

## Contents:

	Page
<i>Safety Alert</i> Model: SA2GN.....	1
PLB Registration.....	2
The COSPAS-SARSAT satellite aided rescue system.....	3
When a distress situation occurs.....	4
In the event of inadvertent Activation.....	4
Beacon test procedure.....	5-6
Helpful operation and information notes.....	7
Instruction for use (Activate).....	8-9
To switch OFF (Deactivate).....	9
Registration contacts.....	10
Product Warranty.....	11
Battery replacement and servicing.....	11
Specifications.....	12

## Owners details

Name:
Address:
Phone:
Hex ID (as printed on beacon)

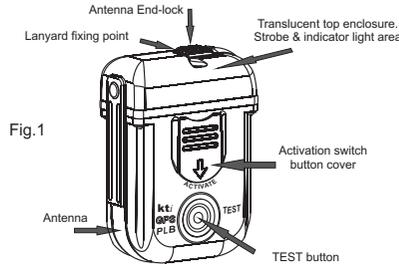
## Safety Alert model: SA2GN

The Safety Alert SA2GN is a compact, self-contained emergency radio transmitter. When activated it will emit a distinctive radio signal on the 406 Mhz international distress frequency and a 121.5MHz homing signal for 24 hours minimum. The SA2GN PLB is waterproof and self-buoyant.

**WARNING:** The SA2GN PLB was not designed, tested or intended for operation whilst in water and should not be confused with a EPIRB which is self-righting in water.

**WARNING:** At all times avoid exposing the PLB to close proximity of high energy electric/magnetic fields.

We recommend the PLB be stowed in carry pouch provided at all times. The carry pouch incorporates a strong loop for attachment to a belt (less than 50mm wide). A lanyard is also supplied which is designed to be attached to the top of the PLB. Please note that the lanyard incorporates a safety-break and should not alone be relied upon for carrying the PLB. SA2GN PLB features (Fig.1).



Page 1

## Beacon Test Procedure

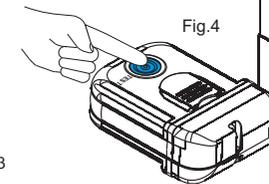
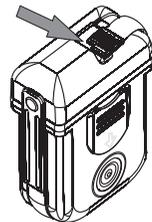
To prevent inadvertent activation under NO circumstances remove RED switch cover during TEST. (Non-emergency operation carries severe penalty.)

Test Beacon testing should be limited to no more than once per month as each test consumes valuable battery power and transmits signals to satellites. Visually inspect the PLB for signs of physical damage and verify the red switch cover is in place over activate button. It is important that the "Replace LiFeS2 Battery" date be checked. For safety tolerances this is at half the nominal shelf life of the battery. Should the switch cover be removed, the battery time expired or the beacon fail subsequent test, return to Kinetic Technology International Pty. Ltd. or its agents for service.

**Beacon test:** (Warning: Do not remove RED switch cover)

**Note - Keep antenna clear of conductive objects and hands during self test.**

1. Release antenna from PLB by sliding tip forward from slot (Fig.3).
2. Place PLB on a flat surface and set antenna vertical (Fig. 4).
3. Press Blue button until Red light illuminates (approx. 1 second) then release. The red light will extinguish during self test (approx. 1 second) before result is shown. A white strobe light will flash then Green light indicates a self test pass. A second illumination of the red light indicates a self test fail. If self test fails when conducted per instructions, the PLB should be removed from service and returned to manufacturer or agent for service.
4. After testing, carefully fold antenna around PLB and slide tip back into slot.



Page 5

## Advice to owners of personal locator beacons (PLBs)

Registration of 406 MHz satellite PLBs with the PLB Registration Section of the 'Australian Maritime Safety Authority' for Australian registration or 'Rescue Co-ordination Centre (RCC) New Zealand' for registration in New Zealand is mandatory because of the global alerting nature of the system.

The information provided in the registration card is used for rescue purposes only.

See the owner registration card for the 'Australian Maritime Safety Authority' for Australian registration or 'Rescue Co-ordination Centre (RCC) New Zealand' for registration in New Zealand contact details on how to register your beacon upon completion of the sales transaction. Before a beacon enters service, it should be registered with the 'Australian Maritime Safety Authority' for Australian registration or 'Rescue Co-ordination Centre (RCC) New Zealand' for registration in New Zealand.

If the beacon is being transferred to a new owner, the current owner needs to inform the 'Australian Maritime Safety Authority' for Australian registration or 'Rescue Co-ordination Centre (RCC) New Zealand' for registration in New Zealand of the name and address of the new owner.

