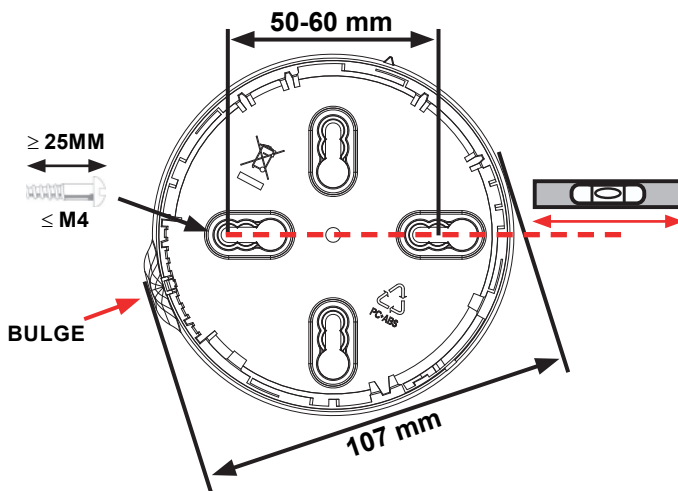
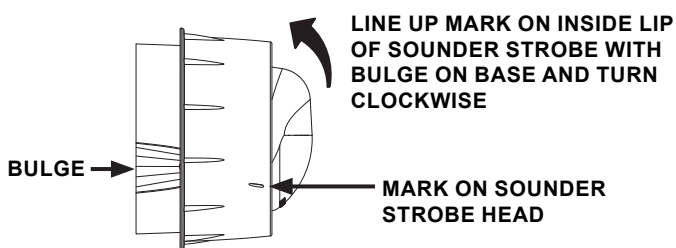
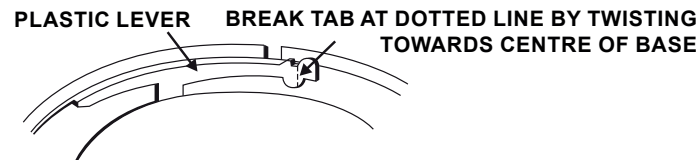
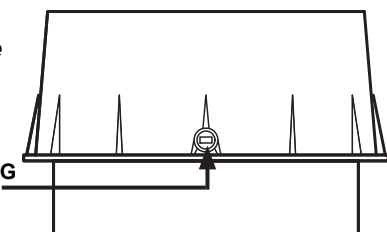

**Figure 1: B501RF Mounting**

**Figure 2: Attaching Sounder Strobe to Base**

**Figure 3a: Activation of Tamper Resist Feature**

**Figure 3b: Removing Sounder Strobe From Base**

USE A SMALL-BLADED SCREWDRIVER TO PUSH THROUGH PLASTIC MOLDING AND BASE SLOT ONTO LOCKING LEVER



## DESCRIPTION

The WSF-[xx]-RF Type A radio wall-mounted sounder strobe is a battery operated RF device designed for use with the M200G-RF radio gateway (part of the Series 200 RF range) running on an addressable fire system (using a compatible proprietary communication protocol).

It comprises a strobe light and a two stage sounder module combined with a wireless RF transceiver that fits into a standard B501RF wireless base. The sounder and strobe functions can be turned ON and OFF separately. The appropriate volume and tone settings are selected by special application software (AgileIQ™). The 2nd stage tone (related to the 1st stage tone) is controlled by the fire panel via the RF Gateway.

This device conforms to EN54-3, EN54-23 and EN54-25. It complies with the requirements of 2014/53/EU for conformance with the RED directive.

## PARTS LIST

Sounder strobe unit	1
B501RF base	1
Batteries (Duracell Ultra 123 or Panasonic Industrial 123)	4
WSF-[xx]-RF radio sounder strobe installation instructions	1

## SPECIFICATIONS

Supply Voltage:	2.5-3.3 V Direct Current.
Standby Current:	125 µA@ 3V (typical in normal operating mode)
Max Current (Sounder On, Strobe Off):	75mA (typical, High Volume Tone 9)
Max Current (Sounder Off Strobe On):	110mA (typical)
Max Current Consump:	185 mA average (High Volume Tone 9 - strobe on)
Max Sound Output:	100 dB(A) @ 1m (High Volume Tone 24)
Strobe Type:	Type A indoor use
Strobe Flash Colour:	Red
Strobe Pulse Width/Flash Rate:	50ms/0.5 Hz
Strobe category:	W-3.5-10
Re-Sync Time:	35s (max time to normal RF communication from device power on)
Batteries:	4 X Duracell Ultra123 or Panasonic Industrial 123
Battery Life:	4 years @ 25°C (Testing for 30s/week max.)
Radio Frequency:	865-870 MHz, Channel width: 250kHz
RF Output Power:	14dBm (max)
Range:	500m (typical in free air)
Relative Humidity:	5% to 95% (non-condensing)
IP Rating:	IP21C

