

JRC

150W MF/HF RADIO EQUIPMENT JSB-196GM



- Simple installation on small ship
- High expandability
- Easy operation
- Digital signal processing (DSP)

JRC *Japan Radio Co., Ltd.*



The JSB-196GM MF/HF Radio Equipment is a new generation of economical marine transceiver with high functionality designed to conform to the GMDSS A2 area requirements. The JSB-196GM functions to fully meet the latest regulations for maritime MF/HF communications by connecting the NCT-196 DSC terminal with a built-in watchkeeping receiver.

The radiotelephone system consisting of the JSB-196GM that covers the frequency range of 1.6 to 27.5MHz and the NCT-196 DSC terminal with an internal DSC watchkeeping receiver conforms to the applicable regulations including the IMO performance standard and the national standard.

FEATURES

• Simple installation on small ship

Each equipment is of very compact design for simple installation on small ship. The GMDSS-based system consists of the JSB-196GM MF/HF Radiotelephone, the NCT-196 DSC Terminal and a DC-DC converter. The main unit of the JSB-196GM and the NCT-196 can be integrated as a stacked system and installed in a easy-to-operate place on the bridge.

• High expandability

The JSB-196GM can provide the HF E-mail communication capability by connecting a dedicated modem and a general-purpose personal computer.

• Easy operation

The JSB-196GM is designed for user-friendly operation using a single large control dial for frequency channel selection, mode setting and high/low transmit power switching. The NCT-196 integrates the DSC modem and the watchkeeping receiver in it, enabling operations to fully meet the GMDSS requirements.

• Digital signal processing (DSP)

The JSB-196GM radiotelephone uses 32-bit floating point DSP for digital signal processing in and after the IF stage. The DSP technology improves a number of functions including noise reduction and various types of interference rejection, ensuring enhanced performance.

SYSTEM CONFIGURATION



SPECIFICATION

General

frequency range	Transmit: 1.6 to 27.5MHz Receive: 0.1 to 29.9999MHz
Frequency increments	100Hz
Frequency tolerance	±10Hz or better
User definable channels	200ch (20ch 10 Groups)
Emissions mode	J3E, A1A, F1B, H2B and H3E(Reception only)
Preset ITU channels	1722ch (SSB:283, F1B:920, A1A:519)
Scanning channel	20 user defined channels
Communication mode	Simplex and semi-duplex
Antenna impedance	50Ω
Operating temperature	-15°C to +55°C
Power requirement	13.6VDC±10% (12.3VDC to 15.0VDC), negative-grounded Tx: 40 A max Rx: 2 A max (Operable between 10.2VDC and 16.2VDC)
Compass safe distance	1.5m
Dimensions and mass	250mm(W) x 100mm(H) x 260mm(D), Approx. 7.4kg

TRANSMITTER

Output power	100Wpep (1.6 to 4MHz), 150Wpep (4 to 27.5MHz)
Occupied bandwidth	J3E: 3kHz or better F1B, A1A: 0.5kHz or less
Carrier suppression	40dB or better
Spurious suppression	43dB or better
AF frequency response	350 to 2700Hz (6dB bandwidth)
Microphone input	600 Ω
Line input	600 Ω, 0dBm (balanced)

RECEIVER

Receiving system	Triple superheterodyne
Intermediate frequencies	70.455MHz, 455kHz, 20.217kHz
Sensitivity (SINAD 20dB)	J3E: 6.3μV or better (1.6 to 4MHz) 3.5μV or better (4 to 27.5MHz) F1B: 1.8μV or better (1.6 to 4MHz) 1.0μV or better (4 to 27.5MHz)
Selectivity	J3E: 6dB bandwidth 2.4 to 3kHz, 66dB bandwidth Within:2.1kHz F1B: 6dB bandwidth 270 to 300Hz, 60dB bandwidth Within:550Hz

Spurious response	60dB or better
Clarifier range:	±200Hz in 1Hz steps
AF output	5.0W max. 1W rated
Line output:	600 Ω, 0dBm (balanced)

NFC-196 ANTENNA TUNER

Frequency range	1.6 to 30MHz
Power capability	200Wpep
SWR after tuning	2 : 1
Turning time	Automatic tuning: typical 3 sec Preset tuning: typical 0.5 sec
Operating temperature	-30°C to +60°C
Power requirement	10.2VDC to 16.2VDC, negative-grounded, 1.5A (max)
Dimensions and mass	230mm(W) x 380mm(H) x 90mm(D) Approx. 3.3kg

NCT-196 DSC TERMINAL

Protocol	ITU-RM.493-7, M.541-6 and M.1082
Modulation rate	100 baud
Modulation accuracy	Within ±30ppm
Output frequency	1700Hz ±85Hz
Frequency tolerance	±0.5Hz or better
Output level	-20dBm to +10dBm
Operating temperature	-15 to +55°C
Power requirement	10.2VDC to 16.2VDC, negative-grounded, 3A max
Dimensions and mass	250mm(W) x 100mm(H) x 260mm(D) Approx. 4.8kg

WATCH KEEPING RECEIVER

Receiving system	Double superheterodyne
Receiving frequencies	2187.5kHz, 4207.5kHz, 6312.0kHz, 8414.5kHz, 12577.0kHz, 16804.5kHz
Sensitivity	Character error rate of 1% at receiver input voltage of 1uV
Antenna impedance	50 Ω

