CRANFORDCONTROLS®
FIRE & SECURITY

VTB-32EVAD Wall Spatial Sounder/VAD Beacon Red Flash 24VDC

EN54 Part 3 & 23 Approved

The VTB EN54 Part 3 & 23 Approved sounder beacon is part of the VTG/VTB family of products designed for use with conventional fire alarm systems

The sounder function like all VTG family of products comes as standard with 32 tones.

The VAD beacon has been approved to EN54-23, at W-2.4-7 coverage range (Reduced room size coverage available via the DIL switch W-2.4-4,but does not comply with EN54-23)

The sounder function features a two-stage alarm override which is activated by a third negative wire from the fire panel.

Both the sounder and beacon functions are fully synchronised. The sounder function has been fully approved to EN54 Part 3 by Intertek on tones 1, 8, 11, 25 and 27. The product can also be used as a beacon only which is easily selected by a DIL switch at the time of installation.

Approved at 1Hz flash rate.(0.5Hz flash rate available via the DIL switch,but does not comply with EN54-23)

- Sounder function fully approved to EN54-3 and beacon (VAD) to EN54-23
- 32 tones plus a selectable override tone
- Shallow base IP21C and deep base IP33C versions available
- Designed to work with conventional alarm circuits
- Switch selectable beacon only feature
- Unique twist and lock bayonet mounting system
- Removable cover on deep base for surface wiring
- Features base locking system as standard

TECHNICAL

Voltage range (Vdc)	18 - 30	
Number of tones	32	
Operating frequency (Hz)	440 - 2900	
Temperature range (°C)	-20 to +70	
Flash rate	c.1Hz (Approved)	
	(Option for 0.5Hz does not comply with EN54-23)	
Monitoring	Reverse polarity	
Protection rating (EN54 Approved)	IP21C (Shallow)	IP33C (Deep)
Protection rating (BS EN 60529)		IP65C(Deep)
Base part numbers	Shallow 116-085 Red 116-086 White	Deep 126-021 Red 126-022 White
Boxed weight (kg)	0.22 (Shallow)	0.25 (Deep)
Body colours available	Red or white (ABS fire retardant plastic)	
Lens colours available/flash colour	Red lens / Red flash	

PERFORMANCE

Volume setting	High	Low
Tone 1 sound output, (dBA)	98	66
Max. current consumption @ 24Vdc (mA)	40	25
Max power consumption @ 24Vdc (mW)	960	600
Beacon coverage	W-2.4-7 (Approved)	
	(Option for W-2.4-4 does not comply with EN54-23)	
Coverage volume:	118m³	
Light temporal pattern	Single pulse width of 35 - 100ms @ frequency of 1Hz (Approved at 100ms)	

Maintenance: refer to local test and maintenance guidance

ORDERING INFORMATION

VTB-32EVAD EN54-3 & 23 W-2.4-7 Red body, 32 tone, shallow base, red flash	511-305
VTB-32EVAD EN54-3 & 23 W-2.4-7 Red body, 32 tone, deep base, red flash	511-306
VTB-32EVAD EN54-3 & 23 W-2.4-7 White body, 32 tone, shallow base, red flash	511-303
VTB-32EVAD EN54-3 & 23 W-2.4-7 White body, 32 tone, deep base, red flash	511-304

