



**Fastfind MaxG, Fastfind MaxG(B)
& Fastfind Max
Personal Location Beacon
User manual**

Notices to Purchasers

Personal Location Beacons (PLB) must be registered with the appropriate National Authority. **Failure to register your PLB could delay a Search and Rescue (SAR) response and maybe unlawful.**

**Your PLBs
unique
identification
information**



WARNING

A PLB should only be activated in situations of grave and imminent danger to life. Misuse or false activation is unlawful and could result in a penalty

Important

PLBs are intended for use within the maritime, aviation and land environments where permitted by national administrations. When activated, the PLB sends an emergency alert to the COSPAS-SARSAT satellite system. The time taken for the alert to be processed is dependant upon the extent of satellite system coverage at that time and any overhead obstruction that could impair the signal path to the satellite. The actual time to rescue in an emergency will be dependant upon the performance of all factors within the SAR (Search and Rescue) system, and as such, is outside the control of McMurdo Ltd.

Applicability of this manual

Fastfind Max and MaxG build standard: May 2008

This manual is applicable to both the Fastfind Max & MaxG models. Only MaxG versions have an inbuilt GPS receiver, consequently references to GPS and the GPS system will only apply to the MaxG and MaxG(B) models.

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Safety notices


Please take time to read this manual fully as it contains important information regarding the correct use and maintenance of your PLB.


Important


The PLB (Personal Locator Beacon) is an emergency radio beacon; **only ever operate it in situations of grave and imminent danger to life.**

 **CAUTION:** False alerts endanger lives and cause expensive disruption to Search and Rescue services, deliberate misuse of the PLB could result in penalty.


 **CAUTION:** The PLB and battery pack contain no user-serviceable parts. Do not dismantle the PLB or the battery pack.

 **CAUTION:** The battery pack contains lithium batteries. Do not attempt to recharge the battery under any circumstances. Do not incinerate, puncture, deform, or short-circuit. Dispose of spent battery packs safely and in accordance with local waste disposal regulations. Refer to End of Life Statement.

 **CAUTION:** Avoid using chemical solvents to clean the PLB as some solvents can damage the case material.

 **CAUTION:** Radio licensing, the PLB is a radio transmitter. Some administrations may require that the user holds a valid radio licence to cover its ownership and use.

Radio	Frequency	Exposure	Warning
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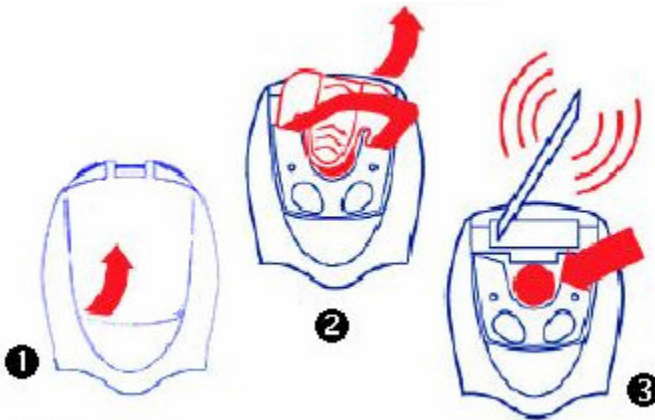
 **WARNING:** The PLB is a radio transmitter which emits radio frequency radiation when activated. Because of the low power levels used and the intermittency of these transmissions PLBs should not expose users to RF energy in excess of safe limits. However it is advisable not to handle the antenna while the unit is transmitting.

Disclaimer

The information and illustrations contained in this publication are to the best of our knowledge correct at the time of going to print. We reserve the right to change specifications, equipment, installation and maintenance instructions without notice as part of our policy of continuous product development and improvement. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, electronic or otherwise without permission in writing from McMurdo Ltd. No liability can be accepted for any inaccuracies or omissions in the publication, although every care has been taken to make it as complete and accurate as possible.

Quick start checklist

Emergency operation



1. Open the flip cover
2. Tear off the red plastic tab
3. Press and hold the red button for 2 seconds

Do

- Register the PLB with the National Authority
- Learn how to activate and position the PLB in an emergency
- Check that the battery is in date
- Self-test the PLB once a month

Don't

- Activate the PLB unless there is a genuine emergency
- Allow the GPS ZONE to become covered (clearly marked on the front of the PLB case)
- Handle the antenna

Introduction

Thank you for purchasing your McMurdo Ltd Fastfind Max Personal Location Beacon (PLB). The Max ranges are the very latest state of the art McMurdo Ltd PLBs manufactured by Signature Industries Limited. When carrying a Fastfind Max, you will enjoy the reassurance of having a PLB as a last resort safeguard against any life threatening incidents that may occur anywhere in the world. Whether alone or in a group, on holiday or at work, enjoying your sport or hobby, if you ever find yourself in a remote area without any other form of emergency communication, on land, at sea or in the air the Fastfind Max comes into its own.

Once activated, the Fastfind Max transmits a unique identification signal via the COSPAS SARSAT satellite system. Provided the PLB has a clear view of the sky its location can be determined anywhere on the earth's surface. Details of the PLB alert will quickly be passed to regional SAR (search and rescue) authorities. Keeping your PLB Registration details up to date is critical to ensure a quick and appropriate SAR response is sent to your rescue.

The Fastfind MaxG and MaxG(B) have an inbuilt Global Positioning System (GPS) navigation receiver. Once activated in an emergency, GPS positional information is automatically transmitted as part of the distress message. The inclusion of GPS based positional information can greatly reduce the time it takes for the SAR authorities to arrive on scene.

Should you have any questions, or require advice regarding McMurdo Ltd products our website 'frequently asked questions' is a good place to start. From the web site you can also leave a message for our customer service team, visit; www.mcmurdo.co.uk

Preparing the PLB for use

Carefully unpack the carton and check the contents.
Carton contents list;

- PLB with attached battery and Lanyard
- Belt bag
- User manual
- User card
- Registration paper work

Confirm that the battery expiry date shown on the rear of the battery pack is in date for the duration of intended use.

