

# BS2000 WALL MOUNTED BASE STATION & REPEATER

- FOR VOICE & DATA



## HIGHLIGHT

- FULL RF BANDWIDTH  
VHF: 68 - 88 MHz  
VHF: 135 - 174 MHz  
UHF: 335 - 410 MHz  
UHF: 400 - 470 MHz
- VOICE & DATA
- CHANNEL SPACING  
12,5 / 20 / 25 KHz
- MULTI CHANNELS
- 5-25 WATT / 5-50 WATT  
OPTION: 100 WATT
- CONTINUOUS OPERATION
- CTCSS SIGNALING /  
CARRIER CONTROLLED REPEATER
- AVAILABLE IN NUMEROUS  
CONFIGURATIONS
- WEATHERPROOF CABINET FOR  
WALL MOUNTING
- RUGGED CONSTRUCTION
- SIMPLEX, SEMI-DUPLEX & DUPLEX



Bracket for wall mount

The BS2000 series of base stations & repeaters are designed for continuous operation under harsh climatic conditions and are available for all PMR frequency bands. The BS2000 is also available for remote control.

# PROFESSIONAL RADIO COMMUNICATION

The BS2000 repeater wall mount model is designed for two-way voice and data communication in the VHF and the UHF frequency bands.

The design of the BS2000 is modular and the cabinets are designed to house different transceivers, modules, I/O interfaces and control units, making the BS2000 very versatile.

The wall mounted BS2000 cabinet BK001 is weatherproofed. All cabinet types provide an effective heat sink allowing the BS2000 to operate on a 100 % duty cycle.

The BS2000 can be configured to fit a customer's exact requirements in terms of: Frequency Band, Mode of Operation, Signalling System, Data or Voice or a combination of both, Supply Voltage / UPS and Output Power.

The BS2000 is available in a version with duplicated transceivers, which enables a hot and standby configuration with automatic switch-over to the standby transceiver(s) in case the main transceiver(s) turns faulty.

To facilitate the site service, the wall mounted cabinets are constructed in such a way that it can be opened in an 180° angle leaving all the parts freely accessible. The BS2000 cabinets meet the IP54 standard for ingress of dust and water.

The BS2000 can be configured as a stand-alone repeater or as a base station with or without repeat function.

In order to ensure the highest quality and reliability of the products, each TP Radio transceiver is exposed to an extensive final test procedure, which includes exposing the transceiver to a temperature cycle ranging from - 25 °C to + 55 °C, before leaving the factory.

## Specifications:

### General

|                    | UHF I       | UHF II                                       | VHF 2m      | VHF 4m    |
|--------------------|-------------|--|-------------|-----------|
| Frequency Range    | 335-410 MHz | 400-470 MHz                                  | 135-174 MHz | 68-88 MHz |
| Number of channels |             | up to 32, option 127                         |             |           |
| Channel spacing    |             | 12.5, 20 or 25 KHz                           |             |           |
| Frequency error    |             | ± 2 ppm                                      |             |           |
| Mode of operation  |             | Simplex / Semi-duplex / Duplex (with filter) |             |           |
| Antenna impedance  |             | 50 Ohm                                       |             |           |
| Temperature range  |             | -30° to + 70°C                               |             |           |
| Power supply       |             | 13.2 V Nominal.                              |             |           |
| Dimensions         |             | H. 530, W. 320, D. 125 mm (BK001)            |             |           |
| Weight             |             | Approx. 16kg (Fully equipped BK001)          |             |           |

### Transmitter

|                       |  |   |  |  |
|-----------------------|--|---|--|--|
| Output power          |  | 5 - 25 W (25 W model)<br>5 - 50 W (50 W model) (only 25W for VHF 4m - Mid band) |  |  |
| Adj. Channel power    |  | (Approx. 0,5-1.0 dB insertion loss on the Duplex filter)                        |  |  |
| Intermod. attenuation |  | 78 dB below carrier   |  |  |
| Spurious conducted    |  | 40 dB (70 dB with circulator)   |  |  |
| Spurious radiated     |  | less than - 40dBm   |  |  |
| Max. Deviation        |  | less than - 45dBm   |  |  |
| Modulation distortion |  | +/- 5 KHz / 25 KHz channel  |  |  |
| Signal / noise ratio  |  | < 2 % @ +/- 3.0 KHz   |  |  |
| AF freq. Response     |  | 45 dB   |  |  |
| Current drain         |  | 300 - 3000 Hz + 6 dB octave   |  |  |
| Stand-by              |  | 25 W (6.5 A) 50 W (10 A)  |  |  |

The UHF version is in conformity for On Board Communication according to EN 300 720 and fulfils the IEC 60945 marine standards. A perfect tool to fulfilment of the SOLAS requirement.

The Specifications are typical and subject to change without prior notice. 02.11.2017

### Receiver

|                         |                               |
|-------------------------|-------------------------------|
| 1. Intermediate freq.   | 45 MHz                        |
| 2. Intermediate freq.   | 450 KHz                       |
| Sensitivity @ 20 dB     | VHF: 0.4 µV UHF: 0.5 µV       |
| AF output power         | 4 W                           |
| AF distortion           | < 10 %                        |
| AF freq. Response       | 300 - 3000 Hz - 6 dB / Octave |
| Signal / noise ratio    | > 45 dB                       |
| Co-channel rejection    | - 3 dB                        |
| Adjacent channel selec. | > 73 dB                       |
| Spurious rejection      | > 75 dB                       |
| Intermodulation sel.    | > 70 dB                       |
| Blocking                | > 100 dB                      |
| Spurious conducted      | > - 60 dBm                    |
| Spurious radiated       | > -70 dBm                     |
| Squelch level           | Internal adjustable level     |

### Power Supply

110/120 or 220/240 VAC 50/60 Hz, or 13,2VDC - max. 8 Amps at 25W TX power. Emergency or back-up power supply according to customer specifications. The total power consumption is dependent of the modules used.

### Signalling

Standard systems CCIR / ZVEI / EEA / CTCSS & DTMF.  
Data transmission: FFSK 1.200, 2.400 & 4.800 bps.  
GMSK: 9.600, 19.200 & 26.400 bps. on 25KHz channel spac-

CONFORMS ACCORDING TO THE DIRECTIVES: RoHS 2011/65/EU, MED 2014/90/EU & RED 2014/53/EU - IP54 WEATHERPROOF CABINET.

APPLIED STANDARDS: EN 300 086 - EN 300 720 (ANALOG PART) - EN 300 113 - EN 300 219 - EN 3001 489

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