The subsequent owner of the beacon is required to provide the 'Australian Maritime Safety Authority' for Australian registration or 'Rescue Co-ordination Centre (RCC) New Zealand' for registration in New Zealand with the information as shown in the owner registration card.

This obligation transfers to all subsequent owners.

Page 2

## Beacon GPS Test Procedure

The optional GPS test will consume battery power and to ensure maximum battery life the GPS test should not be conducted more than **two times per year**.

The RED cover prevents the PLB from being accidentally activated. It is in the owner's interest to ensure that this cover remains in place to remove any doubt as to whether the beacon has been operated causing reduction of battery life.

GPS test requires unobstructed, clear view of the sky to maximise satellite visibility. Avoid testing near buildings, electrical interference or during heavy precipitation as these may cause test fail.

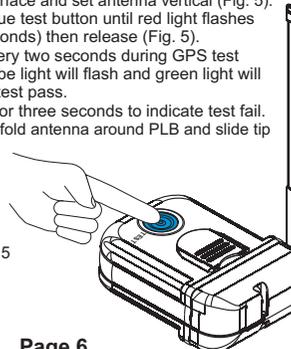
If started too many times the GPS test function will be locked out until the battery is replaced. This is indicated by three slow red flashes when attempting to start the GPS test.

Testing may be terminated at any time by pressing Blue test button until the Red light stops flashing.

**Optional GPS test** (Warning do not remove RED switch cover)

1. Release antenna from PLB by sliding tip forward from slot (Fig.3)
2. Place PLB on a flat surface and set antenna vertical (Fig. 5).
3. Press and hold the blue test button until red light flashes rapidly (approx. 4 seconds) then release (Fig. 5). Red light will flash every two seconds during GPS test (up to 1 minute). Strobe light will flash and green light will illuminate to indicate test pass. Red light illuminates for three seconds to indicate test fail.
4. After testing, carefully fold antenna around PLB and slide tip back into slot.

Fig.5



Page 6

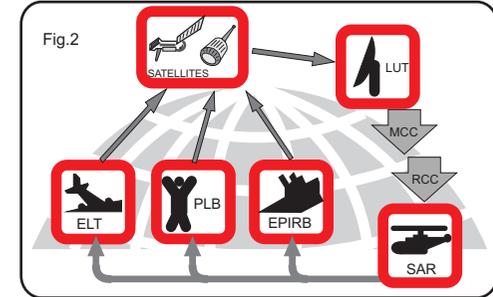
## The COSPAS-SARSAT Satellite aided rescue system

COSPAS-SARSAT is an international (global) search and rescue system that uses satellites to detect and locate 406MHz emergency beacons carried by vessels, aircraft, or individuals.

The system consists of three networks of satellites (LEOSAR, GEOSAR and MEOSAR), ground stations called Local User Terminal (LUT), Mission control centre (MCC) and rescue coordination centres (Fig.2).

When a PLB is activated, the 406MHz signal may be received by a satellite, the signal processed and data with position and digital message then re-transmitted either in real-time or stored. The signal is continuously down loaded until the satellite is in view of a LUT, when the LUT receives satellite data it's directly forwarded to MCC. The Rescue Co-ordination Centre will arrange the search and Rescue using appropriate SAR facilities in the vicinity of the distress location.

The *Safety Alert SA2GN* homing signal (121.5MHz) allows SAR facilities to "home" directly to the signal using radio direction finders.



Page 3

## When a DISTRESS situation occurs

Only operate in a grave and imminent danger situation. (Non-emergency operation carries severe penalty.)

A mariner, aviator or individual in distress has several options to alert authorities when in need of assistance and to help them and Search and Rescue (SAR) Forces to locate the precise distress position.

If two-way, radio or a mobile phone are available, they should be used immediately to contact authorities. If contact cannot be made by two-way radio communications and all other distress procedures fail to summon assistance and there is a grave and imminent danger situation, then the *Safety Alert SA2GN* may be deployed to alert authorities to the emergency and provide an accurate distress position.

Should the PLB be activated other than for a test, we recommend the PLB be removed from service and returned to Kinetic Technology International Pty Ltd. either through supply dealer, our agent or direct, for battery replacement.

## In the event of INADVERTENT ACTIVATION

If the PLB is inadvertently activated;

Press blue TEST button until strobe light stops flashing.

Immediately inform the nearest search and rescue (SAR) authority or the Rescue Co-ordination Centre (RCC) in Australia.

toll free on: 1800 641 792

or Aviation: 1800 815 257

or in New Zealand the Joint Rescue Coordination Centre  
New Zealand (RCCNZ): 0508 472 269 within NZ  
+ 64 4577 8030

Page 4

## Helpful operating and information notes

The *Safety Alert SA2GN* is most effective (i.e. maximum range) when placed in a clear and if possible elevated area. Metal objects or people in the immediate vicinity of the PLB may distort the radiation pattern of the radio signal. It is therefore desirable to have the transmitting beacon a few meters clear of such objects.