Check that the outside of the PLB is undamaged and that the flip top lid cover is present. Lift the flip top lid and confirm that the anti-tamper seal is intact

Self-test the PLB following the instructions detailed in the self test section.
A self-test pass indication verifies that the PLB is ready for use.

Always carry the PLB securely, so it is close at hand in the event of an emergency. Securely attach the PLB lanyard clip to clothing or life vest.

Handling false alerts

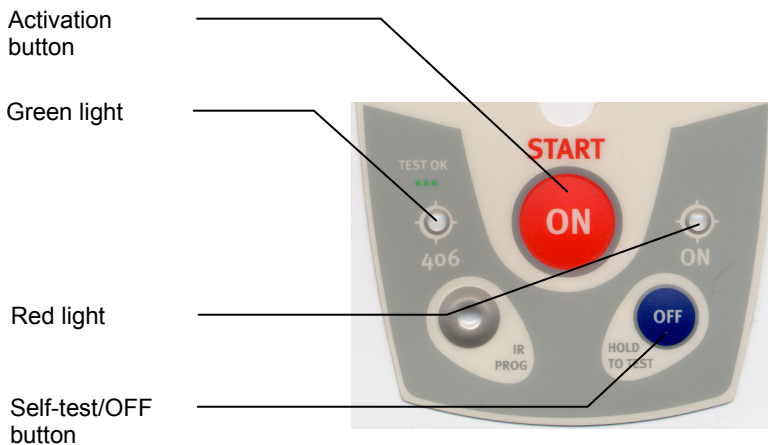
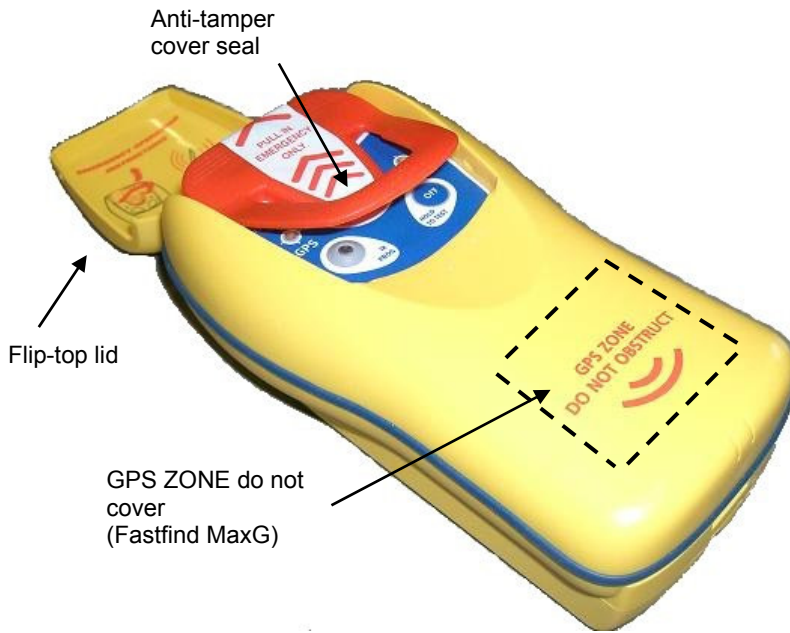
If the PLB has been accidentally activated, or if rescue have been effected before arrival of the rescue services:

- Only switch off the PLB when instructed to do so by the rescue services or authorities.
- Attempt to contact the rescue services, coastguard, or police by radio or telephone to advise them of the false alert.



PLB with antenna deployed

Emergency Operation





PLB controls (Max)


Emergency Operation

Important: ONLY pull the red anti-tamper seal in an emergency.

1. Raise the flip-up lid to expose the red anti-tamper cover. Once opened, the flip-up lid can be pulled off the PLB and discarded if necessary.
2. Grasp the handle part of the red anti-tamper cover, and pull sharply away from the PLB body. This uncovers the START/ON button. The antenna will spring into an upright position as soon as the anti-tamper cover is removed.

 **CAUTION:** Spring action antenna deployment; tilt the PLB away from your face when pulling the anti-tamper seal to deploy the antenna.

3.  Press and hold the ON button for at least 2 seconds.
The RED ON indicator light will turn on
An audible alarm buzzer will start to sound

4.  After 2 minutes has elapsed, the RED ON indicator light will start to slowly flash indicating that the PLB has started transmitting emergency alerts.

The PLB will continue to transmit alerts for a minimum of 48 hours. 406 MHz transmissions are announced by a long flash of the GREEN indicator light once every 50 seconds and the sounding of the audible alarm buzzer.



Lift flip cover and Pull anti-tamper cover to deploy the antenna, push and hold ON button to activate the PLB.

Important: After the PLB is switched ON the first emergency transmission is delayed for 2 minutes. This delay allows time to switch the PLB off in the event of accidental activation before a false alert is transmitted.

Switching off an active PLB

Press and hold the OFF button for a minimum of 5 seconds until the indicator lights go off and the alarm buzzer stops sounding.

Emergency Operation with GPS (Fastfind MaxG)

When the PLB is first activated the inbuilt GPS receiver will attempt to acquire a valid geographical position fix.



Once a GPS position fix is acquired the GREEN indicator light will start to flash once every 3.5 seconds in sequence with the red indicator light.



GPS position acquired



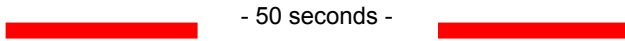
GREEN and RED indicator lights 'long flash' in sequence once every 50 seconds to indicate each 406 MHz transmission containing a valid GPS position.



Transmission with valid GPS position



After 4 hours without a valid GPS position fix the GREEN light will go out completely.