## ORIENTATION

To comply with the EN54:23 fire standard, the wall mounted sounder strobe must be fitted in a specific orientation on a wall. Fix the base as shown in **Figure 1** with the two mounting screw holes horizontal and the anti-tamper **BULGE** towards the left.

## INSTALLATION

*This equipment and any associated work must be installed in accordance with all relevant codes and regulations.*

Figure 1 details the installation of the B501RF base.

**Spacing between radio system devices must be a Minimum of 1m**

Figure 2 details attaching the sounder strobe to the base.

### Anti-Tamper Features

The base includes a feature that, when activated, prevents removal of the sounder strobe from the base without the use of a tool. See Figures 3a and 3b for details on this.

**Head Removal Warning** - An alert message is signalled to the CIE via the Gateway when a sounder strobe is removed from its base.

Figure 4 details the battery installation and the location of the rotary address switches.

### Important

**Batteries should only be installed at the time of commissioning**

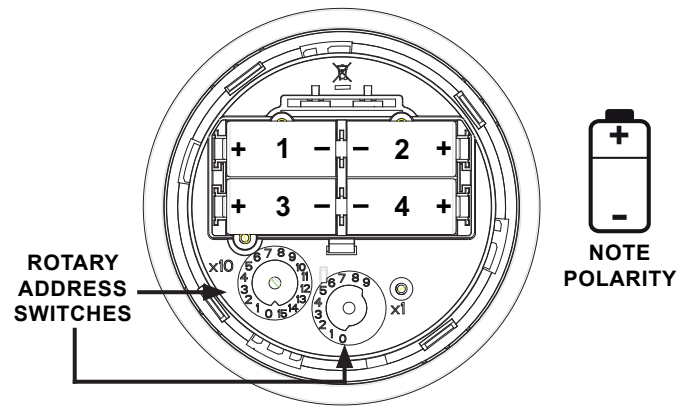
### Warning

**Observe the battery manufacturer's precautions for use and requirements for disposal. Possible explosion risk if incorrect type is used**



Important Battery Information Continued Overleaf

**Figure 4: Battery Installation and Rotary Address Switches**



**Do not mix batteries from different manufacturers. When changing the batteries, all 4 will need to be replaced.**

**Using these battery products for long periods at temperatures below -20°C can reduce the battery life considerably (by up to 30% or more)**

### SETTING THE ADDRESS

Set the loop address by turning the two rotary decade switches on the underside of the sounder strobe (see figure 4), using a screwdriver to rotate the wheels to the desired address.

Except when Advanced Protocol (AP) is being used (see below) the sounder strobe will take two module addresses on the loop; the sounder address will be the number shown on the switches (N), the strobe address will be incremented by one (N+1). So for a panel with 99 addresses, select a number between 01 and 98.

In Advanced Protocol (AP) addresses in the range 01-159 are available. Depending on panel capability, only one loop address is required if using sub-addressing for the sounder and strobe functions, (check the panel documentation for information on this).

#### Important

**Set the loop address on the sounder strobe module Before inserting the batteries**

### PROGRAMMING

#### Configuring the Sounder Settings

##### Volume setting

The sounder has 3 possible volume settings: Low, Medium, High.

The sounder is supplied configured with the volume set to HIGH (factory default setting). To change the volume to a different setting requires a separate programming operation using the **Device Direct Command** in **AgileIQ** (See *Radio Programming and Commissioning Manual* - ref. D200-306-00 for details.)

- 1) Take the un-commissioned sounder strobe, ensure that the address is set to 00 (default setting).
- 2) Insert the batteries.
- 3) Select the **Device Direct Command** tab in AgileIQ, double click on the screen to reveal the options and follow the instructions to configure the sounder volume setting.

