

**Products compatibility and general description**

These products are to be used in conjunction with the following Altair, Altair Lite and Altair Plus detectors:

|                                   |   |
|-----------------------------------|---|
| <b>A1000</b> (AT0610CPR)          | Altair smoke detector                                 |
| <b>A2000</b> (AT0610CPR)          | Altair smoke / temperature detector                   |
| <b>A3500</b> (AT0610CPR)          | Altair temperature detector                           |
| <b>A1000L</b> (AT0210CPR20140225) | Altair smoke detector without isolators               |
| <b>A2000L</b> (AT0210CPR20140225) | Altair smoke / temperature detector without isolators |
| <b>A3500L</b> (AT0210CPR20140225) | Altair temperature detector without isolators         |
| <b>A1000+</b> (AT0610CPR)         | Altair Plus smoke detector                            |
| <b>A2000+</b> (AT0610CPR)         | Altair Plus smoke / temperature detector              |
| <b>A3500+</b> (AT0610CPR)         | Altair Plus temperature detector                      |

|   |
|---|
| <b>AC-BS-01, AC-BSB-23W-01, AC-BSB-23R-01</b> |
| <b>AC-BS-01, AC-BSB-23W-01, AC-BSB-23R-01</b> |
| <b>AC-BS-01, AC-BSB-23W-01, AC-BSB-23R-01</b> |
| <b>AC-BS-01, AC-BSB-23W-01, AC-BSB-23R-01</b> |
| <b>AC-BS-01, AC-BSB-23W-01, AC-BSB-23R-01</b> |
| <b>AI-BS-01, AI-BSB-23W-01, AI-BSB-23R-01</b> |
| <b>AI-BS-01, AI-BSB-23W-01, AI-BSB-23R-01</b> |
| <b>AI-BS-01, AI-BSB-23W-01, AI-BSB-23R-01</b> |

(In brackets, DOP reference)

These products are compatible only with control panels that use the Vega protocol. In order to work, these sounder bases require a suitable host detector.

Following the triggering of an alarm condition on the host detector, the **Altair Flexiplus** base sounder activates its acoustic output, previously selected through its selector; similarly, **Altair Plus Flexiplus** base sounders activate the acoustic output, but in this case its pattern is previously selected from the control panel.

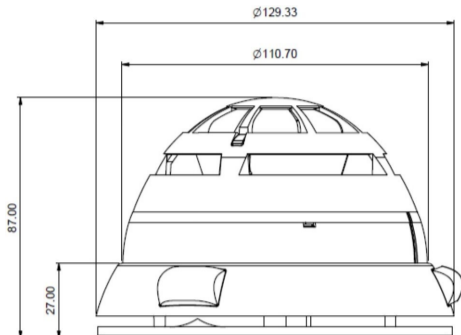
Base sounders equipped with VAD (Visual Alarm Device), in conjunction with the acoustic signal, also emit an alarm visual signal; specifically:

- for **AC-BSB-23W-01** and **AI-BSB-23W-01** white optical alarm signal
- for **AC-BSB-23R-01** and **AI-BSB-23R-01** red optical alarm signal.

**Product parts**

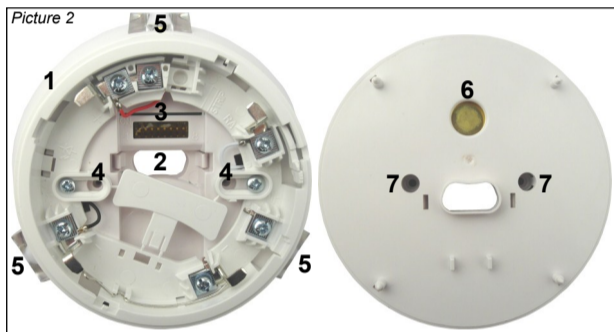
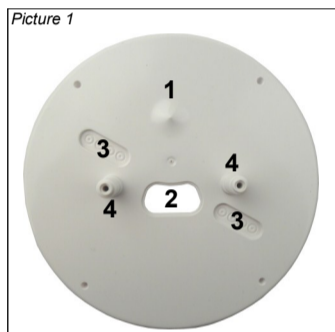
**Ceiling mounting bracket (picture 1)**

1. Sound diffuser cone.
2. Loop cables passage.
3. Pre-cut holes for screwing the bracket to the ceiling.
4. Fixing pins.



**Base sounder (picture 2)**

1. Adaptor base for the host detector.
2. Loop cables passage.
3. Selector for the acoustic tone, volume and VAD output intensity (**Altair Flexiplus** only).
4. Bracket-base sounder screw fixing location.
5. VAD output.
6. Acoustic alarm signal outlet.
7. Bracket's pins hosting holes.