STANDARD COMPONENTS

Component	Model	Q'ty	Remarks
MF/HF Radiotelephone	JSB-196GM	1	
Included Accessories			
Hand Set	NOW-213	1	
Power Cable	7ZCJD0043A	1	L=1m
Accessory parts	JSB196-ACCESS	1	Spare fuse, terminal, etc
Instruction Manual	7ZPJD0124	1	English

Component	Model	Q'ty	Remarks
Antenna Tuner	NFC-196	1	
Included Accessories			
ATU Control Cable	7ZCJD0044A	1	L=5m
ATU RF Cable	7ZCJD0045	1	L=5m

OPTION

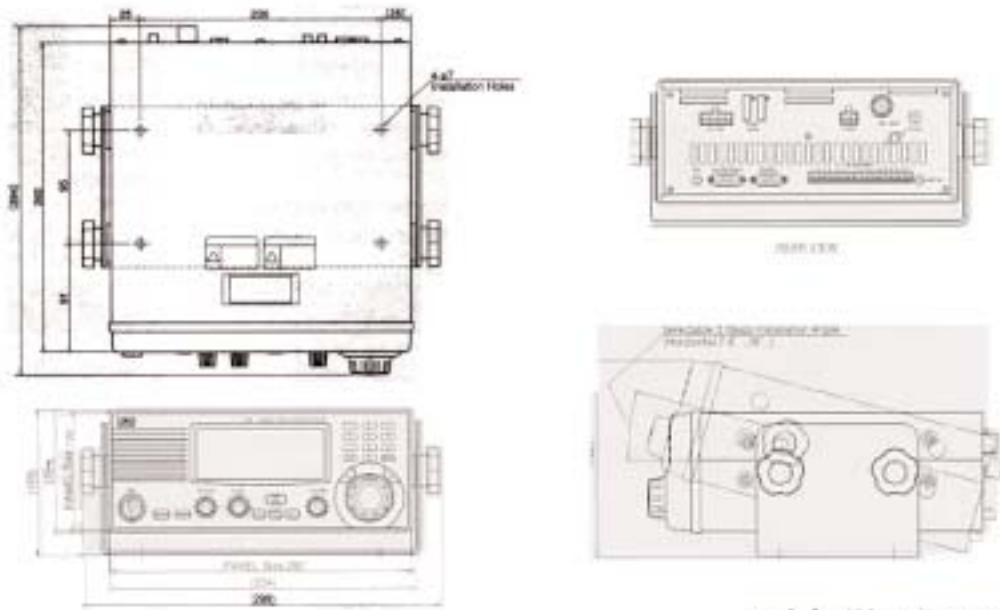
Component	Model	Q'ty	Remarks
DC-DC Converter	NBG-300	1	Input 24VDC
Hand microphone	NVT-140	1	Coil cable (L=0.5m)
Hand microphone	NVT-133	1	Straight cable (L=5m)

Component	Model	Q'ty	Remarks
DSC Terminal	NCT-196	1	
Included Accessories			
DSC Power Cable	7ZCJD0062	1	L=3m
DSC AF Cable	7ZCJD0071	1	L=1.5m
DSC Control Cable	7ZCJD0072	1	L=1.5m
Spare fuse	5ZFEX00012	2	3A
Bridge Card	7ZPJD0122	1	English
Instruction Manual	7ZPJD0120	1	English



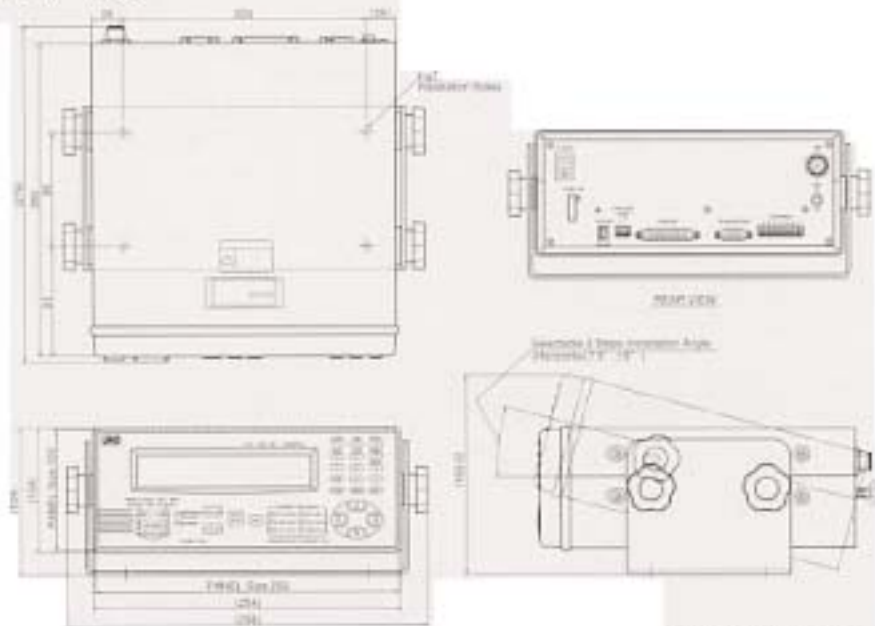
DIMENSIONS & WEIGHT (MASS)

SSB RADIO TELEPHONE JSB-196GM



weight (Mass) : approx X 7.4kg

DSC TERMINAL NCT-196



weight (Mass) : approx X 7.4kg

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