

# ***TracME***

**PERSONAL LOCATOR BEACON**

**USER INSTRUCTION MANUAL**

**Preliminary  
28/04/2005**

## **WARNING**

### ***TracME* IS NOT A LIFE SAVING DEVICE.**

The intention of this device is to assist a rescue team to locate you in an emergency situation *after* they have been notified of your situation. This device will not automatically instigate a search and rescue, as is the case with an EPIRB.

FCC Part 15.21

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: The manufacturer is not responsible for any radio or TV. interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

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## 1. INTRODUCTION

The *TracME* Personal Locator Beacon (PLB) is a low powered audio response Personal Locator Beacon for use in locating lost or distressed people while participating in general outdoor activities.

The *TracME* system is designed to be an affordable alternative to the satellite based EPIRB emergency beacon system. Due to the high cost of operating and following up false alarms on the EPIRB system, it is not suited to use by the general public. With the EPIRB system, all activations are registered and processed by a central office and must be followed up. This is an expensive process, and with 97% of activations being false alarms, a lot of resources are wasted. The *TracME* system relies on the a person being reported as missing before a search is instigated, thereby minimising the possibility of a false alarm.

The *TracME* is designed to operate on the designated UHF CB or FRS emergency channel(FRS Ch1 – USA, UHF CB Ch5 – Australia), and when activated, it transmits an audio response eg “Mayday Mayday” or “Help, Emergency” or other similar message as is prerecorded into the unit.

After the *TracME* has been activated, the person (lost or distressed) can be quickly and easily found without the need for any specialised direction finding equipment other than a *TracME* antenna and a UHF CB or FRS radio with a Received Signal Strength Indicator(RSSI). Many of the newer UHF CB radios and FRS radios have this type of indicator as standard. A light plane can also be used to initially locate the *TracME* to within a 1 to 2 km radius, even with poor visibility. This information can then be passed on to a ground crew who can then complete the search and rescue operation. The distress message can be understood and interpreted by anyone listening to that radio channel within a range of approx 500\*m/yds. See detailed recommendations for the most efficient search procedure.

## 2. FEATURES

- small and light weight
- operation on the standard UHF CB or FRS frequency band
- can be monitored without the use of specialised equipment
- minimal special equipment required
- suitable for use by the general public
- low cost
- simple operation

### 3. GENERAL SPECIFICATIONS

Operating temperature	-40 to +85 deg C
Storage temperature	-40 to +85 deg C
Transmit frequency	402 to 480mHz
Transmit power	10mW
Transmission type	FM audio (FE3)
Transmitted message	factory recorded, upto 3 sec of audio
Message format	message repeated every 15sec
Duration of operation	once activated, operation time will be approx 7days at 25 deg C
Reuse after deactivation	not possible
Deactivation system	operate the TEST button in a set sequence
Water proof	submersible to 1m (will not operate under water)
Bouyancy	will float.
Indicators	Green LED, red LED. See detailed description.
Weight	45gm
Size	80x43x24mm(3.1"x1.7"x1")

## 4. FUNCTIONAL OUTLINE

A TEST button is accessible on the case of the *TracME*. This can be operated by the owner during the life of the unit to check if the unit is viable. When the TEST button is activated the unit will check the battery voltage and the transmit power. If either of these functions fails the test, the test indicator will flash red. If all tests are OK, then the indicator flash green. When the *TracME* is activated by withdrawing it from its outer case, the operation cycle begins. The operation cycle consists of a transmission period during which the audio message is played twice, then a period when the transmitter is switched off. An example of the sequence:

'Mayday, Mayday' .....15sec silence.....'Mayday, Mayday'.... Repeats indefinitely

When the search and rescue is complete, the beacon can be deactivated as follows:

