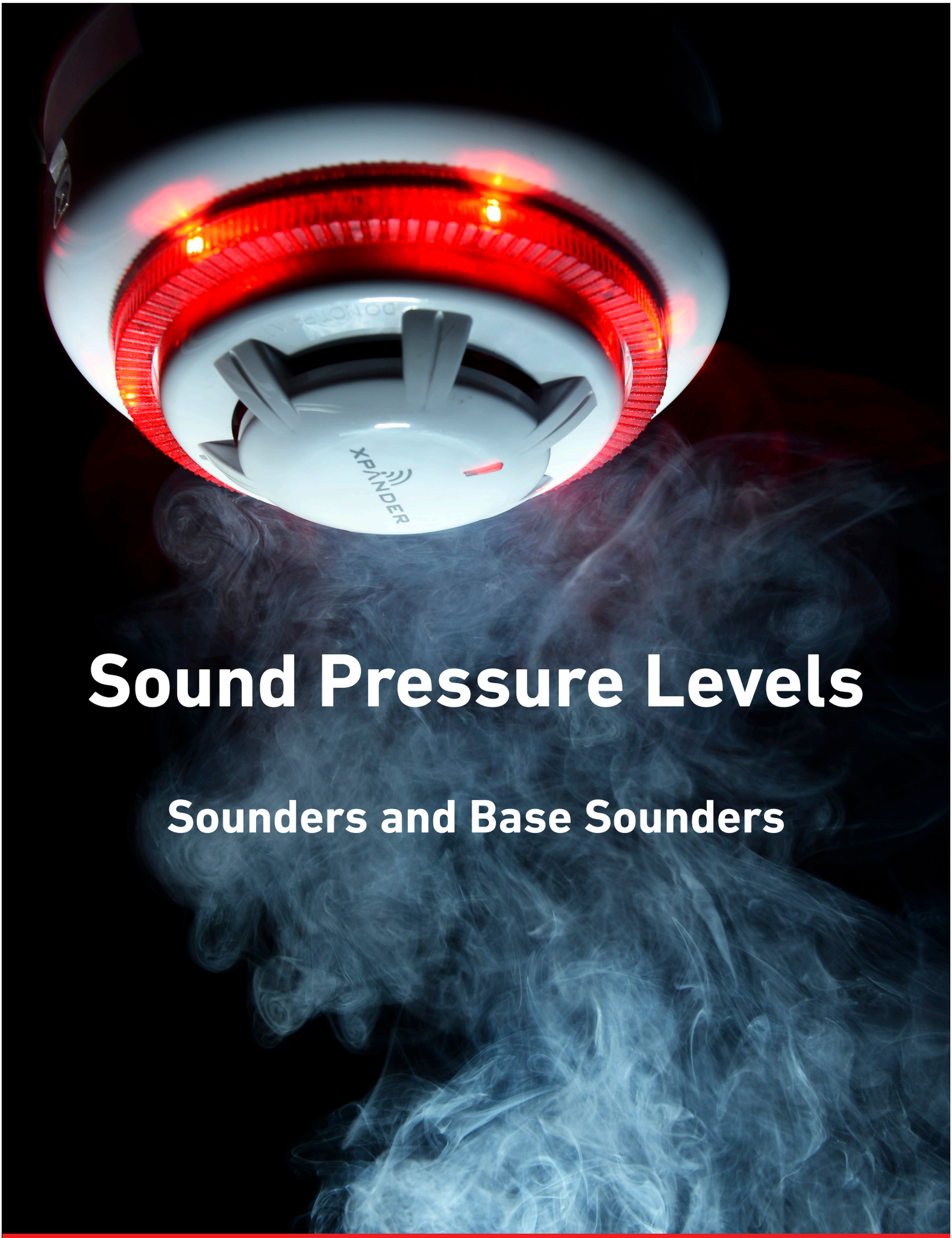


Sound Pressure Levels

Sounders and Base Sounders

apollo

Introduction

Apollo Fire Detectors offers a choice of sounders for installation in intelligent fire detection systems.

These sounders are either base sounders for use with individual detectors or wall-mounted sounders for installation in open areas.

The Apollo information system

Apollo Fire Detectors publishes a datasheet for each type of sounder. These include full information on the function and features of the sounders and, where necessary, the use of the digital communications protocol.

The standard requires the sound pressure levels and tone frequencies to be published but these have not been included in individual sounder datasheets. It has been decided to publish all this data collectively in a separate publication. This publication contains information available at the time of printing. Further information on sound pressure levels and frequencies will be added at intervals as this information becomes available.

Notes:

1.The data given represents the lowest sound levels that might be achieved in actual use at the maximum volume settings.

2. All sound pressure levels in this document are stated at 1 meter.

Sounders included in this publication

- Intelligent Base Sounder
- Intelligent Base Sounder with Isolator
- Intelligent Base Sounder, Slow Whoop
- Intelligent Base Sounder with Isolator, Slow Whoop
- Ancillary Base Sounder
- Integrated Base Sounder with Isolator
- Integrated Base Sounder
- Integrated Base Sounder with Isolator, Slow Whoop
- Integrated Base Sounder, Slow Whoop
- Integrated Base Sounder, DIN Tone
- Sounder Visual Indicator Base with Isolator
- Sounder Visual Indicator Base
- Sounder Visual Indicator Base with Isolator, Slow Whoop
- Sounder Visual Indicator Base with Isolator, DIN Tone
- Discovery Sounder Visual Indicator Base
- AlarmSense Sounder
- AlarmSense Open-Area Sounder Visual Indicator
- AlarmSense Open-Area Sounder
- Discovery Sounder VAD Base
- Discovery Marine Sounder VAD Base
- Discovery Sounder Base
- Sounder VAD Base
- Sounder VAD Base with Isolator, Slow Whoop
- Sounder VAD Base with Isolator, DIN Tone
- Intelligent Open-Area Sounder
- Intelligent Multi-tone Open-Area Sounder Visual Indicator
- Multi-tone Waterproof Open-Area Sounder
- Multi-tone Open-Area Sounder
- Multi-tone Open-Area Sounder Visual Indicator
- Multi-tone Open-Area Sounder Visual Indicator with Isolator
- Multi-tone Waterproof Open-Area Sounder Visual Indicator
- Multi-tone Waterproof Open-Area Sounder Visual Indicator with Isolator
- Discovery Open-Area Sounder Visual Indicator
- Discovery Open-Area Voice Sounder
- Discovery Open-Area Voice Sounder Visual Indicator
- XPander Sounder and Sounder Base
- XPander Sounder Visual Indicator and Sounder Base
- XPander Combined Sounder and Detector Base
- XPander Combined Sounder Visual Indicator and Detector Base
- XP95 Category C Sounder Visual Alarm
- XP95 Category W Sounder Visual Alarm
- Discovery Open-Area Voice Sounder
- Discovery Open-Area Voice Sounder Visual Indicator
- Intelligent Open-Area Sounder (SA part numbers only)
- Intelligent Open-Area Sounder Visual Indicator (SA part numbers only)
- Intelligent Open-Area Sounder VADs (SA part numbers only)
- Soteria Audio Visual Base

