

SEA 245

150 Watt MF/HF/SSB Digital GMDSS Radiotelephone



The SEA 245 is a highly integrated and compact solid state MF/HF SSB Radiotelephone transceiver with an internal DSC Controller. The SEA 245 is Type Certified for Sea Area A2 GMDSS station operations and is also suitable in any general purpose MF/HF SSB radiotelephone application for Maritime or Land Mobile.

- Internal DSC Controller, MF Watch Receiver for A2 and optional SEATOR modem
- A 245 system configured for Sea Area A3 GMDSS at 150 Watts or 300 Watts will be available in 2009
- High to Low RF transmit power can be programmed
- The SEA 245 SSB radiotelephone utilizes Digital Signal Processing (DSP) technology as its fundamental architecture.
- DSP end-user benefits include:
 - Digital transmitter provides more talk power than radiotelephones with equal power ratings
 - Superior gain control (AGC) provides virtually error free transition between voice and data
 - Clean clear audio with enhanced clarity and reception
 - SEA 245 radios can receive future enhancements and improvements through software upgrades
 - Uniquely flexible with special application filters (sitor, telex, modems) software configurable
 - Increased reliability over pure analog radios
- RS-232 Serial PC interface supports radio control applications and E-mail service providers
- Maritime channels are factory programmed with alpha-numeric names for easy recall
- Amateur bands with comprehensive HAM Band channel operations
- True AM receiver for clear undistorted reception of AM frequencies
- Large easy to read Graphic Display
- Backlighted silicone keypad
- GMDSS compatible
- NMEA 0183 position input
- Audio line output (VDR & balanced or un-balanced)
- Optional SEA 3000G SITOR Modem available
- Optional SEAWATCH receiver for A3 operations
- Optional Remote Control Heads (up to 3)
- Interfaces to SCS PACTOR modems

The SEA 245 SSB/DSC radiotelephone is designed and constructed on a fully digital platform. This revolutionary radio is unequalled in performance, price, reliability and flexibility for use in numerous special applications.

SEA SSB radiotelephones have consistently won National Marine Electronics Association's (NMEA) awards for excellence in SSB radiotelephone design.

Preliminary 245 Specifications

GENERAL:

Compliance:

FCC Parts 80, 87, 90,
ITU R M.493, ITU R M.541,
IMO A.804, IMO A.806

Frequency Range:

Tx: 1.6 to 29.999 MHz
Rx: .49 to 29.999 MHz

Frequency Stability:

±10 Hz (-30°C to +60°C)

Operating Modes:

J3E (USB), H3E, R3E,
J2B (AFSK), A1A (CW)
F1B (TELEX)

Supply Voltages:

24 Vdc -10% +25%
(21.6 to 30 V)

Current Drain:

Tx: 8 Amps (two-tone)
Tx: 6 Amps (voice)
Rx: 1 Amp (stand-by)
Rx: 1.5 Amps (full-audio)

Operating Temperature Range:

-30°C to 60°C

Antenna Impedance:

50 ohms

Channels:

1176 Total
200 Programmable
242 ITU SSB Duplex
72 IUT SSB Simplex
662 ITU FSK Duplex

Scan Channels:

200

Display:

Graphic Display
3.2" x 1.85" (W x H)
(81.2mm x 46.9mm)

Metering:

S-Meter

RECEIVER:

Frequency Range:

490 KHz to 29.999 MHz

Frequency Resolution:

10 Hz

Intermediate

Frequencies:

1st 45 MHz, 2nd 40 KHz
(nominal) DSP

Sensitivity:

≤ 1.0 uV for 12 dB SINAD

Adjacent Channel

Selectivity:

>55 dB at -1 KHz

Blocking:

At max. sensitivity: Better
than 70dB. At +60dB/uV:
Better than 100 dB

Cross Modulation:

Better than 80 dB

Spurious Response:

Better than 70 dB

Spurious Emissions:

Less than 1 nW

Intermodulation:

-80 dB

AGC:

J3E, fast attack, slow
release, ≤ 10 dB audio level
change from 10 uV to
100 mV input

Clarifier:

+/-200 Hz in 10 Hz steps

Squelch:

Voice controlled, opens at
SINAD >5dB

Audio Output:

4 Watt into 4 ohms at less
than 10% distortion

TRANSMITTER:

Output Power:

R3E, J3E 150 Watts PEP
F1B 100 Watts

Power Reduction:

-3dB/-6dB from PEP

Intermodulation:

Better than -34 dB
below PEP

Spurious Emissions:

Better than -65 dB
below PEP

Carrier Suppression:

Better than 46 dB below
PEP

Undesired Sideband Suppression:

Better than 41 dB below
PEP

AF Bandwidth:

400 to 2500 Hz at -6 dB

VDR and Audio Line Output:

600 Ohm Balanced or Un-
balanced
TX and RX line out @ 0.775V
RMS

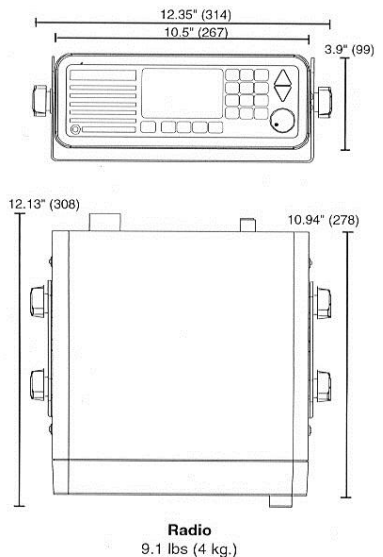
Input /Output Ports:

RS-232, NMEA, SEABUSS II,
AUDIO, REMOTE
CONTROLS

FCC ID:

BZ6SEA245

Dimensions in. (mm)



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