

Alert-it Care Systems

P163xxB General Alarm Monitor

(wired)

Handbook



Models covered by this handbook
P163ACB Wired Touch-iT Monitor
P163BAB Wired Sense-iT Bed/Chair Vacation Monitor
P163BCB Wired Switch-iT Monitor

One of a range of Alert-it Care Alarms available from:
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This handbook is intended to assist carers install, configure and use the monitors. The carer therefore needs to understand the needs of the user and assess that the monitor meets those needs and if any supplementary monitoring is needed taking into account any health risks.

The P163 is a general purpose sensor monitor designed to operate with Nurse Call or Telecare systems. It has two inputs via a RJ12 (Telephone Style) connector. The function of these inputs is highly programmable, but three standard products exist. All units offer a front panel CALL button to allow the user to call for assistance.

P163BAB Bed/Chair Vacation Monitor

This unit is designed to work with a range of Bed/Chair Occupancy sensors, which are characterised as being switches normally closed while the user is present. One input triggers an instant alarm while the other an alarm after a programmed delay, with a default of 6 minutes. An internal link can join both inputs so the sensor activates both functions (default)

It is intended to support the care of those who are frail, vulnerable to falls or wandering, where the carer needs to know if they leave the bed/chair or fail to return within an acceptable period. Optionally the unit can be programmed to also alarm if the resident remains seated for more than 2 hours and hence needs to be moved.

P163BCB Switch Input Monitor

This unit is designed to work with any switch which closes to trigger an alarm. Again there is the capability to trigger the alarm instantly or after a delay. In the case the delay default is 5 seconds. An internal link can join both inputs so the sensor activates both functions (default)

It is intended to be used by those with restricted mobility who need to use one of a range of commercially available switches to call their carer. The delay can be set so a short press sends a low level ASSIST alarm and a long press sends an URGENT alarm. It can also be triggered by Floor Mats to warn when a user is mobile.

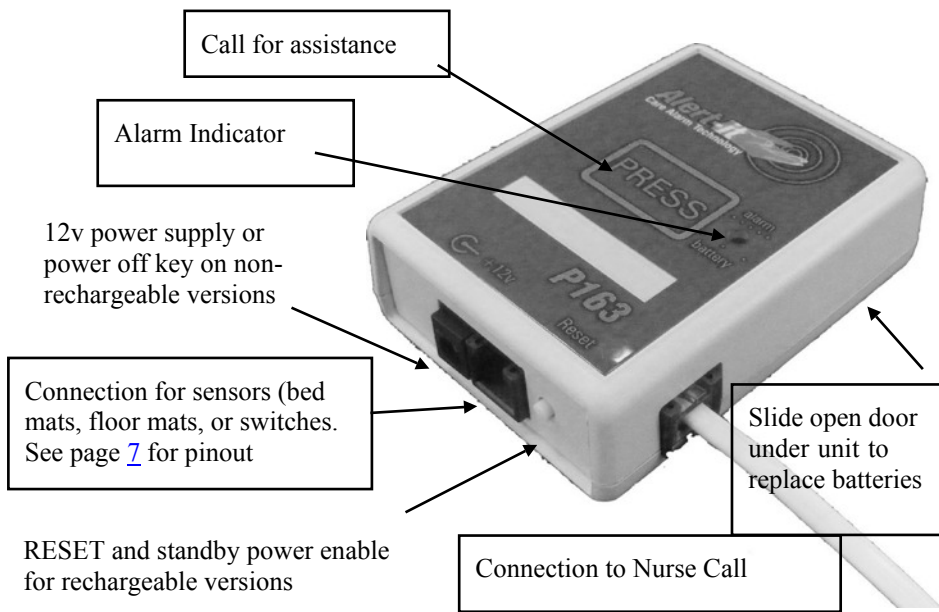
P163ACB Touch-iT

The unit is similar to the P163BCB but the CALL button is a proximity sensor operated by the close presence of a body part, i.e. it needs no force to operate. It is intended to assist those with severe loss of muscle or nerve control.

Power for P163

While usually powered from batteries, a mains adapter can be used and a rechargeable version can also be supplied. The rechargeable option has no power key and the RESET button must be pressed for 5 seconds on first installation to switch on the stand-by battery, after which the battery is always active if the mains power fails

Quick Reference Sheet: Installation



The standard range of sensors are fitted with a connector to mate with the front connector. See the individual sensor handbooks for operating instructions. There are no electrical safety implications for using alternative sensors with battery operated versions. For connections details see page 7. The installer must, however, ensure the sensor meets the needs of the user and poses no mechanical or biological hazard to him.

