BATTERY

Replacement Period:	Prior to expiry date marked on case.
Replacement Method:	Service centre, or factory only (non-user replaceable).
Chemistry:	LiMnO$_2$(0.49 g Lithium per cell)
Configuration:	5 parallel packs each of 2 series cells.

PHYSICAL

Operating:	-20°C to +55°C.
Storage:	-30°C to +70°C.
Weight:	555 g (plus 98 g for bracket).
Compass Safe Distance:	0.7m (incl mounting bracket) from magnetic navigational device when inactive.
Dimensions:	260 mm (H) x 102 mm (W) x 83 mm (D) max. when stowed in bracket.
Materials:	UV stabilized plastic chassis.
Performance:	IEC 61097; IEC 60945; AS/NZS 4280.1; ETSI EN 300 066.
Transport Class:	Exempt from UN3091
Patent Number:	GB2420058, other patents appiled for.

OTHER FEATURES

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.
Bracket:	Quick release mechanism (manual). Retained by four (4) vessel fixing points.

Specifications are subject to change without notice or obligation.

GME SIX (6) YEAR WARRANTY

GME limit this warranty to the original purchaser of the equipment.

GME warrant this product to be free from defects in material and workmanship for a period of 6 years from the date of purchase from the authorised retailer.

Replacement of batteries due to expiry or usage is excluded from this Warranty.

Should the product require servicing during this period, all labour and parts used to effect repairs will be supplied free of charge. GME reserve the right to determine whether damage has been occasioned by accident, misuse or improper installation, whereby the Warranty could be void.

In the event of a defect occurring during the Warranty period, the original purchaser may return the defective unit along with suitable proof of purchase (i.e. receipt, credit card slip etc.) and a full description of the defect to the retailer from whom the unit was purchased. The retailer will forward the unit to an authorised GME Service Depot in your State.

All freight charges incurred for transportation by the retailer or GME are the purchasers' responsibility.

NATIONAL AUTHORITY DETAILS

Australia
24 hour Emergency Contact
Phone: 1 800 641 792

Registration
Beacon Registration Section, AusSAR
Australian Maritime Safety Authority
GPO Box 2181, Canberra ACT 2601
Fax: +61 (0)2 9332 6323
Email: ausbeacon@amsa.gov.au
Ph: Freecall* 1800 406 406 (Australia only)
+61 (0)2 6279 5766 (In Business hours local or international)

*Calls from mobile attracts a connection charge.

New Zealand
24 hour Emergency Contact
Phone: +64 4 577 8030

Registration
Rescue Co-ordination Centre New Zealand
PO Box: 30050, Lower Hutt 6009
Fax: +64 4 577 8041
Email: 406registry@maritimenz.govt.nz
Phone: +64 4 577 8033

NATIONAL DISTRIBUTOR DETAILS

GME

9 319493 177801

ACCUSAT™

ISO 9001 SGS

Standard Communications PTY LTD.

HEAD OFFICE: Locked Bag 2086, North Ryde, N.S.W. 1670, Australia.
Tel: +61 (0)2 9844 6666 **Fax:** +61 (0)2 9844 6600

INTERNATIONAL ENQUIRIES
International enquiries should be direccted to: export@gme.net.au

www.gme.net.au

P/N: 310424 Dwg No: 44212-1

GME

ACCUSAT™

MT403

MANUAL & WATER ACTIVATION

MT403G

GPS VERSION
MANUAL & WATER ACTIVATION

406 MHz Homer/Strobe EPIRB

EMERGENCY POSITION INDICATING RADIO BEACON

Patent Number: GB2420058

INSTRUCTION MANUAL

OWNER DETAILS

Name:

Address:

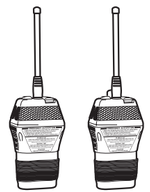
Phone:

Beacon UIN/15-HEX ID:

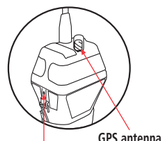
Congratulations on purchasing your new Accusat™ MT403 series EPIRB. The Accusat™ MT403 and MT403G are the most advanced 406 MHz digital satellite beacons available today. Using new digital frequency generation technology, GME have developed and approved world wide, a new family of affordable high performance 406 MHz beacons.

A CAUTIONARY NOTE: The satellite EPIRB is the most significant advance in search and rescue technology in many years. 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 right range of other safety equipment and operate their craft sensibly to suit conditions at sea.

GENERAL DESCRIPTION



MT403 MT403G



The Accusat™ MT403 and MT403G digital Emergency Position Indicating Radio Beacons (EPIRB) are designed for use 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.

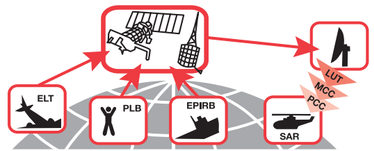
Your GME EPIRB is a self contained 406 MHz radio transmitter that emits an internationally-recognised distress signal on a frequency monitored by the COSPAS-SARSAT satellite system. The MT403 and MT403G contain a unique identity code which can be cross referenced to a database of registered 406 MHz beacons, allowing the beacon's owner or 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 out of the mounting bracket if floated in water. Additionally each includes a ultra high performance solid state strobe and 121.5 MHz VHF homing beacon to assist in leading rescuers to your precise location.

