P161B Radio Door Activity Monitor

User/Installer Handbook

Product	Config	Models covered by this handbook
P161B	**C0**	Latched alarm with disable key
P161B	C1	Non-latching alarm with disable key
P161B	C2	Latching alarm with power-down key
P161B	C3	Non-latching alarm with power-down key
P161B	C4	Special Door Bell version

One of a range of Alert-it Care Alarms available from:

Made in the UK

This handbook is intended to assist carers install, configure and use the monitors. The carere therefore needs to understand the needs of the user and asses that the monitor meets those needs and if any supplementary monitoring is needed taking into account any health risks.

The P161 is a highly configurable door switch that can be used to warn of a door being opened. It can be used as a latched alarm (C0,2) on Emergency Doors and External Doors or as a transient warning of the use of internal doors as may be required in the care of those with dementia (C1,3). Staff can reset any alarm while the door is open, and the alarm will not sound again until the door first closes. This allows the door to be left open, under supervision. There are no vulnerable switches but a simple key is available can either disable the sensor while inserted (C0,1) or can be used to switch-off the sensor;until the CALL button is pressed (C2,3). A version (C4) with just the CALL button enabled is available for use as a Door Bell.
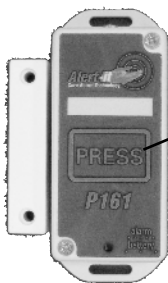
External Keyswitch:
All models can be used with an additional keyswitch which allows the door sensor function to be securely disabled .

Pager Operation

The alarm is passed by the Alert-iT high integrity radio link to the carers pager. The link can operate in Securelink mode which constantly checks the link is working and raises the alarm if it fails
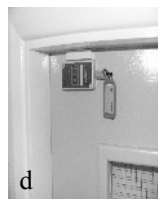
Power connection

First time activation:
On arrival, and after battery replacement, press the front PRESS area until a beep is heard to activate the unit

For stand alone systems the P162B features a radio link to the P137/P138 pagers.

Installation

Location:

Below are some typical mounting arrangements. It will be noted that the magnet can be angled and lie above the case of the P161, which means it will seldom be necessary to modify architrave. The unit comes with screws and self-adhesive pads suitable for the installation. The pads are usually sufficient unless the user is prone to causing damage. The unit can be fixed to metal doors but this may reduce the range. There MUST be sufficient clearance to allow the key to be used if required. Mounting horizontal on the door top edge (d) is a good option which makes the key-hole visible.

a   b   c   d

The units are NOT waterproof (rating IP61 if mounted with keyhole downwards) and hence must be installed so as to protect from rain. As the unit can be disabled when the door is open and it self arms on closure this need not pose an issue even on external doors. The unit should be installed on the outside of bedroom doors so the staff can access the controls and users cannot cause damage.

Magnet Position

After installation the magnet should lie close to the area marked "Sense Area" on the P161. The magnet is especially strong and will influence the switch over a reasonable gap (25mm) and from top or side, making installation particularly easy

Range Test

It is most important to check that the alarm signal will reach all the places where the pager will be used. This is easiest achieved by temporarily setting the unit into Securelink mode (see p 7) and taking the pager to the extremities of the building. The message NEW! 0187 (or similar) should appear every 10 seconds to show that the radio link is functioning. A quick press of CALL (less than 1 sec) will also send a radio transmission and prove communication.

Securelink Mode

In health critical applications it is advisable to use the Safelink radio in secure mode (see p7). This will shorten the battery life but ensure that any failure of equipment or radio path is reported

Typical System Configurations

Optional disarm keyswitch

The P161 Door Switch uses radio to transmit an alarm when activity is detected, using Safelink

Optionally the P161 can be set for Securelink mode (p 7) and make a regular transmission which is used by the P137/8 pagers to prove the integrity of the radio network The regular transmissions will reduce battery life

The P137/8 pagers will give full details of battery and alarm status. It can also use the regular Securelink transmission to warn of monitor or radio failure

The P161B can connect to a Nurse Call system using the P155 Radio Interface or to a P117 autodialler (as shown). The receiver shows successful radio reception by the flash of a green light. It will warn of radio failure when the Securelink protocol is enabled by a red light and audible alert

Operation

Using the keys.

Inserting the BLUE key will deactivate the alarm. Depending on the setting of an internal switch the unit will either re-activate when the key is removed or only after the CALL button is pressed for 2 seconds. The latter state allows the key to be removed should it be vulnerable to theft.

Door Activity Detection

When the door opens the P161 will send an alarm, leaving the front red led illuminated. The pager will show URGENT 01 or the autodialler will start the dialling sequence. The monitor is normally supplied as latching (as often required for fire and external doors) to force staff to attend in order to rest the alarm. Often internal door alarms are set to self reset when the door closes, hence the alarm is fleeting on the pager as the door is opened, allowing staff to judge if attendance is needed depending on the time of day and the vulnerability of the user. To ensure the alarm is heard the notification will last 10 seconds after the door closes.

Staff Call

While the door is closed, pressing the CALL key will send an ASSIST alarm to the pager, allowing staff to summon help to the door. This function is also supplied as the Door Bell version.

Cancelling the alarm:

If the unit is programmed to latch the alarm, then pressing CALL until a beep is heard will reset the alarm.

