



battery information

Part number: D3607154R

Tunstall

Introduction

This document provides detailed information on the batteries used within Tunstall products to support the process of battery management. Battery management should be looked at within an overall risk management regime, whereby the age of the battery, recommended replacement period, location and likelihood of power failure, duration of power failure and the assessed risk to the individual are all factors taken into consideration.

Contents

- Page 1 Automatic Low Battery (ALB) reporting
- Page 1 Recommended battery test procedures
- Pages 1-2 Battery Disposal
- Page 3 Replacement Periods of Rechargeable batteries
- Page 3 Glossary of Terms
- Pages 4-5 Frequently asked questions
- Pages 4-5 Detailed Battery Information – Table A

Automatic Low Battery (ALB) Reporting

Telecare sensors operating on the 869MHz European Social Alarm frequency incorporate an ALB feature that automatically reports Low Battery status to the monitoring centre (Lifeline home units) or the system log printer (Telecare Overlay) or the Scheme Manager's handset (Communicall Connect) ALB signals are transmitted if an auto battery test fails.

ALB tests are performed every 7 days if the sensor has not been activated in the period since the last test. The latest products test their battery every 4 hours and send an ALB message at the 7 day period if the battery has regularly been low in the previous period. The regularity of this test means that spurious low battery alerts caused, for example, by low temperatures will be minimised.

A full list of batteries protected by ALB functionality is detailed in Table 1.

Recommended Test Procedures

ALB Monitoring available

Where a battery is monitored by Automatic Low Battery reporting no extra manual testing of the battery is required (except personal radio trigger).

NOTE:

Lifeline Home Units

From January 2011 the main battery in home units have been provided with battery monitoring ON. This removes the need to carry out mains power switch off tests.

Although the current Tunstall triggers have ALB functionality, it is recommended that all personal triggers are tested at least monthly.

No ALB Monitoring

Lifeline Home Units

Lifeline Home Units prior to Jan 2011 require a battery test at least every 6 months to ensure they can still operate in a mains power failure situation.

The procedure to be followed is as follows:

Switch off mains power to home unit then activate an alarm call. Ensure that the monitoring centre answers the call and you can communicate with them. Once the monitoring centre has cleared the call, switch the mains power supply to the home unit back on.

Smoke Detectors and Heat Detectors

Where Table 1 indicates that the ALB functionality only monitors the radio transmitter battery, Smoke and Heat Detectors should be tested as a minimum monthly by pressing the test button until the audible warning sounds. This will also raise an alarm call.

Medication Dispenser (67005/81 only)

The dispenser mechanism is not protected by ALB, therefore the batteries powering the mechanism need to be tested as a minimum monthly.

The procedure to be followed is:

Remove the lid, press and hold the middle button for 2 seconds until a beep is heard and the current time appears in the display again. Then press the left button for 'missed dose' trigger. The battery icon on the display clearly indicates the battery status. This will also raise a call to the monitoring centre.

Products with rechargeable batteries

Where products have rechargeable batteries as detailed in Table 1 they should be kept in the charger supplied when not in use or connected to the mains power via the supplied power adaptor. The predicted operating capacity (back up time) when the battery is fully charged is also listed in Table 1.

Control centre UPS Systems

A quarterly test of UPS batteries will be carried out under any Tunstall maintenance agreement.

NOTE: The capacity of the batteries installed should meet the requirements required by TSA Standards Module, Planning and Development of a Telecare Service Centre.

Personal Radio Trigger

Although the current Tunstall triggers have ALB functionality, it is recommended that all personal triggers are tested at least monthly. This is due to the critical nature of the device which requires the whole Alarm system to be tested. This not only tests the battery but also the whole radio receiving system and the contact through to the monitoring centre. This is in line with TSA Process Module, Installation, Planned maintenance and Service, para 14.1.

Battery Disposal

All batteries should be disposed of in accordance with current legislation.

As a responsible company, Tunstall disposes of all returned batteries in accordance with The Waste Batteries and Accumulators Regulations.

Recommended Replacement Periods of Rechargeable Batteries

The type of rechargeable battery fitted into specific products is detailed in Table 1. The recommended replacement period of rechargeable batteries is dependent on type and is detailed below:

Lead Acid Battery – At a battery test failure or 4 Years maximum.

Nickel Cadmium Battery – At a battery test failure or 2 Years maximum

Metal Hydride – At a battery test failure or 5 years maximum.

