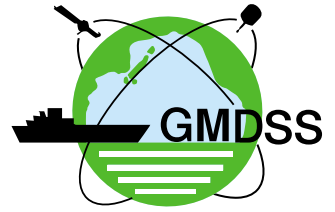


# JRC

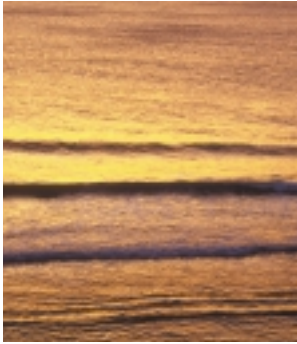
## 250W MF/HF RADIO EQUIPMENT JSS-296



Fully Complies with GMDSS Requirements  
Inadvertent Distress Alert Protection  
AC/DC Two-way Power Supply  
Selfcheck Function  
Built-in Dummy Load for ATU Selfcheck  
Outdoor Installable Antenna Tuning Unit



*Japan Radio Co., Ltd.*



The JSS-296 MF/HF Radio Equipment is designed for vessels navigating A2,A3 and A4 sea areas. It consists of mainly the JSB-196GM Radiotelephone, NFC-296 Antenna Tuning Unit (ATU), NCT-196N DSC/NBDP MODEM, NDZ-127J Data Terminal Equipment (DTE), NDF-268 Keyboard, and NAH-692 Power Amplifier, and it provides the optimum GMDSS system for the superior performance, compact, lightweight and highly efficient design of the units, which ensures easy operation for distress and safety calling as well as general communications.

## FEATURES

### Fully Complies with GMDSS Requirements

All the functions required by IMO resolutions A.804 (19) and A.806 (19) are equipped, and suitable for radio installations of vessels navigating A2, A3 and A4 sea areas.

### Inadvertent Distress Alert Protection

The DISTRESS button is protected by a cover to prevent inadvertent distress alert transmission.

### AC/DC Two-way Power Supply

Ordinarily the Power Supply equipped in the NAH-692 Power Amplifier operates with AC mains and when AC mains is failed, it operates with auxiliary DC24V battery.

### Selfcheck Function

A Built-in high grade selfcheck function centrally controlled using JSB-196GM Radiotelephone ensures easy maintenance.

### Built-in Dummy Load for ATU Selfcheck

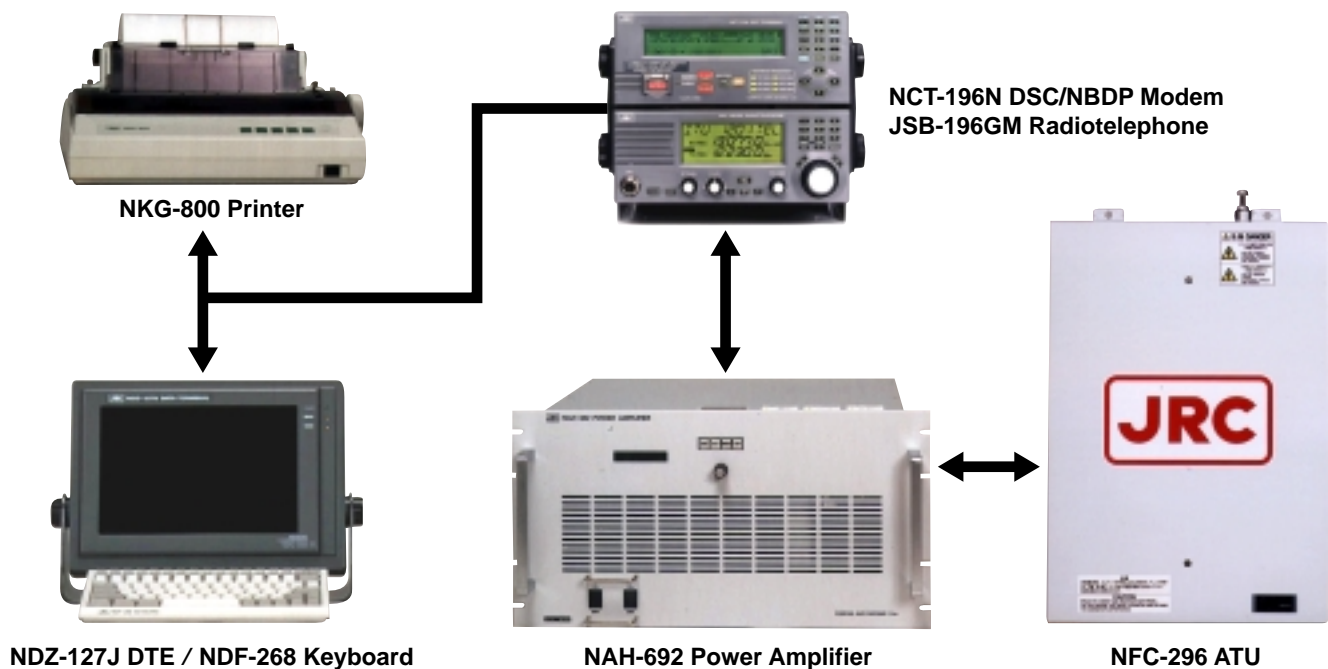
The dummy load for checking the NFC-296 Antenna Tuning Unit (ATU) is built-in and not required to connect as extra unit.