Intelligent Base Sounder, Part Number 45681-265
Intelligent Base Sounder with Isolator, Part Number 45681-266

	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 510Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 510Hz for 0.5s / 610Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	80.3	78.7	80.8	83.3
45°	81.3	79.1	81.5	83.0
75°	86.5	85.7	87.7	88.4
105°	86.5	85.8	86.4	85.3
135°	80.7	83.1	82.4	83.3
165°	80.5	84.1	82.8	86.4

Intelligent Base Sounder, Slow Whoop, Part Number 45681-267

	Slow Whoop			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: 970Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500Hz–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	75.8	76.5	84.4	88.3
45°	75.9	75.7	85.7	87.9
75°	81.0	76.0	90.1	89.6
105°	81.1	81.0	90.0	89.5
135°	76.7	79.3	84.8	84.3
165°	76.9	80.2	83.7	82.7

Ancillary Base Sounder, Part Number 45681-276

	Apollo Standard	
	EVACUATE	
	Minimum Sound pressure level dB(A) Tone frequency: 630Hz for 0.5s / 990Hz for 0.5s	
	Maximum Volume Settings	
Angle	Horizontal	Vertical
15°	73.7	72.2
45°	72.9	68.1
75°	77.7	76.6
105°	76.0	78.5
135°	72.0	75.1
165°	72.2	67.0

Integrated Base Sounder with Isolator, Part Number 45681-277
Integrated Base Sounder, Part Number 45681-278

	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 800Hz–1000Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 500Hz–700Hz for 0.5s / 800Hz–1000Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	67.8	67.5	70.4	66.2
45°	67.7	66.3	70.0	65.9
75°	72.5	71.8	74.2	74.7
105°	71.3	71.8	73.7	73.2
135°	65.9	69.7	67.6	72.9
165°	68.2	74.4	70.4	75.0

Integrated Base Sounder with Isolator, Slow Whoop, Part Number 45681-290
Integrated Base Sounder, Slow Whoop, Part Number 45681-291

	Slow Whoop			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: 800–1000Hz		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	69.2	64.2	73.8	72.0
45°	70.0	69.3	75.4	73.0
75°	74.7	74.3	78.4	80.7
105°	74.5	74.7	78.9	80.0
135°	69.0	72.1	73.0	75.1
165°	70.5	72.3	73.8	76.3

Integrated Base Sounder with Isolator, DIN Tone, Part Number 45681-300

	DIN Tone			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) for continuous tone (not DIN) Tone frequency: 870Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	68.3	65.5	71.7	69.5
45°	67.7	65.8	71.1	67.4
75°	74.7	74.8	76.6	75.8
105°	74.4	74.1	75.7	76.6
135°	69.3	70.7	72.0	75.6
165°	70.3	71.1	73.9	70.0

Sounder Visual Indicator Base with Isolator, Part Number 45681-330

	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 825Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550Hz for 0.5s / 825Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	68.2	67.9	68.2	68.8
45°	68.1	68.0	68.0	67.5
75°	71.4	71.0	71.4	71.0
105°	71.7	72.2	71.5	72.0
135°	68.1	70.4	68.4	71.9
165°	68.9	73.0	69.2	73.0

Sounder Visual Indicator Base, Part Number 45681-331

	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 825Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550Hz for 0.5s / 825Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	69.9	73.6	70.2	73.9
45°	72.0	76.1	72.0	75.7
75°	78.4	80.3	78.6	80.4
105°	78.6	80.0	78.6	80.2
135°	75.1	77.5	74.6	77.5
165°	73.3	79.2	73.3	79.4

Sounder Visual Indicator Base, Slow Whoop, Part Number 45681-332

	Slow Whoop			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: 825Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	73.8	70.0	75.0	73.6
45°	74.5	73.0	75.3	74.3
75°	78.6	78.0	81.5	80.8
105°	78.4	78.0	81.4	81.0
135°	73.5	75.5	76.0	78.3
165°	72.3	75.0	75.0	75.5

Discovery Sounder Visual Indicator Base, Part Number 45681-393

	Apollo Standard			
	ALERT (Tone 0)		EVACUATE (Tone 1)	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 825Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550Hz for 0.5s / 825Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	68.5	68.5	70.5	68.9
45°	67.8	68.7	71.1	68.6
75°	74.1	73.7	74.1	73.7
105°	73.8	73.7	73.8	73.7
135°	69.9	72.6	69.8	73.1
165°	69.0	75.2	69.5	75.9
	EVACUATE (Tone 3)		EVACUATE (Tone 4)	
	Minimum Sound pressure level dB(A) for Dutch Slow Whoop tone Tone frequency: off for 0.5s / 500–1200Hz over 3.5s		Minimum Sound pressure level dB(A) for DIN tone Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	73.0	68.8	75.0	70.6
45°	73.4	67.4	72.7	67.7
75°	79.2	78.8	78.1	78.2
105°	78.1	78.1	78.1	78.1
135°	73.3	76.7	72.8	76.0
165°	73.1	79.2	73.1	80.4
	EVACUATE (Tone 12)		ALERT (Tone 11)	
	Minimum Sound pressure level dB(A) for alternating Fulleon and Hochiki tone Tone frequency: 626Hz for 0.25s / 925Hz for 0.25ms		Minimum sound pressure level dB(A) for continuous Fulleon and Hochiki tone Tone frequency: 925Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	75.6	70.6	73.0	70.1
45°	72.3	64.9	64.2	62.9
75°	78.0	78.6	78.4	78.7
105°	78.2	78.0	76.7	78.0
135°	70.3	76.2	70.0	75.3
165°	75.2	81.2	75.2	80.7
	EVACUATE (Tone 14)		ALERT (Tone 13)	
	Minimum Sound pressure level dB(A) for Medium Sweep tone Tone frequency: 800Hz to 970Hz at 1Hz		Minimum sound pressure level dB(A) for continuous tone Tone frequency: 970Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	72.9	70.4	73.8	66.8
45°	69.9	64.4	70.0	56.0
75°	78.8	79.3	76.1	76.4
105°	78.6	78.4	75.4	75.8
135°	70.0	75.8	71.0	74.2
165°	75.2	80.7	73.3	77.7