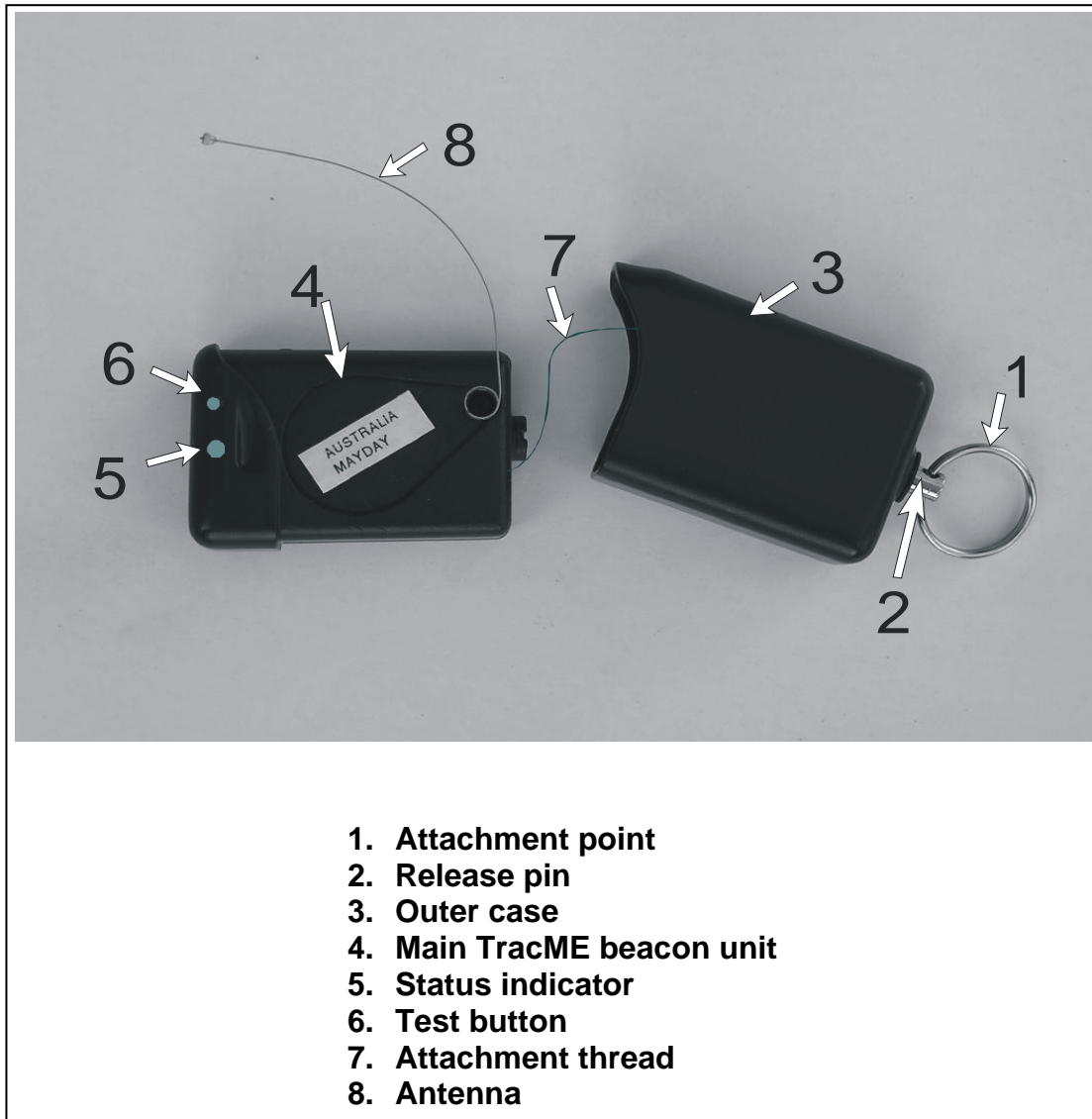
1. press and hold the TEST button until the indicator lights RED
2. release the TEST button after the indicator goes off (2sec)
3. wait for the indicator to come on again and then press and release the TEST button momentarily
4. Successful deactivation is signalled by a flashing red indicator.

The *TracME* is now deactivated, and will run without transmitting any signal until the battery is exhausted. The *TracME* cannot be re-activated as it is designed to be used only once.

