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C/S T.007 - Issue 4 – Rev. 9

October 2014

ANNEX L**BEACON QUALITY ASSURANCE PLAN**

We, manufacturer of Cospas-Sarsat 406 MHz beacons (Manufacturer name and address)

Standard Communications Pty Ltd

17 Gibbon Road, Winston Hills, NSW 2153, AUSTRALIA

confirm that ALL PRODUCTION UNITS of the following beacon model(s),
Model : MT603G, MT603FG, Pcb. No. 580438, Firmware version OS0021.1.00
(model, hardware part number, firmware part number, software version or part number)

will meet the Cospas-Sarsat specification and technical requirements in a similar manner to the units subjected for type approval testing. To this effect all production units will be subjected to following tests at ambient temperature:

- Digital message
- Bit rate
- Rise and fall times of the modulation waveform
- Modulation Index (positive/negative)
- Output power
- Frequency stability (short, medium)*

Note*: Beacon manufacturer shall provide technical data on the beacon frequency generation to demonstrate that the frequency stability tests at ambient temperature are sufficient for ensuring that each production beacon will exhibit frequency stability performance similar to the beacon submitted for type approval over the complete operating temperature range. If such assurance of adequate performance over the complete operating temperature range cannot be deduced from the technical data provided and the frequency stability test results at ambient temperature, a thermal gradient test shall be performed on all production units.

- Other tests:

Full Circuit level performance testing of pcb assembly to verify voltage, current, frequency etc.
at all critical test points.

Verification using a complete thermal gradient cycle with maximum and minimum temperature extremes
which exceed of those specified for Class 2 operation.

All TCXO devices that are received from the TCXO manufacturer RAKON Ltd. for assembly of MT603G and MT603FG beacons will be inspected to ensure that RAKON Ltd. factory test data sheets associated with those TCXO parts demonstrate the following performances, when tested against temperature gradient test in accordance with C/S T.001:

- Maximum value of residual frequency variation would not exceed 2.0 ppb
- Maximum and minimum values of MTS-slope, at steady temperature conditions, would not exceed ± 0.7 ppb/min
- Maximum and minimum values of MTS-slope, at changing temperature conditions, would not exceed ± 1.7 ppb/min

We confirm that the above tests will be performed as appropriate to ensure that the complete beacon satisfies Cospas-Sarsat requirements, as demonstrated by the test unit submitted for type approval.

We agree to keep the test result sheet of every production beacon for inspection by Cospas-Sarsat, if required, for a minimum of 10 years.

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We confirm that Cospas-Sarsat representative(s) have the right to visit our premises to witness the production and testing process of the above-mentioned beacons. We understand that the cost related to the visit is to be borne by Cospas-Sarsat.

We also accept that, upon official notification of Cospas-Sarsat, we may be required to re-submit a unit of the above beacon model selected by Cospas-Sarsat for the testing of parameters chosen at Cospas-Sarsat discretion at a Cospas-Sarsat accepted test facility selected by the Cospas-Sarsat. We understand that the cost of the testing shall be borne by Cospas-Sarsat.

We understand that the Cospas-Sarsat Type Approval Certificate is subject to revocation should the beacon type for which it was issued, or its modifications, cease to meet the Cospas-Sarsat specifications, or Cospas-Sarsat has determined that this quality assurance plan is not implemented in a satisfactory manner.

12/12/14
Dated:.....


Signed:.....
(Name, Position and Signature of Beacon Manufacturer Representative)

Kevan Wilson-Elswood, Technical Compliance Manger

- END OF ANNEX L -

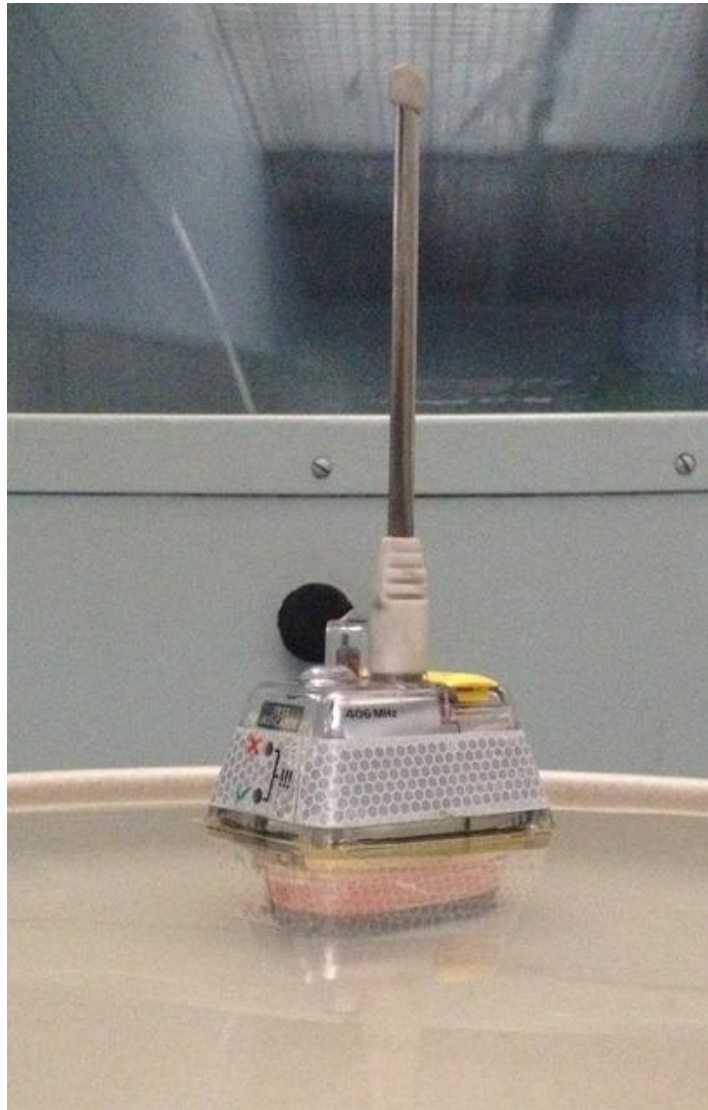
Photos of the beacon in all operational configurations



Picture 1 — “Resting on ground”



Picture 2 — “Held by operator”



Picture 3 — “Floating in water”

**Pre-test discharge data and analysis, table F-E.2
and
List and analysis of operating modes, Table F-E.1**

APPENDIX E TO ANNEX F
BEACON OPERATING CURRENT AND PRE-TEST DISCHARGE CALCULATIONS

Table F-E.1: Beacon Operating Current

Beacon Operating Modes	Mode: Manually selectable or Automatic	Measurement interval, sec	Average Current, mA	Peak Current, mA
406 + 121 +GNSS Search	Manual > Auto	102.5	90	2900
406 + 121 +GNSS Sleep	Manual > Auto	102.5	69	2800
Self-Test	Manual	8.25	221	2800
GNSS Self-Test	Manual	130.2	48	2800
Standby / Off	N/A	20.0	0.001	0.001

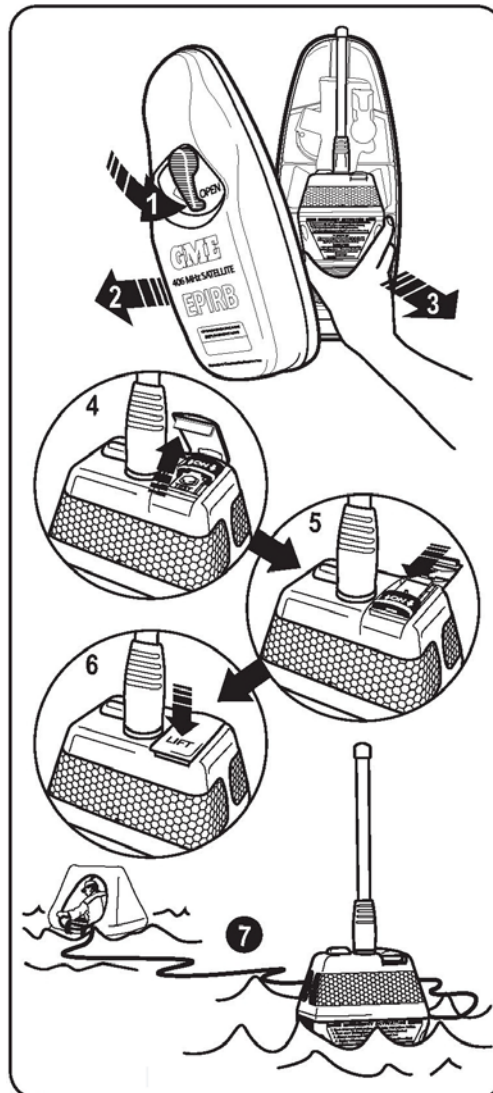
Table F-E.2: Pre-test Battery Discharge Calculations