Discovery Sounder Visual Indicator Base, Part Number 45681-393 (cont'd)

	EVACUATE (Tone 18)		ALERT (Tone 2)	
	Minimum Sound pressure level dB(A) for Swedish Fire tone Tone frequency: off for 0.15s / 660Hz for 0.15s		Minimum sound pressure level dB(A) for continuous tone Tone frequency: 825Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	73.1	67.8	69.8	68.0
45°	70.9	68.1	70.5	64.3
75°	76.9	77.2	74.0	73.7
105°	77.0	76.7	73.8	73.6
135°	69.6	74.0	69.7	72.5
165°	74.0	78.6	69.1	74.9

	ALERT (Tone 17)	
	Minimum sound pressure level dB(A) for Swedish All Clear Signal continuous tone Tone frequency: 660Hz continuous	
	Maximum Volume Settings	
Angle	Horizontal	Vertical
15°	74.3	68.8
45°	72.0	69.1
75°	78.0	78.3
105°	78.1	77.9
135°	70.6	75.1
165°	75.1	79.7

AlarmSense Sounder Visual Indicator Base, Part Number 45681-509
AlarmSense Sounder Base, Part Number 45681-510

	Apollo Standard	
	EVACUATE (Tone 7)	
	Minimum Sound pressure level dB(A) Tone frequency: 550Hz for 0.5s / 825Hz for 0.5s	
	Maximum volume, switch 2 off	
Angle	Horizontal	Vertical
15°	71.0	67.1
45°	70.1	67.8
75°	75.2	75.0
105°	75.2	75.2
135°	69.5	73.8
165°	71.4	76.1

AlarmSense Open-Area Sounder Visual Indicator, Part Number 55000-017
AlarmSense Open-Area Sounder, Part Number 55000-018

	Apollo Standard	
	EVACUATE	
	Minimum Sound pressure level dB(A) Tone frequency: 558Hz for 0.5 s / 840Hz for 0.5 s	
	Maximum Volume Settings	
Angle	Horizontal	Vertical
15°	83.2	83.2
45°	88.6	88.9
75°	89.7	89.5
105°	89.7	89.6
135°	88.6	89.0
165°	83.2	82.9

Discovery Sounder VAD Base, Part Number 45681-700
Discovery Sounder Base, Part Number 45681-702

	Apollo Standard			
	ALERT (Tone 0)		EVACUATE (Tone 1)	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 850Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 567Hz for 0.5s / 850Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	71.8	68.3	71.7	71.1
45°	76.2	72.2	76.1	74.4
75°	80.8	79.0	80.9	80.5
105°	80.9	79.4	80.9	81.2
135°	74.3	76.5	74.3	77.6
165°	75.8	77.9	75.8	80.8
	EVACUATE (Tone 3)		EVACUATE (Tone 4)	
	Minimum Sound pressure level dB(A) for Dutch Slow Whoop tone Tone frequency: off for 0.5s / 500–1200Hz over 3.5s		Minimum Sound pressure level dB(A) for DIN tone Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	75.5	73.8	73.2	69.8
45°	75.9	73.7	72.0	68.8
75°	72.9	83.7	76.2	76.9
105°	83.6	83.0	75.8	76.9
135°	77.5	81.0	70.0	73.0
165°	79.3	79.4	73.7	78.1
	EVACUATE (Tone 12)		ALERT (Tone 11)	
	Minimum Sound pressure level dB(A) for alternating Fulleon and Hochiki tone Tone frequency: 626Hz for 0.25s / 925Hz for 0.25ms		Minimum sound pressure level dB(A) for continuous Fulleon and Hochiki tone Tone frequency: 925Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	73.0	68.0	73.2	73.2
45°	70.0	64.0	61.2	63.2
75°	75.0	76.4	75.4	76.4
105°	75.2	75.0	73.7	75.0
135°	67.3	73.8	67.0	73.8
165°	72.5	78.2	72.2	78.1
	EVACUATE (Tone 14)		ALERT (Tone 13)	
	Minimum Sound pressure level dB(A) for Medium Sweep tone Tone frequency: 800Hz to 970Hz at 1Hz		Minimum sound pressure level dB(A) for continuous tone Tone frequency: 970Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	73.0	70.0	72.5	69.3
45°	70.8	66.8	68.9	65.6
75°	76.5	76.3	74.8	75.0
105°	75.6	76.1	75.3	75.8
135°	67.0	72.8	70.0	70.1
165°	72.2	78.3	72.7	73.8
	EVACUATE (Tone 18)		ALERT (Tone 2)	
	Minimum Sound pressure level dB(A) for Swedish Fire tone Tone frequency: off for 0.15s / 660Hz for 0.15s		Minimum sound pressure level dB(A) for continuous tone Tone frequency: 850Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	70.8	65.1	71.9	71.7
45°	68.8	66.6	72.2	61.7
75°	73.9	74.2	79.5	79.0
105°	74.1	74.2	79.0	80.5
135°	68.9	71.7	71.7	77.7
165°	70.7	76.3	75.3	80.7

Discovery Sounder VAD Base, Part Number 45681-700 Discovery Sounder Base, Part Number 45681-702	(cont'd)
	ALERT (Tone 17)
	Minimum sound pressure level dB(A) for Swedish All Clear Signal continuous tone Tone frequency: 660Hz continuous
	Maximum Volume Settings
Angle	Horizontal	Vertical
15°	71.9	66.3
45°	69.9	67.7
75°	75.0	75.3
105°	75.2	75.2
135°	70.1	72.8
165°	72.5	77.3

Sounder VAD Base with Isolator, Part Number 45681-705				
	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 850Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 567Hz for 0.5s / 850Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.6	79.7	82.4	82.5
45°	84.4	81.8	84.2	82.5
75°	86.9	86.0	86.6	86.2
105°	86.1	85.8	86.9	86.0
135°	80.6	82.0	79.9	82.2
165°	76.4	81.3	77.5	80.7

