

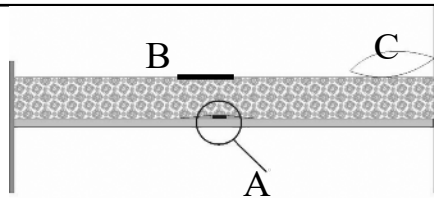
## Quick-start guide for P154BA & BC Wire linked Bedside Monitor systems with Sound (S1027, S1028)

The P154A is a flexible monitor capable supporting the care of those with Epilepsy by using a range of sensing elements and passing an alarm to a Nurse Call or Telecare system. This leaflet is a quick-start guide to installing, testing and using your pre-configured system and it assumes the reader has skills comparable to operating a mobile phone. In addition they need to have sufficient knowledge of the client to make the necessary risk assessment as to the suitability of the equipment to provide a safe environment. We are pleased to offer assistance including a full system check via our telephone helpline, and would urge you to use this service. Should you wish to change any of the operating parameters or modify your system in any way, then detailed handbooks, videos and risk assessment forms are available on request or on-line at [www.alert-it.co.uk/support](http://www.alert-it.co.uk/support)

### Install the sensing components

#### Install the **Bed Movement**

Sensor (A) underneath the mattress on a compliant bed base or the foam pad supplied., in a position below the rib cage. Its task is to monitor the smallest bed movements transmitted through the mattress.



For S1028 install the **Bed Occupancy** Mat (B) on top of the mattress under a suitable cover sheet, in a position that ensures the maximum body weight is lying on the mat, typically below the upper torso. Under the shoulder area is a good place if an alarm is required before the users feet touch the floor.

The optional **microphone** (C) is plugged into the rear socket and positioned near and convenient to the user. There are two versions of the monitor. P154BA is sensitive to repetitive sharp sounds (eg clicks and grunts or shouts), the other (P154BC) has been designed to detect the sigh that frequently preempts a seizure.

An optional Bed/Wall bracket is available which can be adjusted to suit different bedhead thicknesses by loosening the two screws. For very thick beds the bracket can be reversed to give greater adjustment. For wall mounting the bracket is screwed to the wall, through the slots, and the P154 then added

### Connect to Alarm System and test

The system components and connection details are shown overleaf. The actual range of sensors provided will depend on your order requirements

The P154 Alarm signal is available on the rear OUTPUT socket as a changeover switch. If a P145 Nurse Call cable has been provided then this should be connected to the Nurse Call room box (in place of any Call Button unless a special equipment socket is provided). If the P119F Remote Indicator is supplied then this is connected via the 5m lead supplied. Additional extension leads are available.

#### *These tests must be repeated regularly to check the sensors*

For 30 seconds after turn-on or pressing RESET the unit is in a test mode which allows you to confirm the various sensors are working, without sending an alarm. This period is indicated by the green power light flashing. Follow the test sequence as appropriate:

**Bed Movement.** Tap the mattress and Input A light should flicker with each tap. The amount of force needed to make the light flicker can be adjusted

**Bed Occupancy:** If the system has such a provision then Input B light will be on if no-one is sitting/lying on the mat. Press the mat and ensure the light goes out.

**Microphone.** You will first need to sit on any Bed Occupancy mat if fitted, to make Input B light extinguish. The light should now flicker whenever a sharp sound or click is made. The loudness of the sound to make the light flicker can be adjusted (see setup sheet)

### Normal Operation

Once the test period has ended (indicated by the green power light being mainly on), the P154 will now detect alarms. Remember that most sensors operate with a time delay to reduce false alarms. When a sensor is stimulated the corresponding light will illuminate and the time delay starts. If the sensor activity stops then the light goes out and the time delay is reset without sending an alarm. If the sensor remains activated, the light will stay on and the alarm will be transmitted after the delay, and the ALARM light will illuminate.

The exact form of the alarm annunciation will depend on the ancillary equipment supplied. The P145 Nurse Call lead will pass the alarm to the resident Nurse Call System. The P117A Autodialler will pass the alarm details by telephone or the P119 Remote Buzzer will alert staff locally.

The alarm will activate the remote equipment once by a 2 second pulse and enter a standby phase. After 2 minutes the unit will return to an active state and if the alarm condition still exists it will re-activate the alarm system. By this method the carer only has to reset the alarm indication equipment but alarms cannot be forgotten or ignored.

Bed Occupancy reset has a special feature to prevent false alarms during the day. If the RESET button is pressed at any time with the occupant out of bed, then the alarm detection is inhibited until the mat is next operated, indicating that the client has got into bed, and is therefore now to be monitored.