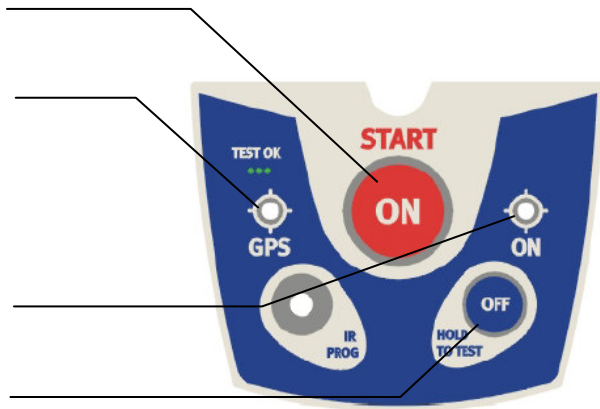
GPS position lost

Activation button

Green light flashes when GPS position is good

Red light

Self-test/OFF button



GPS PLB controls (MaxG & MaxG(B))

Self-test

International regulations require that Self-testing of the PLB should only be carried out in the first five minutes of any hour.

Self-test verifies operation of the PLB by checking key features including battery voltage and 406 MHz and 121.5 MHz alert transmitters.

Important

Each self-test draws small amounts of energy from the battery pack. Unnecessary testing of the PLB may subsequently reduce the run time of the PLB in an emergency. On average, the PLB should only be self tested 12 times per year, or a total of 60 times across the 5 year battery lifetime.

To operate self-test, use the **Test/OFF** button, located under the flexible handle of the red anti-tamper cover.

- Open the flip-top lid. **Do NOT** pull off the red anti-tamper cover.
- Slide a finger under the flexible handle of the anti-tamper cover to locate the **Test/OFF** button.



Hold down the **Test/OFF** button for 10 seconds.
(**red ON** indicator light will illuminate)



Self-test **pass** is indicated by 3 flashes of the **green** indicator light and the alarm buzzer will sound.

- A **failed** self-test is indicated by 3 flashes of the **red ON** indicator light
- The PLB will switch off once the self-test has finished

Self-test



- Release the button and close the flip-top lid.

Important: While self-testing keep your fingers away from the top of the PLB as the close proximity of any objects can affect the results of the self-test.

If the self-test still fails, repeat it and if the problem persists remove the PLB from use and contact your service dealer for advice.

Getting the best from the PLB

General use

Once activated, position the PLB so that the antenna is pointing straight up towards the sky so that it has the best all-around view of the sky. The position of the COSPAS-SARSAT satellites can affect when an alert signal is received. Careful positioning so that the maximum amount of sky is in view will produce the optimum performance.

Get the best from GPS PLBs

Position the PLB so that the antenna is pointing skyward and the GPS zone is clear of any obstructions.



YES



NO

Do not obstruct the area marked GPS Zone on top of the PLB

The PLB should be positioned to have the clearest possible view of the sky, obstructions such as tree cover, deep canyons, ravines, caves, overhangs and shadowing objects can block out the view of GPS satellites and may inhibit GPS signals from reaching the PLB.

Even if the GPS PLB initially fails to acquire a valid GPS position, the first alert message will still be transmitted within 2 minutes of activation. The PLBs position will be determined as if it was a standard PLB without GPS.

Using the PLB afloat

The PLB is totally waterproof but is not designed to operate when floating on the surface of the water. It is buoyant and will not sink if dropped into water, if possible keep it out of the water when in use, place it high up on your PFD, lifejacket. or chest and clear of any wave wash. Any trapped water should be removed periodically by shaking the PLB.

Aboard a liferaft

The principle is to give the PLB as clear a view of the sky as possible whilst keeping it flat. If the raft is full, it may be necessary to elevate the PLB or hold it outside the liferaft canopy. Attach the lanyard to your clothing so in the event of separation from the life raft the PLB will stay with you.

Aboard ship

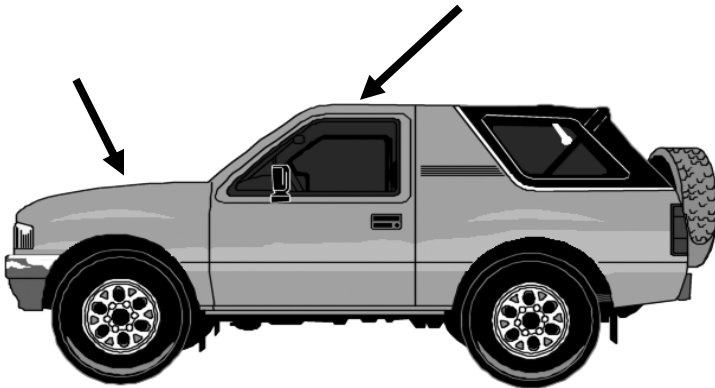
Operate the PLB on deck; position it to have the clearest possible view of the sky. Lay it flat on the deck with the antenna pointing up towards the sky .

Aviation

The PLB is not designed for activation aboard an aircraft although they are often used as an additional carry off safety device. Take care not to place the PLB in the shadow of the aircraft. Lay it on a flat surface with the antenna pointing up towards the sky and with the maximum amount of sky possible in view.

Vehicles

Because of the shielding effect, the PLB probably will not operate effectively when inside a vehicle. It is best placed outside on the roof, hood or trunk.



On the move

If on the move, take care to keep the PLB flat with the antenna pointing skyward.

Using the PLB on land

The PLB should be placed to have the clearest possible view of the sky. Make sure the PLB does not become covered by drifting material (e.g. snow, sand). Keep it flat with the antenna pointing upwards. Do not stand over the PLB.



OK



NO



Try to move the PLB into a clearing and out of thick tree cover

It is **ESSENTIAL** that you register your PLB

Registration helps reduce the number of false alarms and hoax calls, and so makes the rescue service more efficient. It is important to update your registration details if your address or 24 hour contact details ever change.

On receipt of a PLB alert, the SAR organization will firstly try to check that the registered owner of the PLB has not accidentally activated the beacon. To do this, they will try to confirm the approximate location by calling the 24 hour contact number filed at the time the PLB was registered. You should always ensure that your 24 hour contact details are up to date and that they know where you are likely to be located. For the same reason, if you ever lend your PLB to anybody you should always know where they are going.