APPROVALS INFORMATION

EN54-3

EN54-23

CE
15
0905-CPR-00473

Intertek

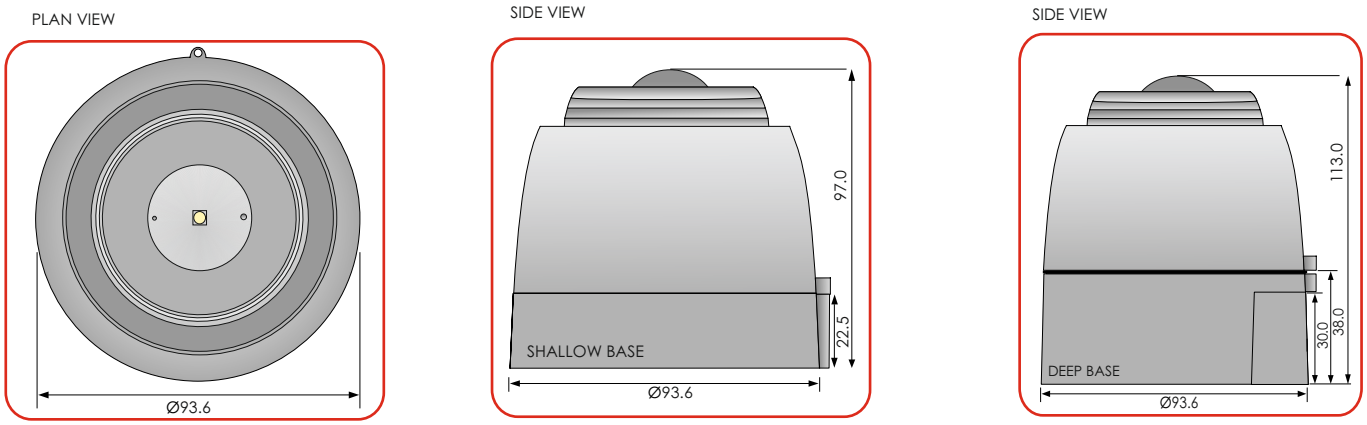
innovationdesignmanufacture

00 44 (0)1420 592444 sales@cranfordcontrols.com

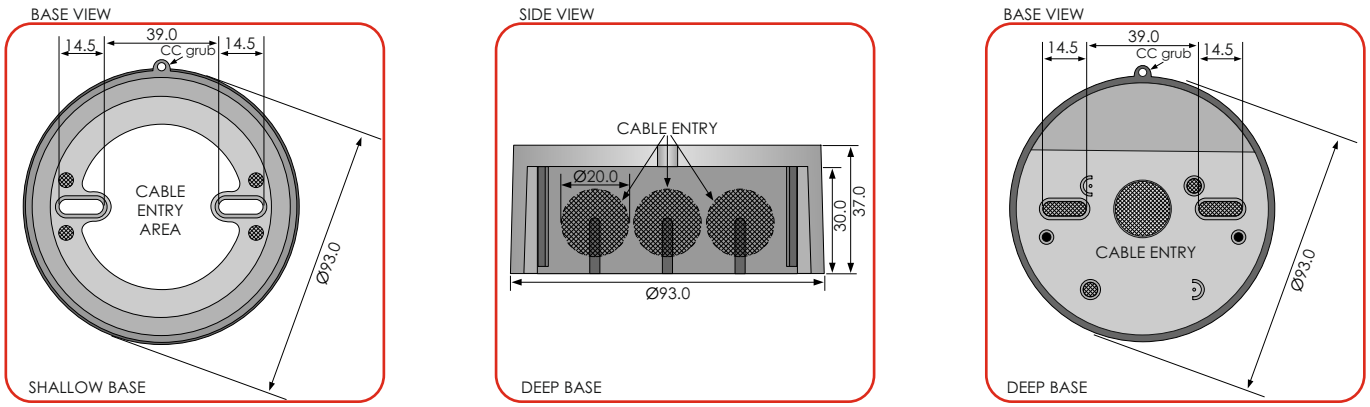
VTB-32EVAD Wall Spatial Sounder/VAD Beacon Red Flash 24VDC