**Installation - general procedure**

1. Install the mounting bracket onto the ceiling.
2. Select the acoustic alarm tone, its volume and the VAD light emission power using the selector (**Altair Flexiplus** only).
3. Install the base sounder on the mounting bracket.
4. Connect the Vega loop to the base sounder.
5. Install the host detector.
6. Set the acoustic alarm tone, its volume and the VAD light emission power on the control panel (**Altair Plus Flexiplus** only).
7. Test the base sounder-host detector assembly.

**Mounting bracket installation**

1. Pass the loop cables through their bracket's passage.
2. Set the bracket in the intended installation location.
3. Fix the bracket to the ceiling, using the supplied screws and wall anchors; use the pre-cut holes.

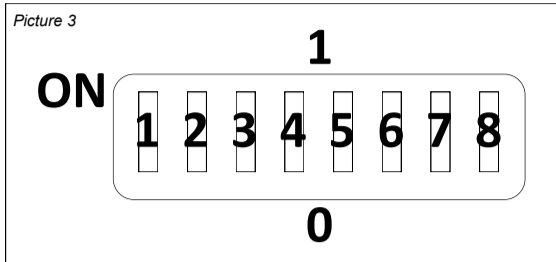
**Tone, volume and VAD power selection (Altair Flexiplus only)**

Use the internal micro-switches for selecting the acoustical tone, volume and VAD power (if present).

To move the single micro-switches use the tip of a little screw-driver.

In the tone, volume and VAD power selection tables of this manual, the micro-switch positioned at the high end is indicated as "1", while when at the low end with "0" (picture 3).

1. Set the acoustic tone with the first 5 micro-switches and referring to table 1.
2. Set the volume with position 6 and 7 micro-switches and referring to table 2.
3. If applicable, set the VAD power with position 8's micro-switch and referring to table 3.



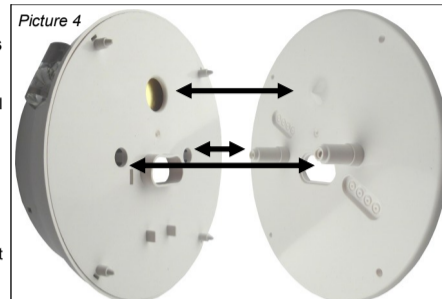
**Tone, volume and VAD power selection (Altair Plus Flexiplus only)**

Alarm tone, volume and VAD power (if present), must be set on the control panel; possible setting options are given in table 1, 2 and 3.

In order to perform this operation, refer to the control panel's manual.

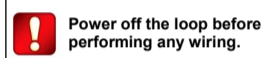
**Installing the device on the mounting bracket**

1. Pass the loop's cables through their device passage.
2. Assemble the bracket together with the device, inserting the pins of the first into the corresponding holes of the second.
3. Fix the device to the bracket using the supplied screws.



**Wiring the base sounder to the Vega loop**

Connect the loop's wires to the adaptor base of the host detector (picture 5); in any case, refer to the detector manual for further data.

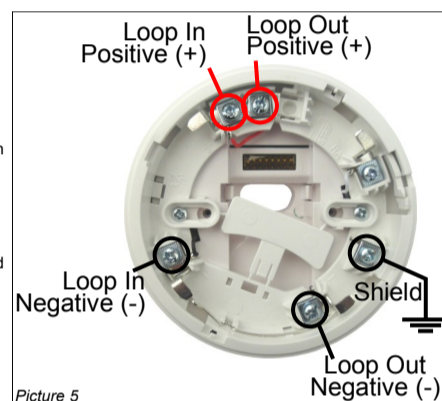
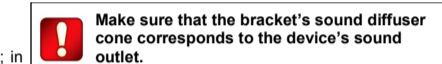


**Host detector's installation**

Install the host detector on the base sounder; refer to the detector's installation manual.