It is recommended that the sounder's output volume configuration is noted for future reference on the sounder label after programming:

OUTPUT VOLUME: High \_\_ Medium \_\_ Low \_\_

##### Tone setting

The sounder is supplied configured with the tone setting 8 (factory default setting), with the second stage tone as 2 (see tone table). To change the tone to a different setting requires a separate programming operation using the **Device Direct Command** in **AgileIQ** (See *Radio Programming and Commissioning Manual* - ref. D200-306-00 for details.)

- 1) Take the un-commissioned sounder strobe, ensure that the address is set to 00 (default setting).
- 2) Insert the batteries.
- 3) Select the **Device Direct Command** tab in AgileIQ, double click on the screen to reveal the options and follow the instructions to configure the sounder tone settings.

It is recommended that the sounder's tone configuration is noted for future reference on the sounder label after programming:

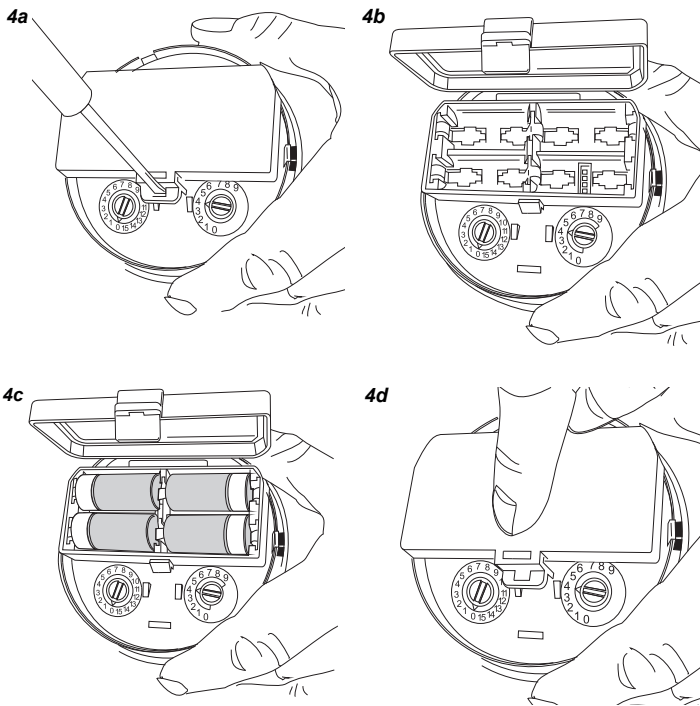
1st STAGE TONE No: \_\_ 2nd STAGE TONE No: \_\_

**Note: Remove the batteries from the device after setting the tone/volume or strobe functions if the system commissioning operation is not about to be done.**

#### Commissioning

- 1) Ensure that the correct address has been set on the device.
- 2) Insert the batteries.
- 3) Fit the sounder strobe in its base (as shown in **Figure 2**).

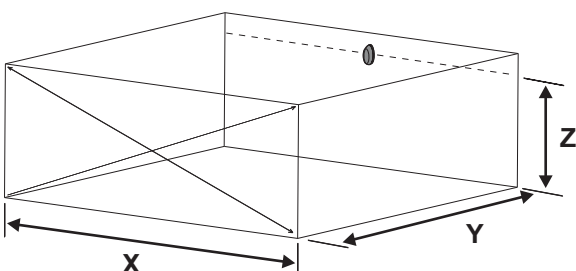
To load network parameters into the RF sounder strobe, it is necessary to link the RF gateway and the RF sounder strobe in a configuration operation. At commissioning time, with the RF network devices powered on, the RF gateway will connect and programme the sounder strobe and all the other RF devices in the system with the necessary network information. The RF sounder strobe then synchronises with its other associated devices as the



 0905 20 DOP-IRF032	Honeywell Products and Solutions Sàrl (Trading as System Sensor Europe) Zone d'activités La Pièce 16 CH-1180 ROLLE, Switzerland
	EN54-25: 2008 / AC: 2010 / AC: 2012 - Components Using Radio Links EN54-3: 2001 + A1: 2002 + A2: 2006 - Fire Alarm Devices: Sounder EN54-23: 2010 - Fire Alarm Devices: Visual Alarm Devices

#### Maximum Coverage to EN54: 23

Model	EN54: 23 Category	LED	X (Max)	Y (Max)	Z (Max)	Volume (m <sup>3</sup> )
WSF-RR-RF	W-3.5-10	Red	10m	10m	3.5m	350
WSF-WR-RF	W-3.5-10	White	10m	10m	3.5m	350