Characteristic	Designation	Units	Value	Comments
Beacon manufacturers declared maximum allowed cell shelf-life (from date of cell manufacture to date of battery pack installation in the beacon)	T _{CS} or TCS	Years	1	
Declared beacon battery replacement period (from date of installation in the beacon to expiry date marked on the beacon)	T _{BR} or TBR		7	
Battery pack electrical configuration	2 x D Cells series wired			
Cell model and cell chemistry	Saft LO26SX, LiSO ₂			
Nominal cell capacity		A-hrs	7.75	
Nominal battery pack capacity	C _{BN}	A-hrs	7.75	
Annual battery cell capacity loss (self-discharge) due to aging, as specified by cell manufacturer at ambient temperature	L _{SDC}	%	3	
Calculated battery pack capacity loss due to self-discharge: $L_{CBN} = C_{BN} - [C_{BN} * (1 - L_{SDC} / 100)^{TBR + TCS}]$	L _{CBN}	A-hrs	1.68	
Number of self-tests per year	N _{ST}		12	
Average battery current during a self-test	I _{ST}	mA	221	
Maximum duration of a self-test	T _{ST}	sec	8.25	
Calculated battery pack capacity loss due to self-tests during battery replacement period: $L_{ST} = I_{ST} * T_{ST} * T_{BR} * N_{ST} / 3600$	L _{ST}	mA-hrs	42.5	
Maximum Number of GNSS self-tests between battery replacements	N _{GST}		7	
Average battery current during a GNSS self-test of maximum duration	I _{GST}	mA	48	
Maximum duration of a GNSS self-test	T _{GST}	sec	130.2	
Calculated battery pack capacity loss due to GNSS self-tests during battery replacement period: $L_{GST} = I_{GST} * T_{GST} * N_{GST} / 3600$	L _{GST}	mA-hrs	12.2	
Average stand-by battery pack current	I _{SB}	mA	0.001	
Other Capacity Losses	L _{OTH}	mA-hrs		See Note 1
Battery pack capacity loss due to constant operation of circuitry prior to beacon activation: $L_{ISB} = I_{SB} * T_{BR} * 8760$	L _{ISB}	mA-hrs	61.3	
Calculated value of the battery pack pre-test discharge $L_{CDC} = L_{CBN} + 1.65 * (L_{ST} + L_{GST} + L_{ISB}) / 1000 + L_{OTH} / 1000$	L _{CDC}	A-hrs	1.87	

Note 1: The worst case depletion in battery power due to current drawn that cannot be replicated during the lifetime test.

Beacon manuals



MANUAL EPIRB ACTIVATION

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IMPORTANT:

**To ensure the MT603FF/MT603FG is fully functional,
TEST IT AT REGULAR MONTHLY INTERVALS
or prior to an extended journey as described
on page 13 of this manual.**

OWNER DETAILS

Name:

Address:

.....

Phone:

Beacon UIN/15-HEX ID:

Congratulations on purchasing your new Accusat™ MT603FF series EPIRB.

The Accusat™ MT603FF/MT603FG are the most advanced 406 MHz digital satellite beacons available today. GME have developed and approved internationally, a new family of affordable high performance 406 MHz beacons.

A CAUTIONARY NOTE: The satellite EPIRB is the most significant advance in search and rescue technology in many years. However, it is not a substitute for a marine radio. Mariners should not be over-reliant on any single system. Wise, safe mariners plan carefully, ensure that shore contacts know their sail plan, carry a marine radio and the correct range of other safety equipment and operate their craft sensibly to suit conditions at sea.

FEATURES

- Compact , lightweight, easy-to-mount design.
- 121.5 MHz VHF homing beacon to assist in guiding rescuers to your precise location.
- Zero warm-up digital technology.
- Ultra high performance solid state strobe.
- Quick and easy test facility with audio / visual indication.
- COSPAS-SARSAT CLASS 2 (C/S T.001). Internationally approved,, worldwide operation.
- Meets or exceeds the applicable requirements of: AS/NZ 4280.1:2003, IEC 61097-2:2008, RTCM 11000 and C/S T.001/007 standards.
- Includes quick release mounting housing.
- Antenna deploys automatically when the unit is removed from the housing.
- 7 year battery life.
- 6 year warranty.

MT603FG ADDITIONAL FEATURES

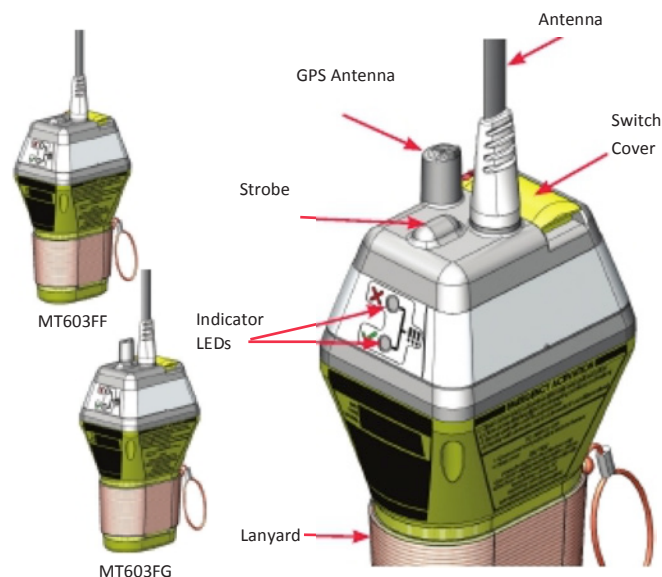
- Integrated 66 channel GPS receiver with top mounted Quad helix antenna for better than 100 metre accuracy.

GENERAL DESCRIPTION

The Accusat™ MT603FF and MT603FG digital Emergency Position Indicating Radio Beacons (EPIRBs) are designed to be used when the safety of your craft and crew is endangered and you have no other means of communication. The EPIRB can save your life and the lives of others on board by leading an air/sea rescue to your precise location. In the past, extensive and lengthy searches have been carried out for missing craft, sometimes to no avail.

Your GME EPIRB is a self contained 406 MHz radio transmitter that emits an internationally recognised distress signal on a frequency monitored by the COSPAS-SARSAT satellite system. The MT603FF and MT603FG EPIRBs contain a unique identity code which can be cross referenced to a database of registered 406 MHz beacons, allowing the beacon's owner and vessel to be immediately identified in the event of an emergency. Both models can be manually activated by the operator in an emergency situation and will also automatically activate when out of it's housing if deployed in water. The special auto-release housing provided with your EPIRB not only provides protection from the environment but will automatically release the EPIRB at a pre-determined water depth. This may prove invaluable in an emergency where it is impossible to manually remove and activate your EPIRB. Additionally, each unit includes an ultra high performance solid state strobe and 121.5MHz VHF homing beacon to assist in guiding rescuers to your precise location.

The MT603FG model also features an integrated 66 channel GPS receiver which automatically acquires a position and relays the latitude and longitude of the beacon along with the personal identifier and emergency signal.



WARNING:

**USE ONLY IN SITUATIONS OF GRAVE
AND IMMINENT DANGER**

MISUSE MAY RESULT IN A SEVERE PENALTY

REGISTRATION AND TRANSFER OF OWNERSHIP

EPIRB PURCHASE OR TRANSFER ADVICE

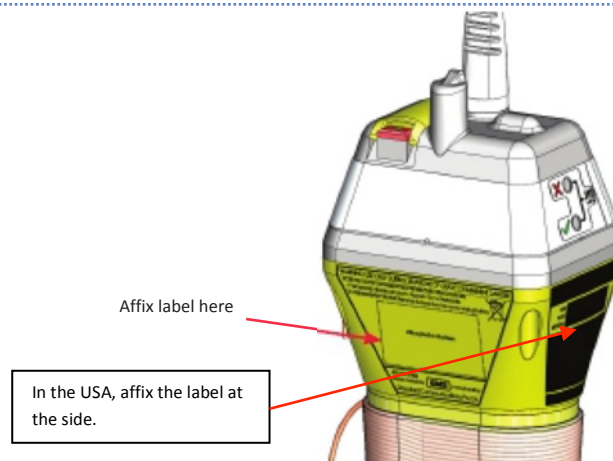
Registration of 406 MHz satellite EPIRBs with the EPIRB registration section of the national authority is mandatory because of the global alerting nature of the COSPAS-SARSAT system. The information provided for registration is used only for search and rescue purposes. If your EPIRB is activated in an emergency, it will transmit its unique identifying code that will give the authorities immediate access to your details when the beacon is detected.

In Australia the preferred method of registration is online at: <http://www.amsa.gov.au/beacons>. Alternatively, fill in the owner registration form upon completion of the sale and mail, fax or email the registration form to the relevant national authority. Registration forms are also available online and if the beacon is to enter service immediately, **complete the registration form and submit to the relevant national authority electronically for immediate registration.**

(Registration details are on page 20 of this manual).

Once your EPIRB has been registered your regulator may send an adhesive label which must be applied to the body of the EPIRB in the location shown below.

NOTE: Registration of your EPIRB cannot be done by GME.



TRANSFERRING OWNERSHIP

If the beacon is being transferred to a new owner, it is the responsibility of the current owner to inform the national authority of the new owner's name and address by email, fax, letter or phone.

The new owner of the beacon is required to provide the national authority with the information shown on the registration form.

This obligation transfers to all subsequent owners.

Failure to register your beacon may result in a fine and could result in unnecessary delays in the rescue process and possible loss of life.

PREVENTING ACCIDENTAL ACTIVATION

The signal from an EPIRB is regarded by authorities as an indication of distress and is given an appropriate response. It is the responsibility of every owner of an EPIRB to ensure that it is not activated unintentionally or in situations that do not justify its use.

Most cases of accidental transmission are the result of poor or inappropriate storage or failure to totally disable an old model EPIRB before disposal.

The need to treat EPIRBs responsibly cannot be too highly emphasized.

The MT603FF/MT603FG beacon will not activate unless the ON button is being held continuously in the 'pressed' state or the beacon has been removed from its housing and immersed in water. Once the beacon has been activated, it will not commence transmitting until approximately 50 seconds after activation, providing a safety period of audible and visual warning. If you hear the beacon beeping while it is being carried or stowed, you may still be able to deactivate it during this time period without actually transmitting a distress signal. If in doubt, report the incident to your local authorities just in case.