Glossary of terms

Battery Use

Provides information on how a battery is used. E.g. some telecare sensors have more than one battery – one for the sensor and one for the radio transmitter. If the field in Table 1 is blank, one battery is used for complete operation.

Battery Type

Provides information on the battery used within the product using the key below.

Key	Part Number	Battery Code	Power	Type
A	S1004014	PP3	9v	Alkaline
B	S1004035	PP3	9v	Lithium
C	S1004012	PX28L	6v	Lithium
D	S1004033	CR123A	3v	Lithium
E	B109	AA	1.5v	Alkaline
F	S1004007	AAA	1.5v	Alkaline
G	S1004040	½ AA (ER14250)	3.6v	Lithium
H	S1004051	CR2450*	3v	Lithium
J	S1004037	740mAh pack	3.7v	Lithium
K	S1004048	CR2477	3v	Lithium
L	D3706005C	1200mAh		NiMH

*Only CR2450 batteries manufactured by Sony may be used.

Auto Low Battery

Indicates whether the battery is covered by Auto Low Battery monitoring.

Maximum Recommended Replacement Period

Due to variations in battery usage specific individual performance cannot be guaranteed. Therefore all batteries should be tested in accordance with the guidelines above and changed if any test fails.

However a maximum recommended replacement period is detailed based upon the battery manufacturer's technical literature.

Operating Capacity

The term refers to rechargeable batteries and is the minimum expected standby duration of battery power for a fully charged battery at the date of purchase.

Frequently Asked Questions

Q1: What is the cost of new batteries?

A: Please contact Tunstall's Customer Satisfaction centre for the costs of replacement batteries for specific products.

Q2: What is the cost of having batteries changed by Tunstall?

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

Q3: Are there any specific brands of battery we should / should not use?

A: Tunstall uses specific types of batteries within its products when supplied new and the specifications of these batteries form the basis for statements made with regard to recommended replacement periods and operating capacity. Batteries supplied by other manufacturers may not provide the same level of performance.

Details of Batteries Supplied with Tunstall Products - Table 1

EQUIPMENT	PART NUMBER	BATTERY USE Δ	BATTERY TYPE Δ	USER CHANGEABLE Δ	RECHARGEABLE Δ	AUTO LOW BATTERY Δ	MAX RECOMMENDED REPLACEMENT PERIOD Δ	OPERATING CAPACITY Δ
TELECARE RADIO TRIGGERS AND SENSORS (869MHz)								
MyAmie (inc arm/disarm/zone and access)	68005/01, 08, 10		1 x 3V lithium	✗	✗	✓	7 years	20,000 operations
Amie+ (inc arm/disarm)	67005/02, 47		1 x 3V lithium	✗	✗	✓	5 years	20,000 operations
Gem+ (inc zoning, keyless access and bogus caller)	67005/05		1 x 3V lithium	✗	✗	✓	5 years	20,000 operations
Bed/Chair Occupancy and Property Exit Sensor	41005/13, 15	Control Unit	4 x E	✓	✗	✓	2 years	
Carbon Monoxide Detector	67005/51		3 x F	✓	✗	✓	2 years	Detector life 4-5 yrs
Carbon Monoxide Alarm	68005/98		No battery change required	✗	✗	✓	7 years*	*replace complete unit after 7 years
Enuresis Sensor	41005/21		4 x E	✓	✗	✓	2 years	
Epilepsy Sensor	67005/59	Radio	1 x 3V lithium	✗	✗	✓	5 years	
		Control Unit	2 x E	✓	✗	✗	1 year	
iVi™ intelligent pendant (inc fall)	P68005/95		1 x H	✓	✗	✓	1 year	
VitalBase ^{FALL} Detector	67605/16		1 x CR2477	✗	✗	✓	2 years	
VitalBase ^{FALL} Detector	67605/19		1 x K	✓	✗	✓	2 years	
Fall Detector (white)	P67005/49		1 x C	✓	✗	✓	0.5 years	
Fall Detector (black)	P68005/49		1 x G	✓	✗	✓	1 year	
Flood Detector	69000/01 or 67005/37	Detector	1 x A	✓	✗	✗	1 year	°local indication only
		Radio	1 x 3V lithium	✗	✗	✓	5 years	10,000 operations
Heat Detector	9000/81A	Detector	1 x B	✓	✗	✗	5 years	Detector life 10 years
	67005/78	Radio	1 x 3V lithium	✗	✗	✓	5 years	°local indication only
Medication Dispenser - Addoz	67005/60		2 x E	✓	✗	✓	1 year	
Medication Dispenser - Pivottell	67005/81 67005/85	Dispenser	4 x E	✓	✗	✗	1 year	°local indication only
		Radio	1 x 3V lithium	✗	✗	✓	5 years [°]	
Minuet Watch	67605/06	Watch	1 x V364	✓	✗	✗	5 years	
		Radio	1 x CR2032	✓	✗	✓	3 years	
DDA Standard Pager	D6866003A		1 x 1.2V AAA NiMH	✓	✓	✗		1 week
DDA Wrist Pager	9000/100		1 x 1.2V VARTA	✗	✓	✗		30 hrs
User/Home Alert Pager	9000/69A		1 x F	✓	✗	✓	45 days	
PIR	67005/34		1 x A	✓	✗	✓	1 year	
PIR	67005/45		1 x D	✓	✗	✓	2 years	
Fast PIR	67005/89		1 x B	✓	✗	✓	1 year	
Dual Mode PIR	67005/93		1 x D	✓	✗	✓	1 yr Fast	2yr standard mode
Radio Output Module	69005/05 or 67005/35		1 x 3V lithium	✗	✗	✓	5 years [°]	10,000 operations
Radio Pullcord	64000/10 or 67005/36		1 x 3V lithium	✗	✗	✓	5 years [°]	10,000 operations
Radio Smoke Detector	EF155 PSA6740	Detector	1 x A	✓	✗	✗	1 year	Detector life 10 years
		Pattress	1 x 3V lithium	✗	✗	✓	5 years	
Radio Smoke Detector	67005/58	Detector	1 x B	✓	✗	✗	5 years	°local indication only
		Radio pattress	1 x 3V lithium	✗	✗	✓	5 years	

