



# TRON 40GPS

GMDSS Float Free Satellite EPIRB

your safety – our concern



Tron 40 GPS has been designed to operate with the COSPAS-SARSAT system. The Tron 40GPS is also ment to enhance further the lifesaving capabilities of conventional EPIRBs. The integrated 12 channel GPS module accepts continuous positional information from the standard Global Positioning System using 27 satellites providing an accuracy of approximately 100m. Upon activation of the Tron 40GPS in an emergency situation the positional information is incorporated into the distress message transmitted by the Tron 40GPS.

The main advantage with integrated GPS in Tron 40 EPIRB is the rapid response and positional accuracy providing vital information during a rescue operation practically eliminating valuable time spent searching for the distressed. Whenever a distress message transmitted by Tron 40GPS is detected by a polar orbiting satellite (LEOSAR) the delayed alert remains the same as for non-GPS integrated EPIRBs (max 90 min.), but the position accuracy is improved considerably from a radius of 5 km to

amazing 100m. Upon detection of a distress message transmitted by Tron 40GPS made by a geostationary satellite (GEOSAR) the improvement of integrated GPS proves its benefit as the alert is immediate (max 5 min.), still providing the accurate position of 100m.

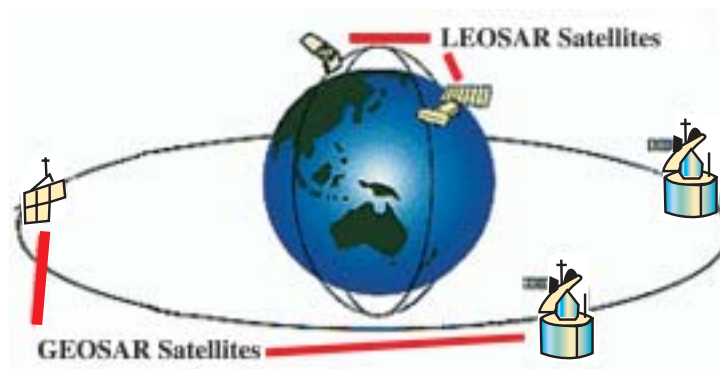
In addition to the obvious improved lifesaving benefits for all users, from private yachts to large passenger vessels, the Tron 40 GPS offers also increased safety for vessels carrying hazardous cargo making detection and location of any emergency situation or accident more rapid and accurate, preventing crucial time wasted whenever the consequence of the accident may represent a danger or threat to the environment.

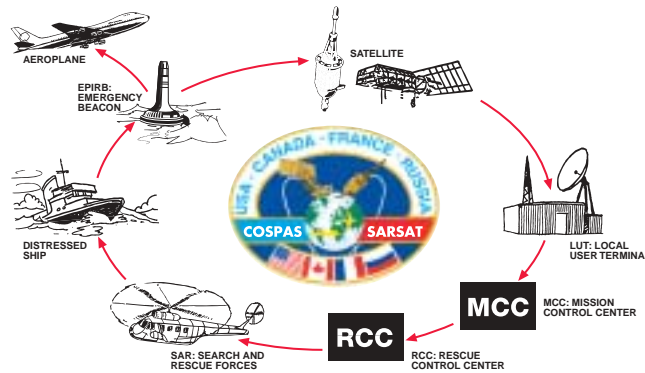
Please note that the positional accuracy and alert delay is depending on the actual protocol used and programmed into the EPIRB and the location of the emergency. The information is based on the capacity of the LEOSAR/GEOSAR COSPAS-SARSAT system.

- Integrated GPS module, 12 channels
- World wide coverage
- Fast and accurate position aiding lat/lon to distress transmission
- Manual or automatic operation
- Compact design
- Easy and flexible mounting
- Designed for fast and easy service
- Strong 10 km visible xenon strobe light

#### OPTIONS

- Brackets: Manual or float free with or without heating
- For duplicate EPIRB  
– See Tron 45SX





## COSPAS / SARSAT

The COSPAS / SARSAT system was introduced in 1982 as a world wide search and rescue system with the help of satellites covering the earth's surface. Since the introduction of the

system more than 14000 people (Dec 2001) have been rescued by the COSPAS / SARSAT system. Each EPIRB in the system is programmed with its unique code. It's important

that your EPIRB is registered on the database for each country. This database is normally in the same country as the ship is registered.

