

# Battery Information



## Introduction

This document provides information, by product and battery type, regarding:

- Recommended replacement period of batteries.
- Recommended test procedures that the customer can conduct to determine battery condition.

Table 1 lists all products with an integral battery and the specific battery details as follows:

1. Battery type and number of batteries included.
2. Whether the battery is of a rechargeable nature.
3. Recommended replacement period for the battery.
4. Capacity of the battery at date of purchase.

The following information details exactly how to make a test call using a radio trigger or sensor. If you have any difficulties please refer to the problems and answers section in the Lifeline User Guide.

### Low battery Indication

869MHz frequency sensors/triggers have an automatic battery test feature that communicates low battery status to the response centre (dispersed alarms) or log printer (Telecare Overlay) even if the sensor has not been activated.

#### Amie Personal Radio Triggers 173MHz

Activate the trigger and check that the pendant LED lights up constantly for approximately 3 seconds and that an alarm call is raised.

#### Amie+ and Gem+ 869MHz for Dispersed Alarms

The 869MHz. version has auto low battery functionality, which means that it will automatically inform the control centre when it's batteries are low. (Code 8)

#### Amie+ and Gem+ 869MHz for Telecare Overlay

The 869MHz. version has auto low battery functionality, which means that low batteries will be reported to the system printer. In addition, any pendants that are used to raise an alarm call while having a low battery will additionally report low battery to the scheme manager's handset or response centre. (Code 5)



## Smoke Detectors

In order to comply with all relevant standards, radio smoke detectors have two batteries- one to power the detector and another to power the transmitter.

Mains powered (non radio) and line powered detectors have one battery.

There are 6 types of detectors with batteries:-

1. 173MHz radio
2. 173 MHz mains powered
3. Mains powered
4. Line powered
5. 869MHz radio
6. 869 MHz radio mains powered

Smoke detectors should be tested weekly by pressing the test button until a siren sounds. This should take typically 20 seconds. If the alarm siren makes a continuous loud sound, the detector battery is working correctly.

Radio detectors will raise a call at a control centre when this process is followed and if the transmitter battery is low, notification of this will be displayed.

869MHz radio detectors will send a battery low warning to the control centre automatically without the need for manual generation however the test procedure should still be followed in order to ensure operational effectiveness.

### Arm/Disarm and Zoning Triggers

These triggers have auto battery low functionality and therefore do not need to be manually tested for battery performance.

### Palm Programming Unit

Battery life between charges is typically 3 weeks and on-screen battery indicator provides battery level information.

### GSM Module

This has a capacity of 11 hours (standby) between charges and the module features a battery level indicator.

### Bed, Chair and Property Exit Sensors

1. Connect the Palm programming unit to the socket marked 'IP4/Prog' on the Telecare Interface Module
2. Select radio tab on the menu screen
3. Select transmit to raise a test call to the response centre

### Carbon Monoxide Detector - mains and radio 869 MHz

There are two types of detector -  
Part Number GS 491 - This is mains powered and when connected to an 869 MHz ROM the battery in the ROM is tested automatically. However when connected to a 173 MHz ROM press the test button on the front of the detector to manually test. Detector life - 5 years  
Part number 67005/51 869 MHz - This is battery powered and has auto battery low functionality.

### Fall Detector 173 / 869 MHz

The 869 MHz and 173MHz versions have auto battery low functionality, therefore they do not require testing manually.

### Flood Detector 173 / 869 MHz

Apply moisture to the 2 probes that are situated nearest to each other. NB do not immerse the unit in water.

### Radio PIR - 869MHz

The 869 MHz battery powered PIR has auto battery low functionality therefore does not require testing manually.

### Radio Output Module (ROM) 173 / 869 MHz

173 MHz - Activate the sensor connected to the ROM.  
869 MHz - This features auto battery low functionality therefore does not require testing manually.

### Temperature Extremes Detector 173 / 869 MHz

Depress the pin hole above the larger black button using a blunt pointed instrument. Please note that the pin hole is located on one side of the detector on the 173Mhz version. The 869 MHz version has auto battery low so does not require testing manually.