Carrying your PLB

The standard belt bag provides a convenient way to carrying the PLB hands-free. Fit the bag to your belt. Invert the PLB and place in the bag with the lanyard uppermost. To prevent loss of the PLB, attach the free end of the lanyard (clip) securely to your clothing or belt. Divers can purchase the optional PLB dive canister, turned from solid marine grade aluminium and pressure tested to 150m (500ft).



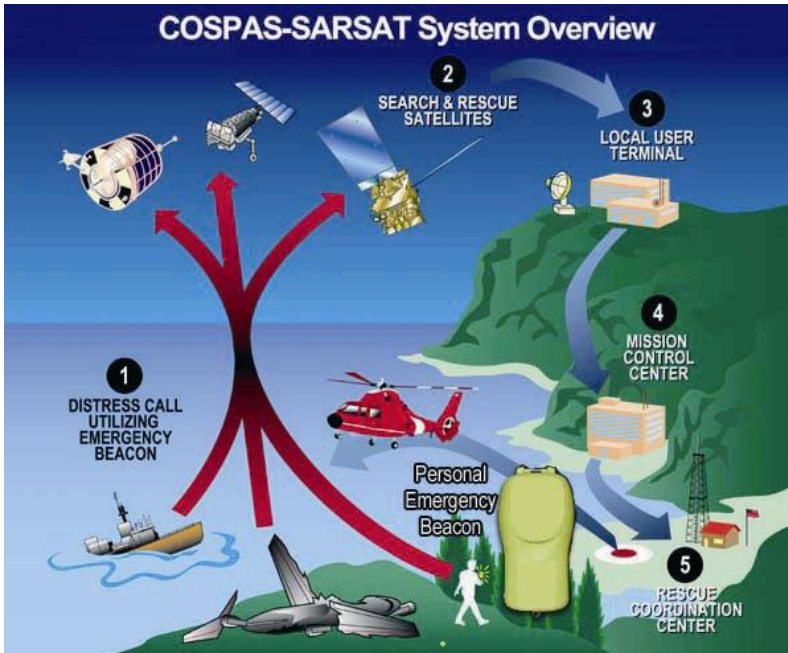
PLB Belt Bag



PLB dive canister option, the ultimate protection for your PLB tested to a depth of 150m

Satellite Distress Beacons explained

Satellite Distress Beacons such as Personal Locator Beacons (PLBs) are used to alert search and rescue services in the event of an emergency. They do this by transmitting a coded message on the international 406 MHz distress frequency which is relayed via satellites and earth stations to the nearest rescue co-ordination centre.



* System graphics courtesy of COSPAS SARSAT.

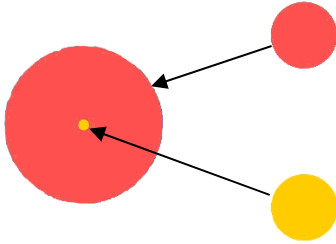
Cospas Sarsat explained

The **Cospas-Sarsat** satellite system has global coverage that provides a typical time to alert notification of between approximately 3 and 45 minutes. The geographical location of a GPS PLB (with inbuilt GPS receiver) can normally be resolved within 5 minutes and 45 minutes for a non-GPS PLB. The time to alert is dependant on which satellites are in view in the sky at the time of PLB activation. Non-GPS PLBs rely on passing orbiting satellites to determine an approximate position, this can take longer and the resolved position is less accurate than can be achieved compared to a GPS PLB.

Why GPS PLBs?

GPS PLBs have been designed to enhance further the lifesaving capabilities of conventional distress beacons. When a GPS PLB is activated in an emergency, GPS positional information is automatically transmitted as part of the distress message. The Global Positioning System (GPS) has an array of orbiting satellites and provides the PLB with positional information and with new positional updates occurring every

20 minutes. The inclusion of GPS based positional information can greatly reduce the time it takes for the SAR authorities to arrive on scene. When speed of response and accuracy of location are important considerations, then GPS PLBs offer the best in performance.



406MHz Beacon

5km radius (28sq mile area)
1 - 2 hour average to respond

406MHz Beacon with GPS

62m radius (0.03 sq mile area)
Under 30 minutes to respond

The location of a GPS PLB can be determine to a typical positional accuracy of about +/- 62 metres (0.03 miles) within a few minutes of PLB activation and a non-GPS PLB within about +/- 5km (3 miles) and typically within 45 minutes.

PLBs also have a secondary homing transmitter. This transmits on the 121.5 MHz internationally recognised aviation guard channel. When the rescue services get close they can "home in" on this signal using direction finding techniques.

More than 22,000 lives have been saved by distress signals routed via the COSPAS-SARSAT* system since it was installed in 1996.

* For a full explanation, visit the Cospas-Sarsat web site:

<http://www.cospas-sarsat.org>

How does your PLB work?

The PLB has two radio transmitters which start transmitting when you activate the PLB. One transmitter operates at 406 MHz which transmits alerts via satellites. The other operates at 121.5 MHz which transmits a signal which can be received by over-flying aircraft and Search and Rescue homing receivers.

Ground stations track the satellites and process the distress signals to obtain a location of the distress. The processed information is then forwarded to a Mission Control Centre where it is combined with PLB registration information and passed to a Rescue Coordination Centre which alerts the appropriate Search and Rescue authorities. Successive satellite passes refine and confirm the original information.

PLBs with inbuilt GPS receivers determine their own geographical position and transmit it as part of the distress alert signal. Locations where the sky area is obscured significantly, such as under a tree canopy or in a steep-sided canyon, may result in delays in GPS position fixing. In extreme circumstance, the PLB may fail

completely to get a valid GPS position. If this happens, the GPS PLB “fails safe” and does not transmit an inaccurate position but instead sends information to indicate that no position is available. Location of the PLB without GPS position information is dependent on the orbiting satellite system just like with a non-GPS PLB.