The Tron 40GPS is designed to be installed in the FB-4/FBH-4 and FB-5 bracket, which are float free automatic release brackets. Or a manual MB-4 or MB-5 bracket may be used.

The FB-4/FBH4 and FB-5 are equipped with a H-20 Hammar hydrostatic release mechanism, which is a well known and reliable product, available and approved world wide. H-20 Hammar is to be used with modified Jotron bolt.



The FB-4 /FBH4 and FB-5 allows you also to release the EPIRB manually by pulling out the locking pin. The brackets are equipped with safety switches to avoid false alarm as long as the Tron 40GPS remains in the bracket.

The Tron 40GPS will automatically be pushed out from the FB-4/FBH-4



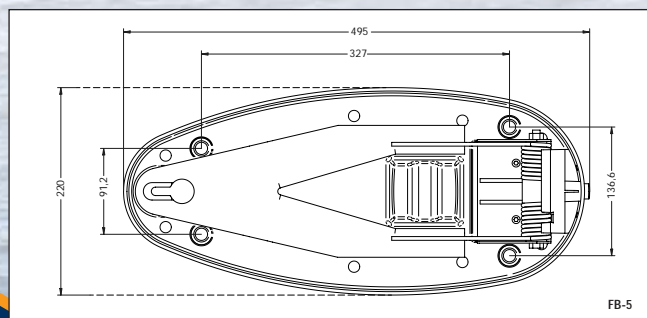
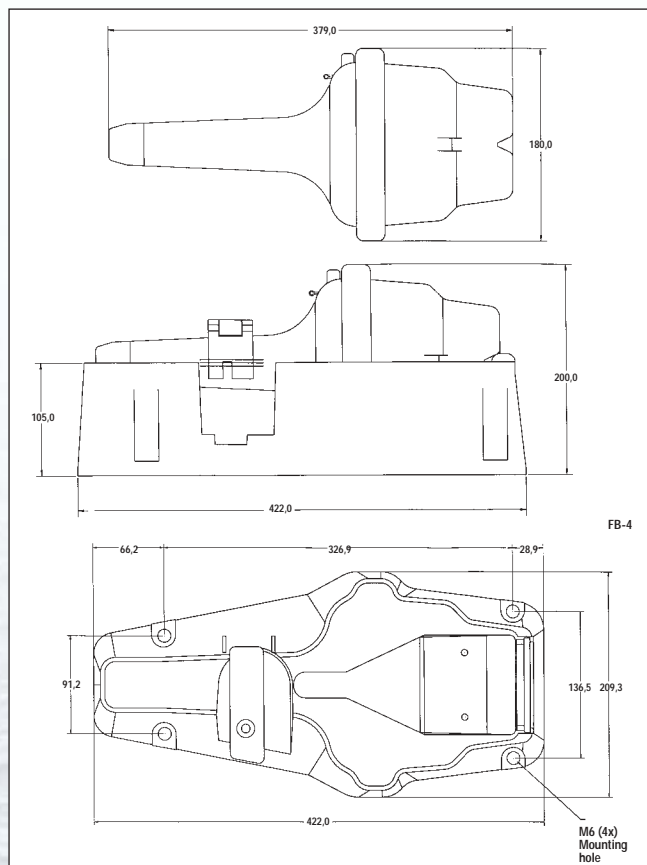
bracket due to the built in reusable catapult spring. This is installed to ensure that the EPIRB will leave the bracket after the H-20 has been activated.



## Tron 40GPS GMDSS Float Free Satellite Emergency Position-Indicating Radio Beacon, EPIRB

JOTRON with more than 30 years of experience is a leader in the latest technology of reliable maritime life-saving equipment based on experience and quality. The products are backed up by a trained network of agents world wide to offer service and support to maintain a reputation second to none. JOTRON has a proven record at giving priority in product development to offer and provide products of unsurpassed reliability and practicality in preventing accidents and ensuring safety of lives at sea.