EN54 Part 3 & 23 Approved

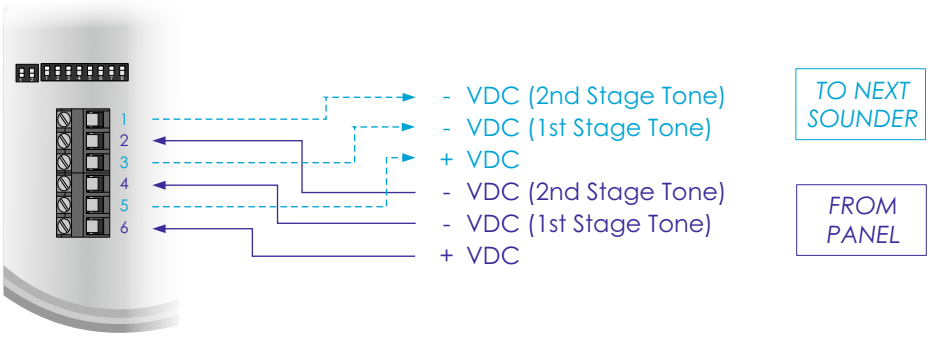
DIMENSIONS



PRODUCT MOUNTING & CABLE ENTRY

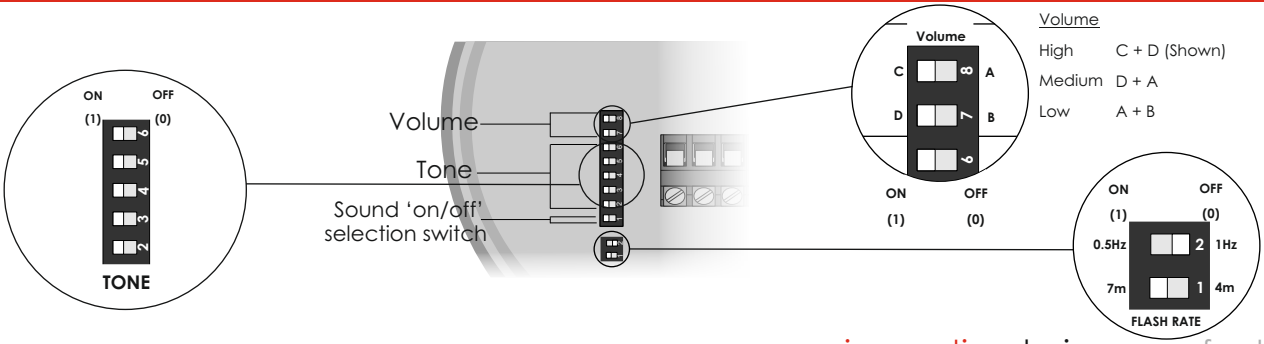


WIRING CONFIGURATION



TONE & VOLUME SELECTION

FLASH RATE & COVERAGE

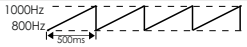
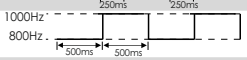
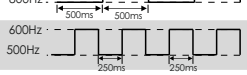
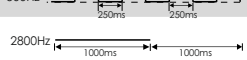
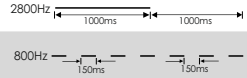
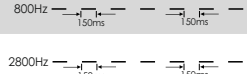
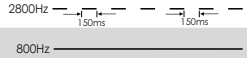
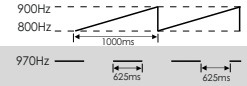
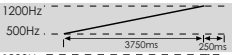
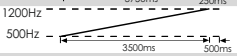
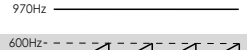
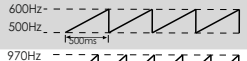
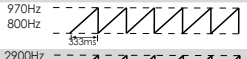
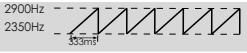
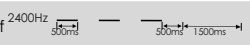
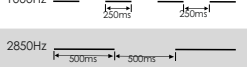
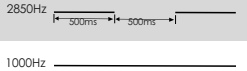
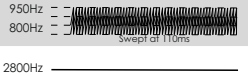
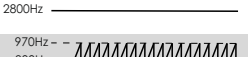
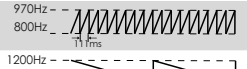
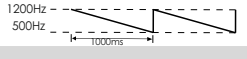
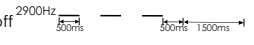