## Alarm Indications

P154 Indication	Nurse-Call	Meaning
None	no	Radio signal lost from the node
Red light A on steady	yes	Client is in distress (Bed Movement Alarm)
Red light B on steady	yes	Client is in distress (Sound Alarm)
Red light B flashing	yes	Client is in distress (Bed Vacation Alarm)
Red light A flashing	yes	Client is in distress (Additional sensor eg Floor Mat)
On power-up or RE-SET all LED's will flash as warning	no	Battery is client's system needs charging

## System components and connection (actual components supplied may vary to order)

Part Description	Part No
A Bed Movement Sensor	P114A
B Bed Occupancy Mat	P143C
C Microphone	P158A
D Bedside Monitor	P154*
E Power Supply for A	P171*
H Nurse Call/Annunciator Lead (optional)	P145*
I Mounting bracket	P159A

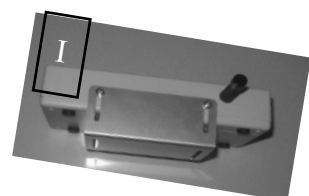
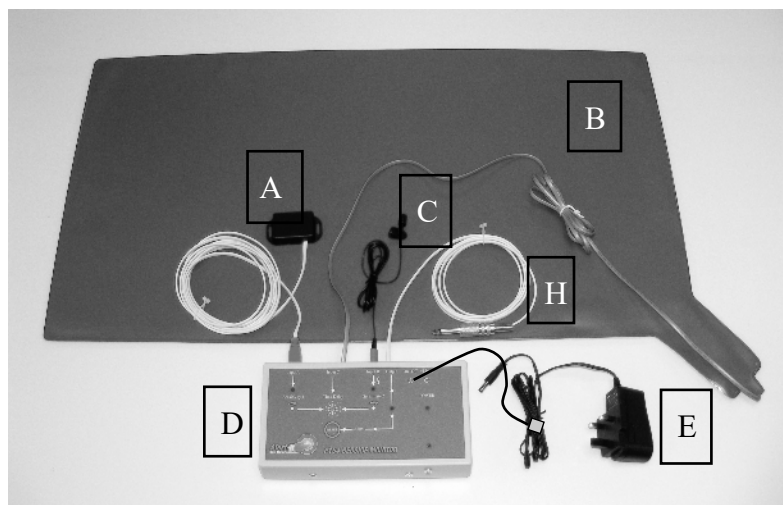
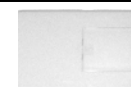
## P154 Sensor Adjustment

*Any adjustment to Bed Movement or Sound detection is made during the 30 second test period after switch on or RESET, when the effect can be observed on the red indicators*

### Sensitivity Adjustment

The two **sensitivity** controls the level at which the stimulus is detected. A good starting place is the slot vertical (half-way) For maximum bed movement sensitivity turn the control clockwise, with the small screw-driver supplied, but not so far that the red indicator is permanently on or flashing. Turn anti-clockwise to reduce over-sensitivity while ensuring the red indicator flashes each time a stimulus at the anticipated level is made.

A small screwdriver to fit the controls is to be found in the battery compartment on the underside



Full adjustment details are found in handbooks available on:  
[www.alert-it.co.uk/handbooks/](http://www.alert-it.co.uk/handbooks/)  
Or by phoning Alert-iT

## Time Delay Adjustment

The delay is a time for which the distress condition (sound or movement) must occur before the alarm is sent and is set by altering the position of small rotary switch according the table. The period should be set to minimize false alarms during normal movement.

As delivered the sensitivity should be suitable for detecting spasms in a domestic bed and the time delay of 15 seconds (position 3) will normally be a good compromise between speed of detection and avoiding false alarms during nocturnal restlessness or short, self-healing spasms. Please refer to the TESTING procedure for confirming acceptable operation.