### Outdoor Installable Antenna Tuning Unit

The NFC-296 Antenna Tuning Unit can be installed outdoors such as on deck, ensuring effective emission of transmitter power.



## SYSTEM CONFIGURATION



# SPECIFICATION

## GENERAL

<b>Frequency range</b>	Transmit: 1.6 to 27.5MHz (100Hz steps) Receive: 0.1 to 29.9999MHz (100Hz steps) ± 10Hz or better
<b>Frequency tolerance</b>	± 10Hz or better
<b>Emission mode</b>	J3E (TEL), F1B (DSC/TLX), A1A (CW), H2B, H3E (AME: reception only) 200ch (20ch X 10 Groups) 1722ch [ TEL:283, DSC:29, TLX:891, CW:519 ]
<b>User definable channels</b>	20 user defined channels
<b>Preset ITU channels</b>	Simplex and semi-duplex
<b>Scanning channel</b>	50 ohms
<b>Communication mode</b>	-15 to +55oC
<b>Antenna impedance</b>	90 ~ 132V/180 ~ 264V AC, Single-phase, 50/60Hz
<b>Operating temperature</b>	Tx: 2.0kVA max, Rx: 0.5kVA max 21.6 ~ 31.2V DC
<b>Power requirement</b>	Tx: 30A max, Rx: 7A max 1.5m
<b>Compass safe distance</b>	

## TRANSMITTER

<b>Output power ( * )</b>	AC power source: 200Wpx ( 1.6 to 4MHz ) , 250Wpx ( 4 to 27.5MHz ) DC power source: 100Wpx ( 1.6 to 4MHz ) , 150Wpx ( 4 to 27.5MHz )
<b>Occupied bandwidth</b>	J3E (TEL) 3kHz or better F1B (DSC/TLX), A1A (CW) 0.5kHz or better

( \* )at 10 + 250pF Artificial antenna for 1.6 ~ 4MHz  
at 50 Artificial antenna for 4 ~ 27.5MHz

## RECEIVER

<b>Receiving system</b>	Triple superheterodyne
<b>Intermediate frequencies</b>	70.455MHz, 455kHz, 20.217kHz
<b>Sensitivity (SINAD 20dB)</b>	J3E (TEL) 6.3uV or better (1.6 to 4MHz) 3.5uV or better (4 to 27.5MHz) F1B (DSC/TLX) 1.8uV or better (1.6 to 4MHz) 1.0uV or better (4 to 27.5MHz)
<b>Selectivity</b>	J3E (TEL) 6dB bandwidth 2.4 to 3kHz, 66dB bandwidth Within ± 2.1kHz F1B (DSC/TLX) 6dB bandwidth 270 to 300Hz, 60dB bandwidth Within ± 550Hz
<b>Clarifier range</b>	± 200Hz in 1Hz steps