innovationdesignmanufacture

00 44 (0)1420 592444 sales@cranfordcontrols.com

TONE LIST - GRAPHICAL

Tones 1,8,11(Second Stage Tone),25 & 27 Approved to EN54-3

Switch (23456)	No.	Name	1st Stage Frequency	1st Stage Graphical	2nd Stage Frequency	2nd Stage Graphical
11111	**1**	**LF Sweep (Cranford Sweep)**	**800-1000Hz swept every 500ms (2Hz)**		800Hz continuous	
11110	2	Alternative warble BS	800Hz for 250ms, then 960Hz for 250ms		800Hz continuous	
11101	3	Warble Tone BS	800Hz for 500ms, then 1000Hz for 500ms		800Hz continuous	
11100	4	Alternative warble BS	500Hz for 250ms, then 600Hz for 250ms		500Hz continuous	
11011	5	HF Back up Interrupted	2800Hz for 1000ms, then off for 1000ms		2800Hz continuous	
11010	6	LF Back up Alarm	800Hz for 150ms, then off for 150ms		800Hz continuous	
11001	7	HF Back up Interrupted	2800Hz for 150ms, then off for 150ms		800Hz continuous	
11000	8	**LF Continuous tone BS5839**	**800Hz continuous**		800Hz continuous	
10111	9	Sweep - 1Hz	800-900Hz swept every 1000ms (1Hz)		800Hz continuous	
10110	10	Australian slow whoop	970Hz for 625ms, then off for 150m		500-1200Hz for 3250ms, then off for 250ms	
10101	**11**	**Dutch sweep**	970Hz continuous		**500-1200Hz for 3500ms, then off for 500ms**	
10100	12	Analogue sweep	500-600Hz swept every 500ms (2Hz)		500Hz continuous	
10011	13	Sweep - 3Hz	800-970Hz swept every 333ms (3Hz)		800Hz continuous	
10010	14	Alternate HF slow sweep	2350-2900Hz swept every 333ms (3Hz)		2400Hz continuous	
10001	15	Fast HF sweep	2400-2800Hz swept every 143ms (7Hz)		2400Hz continuous	
10000	16	US Temporal Pattern LF	950Hz for 500ms on, 500ms off (x3), then 1500ms off		800Hz continuous	
01111	17	Interrupted BS	800Hz for 500ms, then off for 500ms		800Hz continuous	
01110	18	ISO 8201 LF BS5839 Pt 1	970Hz for 500ms, then off for 500ms		970Hz for 500ms, then off for 500ms	
01101	19	Interrupted medium	1000Hz for 250ms, then off for 250ms		800Hz continuous	
01100	20	ISO8201 HF	2850Hz for 500ms, then off for 500ms		2850Hz for 500ms, then off for 500ms	
01011	21	Continuous	1000Hz continuous		1000Hz continuous	
01010	22	LF Buzz	800-950Hz swept every 9ms (110Hz)		800Hz continuous	
01001	23	HF Continuous	2800Hz continuous		2800Hz continuous	
01000	24	Sweep	800-970Hz swept every 111ms (9Hz)		800Hz continuous	
00111	**25**	**German DIN tone**	**1200-500Hz swept every 1000ms (1Hz)**		800Hz continuous	
00110	26	Swedish Fire signal	660Hz for 150ms, then off for 150ms		660Hz for 150ms, then off for 150ms	
00101	**27**	**French tone AFNOR**	**554Hz for 100ms, then 440Hz for 400ms**		800Hz continuous	
00100	28	Swedish all clear signal	660Hz continuous		660Hz continuous	
00011	29	US Temporal Pattern HF	2900Hz for 500ms on, 500ms off (x3), then1500ms off		2900Hz continuous	
00010	30	Siren 2 way ramp (short)	500-1200Hz rising for 250ms, then falling for 250ms		800Hz continuous	
00001	31	FP1063.1-Telecom	800Hz for 250ms, then 970Hz for 250ms		800Hz continuous	
00000	32	Siren 2 way ramp (long)	500-1200Hz rising for 3000ms, then falling for 3000ms		800Hz continuous	