To minimize the possibility of accidental activation, EPIRB owners are urged to pay careful attention to the following points:

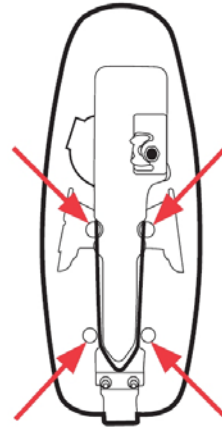
1. **Always** stow the EPIRB in the housing with the switch cover closed.
The switch cover is designed specifically to prevent accidental activation. The retention arms within this model's housing contain special features which inhibit automatic water activation of the EPIRB whilst in the housing. If transporting the EPIRB out of the housing, ensure it remains dry at all times including avoiding contact with wet clothing etc.
2. Avoid stowing the EPIRB where it may lie in water or be in contact with moisture.
3. Do not allow children to interfere with the EPIRB and/or housing.
4. Educate others on board your vessel regarding the consequences of beacon activation.

INSTALLATION

The MT603FF/MT603FG can be mounted upright or horizontally against a panel or bulkhead. When selecting a location, it is important to consider the following:

- Select a location that is readily accessible in an emergency.
- In the case of an emergency auto-release the EPIRB must be able to float to the surface freely without becoming trapped by the sinking vessel or entangled within the rigging etc. Locate the housing externally to the vessel in a clear, open space remembering the craft may list or roll during submersion
- It is recommended to select a location high on the vessel. This will ensure auto-release in the event of a capsized vessel without sinking
- The specifications section contains the 'Compass Safe Distance' for your particular model EPIRB. This is the minimum distance that must be maintained between an inactive stowed beacon and any magnetic navigational device.
- Confirm the selected location allows sufficient clearance to remove the beacon from the housing when required.

- 1) Hold the housing rear cover in place (with the EPIRB removed) and mark the location of the 4 mounting holes.
- 2) Screw the housing to the panel or bulkhead using the stainless steel screws supplied.
- 3) Replace the EPIRB and front cover, verifying that the cover can be freely removed and replaced (See Manual Release and Stowage Instructions)
- 4) Using a sharp implement, mark (x) on the Hydrostatic Release Replacement Date label on the front cover with the replacement month and year. This must be two years from the date of installation

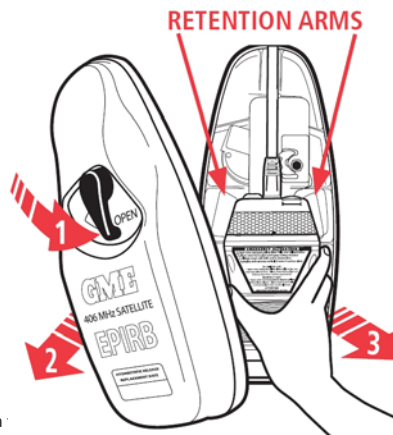


MANUAL RELEASE AND STOWAGE

To remove the EPIRB from the Auto-release housing

NOTE: DO NOT remove the beacon from the housing if it is wet, it may Automatically activate. Ensure the unit is thoroughly dry before removal.

1. With one hand, hold the front cover, whilst using the other hand to rotate the yellow lever anti-clockwise as shown.
2. Without releasing the lever, remove the front cover completely away from the rear cover.
3. Firmly grasp the EPIRB and withdraw it from the housing.



To Stow the EPIRB

1. Orientate the EPIRB
Such that the side displaying the "EMERGENCY ACTIVATION" instructions faces outwards.
This is necessary for the EPIRB to engage with the base of the Auto-release housing.
2. Insert the head of the EPIRB between the base of the EPIRB also engages into the housing supports.
3. Replace the front cover. Locate the metal "tongue" at the bottom of the rear cover into the slot at the bottom of the front cover.
4. Align the front cover with the rear cover and apply firm pressure above the yellow lever to lock into place. If necessary, partially and momentarily rotate the lever anti-clockwise whilst applying pressure to ensure proper engagement.
5. Verify that the front cover is securely retained.

To Stow the EPIRB

1. Hold the EPIRB upright with the antenna towards the front.
2. Insert the EPIRB, antenna first, upwards into the housing.
3. Press the tip of the antenna against the bottom of the three ridges in the antenna slot and slide the EPIRB upwards into the orange collar of the housing so that the antenna folds over.
4. Push the EPIRB base firmly into the housing until the release lever clicks upwards.
5. Connect strap

IN AN EMERGENCY

The EPIRB should only be used where grave and imminent danger threatens your craft and assistance is required.

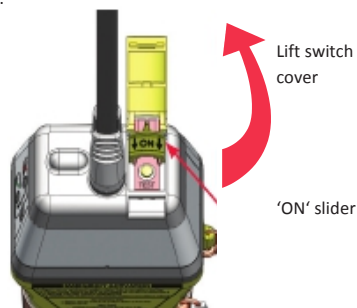
If an emergency occurs, you should first try to use your radio to summon assistance. If contact is made, it may not be necessary to use the beacon. Notify the 'Emergency Facility' that you have a beacon and that you will turn it on upon their instructions.

USING THE BEACON AS A LAST RESORT

If dire emergency threatens life and you have been unable to make radio contact or have lost radio contact, use the beacon. The distress signal transmitted by your beacon identifies you as a craft in distress and will initiate an air/sea search and rescue.

MANUAL ACTIVATION

1. Remove the beacon from the housing.
2. Lift the switch cover (marked 'LIFT').
3. Slide the 'ON' slider switch fully forward in the direction of the arrows. The unit will initially beep once and the strobe will flash, then after seven seconds the flashing strobe and beeps will continue every 3 seconds to indicate the beacon is operating.
4. Close the cover to secure the slider switch in the 'ON' position.

**WATER ACTIVATION**

1. Remove the beacon from the housing.
2. Deploy the beacon in water if sea conditions permit. The unit will initially beep once and the strobe will flash, then after seven seconds the flashing strobe and beeps will continue every 3 seconds to indicate the beacon is operating.

NOTE: The EPIRB has been designed to maintain continuity of operation even when the unit's sensors leave the water for 3 to 4 seconds at a time. Uninterrupted operation is however always best guaranteed by also manually activating the unit

If the beacon is an MT603G it will begin acquiring GPS satellites. When a position is obtained, a musical chime will be heard and the green LED will flash rapidly for a few seconds. The green LED will then flash in sync with the strobe light to confirm a valid GPS position is being used.

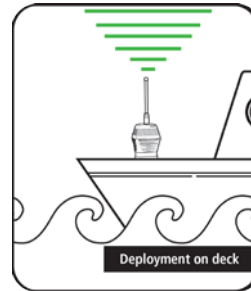
The beacon's first transmission will occur approximately 50 seconds after activation (with or without a valid GPS position).

MANUAL DEPLOYMENT

Unwind the cord and secure the EPIRB to prevent loss. When activated, the MT603FF/MT603FG will transmit the strongest signal to the satellites when:

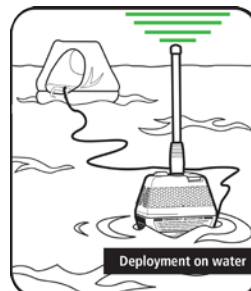
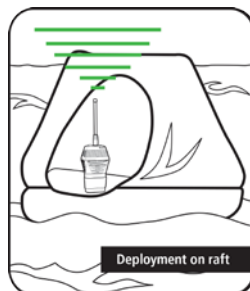
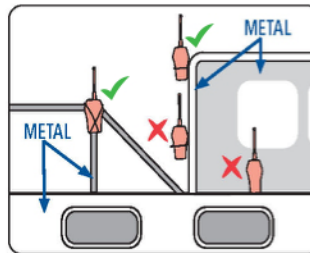
- It is floating in water.
- It is well clear of surrounding and overhanging objects.
- The antenna is vertical.

In extreme sea conditions, you should not float the EPIRB free of the vessel or the life raft if there is the possibility of loss or damage to the EPIRB. However, it is recommended that the EPIRB should ideally be operated clear of any cover or canopy.



By observing the following guidelines satisfactory operation should still be achieved when operating the EPIRB out of water.

- The EPIRB signal will not pass through metal but will pass through fibreglass, wood or fabric with some loss when wet.
- The body of the EPIRB can be attached to metal fittings, but the antenna must be vertical and clear of the metal. You must not attach / lash it to the vessel using the lanyard.
- If the cabin is metallic (such as steel or aluminium), the EPIRB should be placed outside on a clear space with the antenna vertical and clear of surrounding objects.



WARNING: Switching a beacon on and off interferes with the satellites' ability to determine your location. Once activated in an emergency, allow the beacon to operate without interruption until your rescue.

NOTE: Once battery capacity is depleted, normal 406 MHz transmissions will cease along with the strobe and audible beeps. However, special circuitry within the EPIRB will direct any remaining battery capacity towards extended operation of the 121.5 MHz homing transmitter and the green LED will flash every 10 seconds. If after a long period of deployment your beacon appears to cease functioning – leave the beacon switched on – as it is likely that the homing signal is still being transmitted.

TURNING THE EPIRB OFF

After you have been rescued, it is important that you turn the EPIRB off as soon as possible. If you leave the EPIRB running when it is no longer needed it may make it difficult for the satellites to detect other beacons that may be transmitting in the area.

1. Remove beacon from the water
2. Lift the switch cover (marked 'LIFT')
3. Slide the yellow slider switch fully towards the 'OFF' position
4. Close the cover to secure the slider switch
5. **To cancel water activation,** dry the beacon or re-stow in the housing. It may take a number of seconds for the EPIRB to de-activate.
6. Check that both the strobe light and the 'beep' have stopped

IN THE EVENT OF ACCIDENTAL ACTIVATION

If you suspect that an EPIRB has been activated inadvertently, you **MUST** turn it off and report it immediately to your National Authority's Rescue Co-ordination Centre to prevent an unnecessary search.

If at sea, call your local VHF coast station or Rescue Co-ordination Centre.

In international waters contact a Maritime Rescue Co-ordination Centre or Coast Radio Station (CRS) by any available means.