Sounder VAD Base with Isolator, Slow Whoop, Part Number 45681-706				
	Slow Whoop			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: 850Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	81.7	81.0	80.1	84.8
45°	89.5	87.3	85.2	86.3
75°	91.2	90.9	89.1	89.2
105°	90.8	90.8	98.9	88.9
135°	87.9	88.0	85.0	83.7
165°	82.3	86.0	81.6	79.4

Sounder VAD Base with Isolator, DIN Tone, Part Number 45681-707				
	DIN Tone			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: 850Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	83.2	78.5	82.0	78.8
45°	83.3	83.0	81.6	80.7
75°	88.1	87.7	86.2	86.0
105°	88.2	88.7	86.1	86.5
135°	82.8	84.8	81.2	84.0
165°	83.1	87.3	82.4	86.6

Intelligent Open-Area Sounders, Part Numbers 55000-001, 55000-002, 55000-003 and 55000-004
Intelligent Open-Area Sounder Visual Indicators, Part Numbers 55000-005, 55000-006, 55000-007 and 55000-008

	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off 1s / 840Hz ±20Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 558Hz for 0.5s / 840Hz for 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	85.4	86.0	83.6	84.3
45°	86.3	86.7	86.8	86.4
75°	91.3	91.4	91.4	91.3
105°	91.1	91.4	91.3	91.5
135°	85.3	85.9	85.4	85.7
165°	87.0	85.9	83.9	84.3
	Slow Whoop			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: 825Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	85.7	86.7	85.2	85.1
45°	87.1	86.3	87.7	87.1
75°	91.6	91.5	91.5	91.4
105°	91.4	91.2	91.4	91.5
135°	85.5	86.6	86.7	87.6
165°	87.4	84.5	85.4	84.9
	DIN Tone			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: 825Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	85.7	86.7	81.7	82.0
45°	87.1	86.3	85.6	78.7
75°	91.6	91.5	89.3	89.1
105°	91.4	91.2	89.2	89.2
135°	85.5	86.6	84.7	85.7
165°	87.4	84.5	77.7	82.0

Multi-Tone Waterproof Open-Area Sounders, Part Numbers 55000-274 and 55000-275

	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off 1s / 970Hz ±20Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550–700Hz over 0.5s / 850–1000Hz over 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.0	77.2	77.7	75.8
45°	87.8	87.8	85.9	86.5
75°	93.2	93.0	91.9	91.8
105°	92.7	92.9	92.9	92.9
135°	86.4	87.2	85.9	86.7
165°	68.6	71.6	69.5	71.4
	Slow Whoop			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: continuous 800-1000Hz		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.8	75.7	77.7	80.7
45°	88.9	87.6	87.3	88.1
75°	93.8	93.0	92.5	92.7
105°	93.6	92.7	92.8	92.9
135°	87.2	87.0	87.7	88.1
165°	70.3	74.2	73.5	74.0

Multi-Tone Waterproof Open-Area Sounders, Part Numbers 55000-274 and 55000-275 (cont'd)

	DIN Tone			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: continuous 800-1000Hz		Minimum Sound pressure level dB(A) Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.8	75.7	77.5	77.9
45°	88.9	87.6	86.5	87.3
75°	93.8	93.0	92.0	91.5
105°	93.6	92.7	92.0	92.2
135°	87.2	87.0	86.4	87.4
165°	70.3	74.2	71.6	73.1

Multi-Tone Open-Area Sounders, Part Numbers 55000-278 and 55000-279
Multi-Tone Open-Area Sounder Visual Indicators, Part Numbers 55000-291 and 55000-292
Multi-Tone Open-Area Sounder Visual Indicators with Isolator, Part Numbers 55000-293 and 55000-294

	Apollo Standard			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: off 1s / 970Hz ±20Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550–700Hz over 0.5s / 850–1000Hz over 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	80.6	81.3	78.2	79.6
45°	91.1	91.1	87.7	88.3
75°	93.7	93.6	90.7	90.9
105°	92.5	93.1	91.7	91.6
135°	89.4	89.4	88.2	88.7
165°	75.8	78.2	71.7	73.9
	Slow Whoop			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: continuous 800-1000Hz		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	80.8	81.2	80.0	80.4
45°	91.4	90.6	89.1	89.2
75°	93.5	92.9	92.2	91.9
105°	93.2	92.4	92.0	92.1
135°	89.7	89.6	89.4	89.7
165°	76.1	76.5	77.5	77.0
	DIN Tone			
	ALERT		EVACUATE	
	Minimum sound pressure level dB(A) Tone frequency: continuous 800-1000Hz		Minimum Sound pressure level dB(A) Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	80.8	81.2	78.3	79.5
45°	91.4	90.6	88.2	87.5
75°	93.5	92.9	91.0	90.8
105°	93.2	92.4	91.3	91.1
135°	89.7	89.6	88.2	88.5
165°	76.1	76.5	75.2	76.2

Discovery Open-Area Sounder Visual Indicator, Part Number 58000-005

	EVACUATE (Tone 1)		Evacuate (Tone 3)	
	Minimum Sound pressure level dB(A) Tone frequency: 558Hz for 0.5s / 840Hz for 0.5s		Minimum Sound pressure level dB(A) for Dutch Slow Whoop tone Tone frequency: off for 0.5s / 500–1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	80.0	79.6	78.7	80.4
45°	86.0	85.7	83.3	84.5
75°	87.8	86.8	85.9	87.0
105°	87.3	87.1	85.6	87.2
135°	82.8	82.3	82.1	82.2
165°	78.9	79.6	78.9	80.3

	Evacuate (Tone 4)	
	Minimum Sound pressure level dB(A) for DIN tone Tone frequency: 1200–500Hz over 1s	
	Maximum Volume Settings	
Angle	Horizontal	Vertical
15°	81.3	80.2
45°	81.9	82.8
75°	84.5	86.0
105°	84.3	85.6
135°	79.4	80.5
165°	80.0	80.8

Discovery Open-Area Voice Sounders, Part Numbers 58000-010 and 58000-020

	Apollo Standard			
	ALERT (Tone 0)		EVACUATE (Tone 1)	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 825Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550Hz for 1s / 825Hz for 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	76.2	77.5	75.8	77.7
45°	84.8	84.1	84.6	84.2
75°	88.4	88.6	88.7	88.6
105°	88.4	87.9	88.1	87.8
135°	84.7	83.4	84.8	83.6
165°	75.6	71.7	73.6	72.4

Discovery Open-Area Voice Sounder Visual Indicators, Part Numbers 58000-030 and 58000-040