## WATCHKEEPING RECEIVER

<b>Receiving frequencies</b>	2187.5kHz, 4207.5kHz, 6312kHz, 8414.5kHz, 12577kHz, 16804.5kHz
<b>Receiving system</b>	Double superheterodyne
<b>Intermediate frequencies</b>	40.455MHz, 455kHz
<b>Reception mode</b>	F1B
<b>Sensitivity</b>	Symbol error rate of 1% or better at 1 micro-volt input
<b>Frequency stability</b>	Within +/- 10Hz after 1-minute warm-up

## DSC/NBDP TERMINAL

<b>DSC MODEM</b>	
<b>Communications protocol</b>	In conformity with ITU-RM.493 and M.541
<b>Emission</b>	F1B 100 baud
<b>Memory capacity</b>	Received Distress messages: 20 Received Other messages: 20 Transmitted message: 11 24 hours (message content and time data)
<b>Data backup time</b>	

## NBDP MODEM

<b>Communications protocol</b>	In conformity with ITU-RM.476, M.490, M.491, M.492, M.625 and ITU-T Rec. F130
<b>Emission</b>	F1B 100 baud

## ANTENNA TUNER

<b>Frequency range</b>	1.6 to 30MHz
<b>Power capability</b>	300Wpx
<b>Tuning method</b>	Automatic tuning and preset tuning
<b>Operating temperature</b>	-25 to +55 oC

## BATTERY CHARGER

<b>Charging current</b>	20A (Ordinary charge)
<b>Alarm function</b>	10A (Equalizing charge) Charge /Low voltage/ High voltage alarm

## DATA TERMINAL

<b>Controlled item</b>	NBDP function (Control the DSC/NBDP Terminal)
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# STANDARD COMPONENTS

Component	Model	Q'ty	Remark
MF/HF Radiotelephone	JSB-196GM	1	
<b>Included Accessories</b>			
Hand Set	NQW-213	1	L=1m
Power Cable	7ZCJD0043A	1	
Plug	5JCAS00029	1	
Connector	5JJAJ00034	2	14-8
Terminals	5JDAH00084	2	40A
Spare Fuse	5ZFEX00013	4	
Instruction Manual	7ZPJD0124	1	English

Component	Model	Q'ty	Remark
DSC/NBDP MODEM	NCT-196N	1	
<b>Included Accessories</b>			
Power Cable	7ZCJD0139	1	L=3m
AF Cable	7ZCJD0071	1	L=1.5m
Control Cable	7ZCJD0072	1	L=1.5m
Terminals	5JTCD00220	2	1.25-8
Spare Fuse	5ZFCK00001	4	7.5A
Instruction Manual	7ZPJD0156	1	English



# OPTION

Component	Model	Q'ty	Remark
Hand Microphone	NVT-133	1	Straight Cable(L=5m)
Hand Microphone	NVT-140	1	Curl Cable
Handset Holder	MPBP00127A	1	
AF Cable	7ZCJD0073	1	For NCT-196(L=0.3m)
Control Cable	7ZCJD0074	1	For NCT-196(L=0.3m)
Printer	NKG-800	1	For NCT-196