When reporting you should include the following:

1. Your EPIRB's 15 character Unique Identifier Number (UIN) which is marked on the unit body.
2. Date, time and duration of activation
3. Cause of activation
4. Location at time of activation

Search and Rescue authorities will not penalize an EPIRB owner or operator in cases of genuine accidental activation.

Contact numbers for various authorities are provided on page 20 of this manual.

BATTERIES AND MAINTENANCE

The MT603FF/MT603FG are fitted with the very latest in high capacity lithium battery technology. These batteries are able to operate within a temperature range of -20°C to +55°C.

The full operational capability of your beacon may not be available if the batteries fitted have exceeded their replacement date, as shown on the body of the unit. Prior to reaching this date, make arrangements to have your EPIRB returned for service. If the red LED lights when the TEST button is pressed and the EPIRB fails to start, the battery voltage has been depleted.

.....
NOTE: The replacement of batteries due to expiry or usage is not covered by the product's warranty. EPIRB maintenance operations, including battery replacement, require that the beacon be returned to a manufacturer approved service facility.
.....

To ensure reliable operation, the Hydrostatic Release Unit (HRU) mechanism within the Auto-release housing must be replaced within two years of being placed into service. The replacement date is prominently shown on the front of the housing. HRU replacement does not require any particular skills or training and can be completed in situ by the owner in less than 5 minutes simply by following the Instructions in the Float-free Housing Refurbishment Kit available from your retailer. Routinely following these few simple steps will help ensure that your beacon will be operationally ready if called upon.

1. Test the EPIRB at the recommended interval (refer to 'Testing the EPIRB' below)
2. Confirm the SAFETY SEAL has not been broken
3. Check that the batteries have not passed their replacement date
4. Inspect the MT603FF/MT603FG and housing for damage or deterioration
5. Keep the EPIRB clean by wiping over with a damp cloth (warm water and mild detergent are suitable) – **while the unit is in the housing** - then dry.
6. Verify that the unit manually releases correctly from the housing and is securely retained when returned to it.

If there is any doubt as to the EPIRB's serviceability, immediately contact your authorised dealer or service centre for advice.

.....
NOTE: Some installations may be covered by state, national or international carriage requirements. Such legislation may impose additional inspection and maintenance requirements beyond those listed above. Contact the relevant authority for further information.
.....

SAFETY SEAL

The safety seal which covers the tab behind the 'ON' slider is designed to tear if the unit is switched on. A safety seal that is not broken, serves to indicate that the beacon has never been manually activated.

NEVER remove or break the seal unless deploying the EPIRB in an emergency.

If the beacon has been activated for any length of time, the batteries can no longer be guaranteed to have the capacity to operate for the minimum 48 hour period and therefore must be replaced.

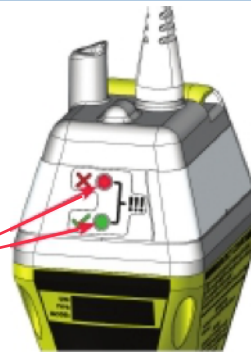
TESTING THE EPIRB

To ensure the MT603FF/MT603FG is fully functional, it is recommended that you test it at regular monthly intervals or prior to an extended journey.

TEST INDICATOR LEDS

During the test the unit will beep. Red and green LEDS on the side of the unit will indicate the test status.

Test indicator LEDS



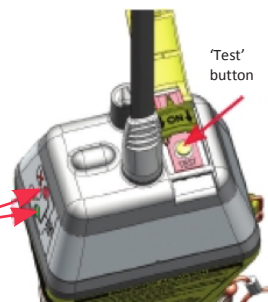
GENERAL SELF TEST (MT603FF/MT603FG)

NOTE 1: The 'General' Self Test function does not test GPS acquisition. The 'GPS Satellite Acquisition Test' is done separately and only applies to the MT603FG model. Refer to pages 15 – 18.

NOTE 2: To minimise interference to the COSPAS/ SARSAT system, testing should be performed during the first 5 minutes of the hour.

IMPORTANT: Do not over test. Testing consumes a small amount of battery power. If both red and green LEDS flash rapidly at the start of the test cycle it means the beacon has been tested well beyond its recommended number of periodic self tests. If this happens you can still continue to perform self tests, but you should limit testing to the recommended monthly intervals or just prior to an extended journey.

Test indicator LEDS



MT603FF MODEL GENERAL SELF TEST**You may test the EPIRB using the following procedure**

1. **Ensuring the unit is dry, remove the EPIRB from the housing.** (Refer to page 8).
2. Keep the antenna well clear of metallic objects during testing.
3. Lift the yellow cover marked 'LIFT'.
4. Hold the EPIRB in position so the two indicator LEDs are clearly visible.
5. Briefly press and release the yellow TEST button (do not hold the test button longer than 2 seconds). The EPIRB will beep once and simultaneously the strobe will flash once indicating that the self test has commenced.
6. A single GREEN LED flash without an audio beep indicated the self test is in progress, checking the internal system, 121.5 MHz and 406 MHz radio transmitter.
7. As the three step test progresses, each test result will be indicated by either a GREEN or RED flash accompanied by a high or low audio beep.
GREEN + High beep, indicating a successful test
RED + Low beep, indicating a failed test

NOTE : If the second LED flash is green, this is an indication that a 121MHz carrier has been emitted and successfully detected by the test routine. If the third LED flash is green, this is an indication that a 406MHz carrier has been emitted and successfully detected by the test routine.

8. At the conclusion of these three individual tests, a summary of results will be indicated by either: A long GREEN flash indicating the MT603FF has successfully passed all tests or a long RED flash indicating a failure of one or more of the tests.

If the EPIRB repeatedly fails the testing process you should contact the GME service department for advice.

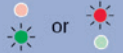
9. Once testing is completed, close the switch cover and press firmly into place until it clicks.
10. Return the EPIRB into the housing.

MT603FG MODEL GENERAL SELF TEST**You may test the EPIRB using the following procedure**

1. **Ensuring the unit is dry, remove the EPIRB from the housing.** (Refer to page 8).
2. Keep the antenna well clear of metallic objects during testing.
3. Lift the yellow cover marked 'LIFT'.
4. Hold the EPIRB in position so the two indicator LEDs are clearly visible.
5. Briefly press and release the yellow TEST button (do not hold the test button longer than 2 seconds). The EPIRB will beep once and simultaneously the strobe will flash once indicating that the self test has commenced.
6. A single GREEN LED flash without an audio beep indicated the self test is in progress, checking the internal system, 121.5 MHz and 406 MHz radio transmitter and GPS functionality.
7. As the four step test progresses, each test result will be indicated by either a GREEN or RED flash accompanied by a high or low audio beep.
GREEN + High beep, indicating a successful test
RED + Low beep, indicating a failed test

NOTE : If the second LED flash is green, this is an indication that a 121MHz carrier has been emitted and successfully detected by the test routine. If the third LED flash is green, this is an indication that a 406MHz carrier has been emitted and successfully detected by the test routine.

8. At the conclusion of these four individual tests, a summary of results will be indicated by either: A long GREEN flash indicating the MT603FG has successfully passed all tests or a long RED flash indicating a failure of one or more of the tests.

GENERAL SELF TEST TABLE		
LEDS	DESCRIPTION	MESSAGE
	Short GREEN flash at the beginning of test.	EPIRB is undergoing a General Self test. (MT603FG only).
	RED and GREEN LEDs flash simultaneously with beeps.	EPIRB is undergoing a General Self test; however, the EPIRB has detected that an excessive number of self tests have been performed. You should limit further self tests to the recommended intervals in order to conserve battery power.
	3 or 4 GREEN or RED flashes with beeps (the number of flashes and beeps are model specific).	Test results – each flash indicates the result of a specific test. • A GREEN flash and a HIGH beep indicates a test has passed. • A RED flash and a LOW beep indicates a test has failed.
	Long GREEN flash or long RED flash (no beeps).	Test Summary • Long GREEN flash indicates the EPIRB has passed all tests and is OK to use. • Long RED flash indicates the EPIRB has failed one or more tests and may require servicing. Contact GME for advice.

If the EPIRB repeatedly fails the testing process you should contact the GME service department for advice.

9. Once testing is completed, close the switch cover and press firmly into place until it clicks.

10. Return the EPIRB into the housing.

GPS SATELLITE ACQUISITION TEST (MT603FG ONLY)

The general self-test procedure is more than sufficient to perform a comprehensive check of your beacon without consuming too much battery capacity. The general self-test also includes a general GPS check to ensure the GPS circuitry is functioning.

However, on occasions, and **no more regularly than once per year**, you may wish to also perform a full GPS satellite acquisition check which includes the operation of the special GPS antenna. This test consumes much more power than a standard self-test, so before you begin, **choose an outside test location with good visibility of the open sky above**. A fast satellite acquisition means a shorter test and less wasted power consumption.

.....
NOTE: Once the GPS test has started, you can terminate the test at any time by briefly pressing the 'TEST' button.
.....

TO TEST THE GPS

1. **Ensuring the unit is dry, remove the EPIRB from the housing.** (Refer to page 8).
2. Ensure you are outside with good visibility of the open sky above.
3. Keep the antenna well clear of metallic objects during testing.
4. Lift the yellow cover marked 'LIFT'.

5. Press and hold the yellow 'Test' button **until the green LED flashes**, then release the button within 2 seconds.

6. The beacon will now attempt to acquire a GPS position. During this time the green LED will flash at one second intervals accompanied by double beeps.

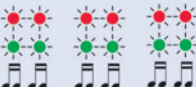
The time taken to acquire a position will vary depending on the number and location of satellites present in your location. Under normal conditions, acquisition should take around 30 to 40 seconds, however it is possible for it to take several minutes. Note that distress signals are not radiated as part of this test.