PLBs have a secondary 121.5 MHz homing transmitter. This transmits on the 121.5 MHz internationally recognised aviation guard channel. If an aircraft hears an activated beacon, it will often make a report to the aviation authority which will pass this information to the Rescue Coordination Centre. When the rescue services get close they can "home in" on the 121.5 MHz signal using direction finding techniques.

Registration and Licensing

Each PLB has a unique digital identity; this is the 15 digit hexadecimal number printed on the programming information label located on the back of the PLB (visible only when the battery pack is removed). It is also pre-printed on the registration form included with each new PLB and a copy of the programming information label is usually placed on the first page of this product user manual.

The PLB must be registered with a relevant national authority. A part completed registration form is normally packed in with the PLB, were required this should be completed and sent to the relevant national administration at the address detailed on the registration form. If your form does not have a registration address, contact your supplier for further advice.

Annex 1. Contains further important information regarding registration of the PLB.

Registration decal

It is usual to receive confirmation after you have correctly registered the PLB. Some administrations (USA, UK) will send you a registration decal (sticker) which must be attached to the PLB, as shown below.

Registration decal



Typical decal being fitted

WARNING: Do not attempt to fit the decal in any other position, as this could interfere with the battery seal or with the operation of the PLB.

Radio transmitter Licence requirements

The PLB is a radio transmitter; some administrations require that the user holds a valid radio licence to cover its ownership and use. Radio Licensing regulations vary from nation to nation. Your supplier should be able to offer advice regarding any local licensing requirements in your country of residence, or you should contact your national communications licensing authority directly.

Note for U.S. PLB owners, A Radio Licence is not required to own or operate a PLB within the confines of the USA.

Service and Maintenance

Before use

Check the PLB monthly, check the battery expiry date has not expired, run self-test and examine for any signs of damage to the outer case.

After use (not activated)

Clean the outer case with fresh water, wipe dry and examine for any damage. Store in a cool dry place until next needed, self-test the PLB monthly.

⚠ CAUTION: Avoid using chemical solvents to clean the PLB as some solvents can damage the case material.

After activation

The antenna must be re-wound (see below)

⚠ WARNING: The battery will be partly or fully run down and must be replaced.

Inadvertent antenna deployment

If the red anti-tamper seal is defeated, then the antenna will automatically deploy. Re-winding of the antenna and fitting of a new anti-tamper seal can only be done by a McMurdo Ltd authorized service station. For safe transportation, wrap the antenna around the body of the PLB and fix in place with adhesive tape. Do not close or fold the flip-up lid over the top of the deployed antenna as this may damage the antenna.

NOTE: Antenna re-winding will incur a service charge.

⚠ CAUTION: never attempt to re coil the antenna

Method of taping antenna

Service

Battery packs, flip cover and lanyard are user replaceable. The main body of the PLB has no user-serviceable parts. A list of McMurdo Ltd dealers and Service Agents is located on the McMurdo Ltd web site, www.mcmurdo.co.uk.



Spare Parts

Battery pack kit yellow, Class 2, -20 °C	85-763-020A
Battery pack kit black, Class 2, -20 °C	85-763-021A
Replacement belt bag, yellow	85-736-004
Replacement belt bag, black	85-764-007
Max replacement flip cover	85-764-505
MaxG replacement flip cover	85-764-005
MaxG(B) replacement flip cover, black	85-764-007
Replacement lanyard	85-769

Deactivation

The PLB may be completely deactivated by removing the battery pack.

Important: When the battery pack is removed the PLB is no longer fully environmentally sealed and should not be subjected to water.

Battery Pack

The battery pack is easily user replaceable.



Battery packs provide a minimum of 48 hours continuous operation at a minimum temperature of -20 °C (-4 °F), and maximum of +55 °C (+131 °F). The battery may safely be stored in temperatures up to +70 °C (+158 °F).

⚠ CAUTION: this product should only ever be fitted with a -20 °C Class 2 Battery Pack Kit, McMurdo Ltd Part No. 85-763-020A or 85-763-021A.

⚠ CAUTION: Never attempt to recharge the battery Pack

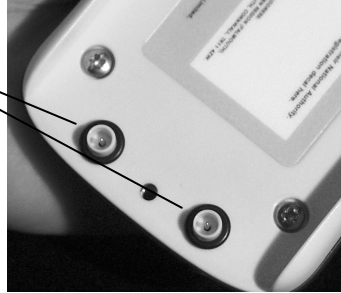
How to assemble your PLB

Fitting the battery

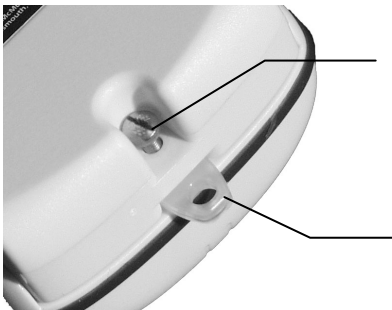
Take care when fitting the battery. It forms part of the sealing system of the PLB, so it is important to follow the instructions exactly. Each replacement battery pack has new 'O' rings which should be replaced when the battery is changed.

1. Fit the two 'O' rings to the battery connectors, as shown below.
2. Clip the battery pack into the PLB, then push the battery pack into place. Take care that the 'O' rings stay in place.