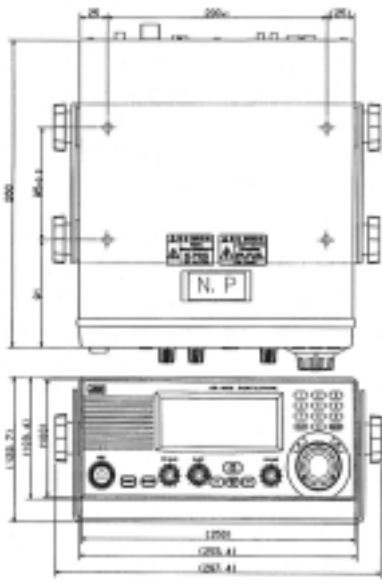


**GMDSS RADIO  
CONSOLE (OPTION)**

NCU-331E

# DIMENSIONS & WEIGHT (MASS)

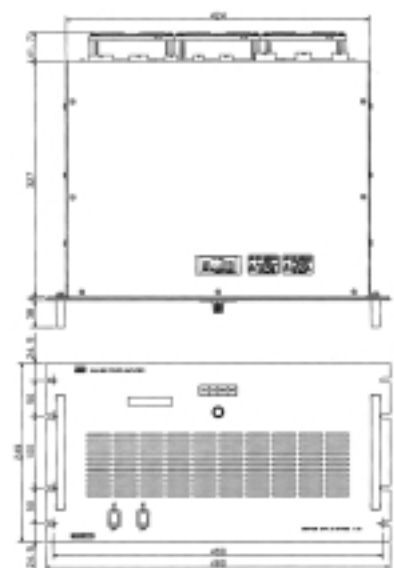
JSB-196GM MF/HF Radiotelephone



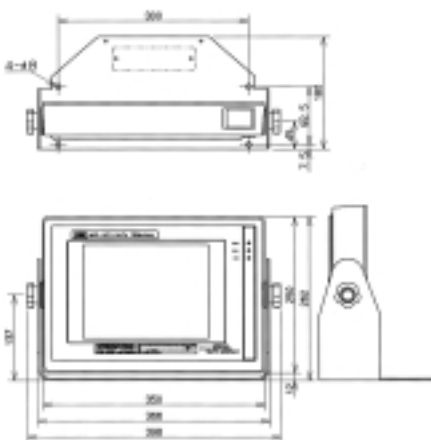
NCT-196N DSC/NBDP Modem



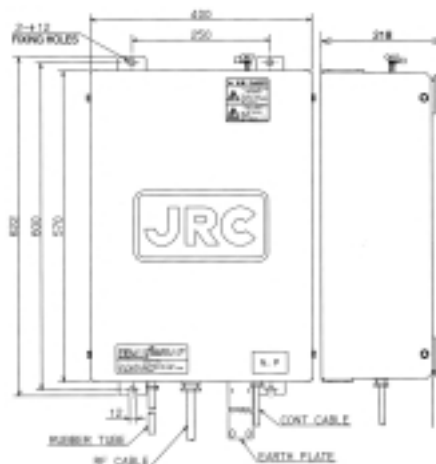
NAH-692 Power Amplifier



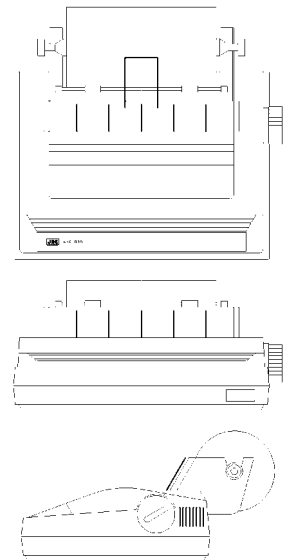
NDZ-127J Data Terminal



NFC-296 Antenna Tuner



NKG-800 Printer



## ⚠ Cautions for Safety

Read the Instruction Manual before your use for safety in operation.

Do not install this equipment in a place with water, wetness, vapor, dust and oily smoke. Otherwise, a fire, electric shock or failure may result.

For the installation work for this equipment, request to JRC agents or dealers. The installation work done by any non-specialist personnel may result in an electric shock or failure.

For further information, contact:



Since 1915

**Japan Radio Co., Ltd.**

URL <http://www.jrc.co.jp/>

**Main Office:** Akasaka Twin Tower(Main), 17-22, Akasaka 2-chome, Minato-ku, Tokyo 107-8432, JAPAN

Telephone: +81-(0)3-3584-8836, 8837

Facsimile: +81-(0)3-3584-8878, 8879

**Overseas Branches :** Seattle, Amsterdam

**Liaison Offices :** Taipei, Pusan, Manila, Jakarta, New York, Piraeus