	Apollo Standard			
	ALERT (Tone 0)		EVACUATE (Tone 1)	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 825Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550Hz for 1s / 825Hz for 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.7	73.3	77.7	73.5
45°	85.2	84.6	84.9	84.9
75°	89.0	88.8	89.0	89.2
105°	88.8	88.9	88.9	88.9
135°	84.8	84.4	84.6	84.6
165°	77.2	76.0	77.7	76.3

XPander Sounder and Sounder Bases, Part Numbers XPA-CB-14001 and XPA-CB-14002
XPander Sounder Visual Indicator and Sounder Bases, Part Numbers XPA-CB-14003, XPA-CB-14004 and XPA-CB-14005

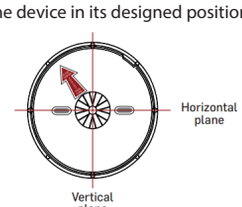
	(Tone 1)		(Tone 2)	
	Minimum Sound pressure level dB(A) Tone frequency: 970Hz continuous		Minimum Sound pressure level dB(A) for continuous tone Tone frequency: 800/970Hz Alternating 2Hz	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	81.7	81.0	84.6	85.0
45°	89.0	88.8	88.2	88.0
75°	88.9	89.0	89.9	90.0
105°	88.9	89.4	90.4	90.1
135°	89.2	89.3	89.5	89.9
165°	80.3	80.7	81.4	80.6
	(Tone 3)		(Tone 4)	
	Minimum Sound pressure level dB(A) for Swedish Fire tone Tone frequency: 800/970Hz Sweep @ 2Hz		Minimum Sound pressure level dB(A) for continuous tone Tone frequency: off for 0.1s / 970Hz for 0.1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	86.4	86.4	84.3	83.9
45°	90.2	90.6	90.0	90.1
75°	92.3	92.4	89.9	90.1
105°	92.3	92.4	89.9	90.0
135°	90.5	90.6	89.9	88.6
165°	82.1	82.9	84.7	84.9
	(Tone 5)		(Tone 6)	
	Minimum Sound pressure level dB(A) for Medium Sweep tone Tone frequency: 630Hz for 0.5s / 970Hz for 0.5s		Minimum Sound pressure level dB(A) for continuous tone Tone frequency: 440Hz for 0.4s / 554Hz for 0.1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	83.3	83.0	83.0	83.4
45°	90.3	90.2	85.4	86.1
75°	89.9	89.9	88.8	89.3
105°	89.9	89.8	88.6	89.0
135°	89.9	88.8	86.9	89.4
165°	84.2	84.2	77.8	78.4
	(Tone 7)		(Tone 13)	
	Minimum Sound pressure level dB(A) for Swedish Fire tone Tone frequency: off for 0.5s / 500–1200Hz over 3.5s		Minimum Sound pressure level dB(A) for continuous tone Tone frequency: 1200–500Hz Sweep @ 1Hz	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	85.6	85.6	84.4	84.5
45°	89.1	90.1	88.5	88.2
75°	91.4	91.5	90.4	90.7
105°	91.5	91.3	90.5	90.6
135°	90.2	90.2	89.2	89.4
165°	81.9	81.9	80.2	80.5
	(Tone 21)			
	Minimum Sound pressure level dB(A) 660Hz, 0.15s / 1.8s off			
	Maximum Volume Settings			
Angle	Horizontal	Vertical		
15°	77.2	84.3		
45°	75.6	81.4		
75°	79.5	80.3		
105°	81.3	79.2		
135°	76.1	79.6		
165°	78.2	80.9		

XPander Combined Sounder and Detector Base, Part Number XPA-WB-14036
XPander Combined Sounder Visual Indicator and Detector Bases, Part Numbers XPA-WB-14037 and XPA-WB-14038
NOTE: Coverage angles are relative to the ceiling or wall. Figures recorded at 1m.

	(Tone 1)		(Tone 2)	
	Minimum Sound pressure level dB(A) Tone frequency: 970Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: 800/970Hz Alternating @ 2Hz	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	87.7	96.1	91.0	98.2
45°	90.7	85.8	90.2	95.5
75°	95.0	94.0	94.8	94.0
105°	95.4	95.0	95.4	94.5
135°	89.8	93.6	89.6	93.3
165°	91.6	92.9	91.8	93.6
	(Tone 3)		(Tone 5)	
	Minimum Sound pressure level dB(A) Tone frequency: 800/970Hz Sweep @ 1Hz		Minimum Sound pressure level dB(A) Tone frequency: 970Hz, 0.5s / 630Hz, 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	90.8	96.8	88.4	95.9
45°	88.9	93.5	90.3	95.7
75°	93.8	92.8	94.6	93.9
105°	95.0	94.0	95.4	95.0
135°	89.7	92.9	89.7	93.1
165°	92.0	94.8	91.7	93.0
	(Tone 6)		(Tone 7)	
	Minimum Sound pressure level dB(A) Tone frequency: 554Hz, 0.1s / 440Hz, 0.4s		Minimum Sound pressure level dB(A) Tone frequency: 500 - 1200Hz, 3.5s / 0.5s off	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	87.3	94.2	92.7	99.7
45°	86.2	91.5	89.8	95.5
75°	90.3	90.2	95.2	95.3
105°	92.0	90.1	97.3	95.3
135°	87.7	90.7	91.9	94.8
165°	89.3	91.4	94.7	95.7
	(Tone 10)		(Tone 13)	
	Minimum Sound pressure level dB(A) Tone frequency: 550Hz / 440Hz @ 0.5Hz		Minimum Sound pressure level dB(A) Tone frequency: 1200 – 500Hz @ 1Hz	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	87.4	94.5	91.7	98.2
45°	85.9	92.0	88.9	94.8
75°	90.4	90.2	94.2	94.4
105°	92.3	90.4	95.7	93.8
135°	87.5	90.5	91.2	93.3
165°	89.5	91.4	93.5	94.6

	(Tone 21)	
	Minimum Sound pressure level dB(A) 660Hz, 0.15s / 1.8s off	
	Maximum Volume Settings	
Angle	Horizontal	Vertical
15°	87.2	94.4
45°	85.7	91.4
75°	89.6	90.4
105°	91.3	89.2
135°	86.2	89.7
165°	88.3	91.0

All levels are at high volume setting and at 30° intervals from 15° to 165° through a semi-circular arc centred at the reference point of the device for two perpendicular planes corresponding to the horizontal and vertical planes of the device in its designed position.



