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MANUAL (2.983(d)(8))

KENWOOD

VHF FM TRANSCEIVER/ UHF FM TRANSCEIVER

TK-290/TK-390

INSTRUCTION MANUAL

KENWOOD CORPORATION

THANK YOU!

We are grateful you chose **KENWOOD** for your land mobile radio applications. We believe this easy-to-use transceiver will provide dependable communications to keep personnel operating at peak efficiency.

KENWOOD transceivers incorporate the latest in advanced technology. As a result, we feel strongly that you will be pleased with the quality and features of this product.

MODELS COVERED BY THIS MANUAL

TK-290: VHF FM Transceiver

TK-390: UHF FM Transceiver

NOTICES TO THE USER

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.*
- *DO NOT OPERATE YOUR TRANSCEIVER IN EXPLOSIVE ATMOSPHERES (GASES, DUST, FUMES, ETC.).*
- *TURN OFF YOUR TRANSCEIVER WHILE TAKING ON FUEL, OR WHILE PARKED IN GASOLINE SERVICE STATIONS.*

SAFETY: It is important that the operator is aware of, and understands, hazards common to the operation of any transceiver.

One or more of the following statements may be applicable:

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.

INFORMATION TO THE DIGITAL DEVICE USER REQUIRED BY THE FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can generate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer for technical assistance.*

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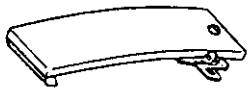
UNPACKING AND CHECKING EQUIPMENT

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

Carefully unpack the transceiver. 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 immediately.

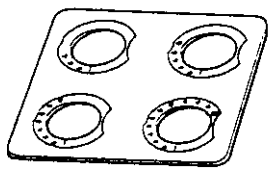
■ Supplied Accessories

Item	Part Number	Quantity
Belt hook	J29-0651-XX	1
Universal connector cap	B09-0363-XX	1
Channel seal	B03-0594-XX	1
Channel stopper	D32-0421-XX	1
Screw set	N99-2004-XX	1
Warranty card	—	1
Instruction manual	B62-0816-XX	1



Belt hook

Universal cap connector



Channel seal

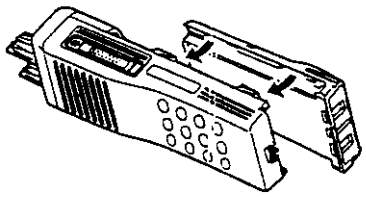
Channel stopper

Screw set

INSTALLING THE NiCd BATTERY PACK (OPTIONAL)

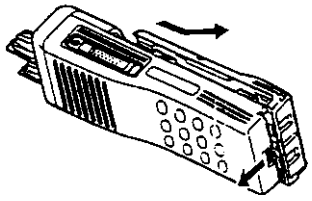
The battery pack is not charged at the factory. Charge the pack before use. Repeat the charge/discharge cycles two or three times after purchase or extended storage (greater than 2 months) to bring the battery pack to its normal operating capacity.

1 Match the four grooves of the battery pack with the corresponding guides on the back of the transceiver.



2 Slide the battery pack along the back of the transceiver until the release latch on the base of the transceiver locks.

3 To remove the battery pack, push down on the release latch and slide the pack away from the transceiver.



CAUTION:

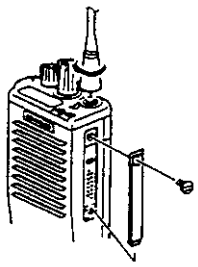
- *DO NOT RECHARGE THE BATTERY PACK IF IT IS ALREADY FULLY CHARGED. DOING THIS WILL OVERCHARGE THE BATTERY PACK WHICH MAY SHORTEN ITS LIFE OR DAMAGE IT.*
- *AFTER RECHARGING THE BATTERY PACK, DISCONNECT IT FROM THE CHARGER. IF, HAVING RECHARGED THE BATTERY, THE POWER TO THE CHARGER IS TURNED OFF AND THEN BACK ON WHILE THE PACK IS STILL CONNECTED, RECHARGING WILL START AGAIN AND THE BATTERY WILL BECOME OVERCHARGED.*
- *DO NOT SHORT THE BATTERY PACK TERMINALS OR DISPOSE OF THE BATTERY BY FIRE. NEVER ATTEMPT TO REMOVE THE CASE FROM THE BATTERY PACK.*

INSTALLING THE ANTENNA (OPTIONAL)

Screw the antenna into the connector on the top of the transceiver by holding the antenna at its base and turning it clockwise until secure.

INSTALLING THE CAP OVER THE UNIVERSAL CONNECTOR

When a speaker/microphone is not being used, install the cap over the universal connector using the supplied accessory screw (4 x 6 mm).