**Base sounder - host detector testing**

1. Alarm and check the detector's effectiveness as described in its manual.
2. Check that the base sounder's alarm acoustic signal and volume correspond as selected.
3. If present, check the VAD's effectiveness and intensity.



| Tone | Name designation                     | Description   | Selectors 12345 (Altair Flexiplus only) |
|------|--------------------------------------|---|---|
| 0    | Silent                               | No sound  | 11111                                   |
| 1    | Warble Tone                          | 800Hz for 500ms, then 1000Hz for 500ms                | 11101                                   |
| 2    | Continuous tone                      | 970Hz continuous                                      | 01011                                   |
| 3    | Slow Whoop (Dutch)                   | 500-1200Hz for 3500ms, then off for 500ms             | 10101                                   |
| 4    | German DIN tone                      | 1200-500Hz for 1000ms (1Hz)                           | 00111                                   |
| 5    | Alternate HF slow sweep              | 2350-2900Hz for 333ms (3Hz)                           | 10010                                   |
| 6    | Alternative warble                   | 800Hz for 250ms, then 960Hz for 250ms                 | 11110                                   |
| 7    | Alternative warble                   | 500Hz for 250ms, then 600Hz for 250ms                 | 11100                                   |
| 8    | Analogue sweep tone                  | 500-600Hz for 500ms (2Hz)                             | 10100                                   |
| 9    | Australian Alert (intermittent tone) | 970Hz for 625ms, then off for 625ms                   | 10001                                   |
| 10   | Australian Evac (slow whoop)         | 500-1200Hz for 3750ms, then off for 250ms             | 10110                                   |
| 11   | FP1063.1-Telecom                     | 800Hz for 250ms, then 970Hz for 250ms                 | 00001                                   |
| 12   | French tone AFNOR                    | 554Hz for 100ms, then 440Hz for 400ms                 | 00101                                   |
| 13   | HF Back up interrupted tone          | 2800Hz for 1s, then off for 1s                        | 11011                                   |
| 14   | HF Back up interrupted tone - fast   | 2800Hz for 150ms, then off for 150ms                  | 11001                                   |
| 15   | HF Continuous                        | 2800Hz continuous                                     | 01001                                   |
| 16   | Interrupted tone                     | 800Hz for 500ms, then off for 500ms                   | 01111                                   |
| 17   | Interrupted tone medium              | 1000Hz for 250ms, then off for 250ms                  | 01101                                   |
| 18   | ISO 8201 LF BS5839 Pt 1 1988         | 970Hz for 500ms, then off for 500ms                   | 01110                                   |
| 19   | ISO 8201 HF                          | 2850Hz for 500ms, then off for 500ms                  | 01100                                   |
| 20   | LF Back up Alarm                     | 800Hz for 150ms, then off for 150ms                   | 11010                                   |
| 21   | LF Buzz                              | 800-950Hz for 9ms                                     | 01010                                   |
| 22   | LF Continuous tone BS5839            | 800Hz continuous                                      | 11000                                   |
| 23   | Siren 2 way ramp (long)              | 500-1200Hz rising for 3000ms, then falling for 3000ms | 00000                                   |
| 24   | Siren 2 way ramp (short)             | 500-1200Hz rising for 250ms, then falling for 250ms   | 00010                                   |
| 25   | Swedish all clear signal             | 660Hz continuous                                      | 00100                                   |
| 26   | Swedish Fire signal                  | 660Hz for 150ms, then off for 150ms                   | 00110                                   |
| 27   | Sweep tone (1 Hz)                    | 800-900Hz for 1000ms                                  | 10111                                   |
| 28   | Sweep tone (3 Hz)                    | 800-970Hz for 333ms (3Hz)                             | 10011                                   |
| 29   | Sweep tone (9 Hz)                    | 800-970Hz for 111ms (9Hz)                             | 01000                                   |
| 30   | US Temporal Pattern HF               | (2900Hz for 500ms, 500ms off) x3, then off for 1500ms | 00011                                   |
| 31   | LF Sweep (Cranford tone)             | 800-1000Hz for 500ms (2Hz)                            | 10000                                   |

Table 1

| Volume      | Selectors 67 (Altair Flexiplus only) |
|-------------|--------------------------------------|
| High        | 11                                   |
| Medium high | 01                                   |
| Medium low  | 10                                   |
| Low         | 00                                   |

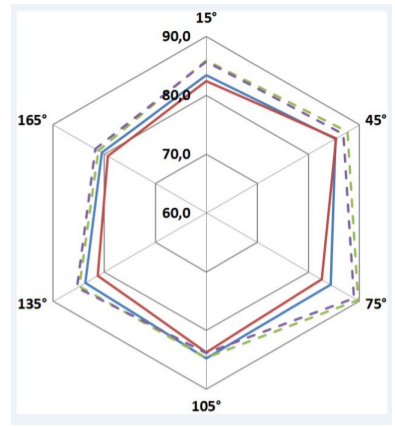
Table 2

| VAD intensity | Selector 8 (Altair Flexiplus only) |
|---------------|------------------------------------|
| High          | 1                                  |
| Low           | 0                                  |