EN54-3 APPROVED MINIMUM SOUND OUTPUT AT 1 METRE - LOW VOLUME

Tone 1- Cranford Sweep Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	67.23	72.31	66.307	71.94
45º	67	72.24	66.02	71.84
75º	75.06	80.21	74.84	79.99
105º	75.45	80.56	75.034	80.29
135º	66.46	72.13	67.44	72.43
165º	67.53	73.09	68.402	73.04

Tone 8 - 800Hz Continuous Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	65.27	70.44	65.375	70.778
45º	65.08	70.45	64.753	70.193
75º	74.81	79.86	74.628	79.837
105º	75.06	80.2	75.377	80.53
135º	66.24	71.3	66.919	72.14
165º	65.99	71.13	66.34	71.732

Tone 11 - Dutch Sweep Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	64.79	70.38	64.189	69.689
45º	67.05	72.6	66.63	72.164
75º	72.56	78.13	72.293	78.226
105º	72.36	77.94	72.236	77.918
135º	67.4	72.84	67.588	72.567
165º	64.04	69.4	64.683	69.633

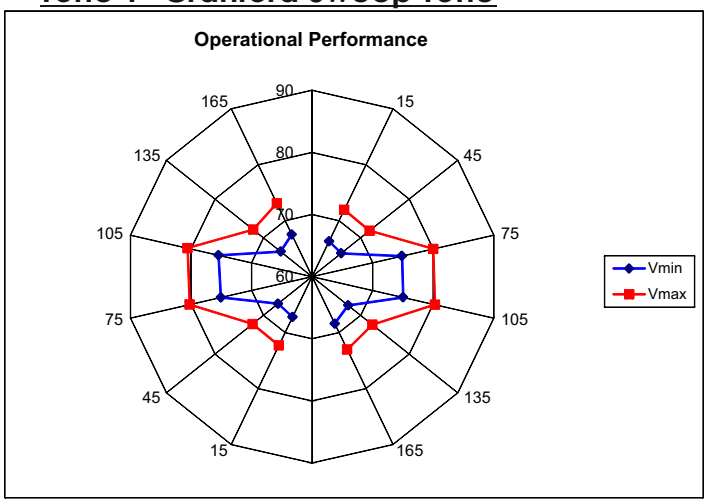
Tone 25 - German DIN Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	65.84	70.76	66.096	71.373
45º	66.62	71.44	66.808	72.435
75º	74.9	80.1	74.909	80.188
105º	75.16	80.35	75.108	80.296
135º	68.04	73.91	66.672	71.455
165º	67.21	72.75	66.078	71.123

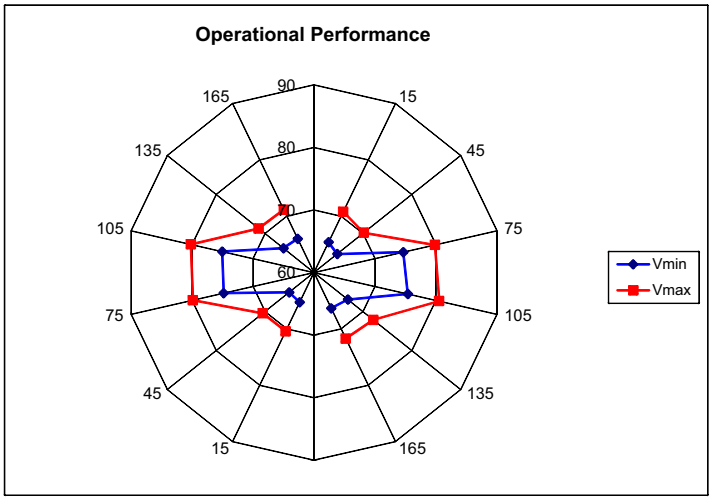
Tone 27 - French AFNOR Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	64.851	70.152	65.446	70.574
45º	65.384	70.652	66.345	71.659
75º	74.374	79.568	74.287	79.466
105º	74.815	80.044	74.74	79.885
135º	66.633	71.953	65.512	70.79
165º	65.633	71.856	65.586	70.809