Note: When tested, the horizontal plane aligned with the screw holes and the vertical plane alighned with the pair of mounting plate ribs as shown.

XP95 Category C Sounder Visual Alarm, Part Numbers 55000-074APO and 55000-075APO
XP95 Category W Sounder Visual Alarm, Part Numbers 55000-076APO and 55000-077APO

	Apollo Standard			
	Alert		Evacuate	
	Minimum sound pressure level dB(A) for continuous pulsed tone. Tone frequency: 970Hz for 1 sec off/ 1 sec on		Minimum Sound pressure level dB(A) for continuous alternating tone. Tone frequency: 970Hz/630 Hz alternating for 0.5 seconds continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	91	91	93	93
45°	93	93	87	87
75°	97	97	97	97
105°	97	97	97	97
135°	93	93	87	87
165°	91	91	88	93
	Slow Whoop			
	Alert		Evacuate	
	Minimum sound pressure level dB(A) for continuous tone. Tone frequency: 970Hz continuous		Minimum Sound pressure level dB(A) . Tone frequency: 500 - 1200 Hz 3.5 secs/0.5 sec off	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	89	89	93	95
45°	93	93	85	85
75°	98	98	94	94
105°	98	98	94	94
135°	93	93	85	85
165°	91	91	93	95
	DIN Tone			
	Alert		Evacuate	
	Minimum sound pressure level dB(A) for continuous tone. Tone frequency: 970Hz continuous		Minimum Sound pressure level dB(A) for continuous pulsed tone. Tone frequency: 1200 Hz - 500 Hz at 1 Hz	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	89	89	90	93
85	93	93	85	85
75°	98	98	93	92
105°	98	98	93	92
135°	93	93	85	85
165°	91	91	91	91

Multi-Tone Waterproof Open-Area Sounder Visual Indicators, Part Numbers 55000-296 & 55000-297 Multi-Tone Waterproof Open-Area Sounder Visual Indicators with Isolator, Part Numbers 55000-298 & 55000-299				
	Apollo Standard			
	Alert		Evacuate	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 970Hz ± 20Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550-700Hz over 0.5s / 850-1000Hz over 0.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.0	77.2	77.7	75.8
45°	87.8	87.8	85.9	86.5
75°	93.2	93.0	91.9	91.8
105°	92.7	92.9	92.9	92.9
135°	86.4	87.2	85.9	86.7
165°	68.6	71.6	69.5	71.4
	Slow Whoop			
	Alert		Evacuate	
	Minimum sound pressure level dB(A) Tone frequency: 800-1000Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: off for 0.5s / 500-1200Hz over 3.5s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.8	75.7	77.7	80.7
45°	88.9	87.6	87.3	88.1
75°	93.8	93.0	92.5	92.7
105°	93.6	92.7	92.8	92.9
135°	87.2	87.0	87.7	88.1
165°	70.3	74.2	73.5	74.0
	DIN Tone			
	Alert		Evacuate	
	Minimum sound pressure level dB(A) Tone frequency: 800-1000Hz continuous		Minimum Sound pressure level dB(A) Tone frequency: 500-1200 Hz over 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	77.8	75.7	77.5	77.9
85	88.9	87.6	86.5	87.3
75°	93.8	93.0	92.0	91.4
105°	93.6	92.7	92.0	92.2
135°	87.2	87.0	86.4	87.4
165°	70.3	74.2	71.6	73.1

Discovery Open-Area Voice Sounder, Part Numbers 58000-010DUT, 58000-020DUT
Discovery Open-Area Voice Sounder Visual Indicator, Part Number, 58000-030DUT

	Apollo Standard			
	ALERT (Tone 0)		EVACUATE (Tone 1)	
	Minimum sound pressure level dB(A) Tone frequency: off for 1s / 825Hz for 1s		Minimum Sound pressure level dB(A) Tone frequency: 550Hz for 1s / 825Hz for 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	76.2	77.5	75.8	77.7
45°	84.8	84.1	84.6	84.2
75°	88.4	88.6	88.7	88.6
105°	88.4	87.9	88.1	87.8
135°	84.7	83.4	84.8	83.6
165°	75.6	71.7	73.6	72.4

	Dutch Slow Whoop	
	Minimum Sound pressure level dB(A) for Dutch Slow Whoop tone Tone frequency: off for 0.5s / 500–1200Hz over 3.5s Maximum volume	
Angle	Horizontal	Vertical
15°	72.5	71.3
45°	81.2	81.3
75°	86.2	86.5
105°	85.8	85.9
135°	81.4	80.7
165°	79.5	72.5

Intelligent Open-Area Sounder, Part Number SA5500-300 (Red body)
Intelligent Open-Area Sounder, Part Number SA5501-300 (White body)
Intelligent Open-Area Sounder Visual Indicator, Part Number SA5500-350 (White flash, red body), Part Number SA5501-350 (White flash, white body), Part Number SA5500-351 (Red flash, red body), Part Number SA5501-351 (Red flash, white body)
Intelligent Open-Area Sounder VAD, Part Number SA5500-550APO (White Flash, Red Body), Part Number SA5501-550APO (White Flash, White Body), Part Number SA5500-551APO (Red Flash, Red Body), Part Number SA5501-551APO (Red Flash, White Body)

	Apollo Standard			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) Tone frequency: 522 Hz for 0.5 s / 707 Hz for 0.5 s		Minimum sound pressure level dB(A) Tone frequency: 1 s off / 707Hz for 1s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	86.0	86.0	85.0	85.0
45°	89.0	89.0	89.0	89.0
75°	95.0	95.0	94.0	94.0
105°	95.0	95.0	94.0	94.0
135°	89.0	89.0	89.0	89.0
165°	86.0	86.0	85.0	85.0

	Hochiki and Fulleon			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Alternating Tone frequency: 925 Hz for 0.25 s / 626 Hz for 0.25 s		Minimum sound pressure level dB(A) - Continuous Tone frequency: 925 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	83.0	83.0	83.0	83.0
45°	84.0	84.0	85.0	85.0
75°	91.0	91.0	91.0	91.0
105°	91.0	91.0	91.0	91.0
135°	84.0	84.0	85.0	85.0
165°	83.0	83.0	83.0	83.0

