

MF/HF RADIO

NHR-1500

- SDR (Software Defined Radio) technology
- Voice digitalized
- Large 7-inch color display
- Knob & touch screen operation
- MSI RX and ACS functions
- Data interface to BAM/INS
- Marine communication handset
- Type approval with DNV (MED) and CCS



TRANSCIVER



ANTENNA COUPLER



ALARM UNIT



CONTROL UNIT

- NHR-1500 MF/HF RADIO (GMDSS) is a high-performance MF/HF device, capable of voice communication and DSC (digital selective calling) facilities as well.
- Conforming to the Class A standard set for MF/HF DSC by ITU and IMO regulations, NHR-1500 can be part of an onboard GMDSS package for vessels of A2/A3/A4.
- NHR-1500 conforms to the regulations of ITU-R M.493-16, ITU-R M.541-11, IMO MSC.302 (87), MSC.512 (105), IEC 61097-9, etc.



SPECIFICATIONS

● TX Frequency:	1605.0 ~ 27500.00 kHz
● RX Frequency:	300.0 ~ 29999.99 kHz
● Working Channel:	400+ channels
● Communication Mode:	Simplex/Semi-duplex
● Emission Class:	J3E, H3E, A1A, F1B
● TX Power:	150 W pep
● RX Sensitivity:	≤2.5 μV (1605.0~27500.0 kHz, J3E), ≤0.7 μV (1605.0~27500.0 kHz, F1B)
● DSC Frequencies (distress):	2187.5, 4207.5, 6312.0, 8414.5, 12577.0, 16804.5 (kHz)
● Control Display:	7-inch color display, touch screen
● Interface:	BAM/INS/GNSS (RS422)
● Antenna Impedance:	50 Ω
● Power Supply:	DC 24 V (range 18 V ~ 29 V)
● Operating Temperature:	-15° ~ 55°C (indoor parts) -25° ~ 55°C (outdoor parts)
● IP Grade:	IP22: Control Unit, Transceiver, Handset, RF Junction Box; IP66: Antenna Coupler

EQUIPMENT LIST					
● STANDARD			● OPTIONS		
- Transceiver	NHR-1500T	1 pc	- Printer	NPT-100	1 pc
- Control Unit	NHR-1000C	1 pc	- Alarm Unit	NAU-100	1 pc
- Antenna Coupler	NHR-1000A	1 pc	- External Speaker	NSK-100	1 pc
- Handset	NHS-200	1 pc	- TX/RX Antenna	NHA100	1 pc
- RF Junction Box	NHR-200J	1 pc	- DSC RX Antenna	NHA200	1 pc
- Cable & Accessories		1 set	- AC/DC PSU	NPS-300	1 pc

SYSTEM DIAGRAM

The diagram illustrates the system architecture and component interconnections. Key components and their connections are as follows:

- Antennas:**
 - TX/RX ANT:** Connected to the **NHR-1000A Ant Coupler**, which is connected to the **NSR** (Navigation System Receiver).
 - WK RX ANT:** Connected to the **NHR-1500T Transceiver Unit**.
 - TR_ANT:** Connected to the **NHR-1500T Transceiver Unit**.
- Transceiver Unit:** The **NHR-1500T Transceiver Unit** is the central communication hub, connected to the **NSR**, **NHR-1000A Ant Coupler**, **NHR-200J RF Switching Box**, **NPS-300 PSU**, **INS**, **NAU-100 Alarm Unit**, and **GNSS Navigator**.
- Control Unit:** The **NHR-1000C Control Unit** is connected to the **NHR-1500T Transceiver Unit** and the **NHR-200J RF Switching Box**. It also controls the **NPS-300 PSU** via **DC 24V** and **AC 220V / DC 18V** lines.
- Power Supply:** The **NPS-300 PSU** provides power to the **NSR**, **NHR-200J RF Switching Box**, **INS**, **NAU-100 Alarm Unit**, and **GNSS Navigator**.
- Handset:** The **NHR-200 Handset** is connected to the **NHR-1000C Control Unit** via **GANPOWER/PWR_ON/PTT** lines.
- Speakers:** The **NSK-100 External Speaker** is connected to the **NHR-1000C Control Unit** via **RS232** lines.
- Printer:** The **NPT-100 Printer** is connected to the **NHR-1000C Control Unit** via **RS232** lines.
- Modules:**
 - NSR:** Navigation System Receiver, connected to the **NHR-1000A Ant Coupler** and the **NHR-1500T Transceiver Unit**.
 - NHR-200J RF Switching Box:** Connected to the **NHR-1500T Transceiver Unit** and the **NHR-1000C Control Unit**.
 - INS:** Inertial Navigation System, connected to the **NHR-1500T Transceiver Unit** and the **NPS-300 PSU**.
 - NAU-100 Alarm Unit:** Connected to the **NHR-1500T Transceiver Unit** and the **NPS-300 PSU**.
 - GNSS Navigator:** Connected to the **NHR-1500T Transceiver Unit** and the **NPS-300 PSU**.

SIZE DIMENSION

TRANSCEIVER

Technical drawing of the Transceiver showing front, side, and top views with dimensions:

- Front view: 174.5 (top), 171.5 (bottom), 480.0 (left), 430.0 (right).
- Side view: 325.0 (top), 148.0 (bottom).
- Top view: 146.9 (left), 134.0 (bottom left), 311.4 (top), 267.5 (bottom).

CONTROL UNIT

Technical drawing of the Control Unit showing front and side views with dimensions:

- Front view: 146.9 (left), 134.0 (bottom left), 311.4 (top), 267.5 (bottom).
- Side view: 81.0 (top), 146.9 (left), 62.0 (bottom).

HANDSET

Technical drawing of the Handset showing front, back, and side views with dimensions:

- Front view: 68.1 (top), 210.3 (left).
- Back view: 68.1 (top), 188.9 (left).
- Side view: 72.1 (top).

ANTENNA COUPLER

Technical drawing of the Antenna Coupler showing front and side views with dimensions:

- Front view: 289.0 (top), 195.5 (top center), 46.2 (top left), 49.1 (top left center), 98.3 (top center), 46.2 (top right), 27.4 (top right center), 7.0 (bottom center), 21.0 (bottom left), 382.0 (bottom left), 380.0 (bottom center), 400.0 (bottom right).
- Side view: 85.0 (top).