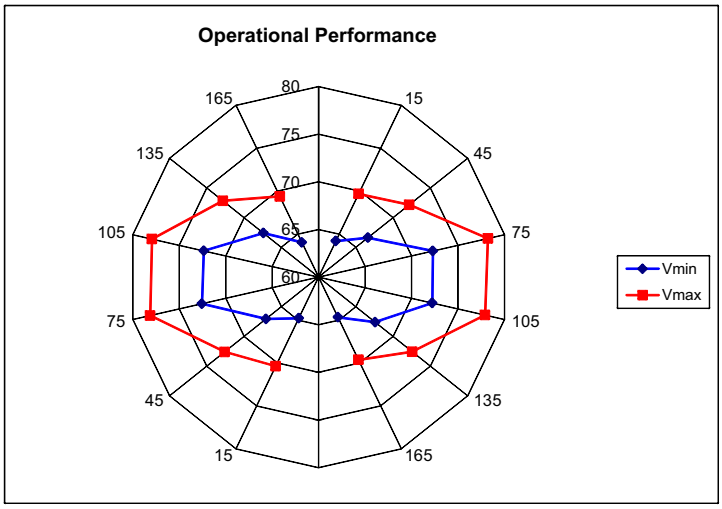
Tone 1- Cranford Sweep Tone



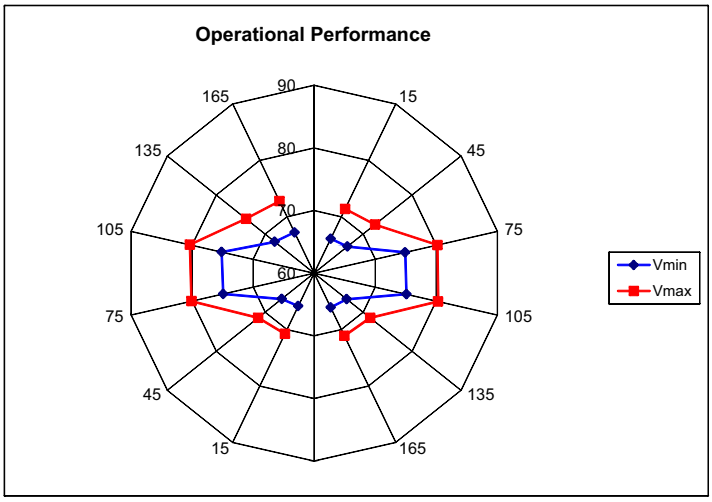
Tone 8 - 800Hz Continuous Tone



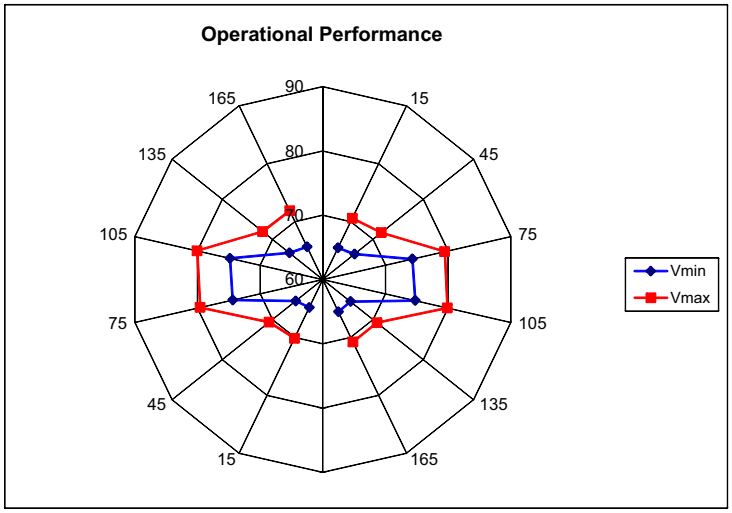
Tone 11- Dutch Sweep Tone



Tone 25 - German DIN Tone



Tone 27 - French AFNOR Tone



EN54-3 APPROVED MINIMUM SOUND OUTPUT AT 1 METRE - HIGH VOLUME

Tone 1- Cranford Sweep Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	85.81	90.19	86.027	90.187
45º	86.12	90.44	85.99	90.421
75º	93.95	97.86	93.792	97.68
105º	94.29	98.23	94.073	98.006
135º	86.26	89.97	86.781	90.482
165º	86.86	90.27	87.148	90.716

Tone 8 - 800Hz Continuous Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	84.44	88.58	84.557	88.772
