VHF FM REPEATER/ UHF FM REPEATER

TKR-740/ TKR-840

INSTRUCTION MANUAL

KENWOOD

KENWOOD CORPORATION

© B62-1136-00 (K)
09 08 07 06 05 04 03 02 01 00

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-47D version 2.00 or later (optional) on a PC.

- You can recall 1 of 32 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.

- When using the KPG-47D version 2.00 or later (optional), RX PLL lock voltage, RX input signal strength, TX PLL lock voltage, TX output power, and the power supply voltage can be monitored on a PC.

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

- The repeater has multi-mode capability.
  Wide: 30 kHz, 25 kHz/ Narrow: 15 kHz,12.5 kHz (TKR-740)
  Wide: 25 kHz/ Narrow: 12.5 kHz (TKR-840)

- You can adjust the following functions from a PC:
  - CW ID Deviation
  - Digital Pager Balance
  - Digital Pager Deviation
  - DQT Deviation
  - Maximum Deviation
  - QT Deviation
  - Remote TA
  - Repeat Gain Level
  - TX Power
  - RX Audio Signal Output (RA)
  - RX Detector Signal Output (RD)
  - Signalling Balance
  - Signalling Deviation (SD)
  - Squelch (Analog/ RSSI)
  - Test Tone Deviation
  - TX Audio Input (TA)
  - Voting Tone Level

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
Front glass	B10-2590-X4	1
Fuse (4 A)	F06-4027-X5	1
Handles and screw set	K01-0421-X5	1
Power cable assembly	E37-0711-X5	1
Lead wire with connector (15 pin)	E31-3228-X5	1
Square plug (12 pin)	E59-0410-X5	1
Dressed screw	N08-0543-X4	1
Instruction manual	B62-1136-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.
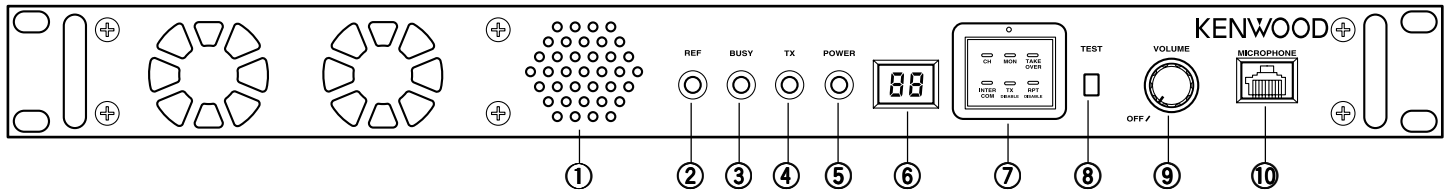
Please consult your dealer for installing the repeater and antenna.

MICROPHONE

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

CONTROLS AND FUNCTIONS

■ Front Panel

① **Speaker**

② **REF (reference) indicator**
Lights red when using an external reference frequency. Lights green when using the internal reference frequency.

③ **BUSY indicator**
Lights green while a signal is being received.

④ **TX (transmit) indicator**
Lights red while transmitting.

⑤ **POWER indicator**
Lights green when power is applied.

⑥ **Display**
Two, 7-segment digits display the channel number or status.

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

⑧ **TEST switch**
Press to transmit an unmodulated signal with no local microphone connected. If an external modulation signal source is connected to the **CONTROL I/O** jack, the RF signal is modulated with this signal source.
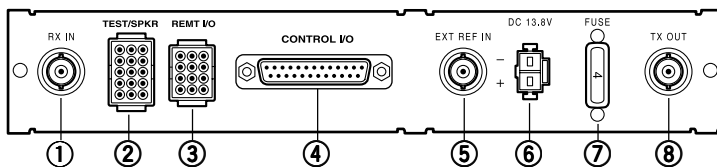
⑨ **VOLUME control**
Turn clockwise until a click sounds, to unmute the volume. Rotate to adjust the volume. Turn counterclockwise fully to mute the volume.

⑩ **MICROPHONE jack**
Connect a microphone to this 8-pin modular jack.

■ Rear Panel

① **RX IN jack**
Connect a RX antenna or a duplexer to this BNC receptacle.

② **TEST/SPKR jack**
Test input/output jack. Connect an external speaker to this jack.

③ **REMT I/O jack**
Connect an external remote controller to this jack.

④ **CONTROL I/O jack**
Connect an external programming device or repeater controller to this DB-25 interface.

⑤ **EXT REF IN jack**
Connect an external reference oscillator (10 MHz, -10 dBm or higher) to this BNC receptacle.

⑥ **DC 13.8V jack**
Connect a 13.8 V DC power supply to this jack.

⑦ **FUSE**
Insert a 4 A blade fuse into this fuse holder.

⑧ **TX OUT jack**
Connect a TX antenna or a duplexer to this BNC receptacle.

REPEATER OPERATION

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

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

Turn the **VOLUME** control clockwise until a click sounds, to unmute the volume. Rotate to adjust the volume. Turn the **VOLUME** control counterclockwise fully to mute 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 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 and 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 while transmitting.

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