Sound Pressure Levels - Sounders and Base Sounders

	Medium Sweep			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Alternating Tone frequency: 800 Hz to 970 Hz at 1 Hz		Minimum sound pressure level dB(A) - Continuous Tone frequency: 970 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	84.0	84.0	83.0	83.0
45°	87.0	87.0	87.0	87.0
75°	92.0	92.0	93.0	93.0
105°	92.0	92.0	93.0	93.0
135°	87.0	87.0	87.0	87.0
165°	84.0	84.0	83.0	83.0
	Dutch Slow Whoop			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Sweep Tone frequency: 500Hz to 1200 Hz for 3.5 s, 0.5 s off		Minimum sound pressure level dB(A) - Continuous Tone frequency: 825 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	87.0	87.0	82.0	82.0
45°	91.0	91.0	85.0	85.0
75°	96.0	96.0	91.0	91.0
105°	96.0	96.0	91.0	91.0
135°	91.0	91.0	85.0	85.0
165°	87.0	87.0	82.0	82.0
	DIN Tone			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Sweep Tone frequency: 1200Hz to 500 Hz for 1s		Minimum sound pressure level dB(A) - Continuous Tone frequency: 825 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	86.0	86.0	82.0	82.0
45°	90.0	90.0	85.0	85.0
75°	94.0	94.0	91.0	91.0
105°	94.0	94.0	91.0	91.0
135°	90.0	90.0	85.0	85.0
165°	86.0	86.0	82.0	82.0
	Swedish FireTone			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Swedish Fire Tone Tone frequency: 660Hz, 150 ms on, 150 ms off		Minimum sound pressure level dB(A) - Swedish All Clear signal - Continuous Tone frequency: 660 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	81.0	81.0	80.0	80.0
45°	85.0	85.0	86.0	86.0
75°	90.0	90.0	91.0	91.0
105°	90.0	90.0	91.0	91.0
135°	85.0	85.0	86.0	86.0
165°	81.0	81.0	80.0	80.0

Soteria Audio Visual Base , Part Number SA5300-300 (Sounder), Part Number SA5300-350 (Sounder Visual Indicator - white flash), Part Number SA5300-351 (Sounder Visual Indicator - red flash)				
	Apollo Standard			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) Tone frequency: 550 Hz for 0.5 s, 825 Hz for 0.5 s		Minimum sound pressure level dB(A)Continuous Tone frequency: 1 s off, 825 Hz for 1 s	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	87.04	87.64	82.24	84.04
45°	80.84	81.44	79.64	81.54
75°	87.74	88.04	87.44	87.74
105°	88.44	87.84	88.14	87.74
135°	80.94	82.44	79.84	82.14
165°	86.34	87.44	83.34	83.34
	Hochiki and Fulleon			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Alternating Tone frequency: 925 Hz for 0.25 s / 626 Hz for 0.25 s		Minimum sound pressure level dB(A) - Continuous Tone frequency: 925 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	86.44	87.24	86.5	87.3
45°	79.74	79.94	80.0	80.0
75°	89.24	89.14	88.3	89.1
105°	88.84	89.04	87.3	86.0
135°	79.14	81.54	79.2	81.4
165°	85.64	86.24	82.5	86.1
	Medium Sweep			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Alternating Tone frequency: 800 Hz to 970 Hz at 1 Hz		Minimum sound pressure level dB(A) - Continuous Tone frequency: 970 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	86.94	87.14	86.74	86.34
45°	80.54	81.64	81.44	82.64
75°	89.64	89.74	90.74	90.84
105°	89.64	89.44	91.04	90.94
135°	81.04	82.74	81.44	82.94
165°	86.54	87.14	86.34	87.14
	Dutch Slow Whoop			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Sweep Tone frequency: 500Hz to 1200 Hz for 3.5 s, 0.5 s off		Minimum sound pressure level dB(A) - Continuous Tone frequency: 825 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	88.24	88.34	82.44	84.04
45°	83.54	83.94	79.54	81.44
75°	90.94	90.94	87.64	87.64
105°	90.74	90.64	88.44	88.34
135°	83.34	84.94	80.04	82.04
165°	87.84	88.14	83.34	83.34
	DIN Tone			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Sweep Tone frequency: 1200Hz to 500 Hz for 1s		Minimum sound pressure level dB(A) - Continuous Tone frequency: 825 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	87.4	87.4	82.44	84.04
45°	82.2	83.0	79.54	81.44
75°	90.0	90.0	87.64	87.64
105°	89.8	89.5	88.44	88.34
135°	82.2	81.0	80.04	82.04
165°	86.9	87.3	83.34	83.34

Soteria Audio Visual Base , Part Number SA5300-300 (Sounder), Part Number SA5300-350 (Sounder Visual Indicator - white flash), Part Number SA5300-351 (Sounder Visual Indicator - red flash) (cont'd)

	Swedish FireTone			
	EVACUATE		ALERT	
	Minimum Sound pressure level dB(A) - Swedish Fire Tone Tone frequency: 660Hz, 150 ms on, 150 ms off		Minimum sound pressure level dB(A) - Swedish All Clear signal - Continuous Tone frequency: 660 Hz continuous	
	Maximum Volume Settings		Maximum Volume Settings	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	82.54	83.74	84.44	84.64
45°	79.74	80.44	81.74	81.44
75°	87.04	86.94	87.94	88.14
105°	87.04	86.34	87.94	87.34
135°	80.34	82.04	81.24	83.04
165°	82.74	83.64	83.64	84.54

Soteria Base Sounder, Part Number SA5302-300APO (Soteria Base Sounder), SA5302-350APO (Soteria Base Sounder Visual Indicator (White Flash)), SA5302-351APO (Soteria Base Sounder Visual Indicator (Red Flash)), SA5306-300APO (Soteria Base Sounder – Black), SA5306-350APO (Soteria Base Sounder Visual indicator (White Flash) – Black), SA5306-351APO (Soteria Base Sounder Visual Indicator (Red Flash) – Black), 58002-300APO (Discovery Base Sounder), 58002-350APO (Discovery Base Sounder Visual Indicator (White Flash)), 58002-351APO (Discovery Base Sounder Visual Indicator (Red Flash)), 58006-300APO (Discovery Base Sounder – Black), 58006-350APO (Discovery Base Sounder Visual indicator (White Flash) – Black), 58006-351APO (Discovery Base Sounder Visual Indicator (Red Flash) – Black)"

