

# JRC MF/HF RADIO EQUIPMENT JSS-825



*Compliant with GMDSS,  
250W DSC • Radiotelephone • Radiotelegraph • NBDP*

*Compact*

*Module Type*



*Japan Radio Co., Ltd.*



# Small vessel suited, GMDSS compliant, compact·module type 250W MF/HF Radio Equipment



Transmitter/Receiver

JSS-825 MF/HF Radio Equipment is designed for vessels navigating A2, A3 and A4 sea areas. It is equipped with various communication features such as radiotelephone, Digital Selective Calling (DSC), and Telex communication (NBDP), all of which are required by the GMDSS. The JSS-825 provides an optimum GMDSS system because of its compact, lightweight, superior performance and high efficiency design of the units, ensuring easy operation of distress and safety callings as well as general communications.



JSS-825NA/NC type (DSC/NBDP)

## FEATURES

### ■ Fully Complies with GMDSS Requirements

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

### ■ Easy Installation to Small Vessels

The system consists of four units, transmitter/receiver (built-in watchkeeping receiver), DSC or DSC/NBDP, PA(two models: built-in and non built-in AC power supply) and antenna tuner. The former two units and installed in the bridge with stack or separate mounting.

### ■ Built-in Radiotelephone Alarm Generator

The 2182kHz radiotelephone alarm signal generator function required by IMO resolution A.421 <IV> is equipped. The function is necessary until the end of January 1999.

### ■ Inadvertent Distress Alert Protection

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

### ■ AC/DC Two-way Power Supply

Auxiliary DC24V battery source is connectable for the transmission power of 60W or more.

### ■ Built-in Dummy Load for 2182kHz

The dummy load required for 2182kHz is built-in, not requiring additional dummy load and antenna switch.

### ■ Self-Test Function

The built-in high grade self-test function ensures easy maintenance.

### ■ Outdoor Installable Antenna Tuner

The antenna tuner can be installed outdoors, ensuring effective radiation of the transmitter power.

### ■ Remote Controller Available (Option)

Up to two remote controllers for radiotelephone functions are optionally available.



JSS-825DA/DC type (DSC)





## SPECIFICATIONS

### General

[Frequency range]	Transmission: 1.6-27.5MHz (100Hz steps) Reception: 0.1-29.9999MHz (100Hz steps)
[Frequency Tolerance]	Within $\pm 10$ Hz after one minute warm-up
[Modes of emission]	J3E, H3E, F1B, A1A
[Preset channels]	ITU channels (J3E, A1A, DSC, NBDP)
[User channels]	400 channels (simplex or semi-duplex)
[Frequency switching time]	Within 0.1sec.
[Communications]	Distress, urgency, safety, ship's business, general communications possible with radiotelephone, DSC and NBDP
[Communication mode]	Simplex or semi-duplex
[Control]	From transmitter/receiver panel, DSC panel or data terminal keyboard, and optional remote controller panel
[Power supply]	Main power supply: AC 100/220V $\pm 10\%$ , 50/60Hz, 2kVA max. Auxiliary battery supply: DC24V +30%, -10% (non grounded), 40A max.

### [Dimensions & weight]

Transmitter/Receiver NTD-825:	130(H) $\times$ 330(W) $\times$ 285(D)mm, Approx.8kg
DSC/NBDP Modem NCT-610A:	99(H) $\times$ 330(W) $\times$ 285(D)mm, Approx.4kg
DSC Terminal NCT-620D:	99(H) $\times$ 330(W) $\times$ 285(D)mm, Approx.4kg
PA NAH-281A/C:	230(H) $\times$ 330(W) $\times$ 420(D)mm, Approx.21kg/Approx.12kg
Antenna Tuner NFC-825:	572(H) $\times$ 380(W) $\times$ 124(D)mm, Approx.14kg