'O' rings fitted to battery connectors



3. Fit the battery screw block (lanyard securing tag). **It is essential that the screw block is fitted, as it forms part of the PLB sealing system.**



Battery retaining screw

Battery screw block must be fitted even if the lanyard is not required. (lanyard removed for clarity)

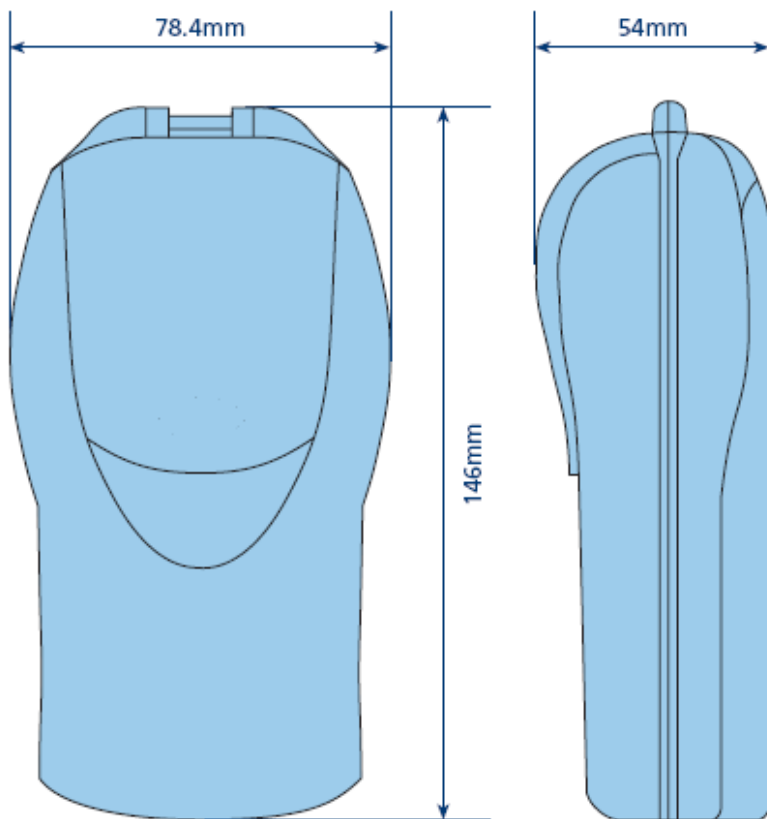
4. Fit the screw to retain the battery pack and tighten until resistance is felt, then turn the screw one 360° additional turn (torque setting 25 cNm).
5. Perform a self-test, (see page 11). If the PLB does not pass the self-test, repeat it once. If the PLB still does not pass the self-test, contact McMurdo Ltd or your dealer for further advice.

Technical Specifications

Part Number: 85-880-001A Fastfind Max PLB retail pack

Part Number: 85-890-001A Fastfind MaxG GPS PLB retail pack

Part Number: 85-890-007A Fastfind MaxG(B) GPS PLB retail pack



Fastfind Max and Fastfind MaxG Specification

General

Approved to COSPAS-SARSAT T.007 Class 2, TAC-184

Internationally type approved, a list of current type approvals is held in the Fastfind Max section of the McMurdo Ltd web site;

www.mcmurdo.co.uk

Complies with relevant clauses	EN 60945 RTCM 76-2002/SC110-STD V1.1
Operating temperature range	-20 °C to +55 °C
Storage temperature range	-30 °C to +70 °C
Operational life, Class 2	48 hours minimum at -20 °C
Battery type, Class 2	11 V lithium iron disulphide
Battery expiry	5 year storage life
Battery change	User replaceable

Electrical

406.037 MHz transmitter

Frequency	406.037 MHz ± 1 kHz
Output power	5 W ± 2 dB
Data encoding	Bi-phase L
Modulation	Phase modulation; 1.1 rads ± 0.1 rads
Transmission time	520 ms $\pm 1\%$ GPS, 440 ms $\pm 1\%$ non-GPS
Repetition period	50 secs ± 2.5 secs

121.5 MHz transmitter

Frequency	121.5 MHz ± 3 kHz
Output power	50 mW ± 3 dB PERP
Transmit duty cycle	100%
Modulation format	3K20A3X
Modulation frequency sweep	1300 Hz to 350 Hz
Modulation duty cycle	41% $\pm 5\%$
Morse code modulation	Letter 'P' (programming option)
Sweep repetition rate	3 Hz ± 1 Hz
Sweep direction	Programmable UP or DOWN

GPS receiver/engine

	(Fastfind MaxG only)
Centre frequency	Band L1 1.57542 GHz
Received signal sensitivity	-175 dBW minimum
Maximum number of satellites tracked	12
Indication of GPS position	Visual

Transmit antenna

Type	Flexible vertical tape monopole
Characteristics	Vertically polarised, omni-directional

Receive antenna

Type	(Fastfind MaxG & MaxG(B) only) Ceramic dielectric patch
Characteristics	RH circular polarised, gain +3 dBi nominal

External interfaces

Programming interface	Infra-red diode
Manual activation	Sealed membrane switch with tamper cover
Self test/Manual deactivation	Sealed membrane switch

Physical characteristics

Category	2, manual activation
Class	2
Weight	300 g
Length	146 mm
Width	78 mm
Buoyancy	Buoyant
Sealing	Waterproof to 5 m immersion
Temporary immersion	10 m
Lanyard	0.75m Sprung Kevlar with belt clip

Communications

Time to first transmission	2 minutes
Time to alert (typical)	LEOSAR 45 minutes GEOSAR 5 minutes

Position accuracy

Fastfind Max	5 Km radius (typical)
Fastfind MaxG & MaxG(B)	62 m radius (typical)

Usage statement

PLBs are intended for use within the maritime, aviation and land environments where permitted by national administrations.

This PLB is not an ELT or an EPIRB and does not meet the regulatory requirements for an ELT or an EPIRB.

This PLB is buoyant, but is not required to float in an upright position.

Declaration of Conformity

mcmurdo

Silver Point
Airport Service Road
Portsmouth PO3 5PB
United Kingdom
Int + 44 (0)23 9200 3900
www.mcmurdo.co.uk

Annex: Conformity Assessment

Standards and other normative documents

These products have been tested to verify compliance with all applicable requirements of the following international instruments, regulations and testing standards:

C/S/T 007 Iss.4 Rev.1 Oct 2006
EN 60945 (2002)
EN 300 008 V1.3.1 (2001-01)

RTTE Conformity Assessment Procedure

The conformity assessment procedure referred to in Article 10 and detailed in Annex IV of the Directive has been followed. All essential radio test suites have been carried out, the assessment procedure has been completed with the involvement of:

Ornicor
Notified Body ID: 0161
Wesly Road, Farnborough, GU14 0LX, United Kingdom

Technical Construction File

The Technical Construction File for these products is held by McMurdo Ltd.

