0	07	69	72	72	72	71	72	68	71	72	72	72	72
85	3.0	09	71	75	74	75	74	75	70	74	74	74	74	75
88	4.5	0A	71	74	74	75	74	74	71	74	73	74	73	74
90	6.5	0B	73	76	75	76	76	76	73	76	75	75	75	75
93	8.0	0C	73	76	76	76	77	76	73	76	76	76	76	75
94	10	0D	74	77	76	77	77	77	74	77	77	76	76	76
95	11	0E	74	77	76	77	77	76	73	77	76	76	76	77
98	16	0F	75	77	77	78	78	77	74	77	77	77	77	77

TONE 51														
500-1200Hz/2.5s 0Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
50	0.8	01	Non EN 54-3 approved setting. Measurements not taken											
55	0.8	02												
60	0.8	03												
70	0.8	05												
78	1.5	06	64	67	66	66	65	67	62	65	66	66	66	67
80	2.0	07	70	73	72	73	72	73	69	72	72	73	72	72
85	3.0	09	74	77	77	77	77	77	74	76	76	77	76	77
88	4.5	0A	75	78	78	78	78	77	74	77	77	77	77	77
90	6.5	0B	77	80	80	80	80	80	77	80	79	80	79	79
93	8.0	0C	78	81	80	81	80	80	77	81	80	80	80	80
94	10	0D	79	81	81	81	81	81	78	81	81	81	81	80
95	11	0E	79	82	81	82	81	81	78	81	81	80	81	80
98	16	0F	80	83	81	82	82	82	79	82	81	81	82	81

- CHQ-BS tone equivalents (in brackets): this is the tone that corresponds to the previous version of Base Sounder, and applies to the first 7 tones listed. The other tone patterns are new to the YBO-BSB sounder device.
- dB (nom): this is the nominal or target SPL level expected.
- Current: this is the current in mA drawn from the loop by the sounder, when sounding.
- Volume code: this is the volume detection code required to set the current level and overall SPL.
- Sound output: this is the minimum sound output that the YBO-BSB Base Sounder Beacon will produce, taking into account manufacturing tolerances, temperature and conditions of operation.



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