

CHQ-WS2 Wall Sounder Tones & Volumes APPLICATION NOTE

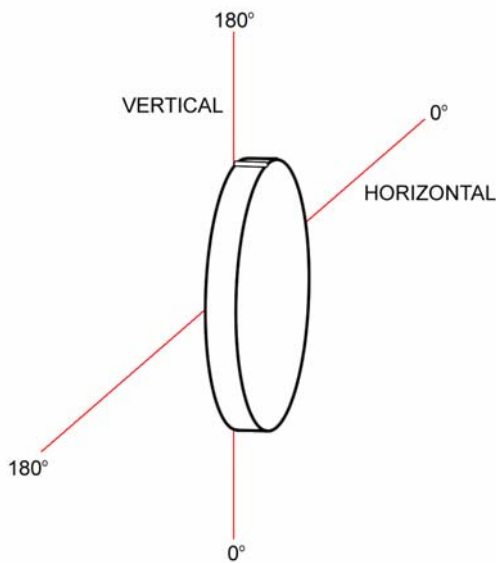
This Application Note covers the CHQ-WS2 Wall Sounder.

Description

The CHQ-WS2 Wall Sounder is designed to fit onto either a Standard Mounting Base (YBN-R/3(RED)) or a Short-Circuit Isolator Mounting Base (YBO-R/SCI(RED)). The CHQ-WS2 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 CHQ-WS2 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											
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
90	2.0	09	81	85	86	88	87	76	81	85	86	88	87	76
95	3.0	0A	82	90	94	94	90	78	82	90	94	94	90	77
98	4.5	0C	82	90	96	96	90	78	82	90	96	96	90	77
100	6.5	07	82	90	96	96	90	78	82	90	96	96	90	77
102	8.0	0B	82	90	96	96	90	78	82	90	96	96	90	77

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
90	2.0	09	77	82	86	86	84	78	77	82	86	86	84	78
95	3.0	0A	81	91	95	95	90	78	81	91	94	95	90	78
98	4.5	0C	81	91	95	95	91	78	82	91	94	95	91	78
100	6.5	07	81	91	95	95	91	78	82	91	94	95	91	78
102	8.0	0B	81	91	95	95	91	78	82	91	94	95	91	78

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
90	2.0	09	76	86	88	84	77	78	76	86	88	84	77	77
95	3.0	0A	79	89	91	91	89	78	79	89	91	91	89	77
98	4.5	0C	79	89	91	91	89	78	82	91	92	92	90	77
100	6.5	07	79	89	91	91	89	78	82	91	92	92	90	77
102	8.0	0B	79	89	91	91	89	78	82	91	92	92	90	77

TONE 8														
500Hz/3s 1200Hz/0.5s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
90	2.0	09	75	81	86	87	82	80	75	81	86	87	80	75
95	3.0	0A	83	87	92	92	86	81	83	87	92	92	86	83
98	4.5	0C	85	89	94	94	89	81	85	89	94	94	89	83
100	6.5	07	86	93	96	96	93	81	86	93	96	96	93	83
102	8.0	0B	86	94	96	96	93	81	86	95	98	98	94	83

TONE 12														
800Hz/1.0s 970Hz/0s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
90	2.0	09	77	83	86	87	83	78	77	83	86	87	83	78
95	3.0	0A	80	90	96	96	90	81	80	90	96	96	89	79
98	4.5	0C	80	90	96	96	90	81	80	90	96	96	89	79
100	6.5	07	80	90	96	96	90	81	80	90	96	96	89	79
102	8.0	0B	80	90	96	96	90	81	80	90	96	96	89	79

TONE 15														
2400Hz/1s 2850Hz/0s			HORIZONTAL Angle°						VERTICAL Angle°					
dB (nom)	Current mA	Volume Code	15	45	75	105	135	165	15	45	75	105	135	165
90	2.0	09	80	89	92	93	89	79	80	89	92	93	89	79
95	3.0	0A	80	90	96	97	90	79	80	90	96	97	90	80
98	4.5	0C	80	90	97	97	90	79	80	90	97	97	90	80
100	6.5	07	80	90	97	97	90	79	80	90	97	97	90	80
102	8.0	0B	80	90	97	97	90	79	80	90	97	98	90	80

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
90	2.0	09	70	76	85	79	83	74	70	76	85	79	83	76
95	3.0	0A	74	80	88	82	86	74	74	80	88	82	86	76
98	4.5	0C	74	81	89	84	86	74	74	81	89	84	86	76
100	6.5	07	74	82	90	85	86	74	74	82	90	85	86	76
102	8.0	0B	74	84	92	87	86	74	74	84	92	87	86	76

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
90	2.0	09	76	86	89	75	88	80	76	86	89	75	88	79
95	3.0	0A	78	89	92	77	90	80	78	89	92	77	90	79
98	4.5	0C	76	87	90	75	89	80	76	87	90	75	89	79
100	6.5	07	80	90	93	78	92	80	80	90	93	78	92	79
102	8.0	0B	80	92	95	80	93	80	80	92	95	80	92	79

- 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 code required to set the current level and overall SPL.
- Sound output: this is the minimum sound output that the CHQ-WS2 Wall Sounder will produce, taking into account manufacturing tolerances, temperature and conditions of operation.



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