The sound detection time is set according to the movement time delay, and is different for the two models

Sound detection is suspended if Bed Vacation is detected following RESET

### P154BA Sound Bursts

	Bed Movement		Transient Sound	
	Time (sec)	Rate (sec)	Time (sec)	Rate (Sec)
0	2.5	1.5	2.5	1.5
1	5.5	1.5	5.5	1.5
2	10	2	7	1.5
3	15	2	7	2
4	20	3	10	3
5	25	3	10	3
6	30	3	10	3
7	40	3	10	3
8	50	3	10	3
9	60	3	10	3

### P154BC Sigh

	Bed Movement		Sigh-Sound	
	Time (sec)	Rate (sec)	Time (Sec)	
0	10	2	1.5	
1	15	2	1.5	
2	10	2	2	
3	15	3	2	
4	20	2	2	
5	25	2	2	
6	10	3	2.5	
7	15	2	2.5	
8	20	2	3	
9	25	3	3	

## Bed Vacation Time Setting (S1028)

The default setting is 6 minutes, which is used to detect potential collapse out of bed, while allowing the user freedom for visiting the bathroom for instance. This can be changed in the range 5 seconds to 21 minutes, but requires removal of the P154 base and a reset procedure using the links exposed. For this please refer to the UH1102B P154 Installers Handbook



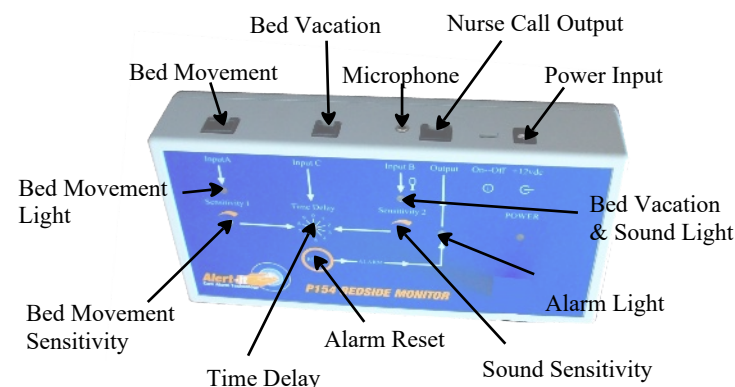
This symbol indicates there are warnings and precautions associated with the use of this equipment. This instruction manual should be carefully read and understood before using the equipment.

1. Ensure the voltage & current rating of remote signalling equipment (Nurse Call etc) does not exceed the maximum allowed (50v/100mA)
2. Ensure that the sensor cable is routed and secured to avoid the risk of entanglement or strangulation.
3. Only the recommended power supply shall be used as it is certified to provide two means of patient protection to EN60601-1
4. Ensure the power cable is routed to avoid a trip hazard
5. Regularly check the power supplies for damage and potential shock risks
6. Clean and disinfect each item regularly in accordance with information on page 7
7. Ensure, by testing, that the alarm is annunciated at the carer's location(s)
8. Regularly sensors test as defined herein
9. Use only the power supply and batteries recommended
10. Operate power supply and charge pager away from direct heat and uncovered.
11. As with all medical electronic equipment there is potential for the equipment to interfere with or be effected by interference from other electrical or electronic devices. For this reason avoid placing the monitor, sensor or connecting cable in close proximity to sensitive electronic devices or devices which produce strong electromagnetic fields such as radio transmitters, mobile phones or power cables.
12. Only use the monitor with accessories approved for use with this product and only in accordance with instructions.
13. If the equipment is modified in any way, appropriate inspection and testing must be conducted to ensure continued safe use of the equipment.
14. The carer must conduct a risk assessment to determine if the level of reliability offered by the monitor is sufficient or if additional monitoring is needed. Contact the manufacture for assistance with Risk Evaluation Tools.
15. Additional levels of mechanical protection may be needed for some patient disorders. Contact the manufacturers for advice
16. Some accessories are fitted with small screws and have plastic bags. Ensure these do not come into the possession of vulnerable patients who might choke on them
17. Any sensor over the mattress (Bed Vacation or Incontinence) has the potential to cause pressure sores . The carer must assess this risk and monitor the use of these products
18. Any sensor over the mattress could pose a fire hazard if in contact with a smouldering cigarette.

The system complies with 93/42/EEC as a Class 1 Medical Device for use in a Home Health-care environment  
The system complies with EN60601 for Class 2 Electrical Safety and does not need a protective earth.

*The Alert-it system has been designed with due regard to reliability and integrity. While it offers a highly vigilant monitoring method, it is always possible that a distress condition can go undetected for a variety of reasons (including malfunction) and in life threatening situations it is advisable to use the Alert-it system in conjunction with additional monitoring techniques (e.g. video). Neither the manufacturer nor its agent can accept legal responsibility to provide a system that is infallible. The carer is responsible for assessing the risks of using this equipment and any settings pertaining to it.*

## Controls and Indicators



None of the components, including batteries should be disposed of as Domestic Waste. For information on disposal contact ITs Designs Ltd.

## Support

For technical support please phone or EMail:  
HELP: 01530 239900  
support@alert-it.co.uk

...using technology to care for carers

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