### Remote Door Controller (RDC)

Generate door entry calls and use each of the three buttons to ensure they function correctly. A low battery is indicated by the red light flashing when any of the buttons are pressed.



### Grouped Systems

**Piper Group, Haven and Communicall EL, Dect, CTL and Vision:** Switch off mains and place an alarm call on the system. Ensure that the alarm call can be selected by the Master Unit or control centre. Switch mains back on. Suggested frequency is one test per annum.

### Dispersed Alarms

Switch off mains to unit and activate an alarm call. Ensure that the control centre has answered the call and you can communicate with them. Once the control centre has cleared the call, switch the mains supply to the unit back on. Suggested frequency is one test every six months on equipment in stock and in the field.

### Control Centre UPS Systems

Under a maintenance agreement a service engineer will perform a quarterly test of UPS batteries by switching off the mains supply and running the system on standby power. Tests to establish the capacity can be conducted by the customer to prove the battery's capability to sustain the system/unit for a period of time. The customer should simply perform the above tests on rechargeable batteries to the capacity specified for that product.

### Battery Disposal

Batteries contain toxic heavy metals which, when disposed of untreated in landfill sites, may have an adverse impact on both human health and the environment, therefore it is essential to dispose of batteries in a responsible manner. Most types of batteries are classified as Hazardous Waste in accordance with the Hazardous Waste Regulations 2005. There are a number of companies throughout the UK offering battery collection and recycling services, for more information visit:

[www.rebat.com/collectionpage.htm](http://www.rebat.com/collectionpage.htm)

[www.wasteline.org.uk/resources/informationSheets/Batteries.htm](http://www.wasteline.org.uk/resources/informationSheets/Batteries.htm)

This information provides simplified guidance based on complex and changing legislation and does not constitute legal advice. If you have concerns regarding compliance with current legislation contact your Regulator (Environment Agency 08708 506 506) or Local Authority.

## Recommended Replacement Periods of Rechargeable batteries within Tunstall Products

\*A The recommended replacement period of rechargeable batteries of this type is as follows:

Lead Acid Batteries	4 Years Max
Nickel Cadmium Batteries	2 Years Max
Nickel Metal Hydride	1-5 Years Max

\*B The expected life of rechargeable batteries supplied as an uninterruptible power supply (UPS) for control centres will depend upon system configuration and battery capacity required, however, the recommended replacement period is:

Lead Acid Batteries	4 Years Max
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At the end of these recommended replacement periods these batteries will give approximately 85% of the battery capacity at date of purchase.

The above statements are dependent upon:

1. Mains disconnection occurring no more than six times per year over the product's life. (Under the recommended tests procedures in this document some of these disconnections will inherently result in a full discharge of the battery's capacity. Additional incidences of mains failure up to the maximum of 6 should not affect the battery capacity over the product's life).
2. The operating environment remaining at normal room temperature (20-22C).

### Monitoring Centre

Recommended replacement period and battery capacity are based upon battery manufacturers' technical literature. Due to the variations in battery manufacturing, specific individual performance cannot be guaranteed. The term battery capacity refers to:

Note 1: Rechargeable batteries, as the minimum expected standby duration of battery power of the system/unit upon mains failure, at date of purchase.

Note 2: Communicall Master Unit batteries as the minimum expected standby duration of battery power once fully charged from the mains, at date of purchase.

## Frequently Asked Questions

**Q1: Which products have batteries?**

**A:** Table 1 indicates products which include batteries, showing the type of battery used with each product and other relevant operational details.

**Q2: Which batteries are rechargeable, non-rechargeable?**

**A:** Table 1 lists products that operate using batteries. Column 4 of this table indicates whether the battery is of a rechargeable nature.

**Q3: What is the difference between rechargeable and non-rechargeable?**

**A:** A rechargeable battery is one that can use up its stored energy repeatedly. Spent energy is replaced by a charging process using mains electrical power.