Details of Batteries Supplied with Tunstall Products - Table 1								
EQUIPMENT	PART NUMBER	BATTERY USE	BATTERY TYPE	USER CHANGEABLE	RECHARGEABLE	AUTO LOW BATTERY	MAX RECOMMENDED REPLACEMENT PERIOD	OPERATING CAPACITY
Radio Smoke Detector	67005/74, 94 68005/94		1 x B	✓	✗	✓	5 years	
Radio Smoke Detector	68005/96		No battery change required	✓	✗	✓	10 years	Detector should be replaced after 10 years
Temperature Extremes	69005/03, 04, 05, 06		3 x F	✓	✗	✓	2 years	
Universal Sensor	41005/25, 30		1 x 3V lithium	✗	✗	✓	5 years	
MONITORING CENTRE								
PNC4/5/6/ UPS	N/A	UPS	12V Lead Acid	✗	✓	✗	4 years *B	7 hours minimum
PNC3	N/A		12V Lead Acid	✗	✓	✗	4 years *B	7 hours minimum
HOME UNITS								
Lifeline Vi and Vi+	<i>all variants</i>	Back-up	1 x L	✓	✓	✓	5 years *A	40 hours
Lifeline Connect and Connect+	<i>all variants</i>	Back-up	1 x L	✓	✓	✓	5 years *A	30 hours
Lifeline GSM	<i>all variants</i>	Back-up	1 x L	✓	✓	✓	5 years *A	58 hours
Lifeline 4000+	<i>all variants</i>	Back-up	1 x L	✓	✓	✗	5 years *A	20 hours
Lifeline 4000	<i>all variants</i>	Back-up	1 x L	✓	✓	✗	5 years *A	24 hours
Lifeline 400	<i>all variants</i>	Back-up	1 x L	✓	✓	✗	5 years *A	30 hours
Lifeline Lite	<i>all variants</i>	Back-up	1 x L	✓	✓	✗	5 years *A	20 hours
Ruggedised Alarm	<i>all variants</i>	Back-up	1 x L	✓	✓	✗	5 years *A	20 hours
Lifeline 1000	<i>all variants</i>	Back-up	1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	20 hours
Lifeline 2000	<i>all variants</i>	Back-up	1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	20 hours
Lifeline 3000	<i>all variants</i>	Back-up	1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	20 hours
Piper Premier	<i>all variants</i>	Back-up	1 x 12V Lead Acid	✗	✓	✗	4 years *A	20 hours
Piper Premier S	<i>all variants</i>	Back-up	1 x 12V Lead Acid	✗	✓	✗	4 years *A	15 hours
Piper Portal	<i>all variants</i>	Back-up	1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	20 hours
Lifeline	<i>all variants</i>	Back-up	1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	4 hours
Lifeline II	<i>all variants</i>	Back-up	1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	20 hours
Lifeline II plus	<i>all variants</i>	Back-up	1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	20 hours
LOCAL CARE ALARM								
CareAssist	68100/01		1 x J	✓	✓	✓	2 years	12 hours
GROUPED SCHEMES ALL COMMUNICALL SYSTEMS								
Communicall Connect	XD9526001	Control Unit	2 x 12V Lead Acid	✗	✓	✗	2 years *A	8 hours
Communicall Control Units	93200/00 92200/00		5 x 12V Lead Acid	✗	✓	✗	4 years *A	8 hours typical
Communicall CT2	92200/41	Master Unit	3 x Panasonic Ni Cad	✗	✓	✗	2 years	20 hrs standby: 3 hrs talk time
Communicall EL Paging	92100/12	Master Unit	1 x Nickel Metal Hydride	✗	✓	✗	2-3 years	7 hours
Communicall Vision Programming Terminal	92100/11		1 x Nickel Metal Hydride	✗	✓	✗	5 years *A	8 hours
Piper Haven Control Unit	9020/01		5 x 12V Lead Acid	✗	✓	✗	4 years *A	8 hours
Haven Master Unit with Paging	9010/02		1 x Nickel Metal	✗	✓	✗	2-3 years	7 hrs