The MT403G also features an intergrated 16 Channel GPS Receiver which will automatically acquire a position and relay the latitude and longitude of the beacon along with the personal identifier and emergency signal.

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 beacons 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.

ABOUT 406 MHz BEACONS

406 MHz beacons provide more accurate and reliable alert data to search and rescue agencies than the older 121.5/243 MHz systems presently being phased out. The older 121.5 MHz analogue system required that the satellite be within view of both the beacon and the LUT before it could transmit the beacons position. This limited the coverage to an area immediately surrounding the LUT. However, the digital nature of the 406 MHz system means that the satellites are able to store the beacons position and digital message, no matter where in the world it is received. These details are then relayed to the next LUT that comes into range, giving the 406 MHz system true global coverage.

REGISTRATION AND TRANSFER OF OWNERSHIP

Registration of your 406 MHz satellite EPIRB with the Registration Section of your National Authority is important because of the global alerting nature of the COSPAS-SARSAT system.

Owner Registration Forms for registering your beacon may be supplied within the packaging, otherwise, your National Authority will be able to provide the correct forms. Up to date forms are often available online.

The information provided in the registration is used only for search and rescue purposes. Promptly fill in the owner registration form upon completion of the sales transaction, then mail, fax or email it to your National Authority. If the beacon is to enter service immediately, complete the registration form and fax or email the information.

Should the beacon be transferred to a new owner, as the previous owner you are to inform your National Authority by email, fax, letter or telephone of the name and address of the new owner.

The new owner of the beacon is required to provide their National Authority with the information as shown on the registration form. This obligation transfers to all subsequent owners.

NOTE: Your MT403/403G EPIRB has been programmed with a unique identifying code which will be transmitted by the beacon in an emergency. Registering your beacon provides the authorities with immediate access to your details when the beacon is detected. This means they will know who you are, who your emergency contacts are and what type of vessel or craft you are in. In situations of accidental activation they can also immediately eliminate your beacon as an emergency situation by contacting you when activation is detected.

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 result from 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 MT403/403G will not commence transmitting until approximately 60 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 and with the switch cover closed. The mounting bracket and switch cover are designed specifically to prevent accidental activation.
2. Avoid stowing the EPIRB where it may lie in water.
3. 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 U.V. light.
4. Do not allow children to interfere with the EPIRB.
5. Educate others on board your vessel regarding the consequences of activation.

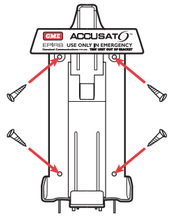
NOTE: Always stow the EPIRB in it's bracket to minimise the possibility of an accidental automatic activation in the presence of moisture. The yellow collar, provided with this model's bracket, contains special features which temporarily

inhibit automatic water activation of the EPIRB. If transporting the MT403/403G out of it's mounting bracket, ensure that it remains completely dry at all times.

INSTALLATION

The MT403/403G 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.
- 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 placement of the mounting holes for the mounting bracket are identical to those used on the earlier MT300 EPIRB.

Once the bracket is fixed in place, fit the MT403/403G to the bracket.

IN AN EMERGENCY

If an emergency occurs, you should first try to use your radio to summon assistance.

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

Use 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.

BRACKET RELEASE AND STOWAGE

To remove the EPIRB

WARNING: DO NOT remove the EPIRB from its mounting bracket if the unit is wet, it may automatically activate. Ensure the unit is thoroughly dry before removal.

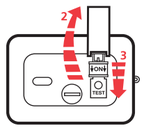
1. With one hand, press down on the tab marked **'RELEASE'** at the base of the bracket.
2. Grasp the EPIRB with the other hand and pull it outwards and downwards.
3. The antenna will release automatically and spring to the upright position.

To re-fit the EPIRB

1. Insert the EPIRB, antenna first, upwards into the bracket.
2. Press the tip of the antenna against the bottom of the three ridges in the antenna slot and slide the EPIRB upwards into the frame of the bracket so that the antenna folds over.
3. Press downwards on the **'RELEASE'** lever and push the EPIRB base firmly into the bracket until the lever clicks upwards.

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 self test, then after two seconds the flashing strobe and beeps will indicate the beacon is operating.
4. Close the cover to secure the switch.



WATER ACTIVATION

1. Remove the beacon from the bracket.
2. Deploy the beacon in water if sea conditions permit. The unit will initially self test, then shortly after the flashing strobe and beeps will indicate the beacon is operating.

The EPIRB has been designed to maintain continuity of operation even when the units sensors leave the water for periods of several seconds at a time. Uninterrupted operation is however always best guaranteed by also manually activating the EPIRB.