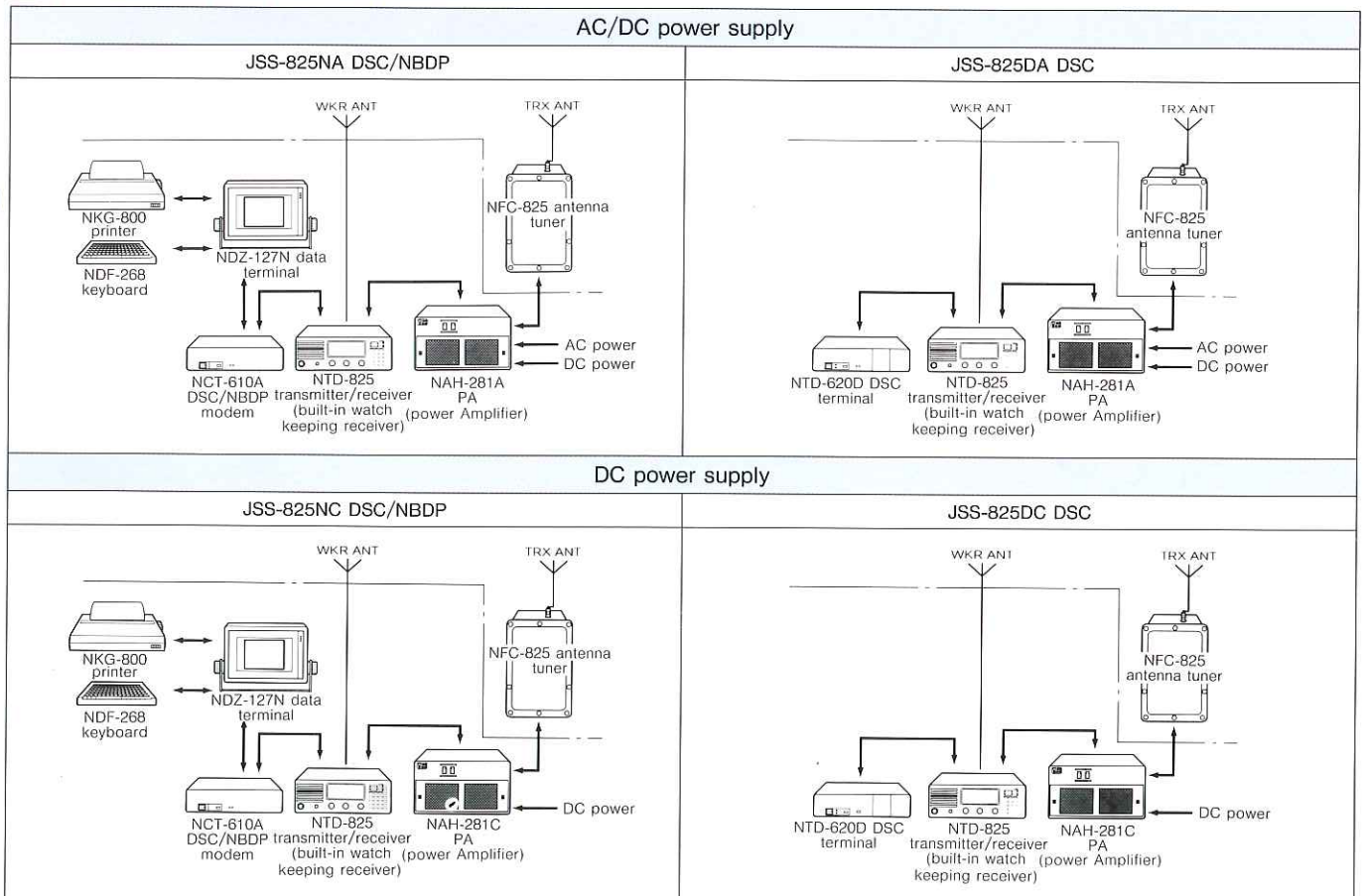
### Transmitter

#### [Output power/Power reduction]

Power Supply	Frequency	Power Reduction	Output Power				
			250W	200W	150W	100W	75W
AC/DC	1.6~4MHz	High	200W	200W	100W	100W	75W
		Medium	100W	100W	—	—	—
		Low	75W	75W	35W	35W	—
	4~27.5MHz	High	250W	200W	150W	100W	75W
		Medium	150W	150W	—	—	—
		Low	75W	75W	35W	35W	—
Auxiliary (Battery)	1.6~4MHz	High	100W	100W	100W	100W	75W
		Medium	—	—	—	—	—
		Low	35W	35W	35W	35W	—
	4~27.5MHz	High	150W	150W	150W	100W	75W
		Medium	—	—	—	—	—
		Low	35W	35W	35W	35W	—

1.6~4MHz: 10 $\Omega$  + 250PF load  
4~27.5MHz: 50 $\Omega$  load

## SYSTEM CONFIGURATION DIAGRAM



### Reception [Sensitivity]

Mode	H3E	J3E	A1A
Frequency			
0.1MHz~0.2MHz	60 $\mu$ V or better	—	20 $\mu$ V or better
0.2MHz~1.6MHz	30 $\mu$ V or better	—	10 $\mu$ V or better
1.6MHz~29.9999MHz	10 $\mu$ V or better	3 $\mu$ V or better	3 $\mu$ V or better

※H3E: (S+N)/N=20dB, 1kHz 30% modulation

J3E: (S+N+D)/(N+D)=20dB

A1A: (S+N)/N=20dB

DSC, NBDP: Symbol error rate is  $1 \times 10^{-2}$  or less at 1 $\mu$ V antenna input.