Our company slogan «your safety - our concern», is built into all products. The Tron 40GPS design is especially based on the GMDSS regulation together with JOTRON's long experience to make it possible to meet the hard maritime environment on the seven seas.



### Tron 40GPS SPECIFICATIONS:

#### GENERAL:

|                             |   |
|-----------------------------|---|
| Dimensions:                 | Height: 38 cm<br>Max diameter: 18 cm  |
| Weight:                     | Appr. 2,0 kg  |
| Material housing:           | Polycarbonate with 10% glass fibre  |
| Dimensions MB-4/FB-4/FBH-4: | Height: 42 cm<br>Wide: 21 cm<br>Depth: 20 cm (with beacon)  |
| Weight MB-4/FB-4/FBH-4:     | Appr. 1.6 kg  |
| Material MB-4/FB-4/FBH-4:   | ASA   |
| FBH4 Power supply:          | 220V AC   |
| Dimensions MB-5/FB-5:       | Height: 50 cm<br>Wide: 22 cm<br>Depth: 20 cm (with beacon)  |
| Weight MB-5/FB-5:           | Appr. 2.7 kg  |
| Material MB-5/FB-5:         | ABS/PMMA  |
| Antenna:                    | Built in, vertical polarisation, Omnidirectional, and GPS patch antenna   |
| Visual indication:          | Built in Xenon flash and Test LED   |
| Operating temperature:      | -20°C to +55°C. Class 2<br>-40°C to +55°C. Class 1, optional  |
| Battery:                    | JOTRON type number X-97780<br>Lithium, 5 years service life   |
| Operating life:             | More than 48 hours at -20°C   |
| GPS Receiver/module:        | 12 Channels, freq. 1575,42 MHz. Time to first fix (TTFF) <3 min. at start-up, position every 25 min. give TTFF between 30-60 sec. |
| Standards:                  | Approved according to:<br>ETS 300 066<br>IMO A662 (16) / A810 (19)<br>DIR 96/98 EEC<br>C/S T.001<br>RTCM (US Coast Guard)         |

#### 406 MHZ TRANSMITTER:

|                  |  |
|------------------|--|
| Frequency:       | 406.025 MHz $\pm$ 2ppm   |
| Output power:    | 5W $\pm$ 2dB   |
| Digital message: | All protocols available  |
| Modulation:      | Phase modulation 1.1 $\pm$ 0.1 rad   |
| Data encoding:   | Bi phase L   |
| Stability:       | Short term: $\leq$ 10-9<br>Medium term: $\leq$ 10-9<br>Residual noise: $\leq$ 3x10-9 |
| Bitrate:         | 400 b/s  |

#### HOMING TRANSMITTER:

|               |   |
|---------------|---|
| Frequency:    | 121.500 MHz $\pm$ 10ppm   |
| Output power: | Up to 100 mW  |
| Modulation:   | A9 AM, sweep tone from max 1600 Hz to min 300 Hz<br>Sweep range 700 Hz<br>Sweep rate 2-3 Hz |

#### AUTOMATIC RELEASE MECHANISM:

|              |                          |
|--------------|--------------------------|
| H-20 Hammar: | With Jotron special bolt |
|--------------|--------------------------|

Jotron Electronics a.s reserve the right to modify without notice characteristics and data supplied in this brochure.

#### Main Office: JOTRON Electronics a.s

P.O.Box 54, NO-3280 Tjodalyng, Norway  
Tel: +47 33 13 97 00, Fax: +47 33 12 67 80  
www.jotron.com

#### Subsidiary Office: JOTRON (UK) Ltd.

Crosland Park, Off Crowhall Road, Cramlington  
Northumberland, NE23 1LA UK  
Tel: +44 1670 712000, Fax: +44 1670 590265

SELEX Communications Ltd  
Marconi House  
New Street  
Chelmsford  
Essex  
CM1 1PL  
United Kingdom

**SELEX**  
Communications

a Finmeccanica Company

Tel: +44 (0)1245 275588  
Fax: +44 (0)1245 275689

Email: marine-sales@selex-comms.com

[www.selexmarine.com](http://www.selexmarine.com)