**Note:** Do not operate PLB inside an Aircraft, vehicle, buildings, vessel cabin, enclosed areas or under cover/canopy.

The SA2GN is designed and approved to be operated on the ground or above the ground (in situations where placement on the ground is not suitable). To view the test light in bright sunlight, it may be necessary to shade it with your hand.

**Cleaning your PLB if required.** Care should be taken not to remove activation switch cover, damage the aerial or inadvertently activate the beacon when cleaning. Visually inspect the beacon for any physical damage or cracks in enclosure which could allow moisture ingress and cause a malfunction.

Only wipe the PLB with a damp cloth. **Do not use chemicals.**

**Note:** The PLB is fabricated with durable plastic materials. All plastics are vulnerable to highly reactive chemicals. Avoid contact with chemical compounds such as sunscreen, deodorant, cosmetics, perfume, hand creams/soaps, sanitizers or compounds containing animal, vegetable or mineral, fats or oils.

**Photosensitive Seizures:** A very small percentage of people may experience a seizure when exposed to certain visual images, including flashing lights. Even people who have no history of seizures or epilepsy may have an undiagnosed condition that can cause these "photosensitive epileptic seizures" while watching an PLB.

These seizures may have a variety of symptoms, including light-headedness, altered vision, eye or face twitching, jerking or shaking of arms or legs, disorientation, confusion, or momentary loss of awareness. Seizures may also cause loss of consciousness or convulsions that lead to injury from falling down or striking nearby objects. Immediately stop looking at strobe light and consult a doctor if you experience any of these symptoms.

**RF exposure:** Due to transmitted RF power requirements for PLBs, Australian standards recommend where practical to minimise exposure by keeping head more than 20cm from an PLB which has been activated.

Page 7

## Distributor Details



Kinetic Technology International Pty. Ltd.  
1 Kembla street, Cheltenham, 3192  
Victoria, Australia.  
Tel: 61 3 9583 9566  
ABN 50 058 419 695



internet: [www.kti.com.au](http://www.kti.com.au)

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NMG30810B

## Registration contacts

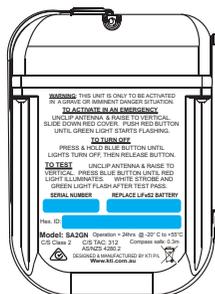
**Australian coded beacons**, address all correspondence to:  
Beacon Registration Section  
Australian Maritime Safety Authority  
GPO Box 2181  
Canberra City ACT 2601  
Australia

Online registration: [www.amsa.gov.au/beacons](http://www.amsa.gov.au/beacons)  
Email: [ausbeacon@amsa.gov.au](mailto:ausbeacon@amsa.gov.au)  
Phone: +61 2 6279 5000  
or Local 1800 406 406 (AEST Business hours)

**New Zealand coded beacons**, address all correspondence to:  
Joint Rescue Coordination Centre New Zealand  
PO Box 30050, Lower Hutt 5040  
Fax: +64 4 577 8041  
Email: [406registry@maritimenz.govt.nz](mailto:406registry@maritimenz.govt.nz)  
Phone: +64 4 577 8042  
Online registration: [www.beacons.org.nz](http://www.beacons.org.nz)

All information subject to change without notice or obligation.

Fig. 11



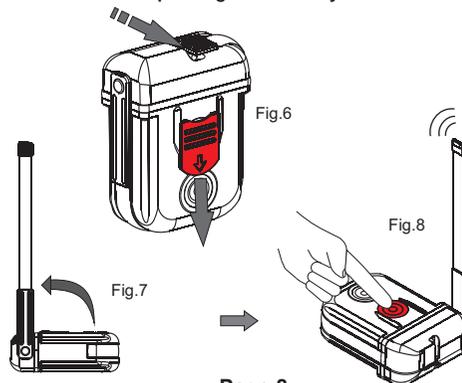
Note: Information regarding the SA2GN test and activation procedures, also the SA2GN unique identification are printed on the back. (Fig.11)

## INSTRUCTIONS FOR USE

The *Safety Alert SA2GN* was designed to be operated on the ground or above the ground.

