



XBT-2000

Solid-State X-Band Radar Location Transponder

- Tellumat's XBT-2000 radar location transponder is based on the successful previous generation magnetron-based XBT product.
- The completely solid-state implementation offers advantages of higher reliability, no periodic maintenance, longer transmitter life and lower power consumption, resulting in a more versatile product with a lower life-cycle cost.
- Receiver and transmitter frequencies are independently programmable and may be matched to a particular radar for on-frequency reply, or may be set to the international beacon-mode frequencies.
- The frequencies and other parameters are set using an RS 232 serial port.
- The XBT-2000 Transponder is typically used for location of drop-zones for airborne support operations. The equipment is designed for man-pack use and is deployed by personnel on the ground.
- The transponder may be either attended or left in a standby mode, ready for activation by a radar interrogation. Alternatively, the equipment may be remotely controlled by either of two methods:
 - by a cable of up to 20 metres length, allowing the antenna to be raised clear of surrounding terrain or vegetation.
 - by an optional VHF radio telemetry package, allowing unattended operation with control from a remote site or an aircraft.
- The equipment may also be used for the location of helicopter landing platforms such as oil-rigs or a ship. An alternative package suitable for mast-mounting is available for marine applications.

Tellumat

X-BAND TRANSPONDER



FEATURES

- Entirely solid-state
- X-Band operation
- Frequency setting and reply coding compatible with radar beacon mode
- 16 coded addresses
- Long-range operation
- Low power consumption
- Low power standby mode
- Local or cable/remote control
- Direct mounting waveguide antenna
- Simple to operate
- Programmable parameters via RS-232 serial port
- Programmable transmit frequency
- Programmable receive frequency
- Programmable transmit pulse width
- Programmable turn-around delay

POWER SUPPLY

Battery Pack	12V, 2Ah NiCd battery pack (Lithium optional)
External Power	10.5 to 36VDC input via vehicle battery adapter unit
Power Consumption:	
• Standby Mode	6W typical (0.5A, 12V)
• Operating Mode	12W typical (1A, 12V)

GENERAL

Mass:	
• Transponder Box	2.8kg
• Battery Pack	1.1kg
• Antenna	0.9kg
Dimensions:	
• Transponder Box	220 x 172 x 64mm
• Battery Pack	70 x 172 x 64mm
• Antenna	45mm diameter x 700mm
Cooling	Convection
Range	160 nautical miles typical for a radar with 10kW peak power and -100dBm sensitivity (subject to radar horizon and line of sight)

TRANSMITTER

Frequency	Programmable in two bands 8500 to 9500MHz
Peak Output Power	+37dBm (5W) minimum
Pulse Width	Programmable 0.5 to 3.15µs
Coding	Single pulse or DO-172 radar beacon mode format (16 available codes)
Turn-around Delay	0.7µs

RECEIVER

Frequency	Programmable in two bands 8500 to 9500MHz
Sensitivity	-60dBm (typical)

ANTENNA

Type	Two-piece slotted waveguide with sealed fibreglass radome
Radiation Pattern:	
• Horizontal	Omnidirectional
• Vertical	20°
Gain	7dBi typical

ENVIRONMENTAL

Operating Temperature	-20°C to +55°C
Humidity	95% RH at 45°C