	VOLUME 7			
	EVACUATE (T1)		ALERT (T0)	
	Tone Pair 1, Apollo Evacuate Tone, 522Hz for 0.5s, 707Hz for 0.5s		Tone Pair 1, Apollo Alert Tone, 1s off, 707Hz for 1s	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	82.2	81.7	82.2	81.2
45°	82.7	81.1	77.8	77.9
75°	88.6	88.2	85.5	85.3
105°	87.7	88.8	85.7	85.5
135°	81.7	81.5	77.4	77.5
165°	82.0	82.2	82.0	81.8
	EVACUATE (T12)		ALERT (T11)	
	Tone Pair 2, Alternating Warble (Hochiki & Fulleon), 925Hz for 0.25s, 626Hz for 0.25s		Tone Pair 2, Continuous (Hochiki & Fulleon), 925Hz	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	80.9	80.9	79.8	80.0
45°	80.2	80.2	75.2	75.6
75°	88.5	87.9	85.2	84.8
105°	87.7	89.1	85.7	85.8
135°	78.9	79.6	74.1	76.3
165°	81.0	81.8	81.0	81.1
	EVACUATE (T14)		ALERT (T13)	
	Tone Pair 3, Medium Sweep at 1hz, 800Hz - 970Hz at 1Hz		Tone Pair 3, Continuous, 970Hz Continuous (BS5839-1:2002)	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	83.2	81.7	83.9	82.3
45°	80.3	80.3	77.0	76.7
75°	87.4	87.6	87.6	87.4
105°	87.5	87.7	87.5	87.5
135°	79.2	79.3	75.1	76.5
165°	82.9	82.0	83.4	82.4
	EVACUATE (T3)		ALERT (T2)	
	Tone Pair 5, Netherlands - NEN 2575:2000 (Dutch Slow Whoop) 500-1200Hz for 3.5s, 0.5s OFF		Tone Pair 5, Continuous, 825Hz Continuous	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	85.9	84.9	81.2	81.0

45°	83.2	83.4	79.9	79.4
75°	90.0	90.2	86.3	85.6
105°	89.9	90.3	85.7	86.2
135°	83.2	81.9	79.8	79.0
165°	84.8	85.1	80.6	81.7
	EVACUATE (T4)		ALERT (T2)	
	Tone Pair 6, German DIN 33 404 500-1200Hz Sweep 1s (1Hz)		Tone Pair 5, Continuous, 825Hz Continuous	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	85.9	84.8	81.2	81.0
45°	82.9	82.7	79.9	79.4
75°	89.5	89.6	86.3	85.6
105°	89.6	89.8	85.7	86.2
135°	82.7	81.6	79.8	79.0
165°	84.8	85.2	80.6	81.7
	EVACUATE (T18)		ALERT (T17)	
	Tone Pair 7, Swedish Fire Signal 660Hz 0.15s ON, 0.15s OFF		Tone Pair 7, Swedish All Clear Signal - Continuous 660Hz Continuous	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	78.7	79.9	80.0	80.4
45°	79.4	79.8	78.9	79.0
75°	85.1	84.7	85.4	85.0
105°	84.7	85.3	85.0	85.2
135°	79.3	79.1	78.5	78.3
165°	78.5	79.6	80.5	81.0

	VOLUME 3			
	EVACUATE (T1)		ALERT (T0)	
	Tone Pair 1, Apollo Evacuate Tone, 522Hz for 0.5s, 707Hz for 0.5s		Tone Pair 1, Apollo Alert Tone, 1s off, 707Hz for 1s	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	62.6	65.1	66.8	67.3
45°	62.3	61.8	60.5	59.5
75°	69.3	70.8	69.2	68.3
105°	70.5	68.8	70.4	69.5
135°	61.7	63.0	59.7	60.3
165°	63.6	64.2	65.0	67.8
	EVACUATE (T12)		ALERT (T11)	
	Tone Pair 2, Alternating Warble (Hochiki & Fulleon), 925Hz for 0.25s, 626Hz for 0.25s		Tone Pair 2, Continuous (Hochiki & Fulleon), 925Hz	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	66.2	66.1	67.6	66.7
45°	60.0	58.4	60.2	58.5
75°	72.7	72.9	73.1	73.3
105°	72.7	72.3	73.3	72.9
135°	58.9	58.5	58.0	58.2
165°	66.7	66.3	66.8	66.7
	EVACUATE (T14)		ALERT (T13)	
	Tone Pair 3, Medium Sweep at 1hz, 800Hz - 970Hz at 1Hz		Tone Pair 3, Continuous, 970Hz Continuous (BS5839-1:2002)	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	65.6	65.6	64.8	63.9
45°	61.0	60.1	58.8	56.5
75°	71.1	71.1	69.0	69.8
105°	70.4	70.0	68.5	68.5
135°	60.7	61.3	58.2	57.8
165°	65.9	66.2	63.9	64.1

Sound Pressure Levels - Sounders and Base Sounders

	EVACUATE (T3)		ALERT (T2)	
	Tone Pair 5, Netherlands - NEN 2575:2000 (Dutch Slow Whoop) 500-1200Hz for 3.5s, 0.5s OFF		Tone Pair 5, Continuous, 825Hz Continuous	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	67.0	65.6	63.6	63.2
45°	63.0	61.3	61.4	60.3
75°	72.1	71.8	68.9	69.3
105°	68.7	70.4	66.2	68.0
135°	63.2	62.9	61.9	62.1
165°	66.4	66.2	63.0	62.7

	EVACUATE (T4)		ALERT (T2)	
	Tone Pair 6, German DIN 33 404 500-1200Hz Sweep 1s (1Hz)		Tone Pair 5, Continuous, 825Hz Continuous	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	67.9	66.4	63.6	63.2
45°	62.6	61.3	61.4	60.3
75°	71.7	71.7	68.9	69.3
105°	69.4	69.5	66.2	68.0
135°	62.3	63.0	61.9	62.1
165°	67.1	66.5	63.0	62.7

	EVACUATE (T18)		ALERT (T17)	
	Tone Pair 7, Swedish Fire Signal 660Hz 0.15s ON, 0.15s OFF		Tone Pair 7, Swedish All Clear Signal - Continuous 660Hz Continuous	
Angle	Horizontal	Vertical	Horizontal	Vertical
15°	62.9	61.1	63.9	62.3
45°	59.0	59.9	60.9	60.7
75°	66.4	65.0	68.1	67.2
105°	65.9	67.0	66.7	67.8
135°	60.5	59.1	60.9	59.9
165°	62.1	60.3	63.3	61.3

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PP2203 / 2025 / Issue 25

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Cert/LPCB ref. 010 EMS

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