- a. If a GPS position is successfully acquired, the beacon will emit a 3 tone musical 'chime' and the green LED will flash 8 times. It will then send a brief 'TEST' transmission containing the GPS coordinates. The 'TEST' transmission is safe and will not trigger a search.
 - b. If a GPS position cannot be acquired within 2 minutes, the beacon will emit 8 beeps and the red LED will flash 8 times. This may indicate a fault with the EPIRB's GPS receiver system and you should contact GME service department for advice.
7. Once GPS testing is completed, close the switch cover and press firmly into place until it clicks.
 8. Return the beacon to its housing.

.....
IMPORTANT: DO NOT over-test. GPS testing consumes additional battery power.

To conserve the battery the EPIRB will only allow a total of 7 GPS tests during its lifetime.

- If the available GPS test count is approaching the limit, both red and green LEDs will give a double flash accompanied by a double beep during the GPS acquisition period.
 - If the available GPS test count expires, any further attempts to perform a GPS test will result a single red LED flash accompanied by a low beep and the test will not start. As long as the GPS is tested at the recommended average of once per year, the test count should not expire during the lifetime of the beacon.
-

GPS SATELLITE ACQUISITION TEST TABLE (in order of appearance)		
LEDS	DESCRIPTION	MESSAGE
	GREEN LED flashes once per second with double beep.	EPIRB is undergoing a GPS test.
or		
	Both RED and GREEN LEDs double flash with double beeps.	EPIRB is undergoing a GPS test HOWEVER there are less than 4 GPS tests remaining. You should limit further GPS tests to the recommended intervals.
or		
	One long Red LED flash with low beep.	The GPS test count has expired. No further GPS tests can be performed*.
	8 GREEN flashes and a musical chime.	<u>GPS test PASSED.</u> A GPS positional fix was acquired.
or		
	8 Red flashes and 8 low beeps.	<u>GPS test FAILED.</u> No GPS positional fix was acquired. Please contact GME for advice.

***IMPORTANT:** Although in this situation the EPIRB has reached the limit of the available number of GPS tests, the GPS circuitry will still be powered if the EPIRB is used in an emergency. Alternatively, the EPIRB can be returned to GME for battery replacement (not covered under warranty) and the GPS test counter will be reset.

UNACCOMPANIED TRANSPORTATION

The MT603FF/MT603FG EPIRB contains Lithium batteries. Some transportation or courier companies may have special requirements for transporting devices containing Lithium Batteries. We recommend you retain the original packaging in which you received your EPIRB for transportation.

If returning your MT603FF/MT603FG to your dealer or GME branch office for repair or scheduled battery replacement, you should inform the transportation company beforehand that your beacon contains Lithium batteries.

DO NOT send your MT603FF/MT603FG beacon through the postal system.

DISPOSAL

Special precautions must be taken when finally disposing of your beacon at the end of its useful life. Legislation may determine the specific requirements which apply to you. In the first instance contact your National Authority for advice. See page 20.

The following information may also be helpful:

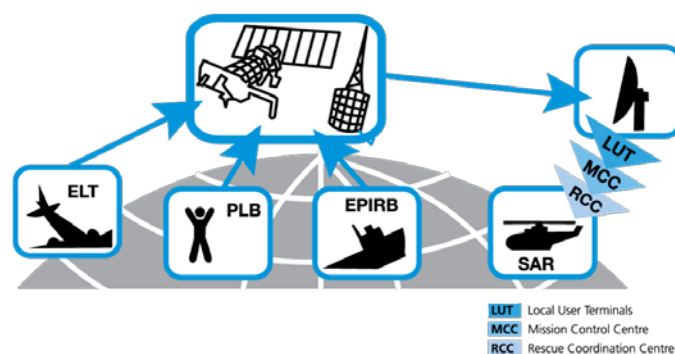
- To permanently disable the beacon, remove the 4 screws retaining the cover, open unit, unplug battery lead, then reseal.
- Lithium batteries are generally not considered to be hazardous waste when fully discharged. Qualified personnel may be able to slowly and safely discharge the cells for you.

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

ABOUT THE COSPAS-SARSAT SYSTEM

The COSPAS-SARSAT system is a complete global search and rescue service using geostationary and polar orbiting satellites. Many countries provide ground facilities known as Local User Terminals (LUTs).

Polar orbiting satellites provide complete, although non-continuous, coverage of the earth (due to the fact that these satellites can only view a portion of the earth at any given time) and can accurately resolve an active beacon's location. Additionally, geostationary satellites can give an immediate alerting function in many regions of the world.



The basic COSPAS-SARSAT concept is illustrated in the figure above.

SPECIFICATIONS

MODES OF OPERATION

Activated:	UHF (406) and VHF (homer) complete with high intensity strobe and audible activation alert.
General Self Test:	Comprehensive internal diagnostics with visual and audible operator feedback. UHF test message (inverted synchronisation compatible with portable beacon testers).
GPS Self Test (MT603FG):	GPS acquisition test with visual and audible operator feedback UHF test message containing GPS co-ordinates.

OPERATION

Activation:	Automatic or Manually by operator
Housing Type:	Automatic or Manual release
Duration:	48 hours minimum
Transmission Delay:	121.5 and 406 MHz distress signals commence ~ 50 seconds after activation.
UHF:	406.040 MHz, 5 W $\pm$ 2 dB, PSK (digital)
Strobe:	20 flashes/minute at greater than 0.75 cd effective intensity
COSPAS-SARSAT:	Certified to C/S T.001 (Class 2) requirements
UHF-Protocol/Data:	Serial number*, Radio call sign or MMSI (all with GPS location – MT603FG only).
Repetition Period:	50 s mean, digitally generated randomization
VHF:	121.5 MHz, 25 mw. Min PERP@25°C

BATTERY

Replacement Period:	6 years – expiry date marked on case and housing
Replacement Method:	Service centre, or factory only (non-user replaceable)
Chemistry:	MT603FF/MT603FG – LiSO ₂ (2.4 g Lithium per cell)
Configuration:	MT603FF/MT603FG – 2 'D' type cells

NOTE: Batteries are not user replaceable. On after emergency activation or reaching the marked expiry date, the EPIRB must be returned to GME or it's authorised service centre for battery replacement.

PHYSICAL

Operating Temperature:	-20°C to +55°C
Storage Temperature:	-30°C to +70°C
EPIRB Weight:	550 g
Compass Safe Distance:	MT603FF/FG – 0.7 m from magnetic navigational device
Dimensions:	385 mm (H) x 158 mm (W) x 110 mm (D) max (stowed in housing)
Materials:	UV stabilized plastic chassis, , Marine grade stainless steel
Performance:	AS/NZS 4280.1, IEC 61097-2, RTCM 11000,, C/S T.001.

OTHER FEATURES

GPS (MT603FG only):	Internal 66 channel high performance receiver with quadrifilar helix antenna.
Retention Lanyard:	Buoyant type approximately 5.5 metres long
Reflector:	SOLAS retro-reflective tape encircling unit above waterline
Solid-state Strobe:	High reliability solid state design exceeds IMO requirements
Antenna:	Flexible self straightening stainless steel design
Housing:	Automatic release at less than 4m immersion or manual release. Retained by four (4) vessel fixing points.

*Standard factory setting, subject to National requirements. Distributor-reprogrammable via optical data interface.

Specifications are subject to change without notice or obligation.

NATIONAL AUTHORITY REGISTRATION DETAILS**AUSTRALIA****24 hour emergency contact****Within Australia: 1800 641 792****International: +61 2 6230 6811****Registration: Online registration is the preferred method**Online registration: www.amsa.gov.au/beacons

Beacon Registration Section,
Australian Maritime Safety Authority
GPO Box 2181, Canberra ACT 2601.
Freecall 1 800 406 406, local only.
International +61 2 6279 5766 business hours only.
Email: ausbeacon@amsa.gov.au

NEW ZEALAND**24 hour emergency contact****Within NZ: 0508 472 269****International: +64 4577 8030****Registration: Online registration is the preferred method**Online registration: www.beacons.org.nz

406 Beacons
Rescue Co-ordination Centre
New Zealand
PO Box: 30050, Lower Hutt 5040
Tel: +64 4577 8042
Fax: +64 4577 8041
Email: 406registry@maritimenz.govt.nz

UNITED STATES OF AMERICA**24 hour emergency contact****Within USA: 1-855-406-8724****Registration: Online registration is the preferred method**Online registration: www.beaconregistration.noaa.gov

NOAA
SARSAT Beacon Registration
NSOF E/SPO53
1315 East West Hwy
Silver Spring, MD 20910-3282
Tel: 1-888-212-7283
Fax: 301-817-4565
Email: beacon.registration@noaa.gov

UNITED KINGDOM**24 hour emergency contact****Within UK: 01326 317 575**

STANDARD COMMUNICATIONS CONTRACT WARRANTY AGAINST DEFECTS

This warranty against defects is given by Standard Communications Pty Ltd ACN 000 346 814 (We, us, our or GME). Our contact details are set out in clause 2.7. This warranty statement only applies to products purchased in Australia. Please contact your local GME distributor for products sold outside of Australia. Local distributor details at www.gme.net.au/export.

1. Consumer guarantees

- 1.1 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.
- 1.2 To the extent we are able; we exclude all other conditions, warranties and obligations which would otherwise be implied.