[AF rated output] 1W, 4 $\Omega$

[AF max. output] 2W At 4 $\Omega$  load with less than 10% distortion

[Line output] 0dBm, 600 $\Omega$ , balanced

[Receiving system] Double super heterodyne

### DSC Watchkeeping Receiver

[Frequency] 2187.5, 4207.5, 6312, 8414.5, 12577, 16804.5kHz

[Scanning]

(a) Scans 2187.5, 8414.5kHz and additionally selected frequencies among 4207.5, 6312, 12577kHz within 2 seconds.

(b) Scanning automatically stops when 100bauds dot pattern signal is received.

[Receiving system] Double superheterodyne

### Antenne Tuner

[Frequency range] 1.6-27.5MHz

[Usable antenna] 7(6+1) ~ 30m length whip or long wire antenna

[Tuning system] Automatic tuning and preset tuning

[Built-in dummy load] 10 $\Omega$  + 250pF

[control cable length] 50m max

### DSC/NBDP

[Protocol]

DSC: Comply with CCIR recommendations 493 and 541

NBDP: Comply with CCIR recommendations 625, 476 and CCITT recommendations 130.

## STANDARD COMPOSITION

### Standard composition

Name	Type	JSS-825DA DSC AC/DC operation	JSS-825NA DSC/NBDP AC/DC operation	JSS-825DC DSC DC operation	JSS-825NC DSC/NBDP DC operation
Transmitter/Receiver	NTD-825	●	●	●	●
Hand microphone	NVT-140	●	●	●	●
Handset	NQW-213	●	●	●	●
DSC terminal	NCT-620D	●		●	
PA	NAH-281A	●	●		
	NAH-281C			●	●
Antenna tuner	NFC-825	●	●	●	●
DSC/NBDP modem	NCT-610A		●		●
DTE	NDZ-127N		●		●
Keyboard	NDF-268		●		●
Floppy drive unit	NDH-265		●		●
Printer	NKG-800		●		●
(Note 3) Transmitter/ Receiver-PA control cable (5m)	6ZCJD 70002A	●	●	●	●
(Note 3) Transmitter/ Receiver-PA power cable (5m)	6ZCJD 71002B	●	●	●	●
(Note 4) Transmitter/ Receiver-DSC control cable (1m)	6ZCJD 72001A	●	●	●	●
(Note 4) Transmitter/ Receiver-DSC power cable (1m)	6ZCJD 73001B	●	●	●	●
Antenna tuner connection terminal board	CFO-8494	●	●	●	●
Spares		●	●	●	●
Test date		●	●	●	●
Instruction manual (English)		●	●	●	●

(Note 1) 200W, 150W, 100W and 75W models are available for each system. Select at ordering.

(Note 2) Japanese or English panel printing is available for transmitter/receiver NTD-825 and DSC terminal NCT-620D. Select at ordering.

(Note 3) 1m and 15m length are available. Select at ordering.

(Note 4) 5m and 15m length are available. Select at ordering.

(Note 5) The volume of test data and instruction manual is one for each.

### Options

Name	Type or Code
Transmitter/Receiver-PA control cable (1m)	6ZCJD70001A
Transmitter/Receiver-PA control cable (5m)	6ZCJD70002A
Transmitter/Receiver-PA control cable (15m)	6ZCJD70003A
Transmitter/Receiver-PA power cable (1m)	6ZCJD71001B
Transmitter/Receiver-PA power cable (5m)	6ZCJD71002B
Transmitter/Receiver-PA power cable (15m)	6ZCJD71003B
Transmitter/Receiver-DSC control cable (1m)	6ZCJD72001A
Transmitter/Receiver-DSC control cable (5m)	6ZCJD72002A
Transmitter/Receiver-DSC control cable (15m)	6ZCJD72003A
Transmitter/Receiver-DSC power cable (1m)	6ZCJD73001B
Transmitter/Receiver-DSC power cable (5m)	6ZCJD73002B
Transmitter/Receiver-DSC power cable (15m)	6ZCJD73003B
Printer (Paper included)	NKG-48A
Remote controller	NCH-449
Remote controller connection terminal board	CFQ-8553
Remote controller connection terminal board (for second controller)	CFQ-8554
Head phone	ST-3
Telegraph key	KY-3A
Service kit (Extension boards for maintenance, PCB removal levers)	NJZ-1210
DMC	NCH-321-1
Accessory connection terminal board	CFQ-8495



(Upper unit) NCT-610A DSC/NBDP modem  
(Lower unit) NTD-825 transmitter/receiver



(Upper unit) NCT-620D DSC terminal  
(Lower unit) NTD-825 transmitter/receiver



NCH-449 Remote controller

Specifications subject to change without notice

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