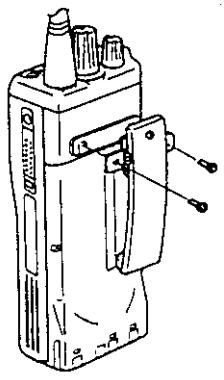


The antenna connector of the transceiver is an SMA male type connector.

INSTALLING THE BELT HOOK

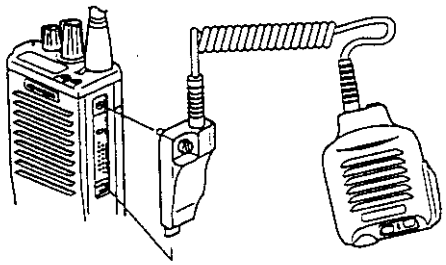
If necessary, attach the belt hook using the two binding screws (3 x 6 mm) which are supplied in the screw set.

Note: *If the belt hook is not installed, its mounting location may get hot during continuous transmission or when left sitting in a hot environment.*



INSTALLING THE SPEAKER/MICROPHONE (OPTIONAL)

1 Insert the guide of the speaker/microphone connector into the groove on the transceiver universal connector.



A speaker/microphone with an antenna connector is also available.

2 Secure the connector in place using the attached screw.

Note: *The speaker/microphone PF keys can be programmed with the functions listed in the table on page 8.*

BASIC OPERATIONS

■ Switching Power ON/OFF

To switch ON the transceiver, turn the **Power** switch/**Volume** control clockwise until it clicks.

To switch OFF the transceiver, turn the **Power** switch/**Volume** control counterclockwise until it clicks.

If the Radio Password function is programmed {page 14}, LOCK will appear on the display when the power is turned ON. The correct password, with a maximum of 6 digits, must be entered to unlock the transceiver. (This function is available on keypad models only.)

■ Adjusting the Volume

Turn the **Power** switch/**Volume** control to adjust the volume. Clockwise increases the volume, and counterclockwise decreases it.

■ Selecting a Group

Turn the **Selector**, press the **Group Up** and **Group Down** keys, or use the toggle switch to select a group.

- Use the **Selector**, PF keys, or toggle switch, depending on which one is programmed with the group functions.

■ Selecting a Channel

Turn the **Selector** or press the **Channel Up** and **Channel Down** keys to select a channel.

- Use the **Selector** or PF keys, depending on which one is programmed with the channel functions.

■ Adjusting the Squelch

1 Press the key programmed as **Squelch Level**.

2 Press the keys programmed as **Group Up** and **Group Down** or **Channel Up** and **Channel Down** to adjust the squelch level.

■ Making a Call

1 Select the desired group and channel {page 9}.

2 Use the key or switch programmed as **Monitor** to check whether or not the channel is free.

- If the channel is busy, wait until it becomes free.

3 Press and hold the **PTT** switch, then speak into the microphone in your normal voice.

- For best results, hold the transceiver approximately 3 to 4 cm (1 1/2 inches) from your lips.

4 Release the **PTT** switch to receive.

KEY LOCK

Use the key or switch programmed as **Key Lock** to activate the Key Lock function. When activated, only the **PTT** and toggle switch, the **Selector**, and the keys programmed as **Emergency Call**, **Monitor**, **Monitor Momentary**, **Squelch OFF**, **Squelch Momentary**, and **Lamp** can be used.

TIME-OUT TIMER (TOT)

The TOT is used to automatically inhibit transmission after a specified time elapses. If the **PTT** switch is held down for longer than the programmed time, the transceiver will stop transmitting and a warning tone will sound. To stop the warning tone, release the **PTT** switch.

Note: *TOT settings can be programmed by your dealer {page 14}.*

SCANNING

Note: The Scan function can be used with a minimum of two channels.

Scan is used to monitor signals on the transceiver channels. When scanning, the transceiver checks each channel for a signal, and stops on a channel if one is present.

Use the key or switch programmed as **Scan**.

- "SCAN" or the revert group/channel number (depending on which one is programmed by your dealer), and the SCN icon will appear on the display.
- A confirmation tone will sound.

To quit scanning, use the **Scan** key or switch again.

- Two confirmation tones will sound.

■ Priority Scan

For Priority Scan to function, the Priority1 or Priority2 channel must be programmed.

- If only one of the priority channels are programmed, the transceiver will automatically change to that priority channel when a signal is received on it. This change occurs even if a signal is being received on another channel.
- If both priority channels are programmed, Priority1 is the high priority and Priority2 is the low priority. If a signal is being received on the Priority1 channel, the transceiver will change to that channel, even if a signal is being received on the Priority2 channel.

