

SEA 245D

Continuous Duty MF/HF SSB Digital Radiotelephone



The SEA 245D system consists of one 2451D RTU and up to four 2450 Remote Control Heads. Its flexible design and reliability provide optimal capabilities for all radiotelephone Operators. The SEA 2451D is a highly integrated and compact solid state MF/HF SSB transceiver housed in a ruggedized chassis specifically designed for long duration transmit cycles.

The SEA 245 SSB radios are compliant for Sea Area A2 GMDSS station operations and are also suitable in any general purpose MF/HF SSB radiotelephone operation where a high duty cycle use is required.

- Internal DSC Controller & MF Watch Receiver
- SEA 245 versions available for Sea Area A3 with TELEX modem and SEA 7001G Watch Receiver
- 2451D power is 100W continuous duty, extended duty to 150 Watts @ -30C to +70C temp range
- SEA 245 SSB radiotelephones utilize Digital Signal Processing (DSP) technology.
- DSP end-user benefits include:
 - Digital transmitter provides more talk power than radiotelephones with equal power ratings
 - Superior Automatic Gain Control (AGC) provides virtually error free transition for voice and data
 - Clear audio, enhanced clarity and reception
 - SEA 245 radios can receive future enhancements through software upgrades
 - Increased reliability versus analog designs
- Factory and Customer programmed channels with alpha-numeric names for easy recall
- Direct frequency entry and channel Scan banks

- Marine, Land Mobile & Aviation channels
- Amateur bands with HAM/MARS operations
- True AM receiver for clear AM reception
- Large, easy to read Graphic Display
- Backlighted silicone keypad
- SEABUSS™, GPS and RS-232 PC I/O
- Audio line output (PTT, balanced or un-balanced)
- Optional 2450 Remote Control Heads (up to 4)
- Optional SEA 3000G Telex Modem
- Optional 7001G SEAWATCH Receiver
- Optional interface to NSG and SCS data modems

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

SEA has consistently provided competitively priced HF/MF SSB radiotelephones for many years and has won numerous awards for excellence.

SEA COM CORP has a worldwide service network to support all of its products, ensuring backup support almost anywhere in the world your ship is operating.

To learn more about this model or other SEA products, contact your local Marine Electronics Dealer or call SEA COM CORP at (425) 771-2182, or email sales@seacomcorp.com.

SEA 245D Specifications

System models: 2450 / 2451D

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 +70°C)

Operating Modes:

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

Supply Voltages:

12 VDC or 24 VDC option
@ -10% +25%

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 70°C

Antenna Impedance:

50 ohms

Channels:

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

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
Guard Receiver 2187.5 kHz

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:

100 Watts CCS (continuous)
Total range : 50W to 150 W

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
REMOTE AUDIO, PTT, RTU
CONTROLS

FCC ID:

BZ6SEA245

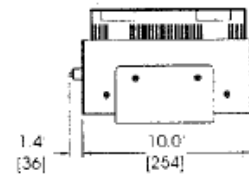
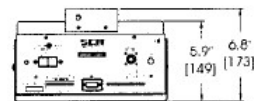
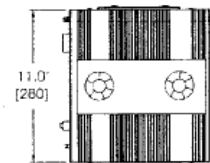
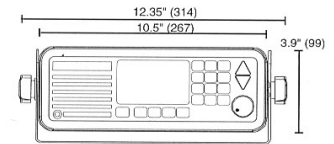
SEA main unit model #s:

2450 - Remote control unit

2451D - RTU @ 12VDC

2451D/24 - RTU @ 24VDC

Dimensions In. (mm)



SEA COM CORPORATION

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