

INSTRUCTION MANUAL

TKR-5800

FEATURES

- The transmitting unit, the receiving unit, and the controller unit are contained in the same case of height 1U.
- TKR-5800 has two modulation mode of analog and digital.
- Alone, it functions as an analog conventional repeater or digital conventional repeater.
- If an analog trunking controller is connected outside, it will function as repeater for the analog sites.
And if two or more repeater is connected, it will function as a trunking system.
- The transmission system in digital mode is as follows.
 - modulation method : 4 Level FSK
 - channel interval : 6.25kHz
 - Transmission rate : 4800bps
 - voice CODEC : AMBE+2(3600bps)
- The transmission system in analog mode is as follows.
 - modulation method : FM
 - channel interval : 12.5kHz
- An air protocol adopts the original protocol of Kenwood.

PRECAUTIONS

- Do not expose the unit to rain or moisture; to prevent fire or electric shock.
- Do not open the unit under any circumstances; to avoid risk of electric shock.
- Do not expose the unit to long periods of direct sunlight, nor place it close to heating appliances.
- Do not place the unit in excessively dusty and/or humid areas, nor on unstable surfaces.
- If you detect an abnormal odor or smoke coming from the unit, disconnect the power from the unit immediately.

NOTICES TO THE USER

FCC WARNING

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

- ** GOVERNMENT LAW PROHIBITS THE OPERATION OF UNLICENSED RADIO TRANSMITTERS WITHIN THE TERRITORIES UNDER GOVERNMENT CONTROL.
- ** ILLEGAL OPERATION IS PUNISHABLE BY FINE OR IMPRISONMENT OR BOTH.
- ** REFER SERVICE TO QUALIFIED TECHNICIANS ONLY.

CAUTION: This repeater is intended for use as a fixed base station with the antenna located outdoors on the rooftop or on antenna tower.

INSTALLATION

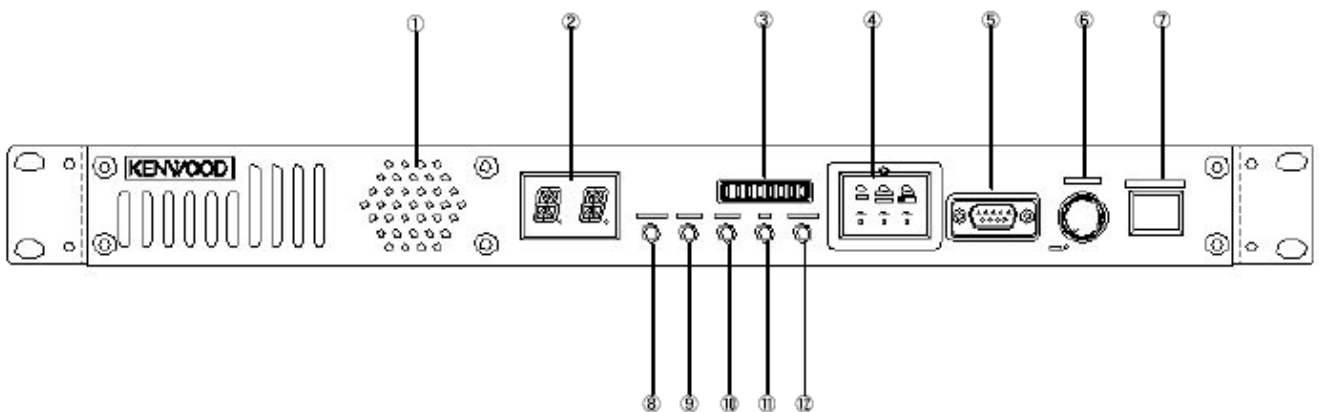
To install the handles onto the front panel of the repeater, align the handles with the holes on the front panel, then secure the handles using the supplied screws.

MICROPHONE

Connect an optional KMC-30, KMC-27A, KMC-27B, or KMC-9C **KENWOOD** microphone to the **MIC** jack on the front panel.

