

# Chapter 1

# GENERAL AND EQUIPMENT COMPOSITION

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## 1.1 FUNCTIONS

This equipment is a marine radar equipment consisting of a scanner unit and an integrated color LCD display unit.

### ■ Function of This System

- Sensitivity adjustment
- Sea clutter suppression
- Rain/snow clutter suppression
- IR (Interference rejection)
- Bearing and range measurement using a cursor, fixed/variable range markers, and electronic bearing line
- Own ship's track display
- NAV line and marker displays
- TM (True Motion) presentation
- Self-diagnostic
- TT (manual and automatic target acquisition/automatic tracking, vector and trail displays and alarm displays)
- AIS

## 1.2 FEATURES

■ **Equipping a Bright and Easy-to-see LCD Screen**

10.4-inch color LCD of 640X480 pixels (VGA) is equipped.

■ **Easy Operation with the Soft keys and the Multi Control**

Simple and easy operations are provided so that you can operate without this instruction manual.

■ **Target Detection by Latest Signal Processing Technology**

The system employs a signal processing technology of DSP to eliminate undesired clutter, thus improving the target detection.

■ **TT and AIS functions as Standard Equipment**

High performance target tracking function which can automatically track targets (up to 10 targets) and AIS target display function (up to 50 targets) are provided.

## 1.3 CONFIGURATION

### Radars Configuration and Ship's Mains

RADAR MODEL	Scanner	Display Unit	SHIP'S MAINS
JMA-3314	NKE-2042	NCD-2182	12/24 VDC
JMA-3334	NKE-2043		
JMA-3316	NKE-2062		24 VDC
JMA-3316HS	NKE-2062HS		12/24 VDC
JMA-3336	NKE-2063		
JMA-3336HS	NKE-2063HS		24 VDC
JMA-3340-4	NKE-2103-4		
JMA-3340-4HS	NKE-2103-4HS		
JMA-3340-6	NKE-2103-6		
JMA-3340-6HS	NKE-2103-6HS		

### Scanners and Transmitted Output Powers

SCANNER TYPE		TRANSMITTED OUTPUT POWER	BAND	RATE OF ROTATION
JMA-3314	620mm Radome	4kW	X	27 rpm
JMA-3334				
JMA-3316	3.9 FT SLOT ANTENNA	6kW		27 rpm
JMA-3316HS				48 rpm
JMA-3336				27 rpm
JMA-3336HS				48 rpm
JMA-3340-4	4 FT SLOT ANTENNA	10 kW		27 rpm
JMA-3340-4HS				48 rpm
JMA-3340-6	6 FT SLOT ANTENNA			27 rpm
JMA-3340-6HS				48 rpm

#### Reference:

- 1 An optional rectifier NBA-5111 or NBD-865 is necessary for using Ship's Mains 100-120/220-240 VAC, 50/60Hz, 1 $\phi$ .
- 2 If connecting to gyro with synchro signal output or step signal output, optional NSK unit NCT-4106A is required.

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**Supplied accessories**

PRODUCT NAME/MODEL	QUANTITY	JRC CODE	REMARKS
Instruction manual 7ZPRD0787	1	7ZPRD0787	This manual
Installation manual 7ZPRD0789	1	7ZPRD0789	
Quick manual 7ZPRD0793	1	7ZPRD0793	
Power cord H-CFQ-5436-5	1	CFQ-5436-5	5 m RoHS compliance