45º	84.74	89.05	84.003	88.371
75º	93.65	97.66	93.331	97.523
105º	93.77	97.76	94.094	98.397
135º	84.73	88.76	86.308	89.952
165º	85.14	89.14	85.856	89.834

Tone 11 - Dutch Sweep Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	84.1	88.02	84.001	88.009
45º	86.36	90.29	86.608	90.615
75º	92.2	96.55	92.566	96.673
105º	92.13	96.46	92.154	96.288
135º	87.28	91.13	86.304	90.417
165º	83.92	87.66	83.191	87.09

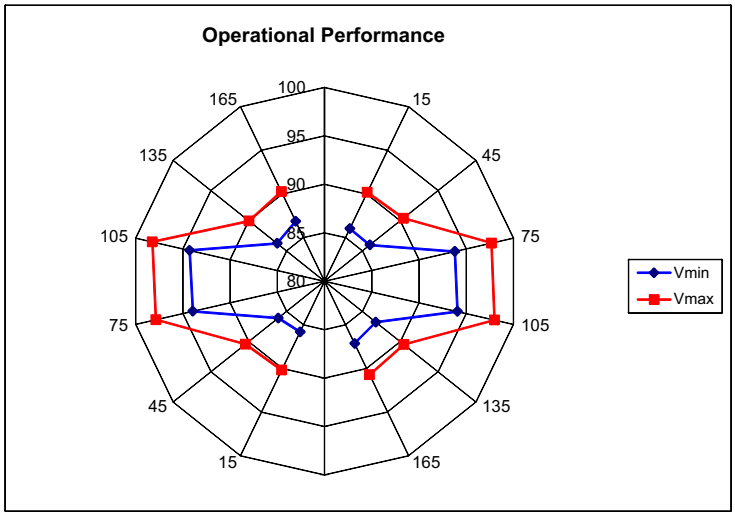
Tone 25 - German DIN Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	84.54	89.22	85.44	86.313
45º	85.28	90.34	86.347	90.513
75º	93.73	97.77	93.749	97.762
105º	93.95	97.94	93.867	97.938
135º	87.42	90.63	85.423	89.779
165º	86.62	90.15	84.935	89.147