2. Warranty against defects

- 2.1 This warranty is in addition to and does not limit, exclude or restrict your rights under the Competition and Consumer Act 2010 (Australia) or any other mandatory protection laws that may apply.
- 2.2 We warrant our goods to be free from defects in materials and workmanship for the warranty period (see warranty table) from the date of original sale (or another period we agree to in writing). Subject to our obligations under clause 1.2, we will at our option, either repair or replace goods which we are satisfied are defective. We warrant any replacement parts for the remainder of the period of warranty for the goods into which they are incorporated.
- 2.3 To the extent permitted by law, our sole liability for breach of a condition, warranty or other obligation implied by law is limited
 - (a) In the case of goods we supply, to any one of the following as we decide -
 - (i) The replacement of the goods or the supply of equivalent goods;
 - (ii) The repair of the goods;
 - (iii) The cost of repairing the goods or of acquiring equivalent goods;
 - (b) In the case of services we supply, to any one of the following as we decide
 - (i) The supplying of the services again;
 - (ii) The cost of having the services supplied again.
- 2.4 For repairs outside the warranty period, we warrant our repairs to be free from defects in materials and workmanship for three months from the date of the original repair. We agree to re-repair or replace (at our option) any materials or workmanship which we are satisfied are defective.
- 2.5 We warrant that we will perform services with reasonable care and skill and agree to investigate any complaint regarding our services made in good faith. If we are satisfied that the complaint is justified, and as our sole liability to you under this warranty (to the extent permitted at law), we agree to supply those services again at no extra charge to you.

2.6 To make a warranty claim you must before the end of the applicable warranty period (see warranty table), at your own cost, return the goods you allege are defective, provide written details of the defect, and give us an original or copy of the sales invoice or some other evidence showing details of the transaction.

2.7 Send your claim to:

Standard Communications Pty Ltd.
PO Box 96 Winston Hills, NSW 2153, Australia.
Tel: (02) 8867 6000 Fax: (02) 8867 6199
Email: servadmin@gme.net.au

2.8 If we determine that your goods are defective, we will pay for the cost of returning the repaired or replaced goods to you, and reimburse you for your reasonable expenses of sending your warranty claim to us.

3. What this warranty does not cover

3.1 This warranty will not apply in relation to:

- (a) Goods modified or altered in any way;
- (b) Defects and damage caused by use with non Standard Communications products;
- (c) Repairs performed other than by our authorised representative;
- (d) Defects or damage resulting from misuse, accident, impact or neglect;
- (e) Goods improperly installed or used in a manner contrary to the relevant instruction manual; or
- (f) Goods where the serial number has been removed or made illegal.

4. Warranty period

4.1 We provide the following warranty on GME and Kingray products. No repair or replacement during the warranty period will renew or extend the warranty period past the period from original date of purchase.

PRODUCT TYPE	WARRANTY PERIOD
EPIRBs	6 years

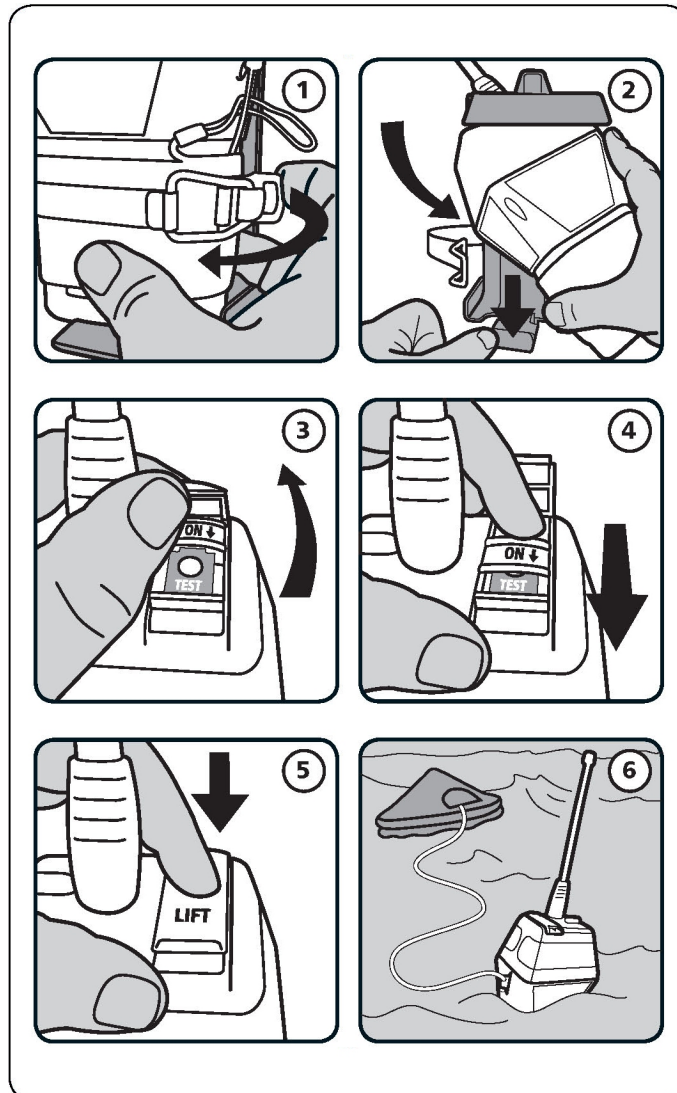
 1300 463 463  gme.net.au

A division of Standard Communications Pty Ltd.
Head Office: PO Box 96, Winston Hills, NSW 2153, Australia.
New Zealand: PO Box 58446 Botany, Auckland, 2163, NZ. T: (09) 274 0955.
All international enquiries email: export@gme.net.au

Part Number: 310698 Drawing Number: 48807-C



EPIRB ACTIVATION



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IMPORTANT:

**To ensure the MT603/MT603G is fully functional,
TEST IT AT REGULAR MONTHLY INTERVALS
or prior to an extended journey as described
on page 13 of this manual.**

OWNER DETAILS

Name:

Address:

.....

Phone:

Beacon UIN/15-HEX ID:

Congratulations on purchasing your new Accusat™ MT603 series EPIRB.

The Accusat™ MT603/MT603G are the most advanced 406 MHz digital satellite beacons available today. GME have developed and approved internationally, a new family of affordable high performance 406 MHz beacons.

.....
A CAUTIONARY NOTE: The satellite EPIRB is the most significant advance in search and rescue technology in many years. However, it is not a substitute for a marine radio. Mariners should not be over-reliant on any single system. Wise, safe mariners plan carefully, ensure that shore contacts know their sail plan, carry a marine radio and the correct range of other safety equipment and operate their craft sensibly to suit conditions at sea.
.....

FEATURES

- Compact, lightweight, easy-to-mount design.
- 121.5 MHz VHF homing beacon to assist in guiding rescuers to your precise location.
- Zero warm-up digital technology.
- Automatically activated on immersion in water (when removed from bracket) or can be manually activated if required.
- Ultra high performance solid state strobe.
- Quick and easy test facility with audio / visual indication.
- COSPAS-SARSAT CLASS 2 (C/S T.001). Internationally approved, worldwide operation.
- Meets or exceeds the applicable requirements of: AS/NZ 4280.1:2017, IEC 61097-2:2008, RTCM 11000 and C/S T.001/007 standards.
- Includes quick release mounting bracket.
- Antenna deploys automatically when the unit is removed from the bracket.
- 6 year battery life.
- 6 year warranty.

MT603G ADDITIONAL FEATURES

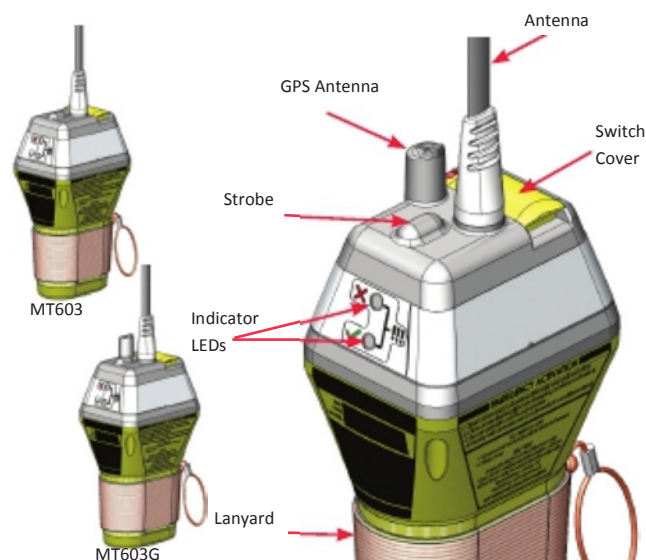
- Integrated 66 channel GPS receiver with top mounted Quad helix antenna for better than 100 metre accuracy.

GENERAL DESCRIPTION

The Accusat™ MT603 and MT603G digital Emergency Position Indicating Radio Beacons (EPIRBs) are designed to be used when the safety of your craft and crew is endangered and you have no other means of communication. The EPIRB can save your life and the lives of others on board by leading an air/sea rescue to your precise location. In the past, extensive and lengthy searches have been carried out for missing craft, sometimes to no avail.

Your GME EPIRB is a self contained 406 MHz radio transmitter that emits an internationally recognised distress signal on a frequency monitored by the COSPAS-SARSAT satellite system. The MT603 and MT603G EPIRBs contain a unique identity code which can be cross referenced to a database of registered 406 MHz beacons, allowing the beacon's owner and vessel to be immediately identified in the event of an emergency. Both models can be manually activated by the operator in an emergency situation and will also automatically activate when out of the bracket if deployed in water. Additionally, each unit includes an ultra high performance solid state strobe and 121.5MHz VHF homing beacon to assist in guiding rescuers to your precise location.

The MT603G model also features an integrated 66 channel GPS receiver which automatically acquires a position and relays the latitude and longitude of the beacon along with the personal identifier and emergency signal.