If the beacon is to be deployed but not in water the manual activation method must be used.

DEPLOYING THE EPIRB

Unwind the cord and secure the EPIRB to prevent loss.

When activated, the MT403/403G will transmit the **strongest signal** to the satellites when:

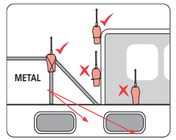
- It is floating in water.
- It is well clear of surrounding and overhanging objects.
- The antenna is vertical.

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.

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 fiberglass, 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.**
- If the cabin is metallic (such as steel or aluminium), the EPIRB should be mounted on a clear space outside 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: Normal operation of your beacon will cease once battery capacity is depleted. Special circuitry within the MT403/403 however directs any remaining capacity towards extended operation of the homing transmitter. Although the beacon may otherwise have appeared to cease functioning it is likely that a homing signal is still being emitted.

TURNING THE EPIRB OFF

It is important that you turn the EPIRB off as soon as possible **after** being rescued. 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 '**READY**' position.
4. Close the cover to secure the switch.
5. To cancel Water Activation dry the beacon or restow the beacon 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.

BATTERIES AND MAINTENANCE

The MT403/403G 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.

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 MT403/403G 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.
2. Confirm the SAFETY SEAL has not been broken.
3. Check that the batteries have not passed their replacement date.
4. Inspect the MT403/403 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), 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 products' 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

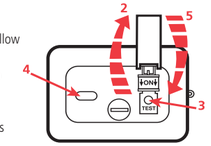
It is recommended that you test the MT403/403G at regular intervals (approximately monthly) to ensure it is fully functional. You should also test the EPIRB prior to an extended journey.

DO NOT over test – testing consumes some battery power.

WARNING: DO NOT remove the EPIRB from its mounting bracket if the unit is wet, it may automatically activate. Ensure the unit is thoroughly dry before removal.

You may test the EPIRB at any time using the following procedure:

1. Remove the beacon from the bracket. Keep the antenna well clear of metalic objects during testing.
2. Lift the cover marked **'LIFT'**.
3. Briefly press then release the yellow **'TEST'** button.
4. The unit will give a double beep and flash of the strobe light to show it is functioning correctly.
5. Close the switch cover and press firmly into place until it clicks.
6. Return the beacon into the bracket.



If the EPIRB fails the testing process you should return it to your retailer or nearest GME branch office for maintenance.

GPS SATELLITE ACQUISITION TEST (MT403G ONLY)

The standard self test procedure is more than sufficient to perform a comprehensive check of your beacon without consuming too much battery capacity. On occasions, and no more regularly than on average once a year, you may wish to perform a GPS satellite acquisition check.

Whereas the routine self test verifies the GPS receiver's circuitry, the full test will include the operation of the special GPS antenna as well.

1. This test consumes much more power than a standard self test so choose a test location with good visibility of the open sky above. A quick satellite acquisition means a short test, and less wasted power consumption.
2. Carry out a self test in the usual way but rather than releasing the **'TEST'** button, continue to hold it in position. **After the self test pass confirmation**, both the strobe flash and the internal beeper will start. Count a further four flashes/beeps then immediately release the **'TEST'** button.
3. The MT403G will continue to flash and beep whilst it searches for available satellites. This may continue for a number of minutes depending on the number and location of satellites present. It is not possible to abort the test once started, and note that distress signals are not radiated as part of this test.
4. If no satellites are found after a predetermined time the repetitive flash and beep will stop. This may indicate a fault with the GPS receiver system within the EPIRB and you should contact your local service centre for advice.

If the test terminates with a rapid sequence of flashes and beeps, then GPS satellite acquisition and correct operation has been confirmed.

TRANSPORTATION

The MT403/403G use batteries with a low level of lithium content. Consequently these EPIRBs are classified as 'non-hazardous products' by IATA and may be shipped without problem (accompanied or unaccompanied) on passenger aircraft. However, it is advisable that you check with your carrier that they do not have specific restrictions which may apply to you.

DISPOSAL

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

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 as 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.

SPECIFICATIONS - MT403 AND MT403G

MODES OF OPERATION

Activated:	UHF (406) and VHF (homer) complete with high intensity strobe and audible activation alert.
Self test:	Comprehensive internal diagnostics with visual and audible operator feedback. UHF test message (inverted synchronisation compatible with portable beacon testers).

OPERATION

Activation:	Manually by operator and Automatic when deployed in water.
Bracket Type:	Manual Release.
Duration:	48 hours minimum.
Transmission Delay:	121.5 and 406 MHz distress signals commence ~ 60 seconds after activation.
Warm Up:	None required (due to digital frequency generation).
VHF:	121.5 MHz, 50 mW ±3 dB, swept tone AM.
UHF:	406.028 or 406.037 MHz, 5 W ± 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 User (Standard factory setting. Distributor programmable via external interface.)
Repetition Period:	50 s mean, digitally generated randomization.
VHF:	Satellite compatible phase coherent.