Table 3

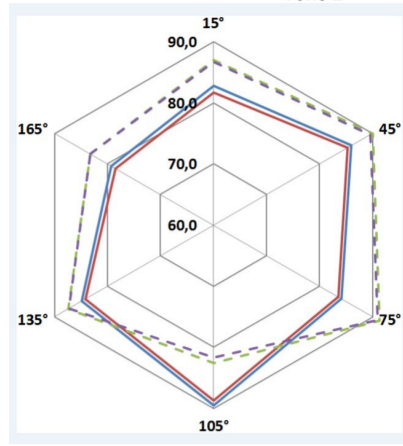
| Technical specifications  |  |
|---|--|
| Voltage range   | From 16 to 40 V (typical 24 V)   |
| Max load current for the <b>AC-BS-01</b> and <b>AI-BS-01</b><br>24 V applied<br>High volume selected<br>Tone 1, 2, 3 and 4 only<br>Base sounder only  | 3,5 mA   |
| Max load current for the <b>AC-BSB-23W-01, AC-BSB-23R-01, AI-BSB-23W-01</b> and <b>AI-BSB-23R-01</b><br>24 V applied<br>High volume selected<br>VAD set to max power<br>Tone 1,2,3 and 4 only<br>Base sounder with beacon | 21 mA  |
| Max load current for the <b>AC-BS-01</b> and <b>AI-BS-01</b><br>16 V applied<br>High volume selected<br>Tone 1, 2, 3 and 4 only<br>Base sounder only  | 4 mA   |
| Max load current for the <b>AC-BSB-23W-01, AC-BSB-23R-01, AI-BSB-23W-01</b> and <b>AI-BSB-23R-01</b><br>16 V applied<br>High volume selected<br>VAD set to max power<br>Tone 1,2,3 and 4 only<br>Base sounder with beacon | 32 mA  |
| Max load current for the <b>AC-BS-01</b> and <b>AI-BS-01</b><br>40 V applied<br>High volume selected<br>Tone 1, 2, 3 and 4 only<br>Base sounder only  | 2,5 mA   |
| Max load current for the <b>AC-BSB-23W-01, AC-BSB-23R-01, AI-BSB-23W-01</b> and <b>AI-BSB-23R-01</b><br>40 V applied<br>High volume selected<br>VAD set to max power<br>Tone 1,2,3 and 4 only<br>Base sounder with beacon | 13 mA  |
| VAD's signal frequency<br>All VAD models  | 0.5 Hz   |
| VAD typical flash coverage for the <b>AC-BSB-23W-01</b> and <b>AI-BSB-23W-01</b><br>VAD set to high power   | C 3 - 14.2 and O 4.6 - 14.2  |
| VAD typical flash coverage for the <b>AC-BSB-23R-01</b> and <b>AI-BSB-23R-01</b><br>VAD set to high power   | C 3 - 10   |
| VAD typical flash coverage for the <b>AC-BSB-23W-01</b> and <b>AI-BSB-23W-01</b><br>VAD set to low power  | C 3 - 9.2  |
| VAD typical flash coverage for the <b>AC-BSB-23R-01</b> and <b>AI-BSB-23R-01</b><br>VAD set to low power  | O 1.7 - 6.0  |
| VAD's signal colour   | <b>AC-BSB-23W-01</b> and <b>AI-BSB-23W-01</b> (white)<br><b>AC-BSB-23R-01</b> and <b>AI-BSB-23R-01</b> (red) |
| Acoustic output frequency range (all tones)   | From 440 to 2900 Hz  |
| Maximum acoustic intensity<br>Tone 1,2,3 and 4 only   | 92.6 dB(A)   |
| Ambient temperature range   | From -10 to +55 °C   |
| Maximum tolerated humidity  | 95% RH (without condensation)  |
| IP  | 21C  |
| Weight ( <b>AC-BS-01</b> and <b>AI-BS-01</b> )  | 200 g  |
| Weight ( <b>AC-BSB-23W-01, AC-BSB-23R-01, AI-BSB-23W-01</b> and <b>AI-BSB-23R-01</b> )  | 210 g  |