WARNING:

**USE ONLY IN SITUATIONS OF GRAVE
AND IMMINENT DANGER**

MISUSE MAY RESULT IN A SEVERE PENALTY

REGISTRATION AND TRANSFER OF OWNERSHIP

EPIRB PURCHASE OR TRANSFER ADVICE

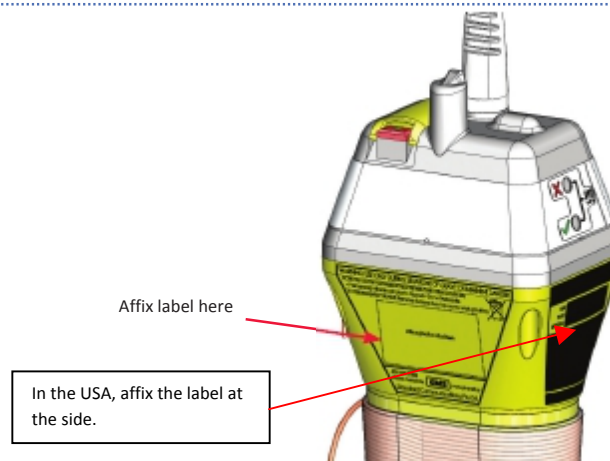
Registration of 406 MHz satellite EPIRBs with the EPIRB registration section of the national authority is mandatory because of the global alerting nature of the COSPAS-SARSAT system. The information provided for registration is used only for search and rescue purposes. If your EPIRB is activated in an emergency, it will transmit its unique identifying code that will give the authorities immediate access to your details when the beacon is detected.

In Australia the preferred method of registration is online at: <http://www.amsa.gov.au/beacons>. Alternatively, fill in the owner registration form upon completion of the sale and mail, fax or email the registration form to the relevant national authority. Registration forms are also available online and if the beacon is to enter service immediately, **complete the registration form and submit to the relevant national authority electronically for immediate registration.**

(Registration details are on page 20 of this manual).

Once your EPIRB has been registered your regulator may send an adhesive label which must be applied to the body of the EPIRB in the location shown below.

NOTE: Registration of your EPIRB cannot be done by GME.



TRANSFERRING OWNERSHIP

If the beacon is being transferred to a new owner, it is the responsibility of the current owner to inform the national authority of the new owner's name and address by email, fax, letter or phone.

The new owner of the beacon is required to provide the national authority with the information shown on the registration form.

This obligation transfers to all subsequent owners.

Failure to register your beacon may result in a fine and could result in unnecessary delays in the rescue process and possible loss of life.

PREVENTING ACCIDENTAL ACTIVATION

The signal from an EPIRB is regarded by authorities as an indication of distress and is given an appropriate response. It is the responsibility of every owner of an EPIRB to ensure that it is not activated unintentionally or in situations that do not justify its use.

Most cases of accidental transmission are the result of poor or inappropriate storage or failure to totally disable an old model EPIRB before disposal.

The need to treat EPIRBs responsibly cannot be too highly emphasized.

The MT603/MT603G beacon will not activate unless the ON button is being held continuously in the 'pressed' state or the beacon has been removed from its bracket and immersed in water. Once the beacon has been activated, it will not commence transmitting until approximately 50 seconds after activation, providing a safety period of audible and visual warning. If you hear the beacon beeping while it is being carried or stowed, you may still be able to deactivate it during this time period without actually transmitting a distress signal. If in doubt, report the incident to your local authorities just in case.

To minimize the possibility of accidental activation, EPIRB owners are urged to pay careful attention to the following points:

1. **Always** stow the EPIRB in the mounting bracket with the switch cover closed.
The switch cover is designed specifically to prevent accidental activation. The yellow collar with this model's bracket contains special features which inhibit automatic water activation of the EPIRB whilst in the bracket. If transporting the EPIRB out of the bracket, ensure it remains dry at all times including avoiding contact with wet clothing etc.
2. Avoid stowing the EPIRB where it may lie in water or be in contact with moisture.
3. Do not allow children to interfere with the EPIRB.
4. Educate others on board your vessel regarding the consequences of beacon activation.

INSTALLATION

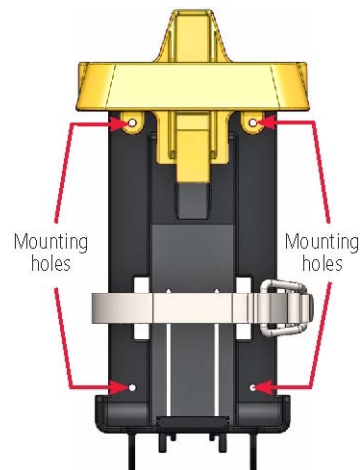
The MT603/MT603G can be mounted upright or horizontally against a panel or bulkhead. When selecting a location, consider the following:

- Select a location that is readily accessible in an emergency.
- Ensure the unit is protected against the environment. Avoid locations where it will be subject to water spray or continuous sunlight.
- Avoid mounting the EPIRB where it will be subjected to continuous direct sunlight. This could cause the beacon's internal temperature to exceed the maximum storage temperature of +70°C. Long term stowage under these conditions could result in reduced battery life, poor performance or degradation of the plastics due to excessive UV light.
- Mount the unit in a location where it will be safe from physical damage.
- The specifications section contains the 'Compass Safe Distance' for your particular model EPIRB. This is the minimum distance that must be maintained between an inactive stowed beacon and any magnetic navigational device.
- Confirm the selected location allows sufficient clearance to remove the beacon from the bracket when required.

Hold the mounting bracket in place (with the EPIRB removed) and mark the location of the mounting holes. Screw the bracket to the panel or bulkhead using the stainless steel screws supplied.

NOTE: The locations of the mounting holes for the mounting bracket are identical to those used on the earlier MT400 series EPIRBs.

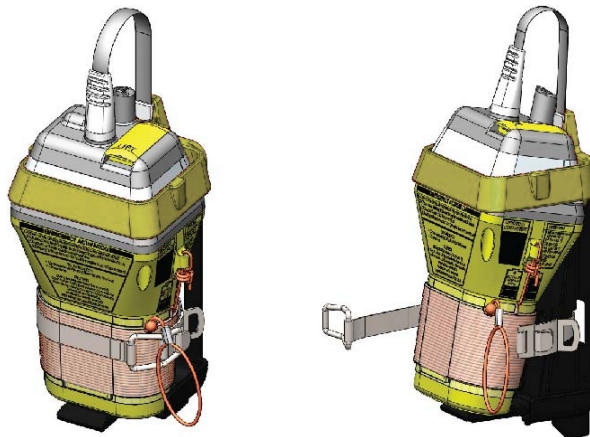
Once the bracket is fixed in place, fit the emergency beacon to the bracket.



BRACKET RELEASE AND STOWAGE

To remove the EPIRB

1. Release metal strap by pulling clasp forward.
2. With one hand, press down on the tab at the base of the bracket.
3. Grasp the EPIRB with the other hand and pull it outwards and downwards.
4. The antenna will release automatically and spring to the upright position.



To Stow the EPIRB

1. Hold the EPIRB upright with the antenna towards the front.
2. Insert the EPIRB, antenna first, upwards into the bracket.
3. Press the tip of the antenna against the bottom of the three ridges in the antenna slot and slide the EPIRB upwards into the orange collar of the bracket so that the antenna folds over.
4. Push the EPIRB base firmly into the bracket until the release lever clicks upwards.
5. Connect strap

IN AN EMERGENCY

The EPIRB should only be used where grave and imminent danger threatens your craft and assistance is required.

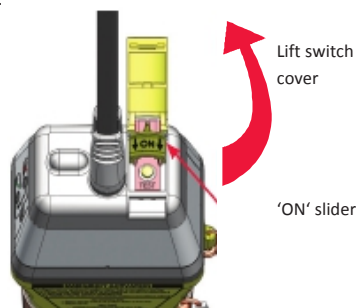
If an emergency occurs, you should first try to use your radio to summon assistance. If contact is made, it may not be necessary to use the beacon. Notify the 'Emergency Facility' that you have a beacon and that you will turn it on upon their instructions.

USING THE BEACON AS A LAST RESORT

If dire emergency threatens life and you have been unable to make radio contact or have lost radio contact, use the beacon. The distress signal transmitted by your beacon identifies you as a craft in distress and will initiate an air/sea search and rescue.

MANUAL ACTIVATION

1. Remove the beacon from the bracket.
2. Lift the switch cover (marked 'LIFT').
3. Slide the 'ON' slider switch fully forward in the direction of the arrows. The unit will initially beep once and the strobe will flash, then after seven seconds the flashing strobe and beeps will continue every 3 seconds to indicate the beacon is operating.
4. Close the cover to secure the slider switch in the 'ON' position.

**WATER ACTIVATION**

1. Remove the beacon from the bracket.
2. Deploy the beacon in water if sea conditions permit. The unit will initially beep once and the strobe will flash, then after seven seconds the flashing strobe and beeps will continue every 3 seconds to indicate the beacon is operating.

NOTE: The EPIRB has been designed to maintain continuity of operation even when the unit's sensors leave the water for 3 to 4 seconds at a time. Uninterrupted operation is however always best guaranteed by also manually activating the unit

If the beacon is an MT603G it will begin acquiring GPS satellites. When a position is obtained, a musical chime will be heard and the green LED will flash rapidly for a few seconds. The green LED will then flash in sync with the strobe light to confirm a valid GPS position is being used.

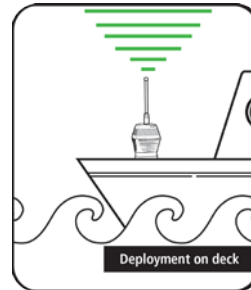
The beacon's first transmission will occur approximately 50 seconds after activation (with or without a valid GPS position).