**Q4: Can I change the battery myself or will I need a Service Engineer?**

**A:** Batteries in the Lifeline 400, Lifeline 4000, Lifeline 4000+, Petite, Remote Door Controller, Fall Detector, Battery\* and Line Powered Smoke Detector, Flood Detector\*, Chair Occupancy, Bed Occupancy, Property Exit Sensor, PIR and Mains Powered Smoke Detector (backup battery) can be changed by the user.

\*Main unit batteries only - radio transmitter batteries should be replaced by Tunstall.

**Q5: What is the cost of new batteries?**

**A:** Please contact Tunstall Service Centre for costs of replacement batteries for specific products.

**Q6: What is the cost of having batteries changed by Tunstall?**

**A:** Replacement of batteries in Tunstall products is not a part of the service agreement, because the life of any battery varies considerably according to its usage. The cost for battery replacement is a standard service visit rate plus the cost of replacement of any batteries changed. To arrange battery replacement of your Tunstall product, please kindly contact Tunstall Service Centre. They will be able to advise you of the cost and arrange a date to visit at your convenience.

**Q7: Are there any specific brands of battery we should/should not use?**

**A:** Tunstall uses specific types of batteries within its products (see table 1). The specifications of these batteries form the basis for statements made with regard to recommended replacement period and battery capacity.



Details of Batteries Supplied with Tunstall Product		Table I			
EQUIPMENT	PART NUMBER	BATTERY TYPE	RECHARGEABLE	RECOMMENDED REPLACEMENT PERIOD	OPERATING CAPACITY
<b>RADIO TRIGGERS AND SENSORS</b>					
Amie+ (to include arm/ disarm triggers)	67005/02 & 67005/47	1 x lithium	N	5 years	20,000 operations
Gem+ (to include zoning triggers and bogus caller triggers)	67005/05 & 67005/48	1 x lithium	N	5 years	20,000 operations
Radio smoke (173 MHz)	6000/21	1 x 9V alkaline battery	N	1 year	
Radio smoke detector (869 MHz) detector	EF155	1 x 9V alkaline battery	N	1 year	
radio pattress	PSA6740	1 x lithium	N	5 years	10,000 operations
Radio smoke (869 MHz) detector	67005/58	1 x lithium	N	5 years	
pattress		1 x lithium	N	5 years	10,000 activations
Line powered smoke detector (Schemes)	9000/30A	1 x lithium	N	10 years max battery back up	
PIR (173 MHz)	64000/16	1 x 9V alkaline battery	N	1 year	
PIR (869 MHz)	67005/34	1 x 9V alkaline battery	N	1 year	
PIR (869 MHz)	67005/45	1 x 3V lithium battery	N	1½ years	
Mains Smoke backup battery	9000/65	1 x 9V lithium	N	10 years max	
Optional radio pattress	PSA6740	1 x lithium	N	5 years	10,000 operations
Temperature Extremes (173 MHz and 869 MHz)	69005/03	3 x AAA 1.5V alkaline	N	2 years	
ROM	64000/14 or 67005/35	1 x lithium	N	5 years	10,000 operations
Pullcord	64000/10 or 67005/36	1 x lithium	N	5 years	10,000 operations
Flood detector	69000/01 or 67005/37	1 x 9V alkaline battery	N	1 year	
radio		1 x lithium	N	5 years	10,000 operations
Carbon Monoxide detector	67005/51	3 x AAA 1.5V alkaline	N	2 years	
Bed/Chair Occupancy and Property Exit Sensors	41005/13 41005/15	4 x AA 1.5V alkaline	N	2 years	
Piper Petite	60000/xx	4 x Silver Oxide	N	18 months	
Piper Petite	62000/xx	4 x Silver Oxide	N	2½ years	3000 activations
Fall Detector (173 MHz)	66000/01	1 x Alkaline PX28L	N	1 year	
Fall Detector (869 MHz)	67005/49	1 x Alkaline PX28L	N	6 months	
MV Gem	10500050	1 x Lithium	N	5 years	
<b>GROUPED SCHEMES ALL COMMUNICALL SYSTEMS</b>					
Communicall Control Units	93200/00 92200/00	5 x 12V Lead Acid	Y	4 Years*A	8 hrs typical
Communicall CT2 Master Unit	92200/41	3 x Panasonic Ni Cad	Y	2 years	20 hrs standby; 3 hrs talk time
Communicall EL Paging/Non Paging Master Unit	92100/12 92100/11	1 Nickel Metal Hydride	Y	2-3 years	7 hrs
Communicall Vision Programming Terminal	93200/0	1 Nickel Metal Hydride	Y	5 years *A	8 hrs
Piper Haven Control Unit	9020/00	5 x 12V Lead Acid	Y	4 years *A	8 hrs
Haven Master Unit with Paging/Non Paging	9010/02 9010/01	1 Nickel Metal Hydride	Y	2-3 years	7 hrs
DECT Master Unit	92199/61	1 x Nickel Metal Hydride	Y	2 years	150 hrs standby; 16 hrs talk
CHECK IT Unit	36200/408	1 x Nickel Metal Hydride	Y	5 years *A	20 hrs
Battery Back for DECT System	192200/54	2 x Lead Acid	Y	4 years	8 hrs
DECT Multitone Handset	192199/13	2 x Nickel Metal Hydride	Y	2 years	12 hrs talktime
Piper Group DCU	PE920/2	1 x Nickel Cadmium	Y	5 years*A	4 hrs
Telecare Management Unit	136100/407	1 x Nickel Metal Hydride	Y	5 years *A	20 hrs

