VHF FM REPEATER/ UHF FM REPEATER

# TKR-750/ TKR-850
# INSTRUCTION MANUAL

# KENWOOD

KENWOOD CORPORATION

© B62-1327-20 (K,E)
09 08 07 06 05 04 03 02

## THANK YOU!

We are grateful you purchased this **KENWOOD** repeater. We believe this easy-to-program repeater will be highly effective in your communications system, and will keep personnel operating at peak efficiency.

**KENWOOD** incorporates the latest in advanced technology into all of our products. As a result, we feel strongly that you will be pleased with the quality and features of this product.

## FEATURES

• You can easily program channel data using the KPG-66D software on a PC.

• You can recall 1 of 16 preset channels using either a PF key or the external control line.

• The firmware can be written to the Flash memory through an external source.

• QT/DQT signalling can be programmed on each channel. It simultaneously decodes up to 16 different QT/DQT tones.

• The interface port can be used with external equipment, such as a repeater controller.

• The repeater has multi-mode capability.
  Wide: 30 kHz/ Narrow: 15 kHz (TKR-750; K type only)
  Wide: 25 kHz/ Narrow: 12.5 kHz (TKR-750/ TKR-850)

• You can adjust the following functions from a PC:
  • Squelch
  • RX audio signal output (RA)
  • RX detector signal output (RD)
  • RX frequency
  • RF output power
  • Maximum deviation
  • TX audio input (TA)
  • Signalling deviation (TD)
  • DQT balance
  • QT deviation
  • DQT deviation
  • Test tone deviation
  • CW ID deviation
  • Repeat gain
  • TX frequency

## 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. Contact your **KENWOOD** service center or dealer.

## 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.*

## UNPACKING AND CHECKING EQUIPMENT

**Note:** *The following unpacking information is for use by your* **KENWOOD** *dealer, an authorized* **KENWOOD** *service facility, or the factory.*

Carefully unpack the repeater. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

| Item | Part Number | Quantity |
|---|---|---|
| Hardware fixture | J21-8402-X4 | 1 |
| Front glass | B10-2635-X4 | 1 |
| Filter | B11-1259-X4 | 1 |
| Cushion | G13-1801-X4 | 4 |
| Cushion | G13-1802-X4 | 4 |
| Foot | J02-0475-X5 | 2 |
| Foot | J02-0492-X4 | 2 |
| Grommet | J59-0302-X5 | 2 |
| Handle | K01-0418-X5 | 1 |
| Screws | N35-3006-45 | 5 |
| DC cord | E30-3427-X5 | 1 |
| Connector cable | E31-3228-X5 | 1 |
| Fuse | F05-1537-X5 | 1 |
| Warranty card (K type only) | — | 1 |
| Instruction manual | B62-1327-XX | 1 |

## 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.
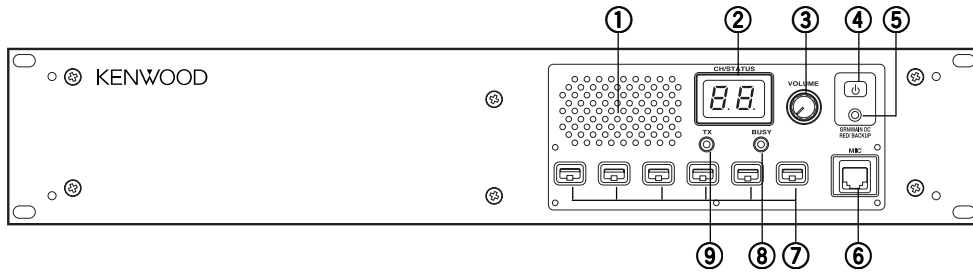
Please consult your dealer for installing the repeater and antenna.

## MICROPHONE

Connect an optional KMC-30 (E type only), 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/STATUS Display
Two, 7-segment digits display the channel number or status.

### ③ VOLUME control
Rotate to adjust the volume.

### ④ DC SOURCE switch

### ⑤ Power indicator
Lights green when power is applied from the **DC 13.6V** jack (**DC 13.2V** jack on E type versions). Lights red when power is applied from the **BACK UP** battery terminal.

### ⑥ MIC jack
Connect a microphone to this 8-pin modular jack.

### ⑦ Programmable Function keys
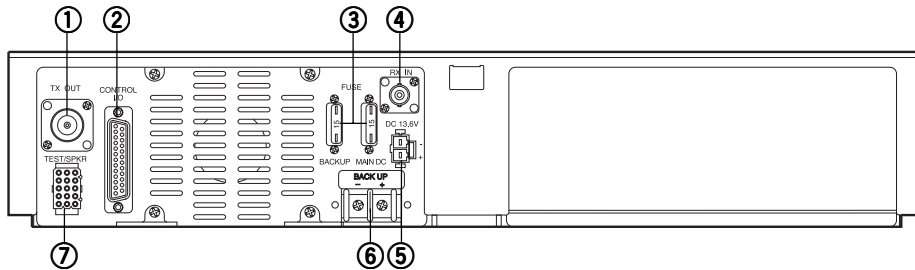Press these keys to activate their programmable functions.

### ⑧ BUSY indicator
Lights green while a signal is being received.

### ⑨ TX indicator
Lights red while transmitting.

## ■ Rear Panel



*\* The K type model is shown in this diagram.*

### ① TX OUT jack
Connect a TX antenna or a duplexer to this receptacle.

### ② CONTROL I/O jack
Connect an external programming device or repeater controller to this DB-25 interface.

### ③ FUSE
Insert 15 A blade fuses into these fuse holders.

### ④ RX IN jack
Connect a RX antenna or a duplexer to this BNC receptacle.

### ⑤ DC 13.6V (K type) / DC 13.2V (E type) jack
Connect a 13.6 V (K type) or 13.2 V (E type) DC power supply to this jack.

### ⑥ BACKUP battery terminal

### ⑦ TEST/SPKR jack
Test input/output jack. Connect an external speaker to this jack.

# REPEATER OPERATION

**Note:** *Please consult your dealer for programming the repeater.*

When power is applied to the unit, the **Power** indicator lights:

- Green when using the main DC jack.
- Red when using the Backup terminal.

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.

- FCC regulations require that you identify the station you are calling as well as your own station (your assigned call sign).
- The **TX** indicator lights red while transmitting.

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