Accessories available		
Part Description	Part No	Cleaning See p 6
Bed Occupancy Mat	P143C	A
Bed Occupancy Ribbon	P143G	A
Bed Leg Sensor	P144A	B
Chair Occupancy Ribbon	P149B	A
Main Adapter (option)	P171	C
Floor Mat	P150	A
Mounting bracket	P159A	B
Nurse Call Lead (to order)	P145B	B

Installation (cont)

Sensor Testing

Occupancy Sensors

Ensure the bed/chair is unoccupied and after pressing RESET there will be a four tone beep and the unit should be in STANDBY. Five tones will indicate the sensor is being falsely triggered by the weight of the bedding/cushion or otherwise installed incorrectly.

Activate the sensor and a single beep should be heard indicate successful detection of the occupant. After that operation is silent.

Deactivating the sensor will then raise the alarm, either instantly or after the delay period (it is not essential to wait for this as the above proves the sensor operation).

Reset the unit to stop further nuisance alarms

Switch Sensors

After RESET there should be no alarm. Activate the sensor and check an alarm is raised. There is an optional beep when the sensor is activated (i.e. usually for switch inputs but not for floor mats).

These tests should be performed regularly to confirm correct system operation

All parts of the system, apart from the pager charger, are suitable for use within the patient vicinity

Operation

The monitor is **turned on** by

- Removing the power key for battery power
- Connecting a mains adapter if required
- Or its is always available if the rechargeable battery has been fitted and enabled

Operating the P163:

Call for Assistance (all versions)

Activating the call button for longer than 1 second will result the Nurse Call being activated.

P163BAB Bed/Chair Vacation

After power-up (or RESET) the monitor will be in STANDBY. When the Occupancy sensor is activated there will be a beep (default) and the monitor will become active. When the user leaves the bed/chair, the monitor will activate the Nurse Call (either immediately or after a time delay dependent on the "1-Input



Operation (cont)

Link” (see page [8](#)). The alarm will automatically reset if the user returns to bed/chair.

To special order the monitor can be programmed to play a warning tune for 30 seconds prior to sending the alarm

P163BCB Switch Input

Activating an external switch will result the same function as for the Call for Assistance above.

Reset the Alarm

All alarms are non-latching and reset once the alarm is clear. Hence the user only has to reset the Nurse Call System

Turn off P163

The unit is supplied with a small RED tagged key. Insert this into the front power socket to turn the unit off and prevent alarms being detected. If a mains power adapter is used, then this can be disconnected to isolate the monitor.

The rechargeable version can only be turned off by removing the standby battery, which can then be replaced. The unit will then stay dormant until the RESET button is pressed (to cause a beep).

Alarm indication on monitor and at the pager/receiver

Alarm	Detect Delay	P163	Nurse Call
Call	Instant	Flash	Activated
External (Instant)	Instant or 6 minutes as Link set	Flash	Activated
Battery Low	-	Flash every 8 sec	
Battery Fail	-	Flash every 8 sec	
Battery Dead	The P163 beeps every 0.5 sec with no LED and no transmission		

Maintenance

Battery Replacement

Expected Battery Life: Operating Mode	Battery capacity
No failsafe heartbeat, no alarms	1 year
Fail safe heartbeat, and alarms	6 months
Maximum alarm number (based on 2 min response)	2000 alarms

The battery needs replacing when the alarm led flashes intermittently every 8 seconds. The P163 will continue to function for some hours, allowing time for this replacement. If the battery is exhausted then the P163 will click continuously without the light flashing.

Battery Type: 2 of AA Alkaline Batteries or equivalent

Cleaning:

The following is a general guide line based on the components listed on page [3](#). Where a different sensor has been supplied, then please refer to the cleaning instructions supplied with that sensor.

Technique A

Wetting with strong disinfectant. This can include immersion provided plugs and any obvious breathing holes are avoided.

Technique B

Wiping with cotton wool pads moistened (compressed until dripping stops) with a mild detergent (0.5% washing up liquid) solution.

Technique C

Wiping with disposable 70% isopropyl alcohol wipes. Ensure that any plugs are completely dry before reinserting into the sensor input socket on the monitor.