EQUIPMENT	PART NO.	BATTERY TYPE	RE-CHARGEABLE	RECOMMENDED REPLACEMENT PERIOD	CAPACITY
<b>DISPERSED ALARMS</b>					
Lifeline 4000+	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years *A	20 hours
Lifeline 4000	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years *A	24 hours
Lifeline 400	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years *A	30 hours
Lifeline Lite	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years *A	20 hours
Lifeline 1000	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years *A	20 hours
Lifeline 2000	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years*A	20 hours
Lifeline 3000	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years*A	20 hours
Compact EL	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years*A	12 hours
Piper Premier	<i>all variants</i>	1 x 12V Lead Acid	Y	4 years *A	20 hours
Piper Premier S	<i>all variants</i>	1 x 12V Lead Acid	Y	4 years *A	15 hours
Piper Portal	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years*A	20 hours
Lifeline	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years *A	4 hours
Lifeline II	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years*A	20 hours
Lifeline II plus	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years*A	20 hours
Piper Solo	<i>all variants</i>	1 x Nickel Metal Hydride	Y	5 years*A	4 hours
MV Pet 418	<i>all variants</i>	1 x Nickel Metal Hydride	Y	2 years	36 hours
MV Pet Link	<i>all variants</i>	1 x 12V Lead Acid	Y	2 years	36 hours
MV Model T	<i>all variants</i>	2 x 6v Nickel Metal Hydride	Y	2 years	12 hours
MV Model A	<i>all variants</i>	2 x 6v Nickel Metal Hydride	Y	2 years	12 hours
MV Pet 173	<i>all variants</i>	1 x Nickel Metal Hydride	Y	2 years	36 hours
Pet Junior	<i>all variants</i>	1 x Nickel Metal Hydride	Y	2 years	36 hours
<b>RESPONSE CENTRE</b>					
PNC4	<i>N/A</i>	Via UPS			
PNC3	<i>N/A</i>	8 x 12V Lead Acid	Y	4 years *B	7 hours minimum
Piper Compact	<i>3410/02</i>	1 x 12V Lead Acid	Y	4 years *B	4 hours
<b>PERIPHERAL PRODUCTS</b>					
Optical Smoke Detector	<i>64000/15</i>	1 x Duracell 9V, 6LR61 Alkaline	N	12 months	
Remote Door Controller	<i>92000/20</i>	1 x Duracell 9V, 6LR61 Alkaline	N	12 months	

\*A & \*B See reference on page 4

**Telephone (direct line to service) 9am - 5pm Mon-Fri: 01977 660314**

All the reassurance you need

**Tunstall**

[www.tunstallgroup.com](http://www.tunstallgroup.com)

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