EC DECLARATION OF CONFORMITY

We, McMurdo Limited, declare under our sole responsibility that the following products comply with Council Directive 1999/5/EC on radio equipment and telecommunications terminal equipment.

product designation:

McMurdo FASTFIND
McMurdo FASTFIND PLUS
McMurdo FASTFIND MAX
McMurdo FASTFIND MAXX
transmitting on Cospas-Sarsat channel 406 037 MHz

product type:

Personal Locator Beacon

Intended usage: these products provide for distress alerting via the Cospas-Sarsat system and for Search And Rescue locating, they provide for voluntary participation in the GMDSS within the maritime mobile service and, where national administrations permit, personal emergency alerting within the land mobile service.

These products belong to Class 2.11: Maritime Radio Equipment.

These products have been tested to verify compliance with all the essential requirements of the Directive as detailed at Annex to this declaration.

CE 0191 

These products carry the conformity marking:



Signed: **N.M.J.** Date: **23-11-2009**.

Name: Neil Jordan
Title: Engineering Manager

ATTENTION

The attention of the specifier, purchaser, installer, or user is drawn to special measures and limitations to use, detailed in the product owner manuals, which must be observed when the product is taken into service to maintain compliance with the Directive.



UKAS 9001
Registered in England No. 6923856
Registered Office: Silver Point, Airport Service Road
Portsmouth PO3 5PB, United Kingdom

85-802 Issue 3

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mcmurdo

Annex: Conformity Assessment

Standards and other normative documents

These products have been tested to verify compliance with all applicable requirements of the following international instruments, regulations and testing standards:

C/S/T 007 Iss.4 Rev.1 Oct 2006
EN 60945 (2002)
EN 300 008 V1.3.1 (2001-01)

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Product Warranty

Subject to the provisions set out below McMurdo Ltd warrants that this product will be free of defects in materials and workmanship for a period of five years from the date of purchase.

McMurdo Ltd will not be liable to the buyer under the above warranty:-

- for any defect arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, failure to follow McMurdo Ltd's instructions (whether oral or in writing) including a failure to install properly and/or to use batteries recommended and/or supplied by McMurdo Ltd, misuse or alterations or repair of the product by persons other than McMurdo Ltd or an Approved Service Agent;
- for parts, materials or equipment not manufactured by McMurdo Ltd in respect of which the buyer shall only be entitled to the benefit of any warranty or guarantee given by the manufacturer to McMurdo Ltd;
- for the battery storage life which is specifically excluded from this warranty;
- if the total price for the product has not been paid.

THE LIMITED WARRANTY STATED ABOVE IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

McMurdo Ltd will not be liable for indirect, special, incidental or consequential damages of any kind sustained from any cause. In no event shall McMurdo Ltd be liable for any breach of warranty or other claim in an amount exceeding the purchase price of the PLB. This warranty does not affect any statutory rights of the consumer.

In order to be valid, claims must be made under the above warranty in writing as soon as practicable after discovery of the defect or failure and within the warranty period referred to above. Proof of purchase will be required. The claim should be sent together with the product in question to the address set out below or to an Approved Service Agent.

Following a valid warranty claim McMurdo Ltd shall be entitled to repair or replace the product (or part) in question free of charge, or at McMurdo Ltd's sole discretion to refund to the buyer the price of the product (or a proportional part of the price). McMurdo Ltd shall not be liable to a buyer who is not a consumer for any other loss or damage (whether indirect, special or consequential loss of profit or otherwise) costs, expenses or other claims for compensation which arise out of or in connection with this product. In the case of a consumer McMurdo Ltd shall only be liable where other loss or damage is foreseeable.

Nothing shall limit McMurdo Ltd's liability for death or personal injury caused by its negligence.

This warranty is to be interpreted under English law.

All enquiries relating to this warranty or Approved Service Agents should be sent to:

**McMurdo Ltd, Silver Point, Airport Service Road, Portsmouth, Hampshire, PO3 5PB
UK**

Telephone: Int + 44 (0) 23 9262 3900 Fax: Int + 44 (0) 23 9262 3998

Web: www.mcmurdo.co.uk Email: customerservice@mcmurdo.co.uk

End of Life Statement

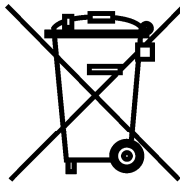
At the end of the PLBs useful life, it is vital that the battery is removed from the main body of the unit to prevent false alarms. False alarms cause expensive disruption to Search and Rescue services and may endanger lives as a consequence. It is also necessary that the PLB and its battery pack be disposed of in a manner that does not present a threat of environmental damage.

Battery Removal

To remove the battery, turn the PLB over and undo the battery retaining screw using a flat-blade screwdriver. Gently prise the battery from the main unit (the lanyard securing lug can be used for leverage). Note that this will also release the 'O' ring seals for the battery terminals, as well as the lanyard securing lug. Cover the terminals of the battery pack with sticky tape to prevent inadvertent short-circuiting.

Disposal

The Waste Electrical and Electronic Equipment (WEEE) Directive aims to minimise any adverse impact of electronic equipment on the environment, both during the product lifetime and when it becomes waste. Within the European Union this legislation is mandated by Directive 2002/96/EC, and there is similar legislation in most other continents. The directive applies to all electronic products such as IT, household appliances, portable electronics etc., and imposes requirements to collect, treat, recover and recycle each product at its end of life. Electronic end-user products must also carry a WEEE label (as below) and recovery and recycling information has to be provided to the recycler.



This PLB product contains traces of lithium in the battery pack. In addition it may contain lead and brominated flame retardants (BFRs), both in the housing material and circuit boards.

In keeping with the directive, McMurdo Ltd strongly recommends that this PLB product and its battery pack be disposed of in a sensible and considerate manner. For example, do not simply discard the product in the domestic waste. Instead take it to a civil recycling facility, or contact McMurdo Ltd for advice.

Annex 1. Registration information

PLBs must be registered with a relevant national authority. Some administrations allow for on line registration or require a completed registration application form to be submitted by letter or FAX.