Tone 1

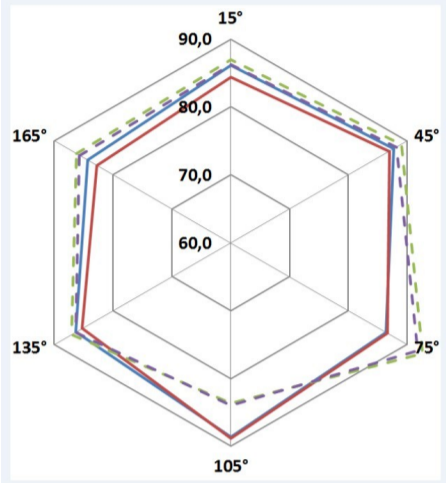


— 16 V - Hor  
 — 40 V - Hor  
 — 16 V - Vrt  
 — 40 V - Vrt

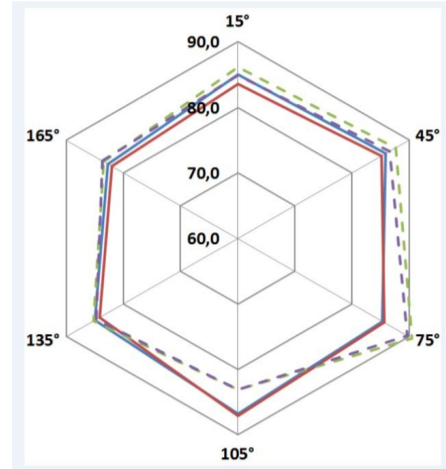
Tone 2



Tone 3



Tone 4



0051

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 34015 Muggia (TS)  
 Italy

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**BS0110CPR**  
 AC-BS-01  
 AI-BS-01

**BS0210CPR**  
 AC-BSB-23W-01  
 AC-BSB-23R-01  
 AI-BSB-23W-01  
 AI-BSB-23R-01

EN 54-3:2001+A1:2002+A2:2006  
 Fire alarm devices - Sounders

**AC-BS-01**  
**AC-BSB-23W-01**  
**AC-BSB-23R-01**  
**AI-BS-01**  
**AI-BSB-23W-01**  
**AI-BSB-23R-01**

EN 54-23:2010  
 Fire alarm devices - Visual Alarm Devices

**AC-BSB-23W-01**  
**AC-BSB-23R-01**  
**AI-BSB-23W-01**  
**AI-BSB-23R-01**

Type A - Intended for indoor use only  
 For use in compatible fire detection and alarm systems  
 Other technical data: see TDS-BSXXX held by the manufacturer

Category rating:  
 C 3 - 14.2 & O 4.6 - 14.2  
**AC-BSB-23W-01 & AI-BSB-23W-01** (high power)

C 3 - 10  
**AC-BSB-23R-01 & AI-BSB-23R-01** (high power)

C 3 - 9.2  
**AC-BSB-23W-01 & AI-BSB-23W-01** (low power)

O 1.7 - 6.0  
**AC-BSB-23R-01 & AI-BSB-23R-01** (low power)

Duration of operation: Pass  
 Provision for external conductors: Pass  
 Flammability of materials: Pass  
 Enclosure protection: Pass  
 Access: Pass  
 Manufacturer's adjustments: Pass  
 On-site adjustment of behaviour: Pass  
 Requirements for software controlled devices: Pass  
 Coverage volume: Pass  
 Variation of light output: Pass  
 Minimum and maximum light intensity: Pass  
 Light colour: White (**AC-BSB-23W-01 & AI-BSB-23W-01**)  
 Light colour: Red (**AC-BSB-23R-01 & AI-BSB-23R-01**)  
 Light temporal pattern / frequency of flashing: N/A / 0.5 Hz  
 Marking and data: Pass  
 Synchronization: Pass  
 Durability: Pass  
 Temperature resistance: Pass  
 Humidity resistance: Pass  
 Shock and vibration resistance: Pass  
 Corrosion resistance: Pass  
 Electrical stability: Pass

**WARNINGS AND LIMITATIONS**

Our devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years of continuous operation, it is advisable to replace the devices in order to minimize the risk of reduced performance caused by external factors. Ensure that this device is only used with compatible control panels. Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation. Smoke sensors may respond differently to various kinds of smoke particles, thus application advice should be sought for special risks. Sensors cannot respond correctly if barriers exist between them and the fire location and may be affected by special environmental conditions. Refer to and follow national codes of practice and other internationally recognized fire engineering standards. Appropriate risk assessment should be carried out initially to determine correct design criteria and updated periodically.

**WARRANTY**

All devices are supplied with the benefit of a limited 3 year warranty relating to faulty materials or manufacturing defects, effective from the production date indicated on each product. This warranty is invalidated by mechanical or electrical damage caused in the field by incorrect handling or usage. Product must be returned via your authorized supplier for repair or replacement together with full information on any problem identified. Full details on our warranty and product's returns policy can be obtained upon request.