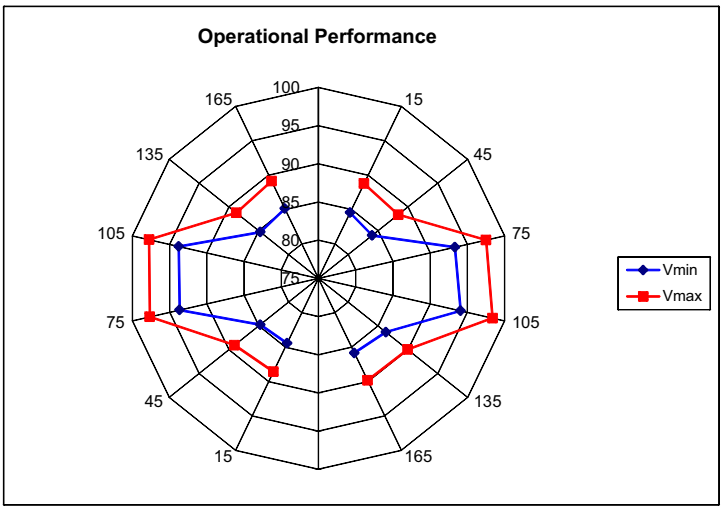
Tone 27 - French AFNOR Tone

Angle	Horizontal Plane dB(A)		Vertical Plane dB(A)	
	Vmin	Vmax	Vmin	Vmax
15º	83.882	87.869	84.065	87.15
45º	84.874	88.892	85.368	88.477
75º	93.03	96.879	92.758	96.602
105º	93.291	97.227	93.179	97.203
135º	85.4	89.357	84.831	89.456
165º	84.776	88.691	84.429	88.592

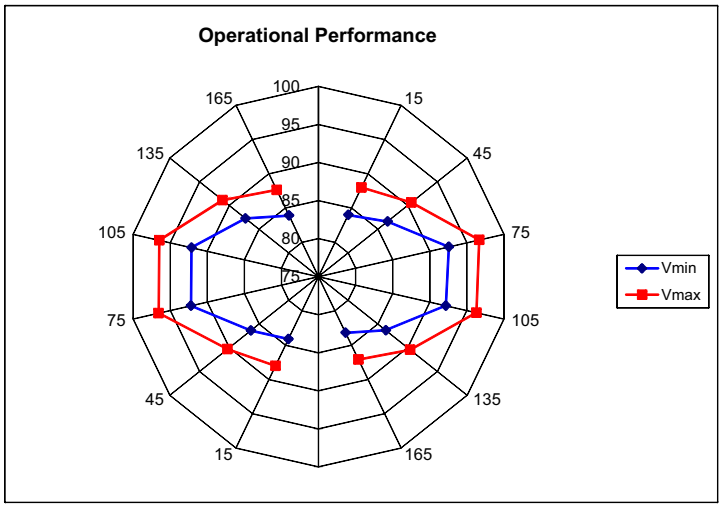
Tone 1- Cranford Sweep Tone



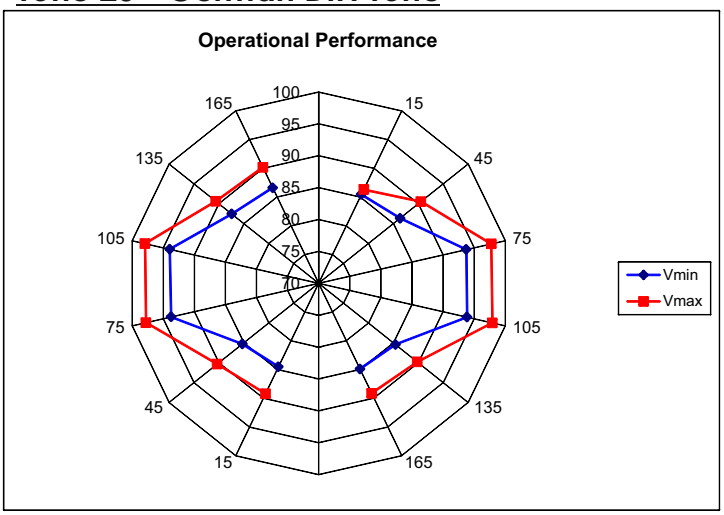
Tone 8 - 800Hz Continuous Tone



Tone 11- Dutch Sweep Tone



Tone 25 - German DIN Tone



Tone 27 - French AFNOR Tone