In the situation where the TEST button is faulty for some reason (jammed or broken) normal deactivation is not possible. In this situation, cut or break off the antenna from the *TracME* and place the unit into a sealed metal container for disposal. The unit will then operate normally until the battery is exhausted. DO NOT crush or attempt to destroy the *TracME* to deactivate it as it contains a Lithium battery.

The *TracME* contains a Lithium battery. When the *TracME* has expired (after use and deactivation or the UseBy date) it should be disposed of in a manner according to the local regulations applying to this type of battery.

## 5. FEATURES OF THE *TracME* PERSONAL LOCATOR BEACON



## 6. DESCRIPTION OF FEATURES

### 1 - Attachment Point

This is used to attach the *TracME* to a suitable point on your body. It should be a point which is easily accessible by *both* hands in the event of an emergency – remember, in the situation, one or other hand may be incapacitated.

The attachment point should be secure enough so that the *TracME* will not come free during activation. Use a belt loop or attach the supplied lanyard to wear around your neck.

### 2 - Release Pin

This pin is part of the activation mechanism of the *TracME*. Please read the section “Activating the *TracME* Beacon” for a full description.

### 3 - Outer Case

This holds the main *TracME* beacon unit until it is activated.

### 4 - Main *TracME* Beacon Unit

This contains the actual beacon transmitter. As part of the activation process, this part is removed from the Outer Case. Please read the section “Activating the *TracME* Beacon” for a full description.

### 5 – Status Indicator

Shows the result of the Self test and deactivation process as outlined in (6) below. Also, when the *TracME* has been activated, the Status Indicator will flash GREEN each time the *TracME* transmits its distress signal (approx. every 15sec).

### 6 - Test Button

This button has two functions:

- Self test - Test the viability of the *TracME* unit at any stage during its lifetime. *If the TracME is not in its activated state*, a self test procedure can be performed by pressing the test button (using a pointed object such as a pen or paper clip). The status indicator (6) will flash GREEN if the *TracME* passed the self test procedure.

The following tests are performed during the self test procedure:

- Check the battery condition
  - Check the operation of the electronic circuits
  - Check if the transmitter is operational
- Deactivation - *If the TracME is in its activated state*, pressing the Test button in the following sequence will deactivate the *TracME*.
    1. Press and hold the Test button until the Status indicator lights
    2. Release the Test button
    3. When the Status indicator lights again, then quickly press and release the Test button

The Status indicator will flash RED/GREEN continuously until the battery is exhausted. During this time the *TracME* no longer transmits its distress signal.

### **REMEMBER – *TracME* cannot be reused after it has been activated**

Placing *TracME* back into its outer case will not turn it off, it can then only be deactivated using the procedure outlined above. It must then be discarded.

### 7 – Attachment Thread

The function of this thread is to prevent the beacon unit from falling away after the *TracME* has been activated. This is useful in situations where the person activating the *TracME* is rock climbing, in a stream or such like where the *TracME* must remain attached to the person once activated. However, by pulling on the beacon unit, the thread can be broken. This is useful in the situation where the unit must be placed in a suitable position while the person takes shelter – eg place the *TracME* in a tree while the person shelters in a snow cave.

### 8 – Antenna

The spring loaded antenna will pop up automatically when the *TracME* unit is activated.



## 7. ACTIVATING THE *TracME* BEACON

Once activated, the *TracME* Personal Locator Beacon (PLB) will transmit the prerecorded distress message on the UHF radio band (FRS Ch1 – USA, UHF CB Ch5 – Australia). The short message will be transmitted approx. every 15 seconds. The transmitted distress message is generally the words “Help...Emergency” or “Mayday...Mayday”. This will immediately alert anyone listening on the radio to your emergency situation. A search and rescue can then be instigated. The transmitted signal will then act as a homing device, allowing rescuers to quickly find you after activating the *TracME*.

To activate the *TracME*, simply pull the bottom section from its outer case as shown below.