## Sounder Strobe Status

Status	Sound	Meaning
Power on initialisation (no fault)	Double chirp	Device is un-commissioned (factory default)
	Single chirp	Device is commissioned

### EU Declaration of Conformity

Hereby, Honeywell Products and Solutions Sàrl declares that the radio equipment type WSF-RR-RF / WSF-WR-RF is in compliance with directive 2014/53/EU

The full text of the EU DoC can be requested from:  
HSFREDDoC@honeywell.com

RF mesh network is created by the gateway. (For further information, see the **Radio Programming and Commissioning Manual** - ref. D200-306-00.)

**NOTE: Do not try to commission more than one gateway system at a time in an area.**

### TESTING

Regular testing of fire alarm equipment is important to ensure its continued correct operation. This device is designed to have a battery life of at least 4 years. The battery lifetime includes provision for periodical testing of the sounder-strobe, providing this does not last for more than 30 seconds per week.

**Table 1: Sounder Tones**

No.	Pattern	Nominal Frequency (Hz)	Switching Cycle	2nd Stage Tone
1	Alternating	554/440	2Hz (0.1s/0.4s)	7
2	Alternating	800/970	1Hz	8
3	Alternating	800/970	2Hz	8
4	Alternating	2400/2900	3Hz	10
5	Alternating	2500/3100	2Hz	10
6	Alternating	988/645	2Hz	8
7	Continuous	660		1
8 <sup>(3)</sup>	Continuous	970		2
9	Continuous	1200		2
10	Continuous	2850		4
11	Sweep	150-1000	Rising from 150Hz to 1000Hz (10s), 40s @ 1000 Hz, falling from 1000Hz to 150Hz (10s), 20s @ 150Hz (Total 80s)	22
12	Intermittent	660	0.5Hz 6.5s on, 13s off	7
13 <sup>(1)</sup>	Sweep	500 - 1200	0.25s off, 3.75s on	12
14 <sup>(1)</sup>	Intermittent	660	3.33Hz 0.15s on, 0.15s off	7
15 <sup>(1)</sup>	Intermittent	970	0.8Hz 0.25s on, 1s off	8
16 <sup>(1)</sup>	Intermittent	970	0.5Hz 1s on, 1s off	8
17 <sup>(1)</sup>	Intermittent	2850	1Hz	10
18 <sup>(1)</sup>	Intermittent	970	1Hz (0.5s on, 0.5s off)	8
19 <sup>(1)</sup>	Intermittent	950	0.22Hz (0.5s on, 0.5s off) rpt x3, 1.5s off	12
20	Continuous	800		22
21 <sup>(1)</sup>	Sweep	400-1200	(0.5s on, 0.5s off) rpt x3, 1.5s off	12
22	Sweep	1200 - 500	0.99Hz 1s on, 0.01s off	20
23	Sweep	2400 - 2850	7Hz	10
24 <sup>(1)</sup>	Sweep	500 - 1200	(0.5s off, 3.5s on)	8
25	Sweep	800 - 970	50Hz	8
26	Sweep	800 - 970	7Hz	8
27	Sweep	800 - 970	1Hz	8
28	Sweep	2400 – 2850	50Hz	10
29	Sweep	500 – 1000	7Hz	8
30	Sweep	500 – 1200 – 500	0.166Hz rise 1s, stable 4s, fall 1s	8
31	Sweep	800 – 1000	2Hz	8
32	Sweep	2400 - 2850	1Hz	10
33 <sup>(2)</sup>	Continuous	4000		5
34	Continuous	440		35
35	Continuous	554		34
36 <sup>(1,2)</sup>	Intermittent	660	0.05Hz 6.5s on, 13s off	7
37 <sup>(1,2)</sup>	Intermittent	660	0.277Hz 1.8s on, 1.8s off	7
38 <sup>(1,2)</sup>	Intermittent	2850	4Hz (0.15s on, 0.1s off)	10

Notes:

- (1) Tones not affected by intermittent user pattern
- (2) Only available through Advanced Protocol commands
- (3) Default tone; (Default volume = HIGH)

**Sounder output approved to EN 54-3 only at high volume setting.** Output sound pattern data, in accordance with EN54-3, is available in Document Ref: S00-7001-xxx.

Patents Pending