General information related to PLB registration requirements around the World is published by the Cospas-Sarsat organisation. Some administrations now allow direct registration using the Cospas-Sarsat website online IBIRD registration database. Further information can be found on line here: www.cospas-sarsat.org

A registration form is normally packed with the PLB, if you are not registering the PLB online the form should be completed and sent to the relevant national administration at the address detailed on the form.

Additional registration information by country

Austria

Point of contact: Frequency Office Federal Ministry for Transport
Tel: +43 1 33181621
Fax: +43 1 33181649
Email: ernst.cerny@bmvit.gv.at
Online registration: n/a

Australia

Point of contact: Beacon Registration Section, AusSAR
Tel: +61 2 6279 5766 or 1800 406 406
Fax: +61 2 9332 6323 or 1800 406 329
Email: ausbeacon@amsa.gov.au
Online registration: n/a

Belgium

Point of contact: IBPT
Tel: +32 2 2268856
Fax: +32 2 2268802
Email: bmr@bipt.be
Online registration: n/a

Canada

Point of contact: Canadian PLB registry
Tel: 1-800-727-9414 or 1-613-996-1616
Fax: 1-613-996-3746
Email: beacons@nss.gc.ca
Online registration: <http://beacons.nss.gc.ca>

Finland

Point of contact: The Finnish Communications Regulatory Authority
Tel: +358 9 69661
Fax: +358 9 6966410
Email / www: www.ficora.fi
Online registration: n/a

France**Point of contact: FMCC**

Tel: +33 5 61274636

Fax: +33 5 61274878

Email: fmcc@cnes.fr

Online registration: n/a

Greenland (Denmark)**Point of contact:** Greenland Telecom Administration

Tel: +45 35430333

Fax: +45 35431434

Email: n/a

Online registration: n/a

India**Point of contact: INMCC/ISTRAC/ISRO**

Tel: +91 80 28371857

Fax: +91 80 28371857

Email: inmcc@istrac.org

Online registration: n/a

Ireland**Point of contact:** Maritime Radio Affairs Unit

Tel: +353 1 6782367

Fax: +353 1 6783109

Email: radiosurveyors@transport.ie

Online registration: n/a

Italy**Point of contact: ITMCC**

Tel: +39 080 5341571

Fax: +39 080 5342145

Email: itmcc247@cospas-sarsat-italy.it

Online registration: n/a

Netherlands**Point of contact:** Radio Communications Agency

Tel: +31 50 5877555

Fax: +31 50 5877400

Email: agentschaptelecom@at-ez.nlwww: www.agentschap-telecom.nl

Online registration: n/a

New Zealand**Point of contact:** Rescue Co-ordination Centre New Zealand

Tel: +64 4 577 8033

Fax: +64 4 577 8041

Email: 406registry@maritimenz.govt.nz

Online registration: n/a

Norway**Point of contact:** Post and Telecommunications Authority

Tel: +47 2 2824600

Fax: +47 2 2824890

Email: inger-lise.walter@npt.no

Online registration: n/a

Portugal

Point of contact: Navigation, Transport, Marine inspector

Tel: +351 21 3913529

Fax: +351 21 3979794

Email: n/a

Online registration: n/a

South Africa

Point of contact: SASAR, MRCC Cape Town

Tel: +27 21 9383310

Fax: +27 21 9383319

Email: mrcc.ct@samsa.org.za

Online registration: n/a

Sweden

Point of contact: MRCC Goteborg

Tel: +46 31 699080

Fax: +46 31 648010

Email: n/a

Online registration: n/a

Switzerland

Point of contact: Federal Office of Communications

Tel: +41 32 3275511

Fax: +41 32 3275555

Email: n/a

Online registration: n/a

UK

Point of contact: The EPIRB Registry, The Maritime and Coastguard Agency

Tel: 01326 211569

Fax: 01326 319264

Email: epirb@mcga.gov.uk

Online registration: www.mcga.gov.uk/c4mca/epirb

USA

Point of contact: United States 406 MHz beacon registration database system

Tel: 1-888-212-SAVE (7283)

Fax: (301) 568-8649

Online registration: www.beaconregistration.noaa.gov

New Zealand

Point of contact: Rescue Co-ordination Centre New Zealand

Tel: +64 4 577 8033

Fax: +64 4 577 8041

Email: 406registry@maritimenz.govt.nz

Online registration: n/a

Annex 2. Quick user card detail

Fastfind PLBs mcmurdo (Personal Locator Beacons)

This beacon **MUST** be registered
- registration is a legal requirement

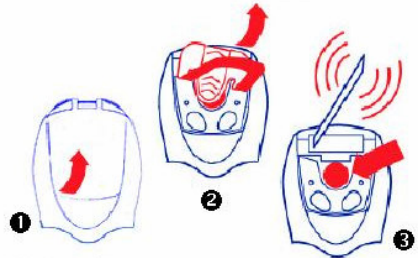
Read the User Manual first
- it might save your life

Test the PLB **BEFORE** you leave
- your life may depend on it

Activate only in an emergency
- false alerts can cost lives

In an emergency:

- Keep the PLB flat with the antenna pointing to the sky
- Place PLB in the open with a clear view of the sky for the GPS (where fitted) to function efficiently
- Do not hold the antenna
- Do not cover the GPS antenna
- Keep the PLB away from large metal objects eg autos
- Do not submerge the antenna ●



- 1) Open the cover
- 2) Tear off the red plastic tab
- 3) Press the red button for 2 seconds

REMEMBER: Even if you are under tree cover without a GPS signal, the orbiting satellites should detect your PLB and raise an alert. It may take longer, but it should still work **IF YOU HAVE TESTED THE PLB AND IT HAS PASSED SELF TEST**

Refer to Fastfind User Guide for full operating instructions and legal statement



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McMurdo

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Fax: +44 (0)23 9262 3998

Email: customerservice@mcmurdo.co.uk

Website: www.mcmurdo.co.uk