

UHF FM REPEATER UNIT

# TKR-830

# INSTRUCTION MANUAL

# KENWOOD

KENWOOD CORPORATION

© B62-1010-00 (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-use 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 PLL synthesizer method.
- You can select 1 of 32 preset channels using the internal DIP switch or the external control line.
- The main program can be written to the Flash memory through an external source.
- RX PLL lock voltage, RX input signal strength, TX PLL lock voltage, and TX output power 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: 25 kHz/ Narrow: 12.5 kHz
- You can adjust the following functions from a PC:
  - Squelch (Digital/ Analog/ RSSI)
  - External Signal Balancing
  - External Maximum Deviation
  - External Signaling Deviation
  - RF Power
  - RX Audio Signal Output (RA)
  - RX Detector Signal Output (RD)
  - TX Modulation Signal Output (TA)
  - TX Signal Input (TD)

## INSTALLATION

Please consult your dealer for installing the repeater and antenna.

## 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 have been damaged during shipment, file a claim with the carrier.

Item	Part Number	Quantity
Fuse (4 A)	F06-4027-X5	1
Handle	K01-0421-X5	2
Power cable assembly	E30-3344-X5	1
Lead wire with connector	E31-3228-X5	1
Instruction manual	B62-1010-XX	1

## CONTROLS AND FUNCTIONS

### ■ Front Panel

<< Front Panel Display >>

- 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 when the channel is in use.
- ④ **TX (transmit) indicator**  
Lights red while transmitting.
- ⑤ **POWER indicator**  
Lights green when the power is turned ON.
- ⑥ **Display**  
Two, 7-segment digits display the channel number or status.
- ⑦ **TEST switch**  
Press to transmit an unmodulated signal with no external microphone connected.
- ⑧ **VOL (volume) control**  
Rotate clockwise, until a click sounds, to turn the power ON. Rotate clockwise to increase the volume, and counterclockwise to decrease the volume. Rotate counterclockwise fully to turn the power OFF.
- ⑨ **MIC (microphone) jack**  
Connect a microphone to this jack.

## ■ Rear Panel

<< Rear Panel Display >>

- ① **RX IN jack**  
Connect a RX antenna to this BNC receptacle.
- ② **EXT.SPEAKER jack**  
Test input/output jack. Connect an external speaker to this jack.
- ③ **LOGIC INTERFACE jack**  
Connect an external programming device to this DB-25 interface.
- ④ **EXT.REF IN jack**  
Connect an external reference frequency (10 MHz) to this BNC receptacle.
- ⑤ **DC 13.8V jack**  
Connect a 13.8 V DC power supply to this jack.
- ⑥ **FUSE**  
Insert a 3 A blade fuse into this fuse holder.
- ⑦ **TX OUT jack**  
Connect a TX antenna to this BNC receptacle.

## REPEATER OPERATION

- Note:*
- ◆ *The repeater transfers messages only when external equipment such as a repeater controller is connected.*
  - ◆ *Please consult your dealer for programming the repeater.*

Rotate the **VOL** control clockwise, until a click sounds, to switch the power ON.

- The **POWER** indicator lights green.

Rotate the **VOL** control counterclockwise fully to switch the power OFF.

The **TX** indicator lights red while transmitting. Adjust the **VOL** control to listen to received messages.

## TRANSCIVER OPERATION

### ■ Receive

Adjust the volume to your desired level while monitoring background noise.

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 the channel is being used.

### ■ Transmit

- 1 Listen to the channel before transmitting, to make sure it is not being used.
- 2 Press the PTT switch and speak in your normal speaking voice.
  - FCC regulations require that you identify your station (your assigned call sign) as well as the station you are calling.
  - The **TX** indicator lights while transmitting.
- 3 When you finish speaking, release the PTT switch.
  - Receive mode will automatically resume.

## MICROPHONE

Connect the **KENWOOD** optional microphone to the **MIC** jack on the front panel.

<< Microphone Display >>

## PRECAUTIONS

- Do not expose the unit to rain or moisture, to prevent fire or electric shock.
- Do not under any circumstances open the unit, to avoid risk of electric shock.
- Do not place any objects on top of the unit, to ensure proper ventilation.
- 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 or humid areas, nor on unstable surfaces.
- If an abnormal odor or smoke is detected coming from the unit, switch OFF the power immediately and remove the power cord from the AC outlet. 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.*

### WARNING:

- ◆ **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.**