**Included accessories**

PRODUCT NAME/MODEL	QUANTITY	JRC CODE	REMARKS
Fuse ST4-6.3AN1	4	7ZXRD0012	Scanner NKE-2042(DC12V) For the modulator(F2) JRC CODE: 5ZFCA00051  1 for installation 3 for spares
Fuse ST4-3.15AN1	4		Scanner NKE-2042(DC24V) For the modulator(F2) JRC CODE: 5ZFCA00047  1 for installation 3 for spares
Fuse ST4-6.3AN1	4	7ZXRD0012	Scanner NKE-2043(DC12V) For the compound modulator(F2) JRC CODE: 5ZFCA00051  1 for installation 3 for spares
Fuse ST4-3.15AN1	4		Scanner NKE-2043(DC24V) For the compound modulator(F2) JRC CODE: 5ZFCA00047  1 for installation 3 for spares
Fuse ST4-6.3AN1	4	7ZXRD0013	Scanner NKE-2062(DC12V) For the modulator(F2) JRC CODE: 5ZFCA00051  1 for installation 3 for spares
Fuse ST4-3.15AN1	4		Scanner NKE-2062/HS(DC24V) For the modulator(F2) JRC CODE: 5ZFCA00047  1 for installation 3 for spares

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<b>PRODUCT NAME/MODEL</b>	<b>QUANTITY</b>	<b>JRC CODE</b>	<b>REMARKS</b>
Fuse ST4-5AN1	4		Scanner NKE-2062/HS For the scanner motor(F3) JRC CODE: 5ZFCA00050  1 for installation 3 for spares
Fuse ST4-6.3AN1	4		Scanner NKE-2063(DC12V) For the compound modulator(F2) JRC CODE: 5ZFCA00051  1 for installation 3 for spares
Fuse ST4-3.15AN1	4	7ZXRD0013	Scanner NKE-2063/HS(DC24V) For the compound modulator(F2) JRC CODE: 5ZFCA00047  1 for installation 3 for spares
Fuse ST4-5AN1	4		Scanner NKE-2063/HS For the scanner motor(F3) JRC CODE: 5ZFCA00050  1 for installation 3 for spares
Carbon brush 54531-01	2		Scanner NKE-2063/HS JRC CODE: BRXP05247  2 for spares
Fuse ST4-5AN1	4		Scanner NKE-2103-4/4HS/6/6HS For the modulator(F2) JRC CODE: 5ZFCA00050  1 for installation 3 for spares
Fuse ST6-10AN1	4		Scanner NKE-2103-4/4HS/6/6HS For the power supply to motor(F3) JRC CODE: 5ZFCA00053  1 for installation 3 for spares

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PRODUCT NAME/MODEL	QUANTITY	JRC CODE	REMARKS
Connector LTW-06BFFA-LL7001	1	7ZXR0028	Display Unit NCD-2182 For GPS connection(J3) JRC CODE: 5JCDX00032  1 for installation
Connector LTW-07BFFA-LL7001	1		Display Unit NCD-2182 For NMEA connection(J4) JRC CODE: 5JCDX00033  1 for installation
Connector LTW-08BFFA-LL7001	1		Display Unit NCD-2182 For GPS compass connection(J5) JRC CODE: 5JCDX00034  1 for installation

#### Option

PRODUCT NAME/MODEL	QUANTITY	JRC CODE	REMARKS
Rectifier NBA-5111	1	NBA-5111	For NKE-2042 NKE-2043 NKE-2062/HS NKE-2063/HS NKE-2103-4/4HS/6/6HS
Rectifier NBD-865	1	NBD-865	For NKE-2042 NKE-2043 NKE-2062 NKE-2063
Equipment cable H-CFQ-6912-5 H-CFQ6912-10 CFQ-6912-15 H-CFQ6912-20 H-CFQ6912-30		CFQ6912-5/10/15/20/30	Cable connecting the scanner unit and the display unit Length: 5/10/15/20/30 m Cable with connectors at both ends
Cable connecting a GPS compass H-CFQ-6934	1	CFQ-6934	For JLR-10
Cable connecting a GPS compass H-CFQ-5469	1	CFQ-5469	For JLR-20/30
Cable connecting NDW-51 H-CFQ-7082	1	CFQ-7082	Radar simulator Cable connecting NDW-51
NSK unit NCT-4106A	1	NCT-4106A	Gyro signal and log signal acquisition
Sun Hood MTV304869	1	MTV304869	