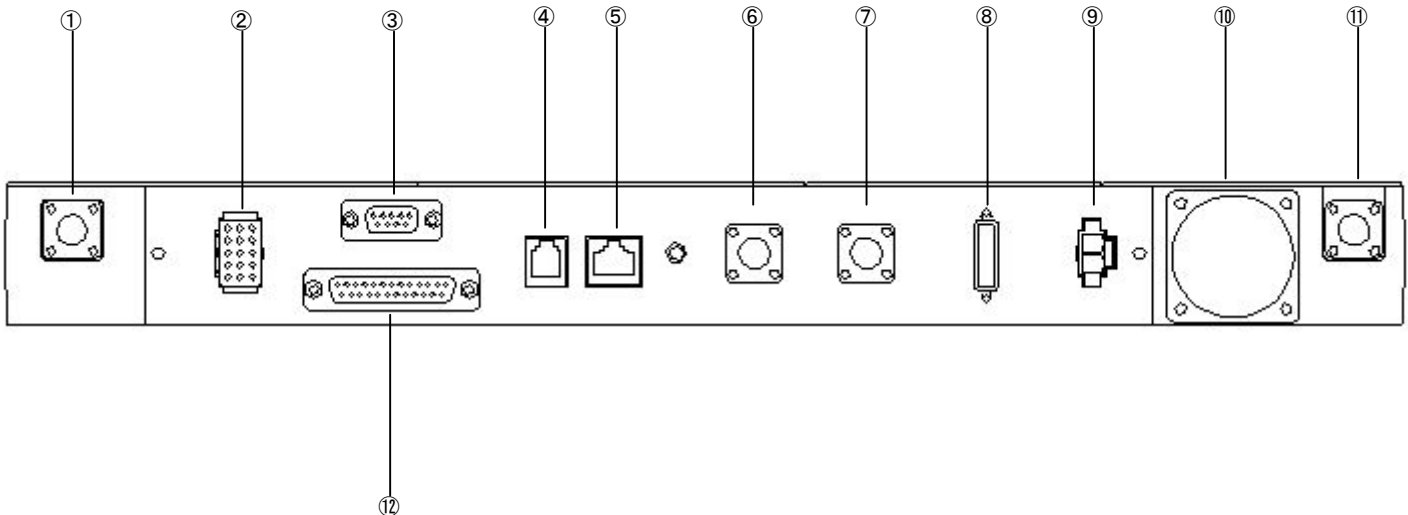
CONTROLS AND FUNCTIONS

** Front Panel



- ① Speaker
- ② CH Number Display
Two 17-segment digits display the channel number or status.
- ③ StatusDisplay
Eight LEDs display the status.
- ④ Programmable Function keys
Press these keys to activate their programmable functions
- ⑤ for maintenance purpose only
- ⑥ VOLUME control
Rotate to adjust the volume.
- ⑦ Mic jack
Connect a microphone to this 8-pin modular jack.
- ⑧ CONT indicator
When assigned to a control channel, it lights red.
- ⑨ OXCXO indicator
The state of OXCXO is displayed in green and red.
- ⑩ BUSY indicator
Lights green while a signal is being received.
- ⑪ TX indicator
Lights red while transmitting.
- ⑫ Power indicator
Lights green when power is applied from the DC 13.8V jack.

** Rear Panel



①RX IN jack

Connect a RX antenna or a duplexer to this BNC receptacle. CH Number Display

②TEST/SPKR jack

Test input/output jack. Connect an external speaker to this jack.

③④⑤⑥⑦for maintenance purpose only

⑧FUSE

Insert 4A blade fuses into these fuse holders

⑨DC 13.8V jack

Connect a 13.8 V DC power supply to this jack.

Supplied cable with ferrite core must be used

⑩Cooling Fan

It is used in order to radiate heat.

⑪TX OUT jack

Connect a TX antenna or a duplexer to this receptacle

⑫for maintenance purpose only

REPEATER OPERATION

When power is applied to the unit, the **POWER** indicator lights.

- Green when using the main DC jack.

Rotate the **VOLUME** control to adjust the volume.

The **BUSY** indicator lights green while receiving a signal and the **TX** indicator lights red while transmitting.

TRANSCEIVER OPERATION

** Receive

Adjust the volume to your desired level.

You may need to readjust the volume when you receive a message from your dispatcher or another member in your fleet.

- The **BUSY** indicator lights green while a signal is being received.

** Transmit

1 Listen to the channel before transmitting, to make sure it is not being used.

2 Press the microphone **PTT** switch, then speak in your normal speaking voice.

- The **TX** indicator lights red while transmitting.

3 When you finish speaking, release the **PTT** switch.

MANDATORY SAFETY INSTRUCTIONS TO INSTALLERS AND USERS

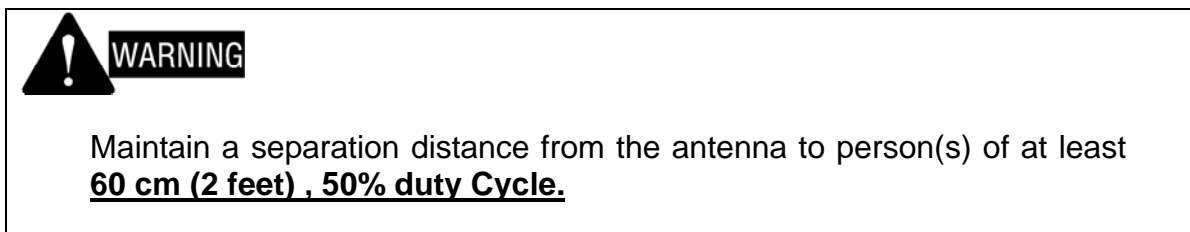
- Use only manufacturer or dealer supplied antenna.
- **Antenna Minimum Safe Distance: 60 cm (2 feet), 50% duty Cycle.**
- Antenna Gain: **0** dBd referenced to a dipole.

The Federal Communications Commission has adopted a safety standard for human exposure to RF (Radio Frequency) energy which is below the OSHA (Occupational Safety and Health Act) limits.

- **Antenna Mounting:** The antenna supplied by the manufacturer or radio dealer must not be mounted at a location such that during radio transmission, any person or persons can come closer than the above indicated minimum safe distance to the antenna, i.e. **60 cm (2 feet) , 50% duty Cycle.**
- To comply with current FCC RF Exposure limits, the antenna must be installed at or exceeding the minimum safe distance shown above, and in accordance with the requirements of the antenna manufacturer or supplier.
- Vehicle installation: The antenna can be mounted at the center of a vehicle metal roof or trunk lid, if the minimum safe distance is observed.
- Base Station Installation: The antenna should be fixed-mounted on an outdoor permanent structure. RF Exposure compliance must be addressed at the time of installation.

Antenna substitution: Do not substitute any antenna for the one supplied or recommended by the manufacturer or radio dealer.

You may be exposing person or persons to excess radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.



You, as the qualified end-user of this radio device must control the exposure conditions of bystanders to ensure the minimum separation distance (above) is maintained between the antenna and nearby persons for satisfying RF Exposure compliance. The operation of this transmitter must satisfy the requirements of Occupational/Controlled Exposure Environment, for work-related use, transmit only when person(s) are at least the minimum distance from the properly installed, externally mounted antenna. Transmit only when people outside the vehicle are at least the recommended minimum lateral distance away from the antenna/vehicle