DTMF CALLING

Note: This function can only be used by transceivers with DTMF keypads.

■ Manual Dialing

To dial a number manually:

1 Press and hold the **PTT** switch.

- If Keypad Auto PTT is enabled, you do not need to press the **PTT** switch.

2 Press the desired DTMF keys.

Note: Manual dialing can be programmed with DTMF Hold Time or Keypad Auto PTT {page 14}.

■ Redialing

A maximum of 16 digits can be redialed. The last number dialed, either manually or automatically, will be redialed.

To redial a number:

1 Press the * key.

- An "A" will appear on the display.

2 Press the **0** key.

- The transceiver will redial the last number, and the digits will appear on the display.

Note: If the transceiver power is switched OFF, the redial memory will be erased.

■ Auto Dialing

Note: Auto dialing is either enabled or disabled by your dealer {page 14}.

Store:

To store a number in memory:

1 Press the # key.

- A "D" will appear on the display.

2 Press the desired DTMF keys to enter a maximum of 16 digits.

- Press and hold the **PTT** switch, then press **2**, **5**, **8**, **0**, *, or # to enter A, B, C, D, *, or # (consecutively).

3 Press the # key.

4 Select the desired memory channel by pressing a DTMF key (**1** ~ **9**).

- The entered number will be stored in the memory channel selected.

Send:

To send a stored number:

1 Press the * key.

- An "A" will appear on the display.

2 Press the memory channel key (1 ~ 9) with the stored number you want to send.

- The transceiver will begin the transmission, and the digits will appear on the display.

Clear:

To erase a stored number from memory:

1 Press the # key.

- A "D" will appear on the display.

2 Press the # key again.

- "D-CLR" will appear on the display.

3 Press the memory channel key (1 ~ 9) with the stored number you want to erase.

DEALER PROGRAMMABLE OPTIONS

The following list of functions can be enabled or disabled by your dealer:

CHANNEL
Group Name
Receive Frequency
Transmit Frequency
QT/DQT Decode
QT/DQT Encode
Channel Name
Optional Signaling
TX Power
Wide/Narrow
Scan Delete/Add
PTT ID
Busy Channel Lockout (BCL)
Beat Shift
Voice Scrambler
Priority1 Channel
Priority2 Channel
Home Channel
Emergency Channel
EDIT
Scan Information
Priority1
Priority2
Look Back Time A
Look Back Time B
Revert Channel
Dropout Delay Time
Dwell Time
Group Scan
<< T.B.D. >>
Priority1 Temp. Delete

Priority2 Temp. Delete
Priority Del Key Hold Time
Revert Channel Display
Optional Features
Channel Text Size
Group Text Size
Power ON Tone
Control Tone
Warning Tone
Alert Tone
Minimum Volume
Squelch Level
BCL Override
Radio Password
Data Password
Battery Warning
Busy LED
TX LED
7 Segment LCD Display
Invert Display
Emergency Channel Display
Clear to Transpond
External Speaker
Mode: Self Programming/Panel Test/Clone/Main Programming
ID: ID Format/Speed/PTT ID/Dial ID/Connect ID/Disconnect ID
Operator Selectable Tone: OST Back Up/Direct OST/OST Name
Group Features
Time-out Timer (TOT)

TOT Pre-Alert
TOT Rekey Time
TOT Reset Time
Group Delete/Add
Battery Save
Signaling
2-Tone (1, 2, and 3)
Decoder Call Format (1 and 2)
Decoder Call Type (1 and 2)
Tones (A, B, and C)
Alert Tone/Transpond
Auto Reset
DTMF
DTMF Speed (Encode)
First Digit Time (Encode)
First Digit Delay (Encode)

* and # Tone (Encode)
DTMF Side Tone (Encode)
DTMF Hold Time (Encode)
Keypad Auto PTT (Encode)
Manual Dial (Encode)
Auto Dial (Encode)
Auto Dial Programming (Encode)
Auto Dial Memory (Encode)
Alert Tone/Transpond (Decode)
Selective Call Alert LED (Decode)
Primary Code (Decode)
Secondary Code (Decode)
Auto Reset (Decode)
Dead Beat Disable (Decode)
Embedded Message (64 characters maximum)

Please contact your dealer for details on these functions.

AUDIBLE USER FEEDBACK TONES

The transceiver outputs various tones to indicate the transceiver operating status.

- Power ON Tone
- Key Operation Tone
- End of Operation Tone
- Operation Error Tone
- Sequence Error Tone
- Transmission Inhibit Tone
- Time-out Timer Warning Tone
- Selective Call Alert Tone
- Call Alert (Transpond)
- Dead Beat Disable Tone
- Password Agreement Tone

Please contact your dealer for details on these functions.