### To Activate:

1. Slide RED protective cover downwards to access button.
2. Release antenna end-lock by sliding forward and set antenna to vertical position. (Fig. 6 & 7)
3. Press & hold RED Activation button (Fig.8) until Green light starts flashing then release button. (Strobe light will also flash)
4. Place in a clear area with antenna in vertical position (Fig.9) or place above the ground. ie. If held by operator (ensure antenna is in the vertical position Fig.10).
5. Leave beacon operating continuously until rescued.



## PRODUCT WARRANTY

The model SA2GN PLB is covered by manufacturer's parts and labour warranty valid for 10 years from date of manufacture. Accessories are warranted free from manufacturing defects for a period of 12 months; this warranty excludes normal wear and tear. All freight charges are to be borne by the purchaser. In the event of any claim under this Warranty, please arrange the return of the PLB to Kinetic Technology International Pty Ltd. 1 Kembla street, Cheltenham, Victoria, Australia 3192, either direct or through supply dealer, together with your proof of original purchase date. This Warranty does not exclude any conditions and remedies you may have under the Australian Consumer Law (ACL). Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

## Battery replacement and servicing

The *Safety Alert SA2GN* is fitted with special lithium batteries and it is not possible to replace batteries in the field. Battery replacement and servicing of the beacon is carried out by Kinetic Technology International Pty. Ltd. (KTI) or assigned agent. Unless the beacon has been activated, battery replacement should only occur at ten yearly intervals.

**Warning:** The battery replacement period of ten year was evaluated for the storage temperature of 20°C. If storage temperatures are higher than 20°C this would result in reduced battery replacement life. Kinetic Technology International Pty Ltd (KTI) conduct full mechanical and operational testing when replacing the batteries in accordance with specifications.

DO NOT incinerate beacon.  
DO NOT short circuit the battery or cells.

All information subject to change without notice or obligation.

## INSTRUCTIONS FOR USE

Fig.9

On the ground

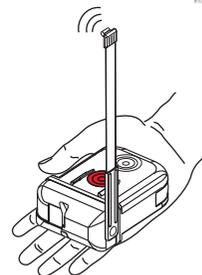
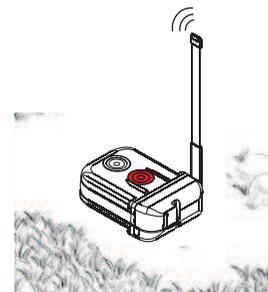


Fig. 10

Held by operator

## To Deactivate (Turn OFF)

1. Press blue TEST button until Strobe light stops flashing.

## SPECIFICATIONS

<b>Frequencies:</b>	406.040 MHz and 121.5 MHz (homing signal).
<b>Approvals:</b>	Australian and New Zealand AS/NZS 4280.2 C/S TAC: 312 (Manual Activation)
<b>COSPAS-SARSAT:</b>	Fully compatible. C/S T.001 Class 2
<b>GPS:</b>	GPS receiver accuracy: 3m (CEP 50). Type receiver: GPS L1 C/A-code, SPS.
<b>Homing signal:</b>	Homing signal Amplitude Modulated, down swept tone.
<b>Activation:</b>	Manual switch with Indicator lights.
<b>Test:</b>	Manual switch with Indicator lights.
<b>Solid-state Strobe:</b>	Greater than 1cd effective intensity.
<b>Transmission Time:</b>	24 hours minimum.
<b>Batteries:</b>	Long-life lithium LiFeS2, Factory replaceable only. Replace battery prior to expiry date shown on PLB. Battery replacement period 10 years.
<b>Antenna:</b>	Flexible marine grade stainless steel, swivelling to maintain vertical aspect.
<b>Buoyant:</b>	Self buoyant (should PLB be dropped in water) <b>Warning:</b> The PLB was not designed, tested or intended for operation whilst in water.
<b>Enclosure:</b>	UV stabilised high impact plastic.
<b>Dimension:</b>	W: 64, D: 31mm, H: 88 mm
<b>Weight:</b>	Gross weight 140 grams approx.
<b>Immersion:</b>	Watertight to a depth of 3 metres for 1hr.
<b>Operating Temperature:</b>	-20° C to +55 °C
<b>Storage Temperature:</b>	-30° C to +70 °C
<b>Compass safe:</b>	30cm
<b>Accessories:</b>	Pouch with belt loop & neck/wrist lanyard.

# Safety Alert

## PLB 406MHz Personal Locator Beacon Model: SA2GN Instruction Manual



COSPAS-SARSAT Satellite compatible  
International Distress Frequencies



Proudly designed and manufactured by:  
Kinetic Technology International Pty. Ltd.  
1 Kembla street, Cheltenham, 3192  
Victoria, Australia.  
internet: [www.kti.com.au](http://www.kti.com.au) e-mail: [info@kti.com.au](mailto:info@kti.com.au)

## NOTES