MANUAL DEPLOYMENT

Unwind the cord and secure the EPIRB to prevent loss. When activated, the MT603/MT603G will transmit the strongest signal to the satellites when:

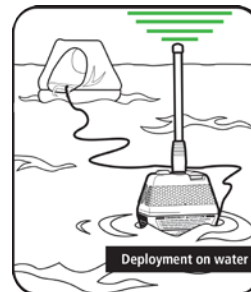
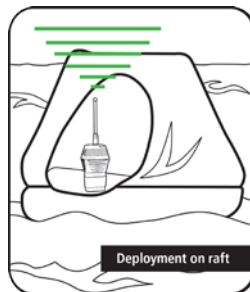
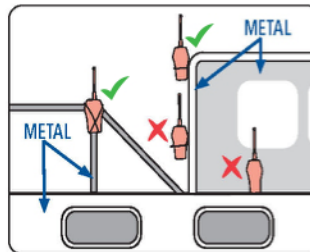
- It is floating in water.
- It is well clear of surrounding and overhanging objects.
- The antenna is vertical.

In extreme sea conditions, you should not float the EPIRB free of the vessel or the life raft if there is the possibility of loss or damage to the EPIRB. However, it is recommended that the EPIRB should ideally be operated clear of any cover or canopy.



By observing the following guidelines satisfactory operation should still be achieved when operating the EPIRB out of water.

- The EPIRB signal will not pass through metal but will pass through fibreglass, wood or fabric with some loss when wet.
- The body of the EPIRB can be attached to metal fittings, but the antenna must be vertical and clear of the metal. You must not attach / lash it to the vessel using the lanyard.
- If the cabin is metallic (such as steel or aluminium), the EPIRB should be placed outside on a clear space with the antenna vertical and clear of surrounding objects.



WARNING: Switching a beacon on and off interferes with the satellites' ability to determine your location. Once activated in an emergency, allow the beacon to operate without interruption until your rescue.

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NOTE: Once battery capacity is depleted, normal 406 MHz transmissions will cease along with the strobe and audible beeps. However, special circuitry within the EPIRB will direct any remaining battery capacity towards extended operation of the 121.5 MHz homing transmitter and the green LED will flash every 10 seconds. If after a long period of deployment your beacon appears to cease functioning – leave the beacon switched on – as it is likely that the homing signal is still being transmitted.

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TURNING THE EPIRB OFF

After you have been rescued, it is important that you turn the EPIRB off as soon

1. Remove beacon from the water
2. Lift the switch cover (marked 'LIFT')
3. Slide the yellow slider switch fully towards the 'OFF' position
4. Close the cover to secure the slider switch
5. **To cancel water activation,** dry the beacon or re-stow in the bracket. It may take a number of seconds for the EPIRB to de-activate.
6. Check that both the strobe light and the 'beep' have stopped

IN THE EVENT OF ACCIDENTAL ACTIVATION

If you suspect that an EPIRB has been activated inadvertently, you **MUST** turn it off and report it immediately to your National Authority's Rescue Co-ordination Centre to prevent an unnecessary search.

If at sea, call your local VHF coast station or Rescue Co-ordination Centre.

In international waters contact a Maritime Rescue Co-ordination Centre or Coast Radio Station (CRS) by any available means.

When reporting you should include the following:

1. Your EPIRB's 15 character Unique Identifier Number (UIN) which is marked on the unit body.
2. Date, time and duration of activation
3. Cause of activation
4. Location at time of activation

Search and Rescue authorities will not penalize an EPIRB owner or operator in cases of genuine accidental activation.

Contact numbers for various authorities are provided on page 20 of this manual.

BATTERIES AND MAINTENANCE

The MT603/MT603G is fitted with the very latest in high capacity lithium battery technology. These batteries are able to operate within a temperature range of -20°C to +55°C.

The full operational capability of your beacon may not be available if the batteries fitted have exceeded their replacement date, as shown on the body of the unit. Prior to reaching this date, make arrangements to have your EPIRB returned for service.

If the red LED lights when the TEST button is pressed and the EPIRB fails to start, the battery voltage has been depleted.

NOTE: The replacement of batteries due to expiry or usage is not covered by the product's warranty. EPIRB maintenance operations, including battery replacement, require that the beacon be returned to a manufacturer approved service facility. Although the MT603/MT603G is otherwise maintenance free, routinely following these few simple steps will help ensure that your beacon will be operationally ready if called upon.

1. Test the EPIRB at the recommended interval (refer to 'Testing the EPIRB' below)
2. Confirm the SAFETY SEAL has not been broken
3. Check that the batteries have not passed their replacement date
4. Inspect the MT603/MT603G and bracket for damage or deterioration
5. Keep the unit clean by wiping over with a damp cloth (warm water and mild detergent are suitable) – **while the unit is in the bracket** - then dry.
6. Verify that the unit releases correctly from the bracket and is securely retained when returned to it.

If there is any doubt as to the EPIRB's serviceability, immediately contact your authorised dealer or service centre for advice.

NOTE: Some installations may be covered by state, national or international carriage requirements. Such legislation may impose additional inspection and maintenance requirements beyond those listed above. Contact the relevant authority for further information.

SAFETY SEAL

The safety seal which covers the tab behind the 'ON' slider is designed to tear if the unit is switched on. A safety seal that is not broken, serves to indicate that the beacon has never been manually activated.

NEVER remove or break the seal unless deploying the EPIRB in an emergency.

If the beacon has been activated for any length of time, the batteries can no longer be guaranteed to have the capacity to operate for the minimum 48 hour period and therefore must be replaced.

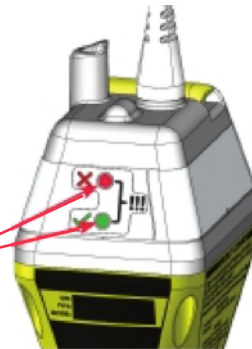
TESTING THE EPIRB

To ensure the MT603/MT603G is fully functional, it is recommended that you test it at regular monthly intervals or prior to an extended journey.

TEST INDICATOR LEDS

During the test the unit will beep. Red and green LEDs on the side of the unit will indicate the test status.

Test indicator LEDs



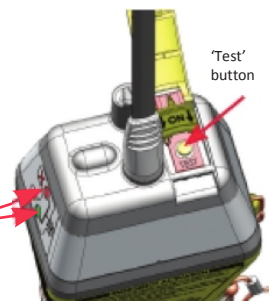
GENERAL SELF TEST (MT603/MT603G)

NOTE 1: The 'General' Self Test function does not test GPS acquisition. The 'GPS Satellite Acquisition Test' is done separately and only applies to the MT603G model. Refer to pages 14 – 17.

NOTE 2: To minimise interference to the COSPAS/ SARSAT system, testing should be performed during the first 5 minutes of the hour.

IMPORTANT: Do not over test. Testing consumes a small amount of battery power. If both red and green LEDs flash rapidly at the start of the test cycle it means the beacon has been tested well beyond its recommended number of periodic self tests. If this happens you can still continue to perform self tests, but you should limit testing to the recommended monthly intervals or just prior to an extended journey.

Test indicator LEDs



MT603 MODEL GENERAL SELF TEST**You may test the EPIRB using the following procedure**

1. **Ensuring the unit is dry, remove the EPIRB from the bracket.** (Refer to page 8).
2. Keep the antenna well clear of metallic objects during testing.
3. Lift the yellow cover marked 'LIFT'.
4. Hold the EPIRB in position so the two test indicator LEDs are clearly visible.
5. Briefly press and release the yellow TEST button (do not hold the test button longer than 2 seconds). The EPIRB will beep once and simultaneously the strobe will flash once indicating that the self test has commenced.
6. A single GREEN LED flash without an audio beep indicated the self test is in progress, checking the internal system, 121.5 MHz and 406 MHz radio transmitter.
7. As the three step test progresses, each test result will be indicated by either a GREEN or RED flash accompanied by a high or low audio beep.
GREEN + High beep, indicating a successful test
RED + Low beep, indicating a failed test

NOTE : If the second LED flash is green, this is an indication that a 121MHz carrier has been emitted and successfully detected by the test routine. If the third LED flash is green, this is an indication that a 406MHz carrier has been emitted and successfully detected by the test routine.

8. At the conclusion of these three individual tests, a summary of results will be indicated by either: A long GREEN flash indicating the MT603FF has successfully passed all tests or a long RED flash indicating a failure of one or more of the tests.

If the EPIRB repeatedly fails the testing process you should contact the GME service department for advice.

9. Once testing is completed, close the switch cover and press firmly into place until it clicks.
10. Return the EPIRB into the bracket.

MT603G MODEL GENERAL SELF TEST**You may test the EPIRB using the following procedure**

1. **Ensuring the unit is dry, remove the EPIRB from the bracket.** (Refer to page 8).
2. Keep the antenna well clear of metallic objects during testing.
3. Lift the yellow cover marked 'LIFT'.
4. Hold the EPIRB in position so the two test indicator LEDs are clearly visible.
5. Briefly press and release the yellow TEST button (do not hold the test button longer than 2 seconds). The EPIRB will beep once and simultaneously the strobe will flash once indicating that the self test has commenced.
6. A single GREEN LED flash without an audio beep indicated the self test is in progress, checking the internal system, 121.5 MHz and 406 MHz radio transmitter and GPS functionality.
7. As the four step test progresses, each test result will be indicated by either a GREEN or RED flash accompanied by a high or low audio beep.
GREEN + High beep, indicating a successful test
RED + Low beep, indicating a failed test

NOTE : If the second LED flash is green, this is an indication that a 121MHz carrier has been emitted and successfully detected by the test routine. If the third LED flash is green, this is an indication that a 406MHz carrier has been emitted and successfully detected by the test routine.

8. At the conclusion of these four individual tests, a summary of results will be indicated by either: A long GREEN flash indicating the MT603FG has successfully passed all tests or a long RED flash indicating a failure of one or more of the tests.