Temporary deactivating the monitor

If the CALL key is pressed while the door is open, then the alarm will be cancelled, and the unit remain in standby until the door re-closes, when the monitoring will

Alarm indication at the pager/receiver				
Alarm	Detect Delay	P161	Pager	P155 /P117C
Open	0 sec	LED Flash	URGENT 01	Continuous tune + alarm
Close (C1,3)	10 sec	LED Off	Alarm Clear	Alarm Clears C1 & C3 only
CALL	0 sec	LED Flash	ASSIST 01	Intermittent tune + alarm
TEST	Less than 1 sec	LED Blink	Node Name	Green light flash
Battery Low	-		Fault 30 or Bat_Low	Intermittent tune, + alarm
Battery Fail	0		Fault 31 or Bat_Fail	Intermittent tune, + alarm
Battery Dead	The P162 LED makes chirping sound			

Operation (cont)

resume. This allows doors to be left open in the day or for visitors to arm the door before leaving

Battery Low

The battery status is checked every time the door opens. As the battery approaches discharge the pager will indicate FAULT 30 or Bat_Low. If the battery is unable to support continued use then the alarm will become FAULT 31 or Bat_Fail. The front alarm LED will pulse every 8 seconds. At the end point the unit will chirp.

Maintenance

Cleaning

Use Alert-iT procedure

Technique B

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

Battery

This can be done in situ, after removing the two front screws and pulling the cover over the key connector. The battery needs to be ejected from the holder by pressing from inside using a thin object such as screwdriver, cocktail stick or cotton bud. Once the rim appears it can be removed.

Battery Life	12 months/12000 alarms
Battery	CR2032 Lithium Coin Cell

NOTE the orientation of the battery with + side upwards, and the seal ring invisible. Fit the new battery in the same orientation. Now press the CALL button for more than 5 seconds. This will re-activate your unit. Replace the cover
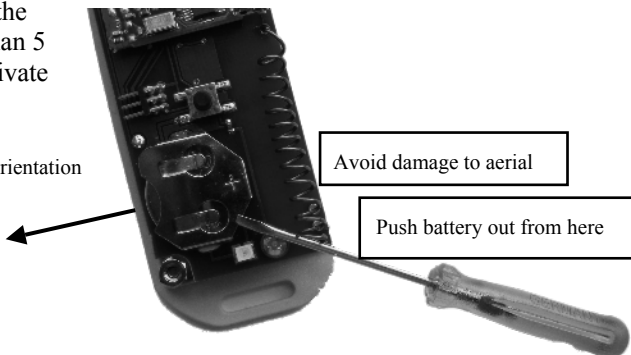
Note battery orientation

Avoid damage to aerial

Push battery out from here
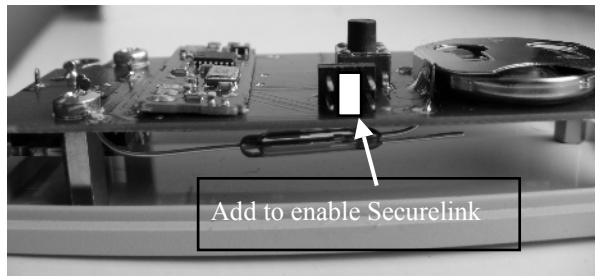
Configuration

Configuration Changes

The P161 uses the standard Alert-iT Programming Data Protocol and all the main features can be changed using the P152 USB Interface and Data Editor Programme.

Communication Address Changes

Each badge in a care home MUST have a different communication address. To facilitate easy installation the Communication Address can also be changed directly from the pager using the P173A programming cable

Safelink Radio

The Securelink failsafe feature is enabled by fitting the link shown, if not required then park the link on one pin only. The battery MUST be removed to activate any change, after which the CALL key is pressed to re-energise the monitor.

Add to enable Securelink

Power down Blue Key

If enabled when the blue Key is inserted into the unit the P161 enters power down mode and must be turned on after this point by holding the "Press" Button

1. Remove front case then slide the switch into the position shown below for the operation you require.
2. Fit front case to unit

Power down Operation
Version C2 & C3

Disable Alarm operation
Versions C0 & C1

& Remote Keyswitch

Remote Keyswitch Disable

Any switch can be used with the P161 to facilitate remote disable, as may be required to allow a carer easy entry from outside.

The connection to the P161 is by a 3.5mm stereo jack with the switch between tip and outer (with ring unconnected). The contact is open to disable the door alarm. Note the required Configuration switch position above.

Note: Should the client remove this jack then the monitor is safely enabled.

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. Clean and disinfect each item regularly in accordance with information herein
2. Regularly test monitor as described herein
3. Ensure, by testing, that the alarm is annunciated at the carer's location(s)
4. Charge pager away from direct heat and uncovered.
5. 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.
6. Only use the monitor with accessories approved for use with this product and only in accordance with instructions.
7. If the equipment is modified in any way, appropriate inspection and testing must be conducted to ensure continued safe use of the equipment.
8. 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.
9. Additional levels of mechanical protection may be needed for some patient disorders. Contact the manufacturers for advice
10. 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
11. The monitor and all accessories are designed to operate indoors in a residential environment of 10ºC to 30ºC and 90%RH max.

This system is certified to the following European Standards	
73/23/EEC	Low Voltage Safety Directive
89/336/EEC	Radio Interference Immunity
EN 300 220-1 V2.1.1 (2006-04)	Permitted radio transmission
EN 50081-1:1992	Domestic Radio Emissions
EN 50082-1:1995	Industrial Radio Immunity
EN12182	Assistive Technology
Also complies with	
2002/95/ECRoHS	Permitted Materials

Additional Documents	
Quick Start Radio P161 Systems	
P137 Configuration Handbook	UH1068C
You tube Instruction Videos Index	UV1198

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 fax or EMail:
HELP: 0845 2179951
FAX : 0845 2179953
Support@itsdesigns.co.uk

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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.