Technique D

Full immersion in detergent , water and optional disinfectant. See component washing instructions for details

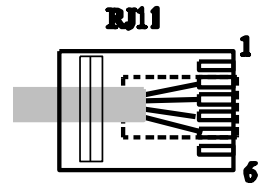
Technical Information & Configuration

Input Connections

The connection details for the unit are shown above and, in general, the alarms will be activated when a connection is made from pin 2 or pin 3 to 0v (pin 4 or 5).

Pin 3 causes instant transmission of the alarm, while pin 2 will delay transmission for a time that will have been programmed into the unit.

pin	Function	FCC64 cable
1	+12v (option)	Brown
2	Delay in	Yellow
3	Instant in	Green
4	0v	Red
5	0v	Black
5	No connection	Blue



Input connection details

Technical Information & Configuration

1-Input Link

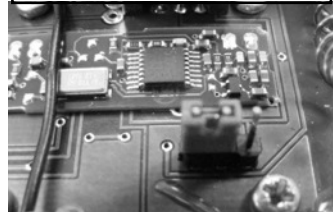
The two inputs can be joined by this link so that one level of alarm is INSTANT and a second level DELAYED. To access this link, remove the 4 case screws and separate the two halves.

The picture shows the two possible positions for the Bed/Chair Vacation Alarm.

For the other versions the Delay Only Option is set by removing the link



INSTANT + DELAY



P139BAA DELAY only

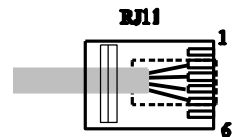
Nurse Call Activation

The Nurse Call connection will be activated for 1 second (as if a button was pressed) and this will happen every 10 seconds to ensure the room call box cannot be reset without resetting the P163. In general the P163 will be set as non-latching so that the alarm will reset once the danger condition is resolved.

The P163 has a changeover relay output as detailed below.

A range of Nurse Call & Telecare leads can be supplied to connect to standard

Pin	Function
1	Normally Closed
2	
3	Normally Open
4	Common
5	
6	



Safety Instructions and Warnings



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

1. Ensure that the sensor cable is routed and secured to avoid the risk of entanglement or strangulation.
2. Only the recommended power supply shall be used as it is certified to provide two means of patient protection to EN60601-1 in non-hospital environments
3. Consult the manufacturer for power supplies suitable for hospital use
4. Ensure any 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 herein
7. Regularly test all sensors as described herein
8. Ensure, by testing, that the alarm is annunciated at the carer's location(s)
9. Operate any power supply and charge pager away from direct heat and uncovered.
10. 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.
11. Only use the monitor with accessories approved for use with this product and only in accordance with instructions.
12. If the equipment is modified in any way, appropriate inspection and testing must be conducted to ensure continued safe use of the equipment.
13. 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.
14. Additional levels of mechanical protection may be needed for some patient disorders. Contact the manufacturers for advice
15. 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
16. Any sensor over the mattress (Bed Vacation) has the potential to cause pressure sores . The carer must assess this risk and monitor the use of these products
17. Any sensor over the mattress could pose a fire hazard if in contact with a smouldering cigarette.
18. The monitor and all accessories are designed to operate indoors in a residential environment of 10°C to 30°C and 90%RH max.

Certified as Class 1 Medical,
Class II Electrical Safety



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

Certified as compliant to the following standards

93/42/EEC as revise 2007/47/EC	Medical Devices Directive
EN 14971:2007	Risk Assessment
EN 61010-1:2005	Medical Device Safety Requirements
EN12182:1999	Technical Aids for Disabled Persons
EN 61010-1-2:2004	EMC
2002/95/ECRoHS	Permitted Materials

¹Alert-it Care Alarms are social aids designed and manufactured in accordance with 93/42/EEC as Class 1 Medical Devices. They are intended to improve the vigilance of carers to distressing side-effects of various diseases, such as Epilepsy and Dementia. They do not monitor vital physiological processes and should not be expected to diagnose any disease or predict the onset of any symptoms.

Additional Documents

Quick Start Wired Mobility Systems	UQ1181
Review of different Occupancy Sensors	UL1200
Check sheet on choice of occupancy sensors	UT1246
You tube Instruction Videos Index	UV1198

Support

For technical support please fax or EMail:
HELP: 0845 217 9951
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Support@alert-it.co.uk

Designed by:
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...using technology to care for carers

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.