Details of Batteries Supplied with Tunstall Products - Table 1								
EQUIPMENT	PART NUMBER	BATTERY USE Δ	BATTERY TYPE Δ	USER CHANGEABLE Δ	RECHARGEABLE Δ	AUTO LOW BATTERY Δ	MAX RECOMMENDED REPLACEMENT PERIOD Δ	OPERATING CAPACITY Δ
			Hydride					
DECT Master Unit	92199/61		1 x Nickel Metal Hydride	✓	✓	✗	2 years	150 hrs standby: 16 hrs talk
CHECK IT Unit	36200/408		1 x Nickel Metal Hydride	✓	✓	✗	5 years *A	20 hours
DECT UPS	92200/54		2 x Lead Acid	✗	✓	✗	4 years	8 hours
DECT Multitone Handset	192199/13		2 x Nickel Metal Hydride	✓	✓	✗	2 years	12 hrs talktime
Telecare Manager Unit	136100/407		1 x Nickel Metal Hydride	✓	✓	✗	5 years *A	20 hours
PERIPHERAL PRODUCTS								
Line powered smoke detector (Schemes)	9000/30A	Back-up	1 x B	✓	✗	✗	10 years	Detector life 10 years
Mains Smoke Detector	67005/38	Backup battery	1 x B	✓	✗	✗	10 years	
		Optional radio pattress	1 x 3V lithium	✗	✗	✓	12 months	
Line powered smoke detector (Scheme)	9000/77A	Back-up	1 x B	✓	✗	✗	10 years max	
Line powered heat detector (Scheme)	9000/80A	Back-up	1 x B	✓	✗	✗	10 years max	
Optical Smoke Detector	64000/15		1 x A	✓	✗	✗	12 months	
Remote Door Controller	92000/20		1 x A	✓	✗	✗	12 months	

Δ Refer to glossary of terms on page 3

- Feature included on units manufactured 31/01/11 (week/year 0511) onwards.

*A & B See reference on page 3

^o Battery life calculated from date of manufacture. Whilst depletion is low prior to use, prolonged periods of storage will impact battery life.

Telephone (Customer Satisfaction Centre) 9am – 5pm, Mon – Fri: 01977 660551

01/16



www.tunstallhealth.com

Tunstall is a founder member of the Continua Health Alliance

Our policy of continual development means that product specification and appearance may change without notice. Tunstall does not accept responsibility for any errors and omissions contained within this document.

© 2011 Tunstall Group Ltd. © TUNSTALL is a registered trademark.

A member of the Tunstall Healthcare Group Limited.

Tunstall Healthcare (UK) Ltd, Whitley Lodge, Whitley Bridge, Yorkshire DN14 0HR
Tel: 01977 661234 Fax: 01977 662450 Email: enquiries@tunstall.co.uk



FM12477
MD58888