

# KENWOOD

## INSTRUCTION MANUAL MANUAL DE INSTRUCCIONES INSTRUCTION MANUAL



VHF FM TRANSCEIVER/  
UHF FM TRANSCEIVER  
TK-270G/ TK-370G

TK-278G/ TK-378G

TRANSCPTOR DE FM VHF/  
TRANSCPTOR DE FM UHF  
TK-270G/ TK-370G

TK-278G/ TK-378G

VHF FM TRANSCEIVER/  
UHF FM TRANSCEIVER  
TK-270G/ TK-370G

TK-278G/ TK-378G

KENWOOD CORPORATION

© B62-1113-00 (K,M,C)  
09 08 07 06 05 04 03 02 01 00

# TK-270G/ TK-370G TK-278G/ TK-378G

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VHF FM TRANSCEIVER/  
UHF FM TRANSCEIVER  
INSTRUCTION MANUAL

ENGLISH

# 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-270G:** VHF FM Transceiver
- **TK-278G:** VHF FM Transceiver
- **TK-370G:** UHF FM Transceiver
- **TK-378G:** UHF FM Transceiver

## NOTICES TO THE USER

- ◆ *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.*

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

**WARNING:**

**EXPLOSIVE ATMOSPHERES (GASES, DUST, FUMES, etc.)**

*Turn off your transceiver while taking on fuel, or while parked in gasoline service stations.*

## 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.*



### **ATTENTION (U.S.A. Only):**

The RBRC Recycle seal found on **KENWOOD** nickel-cadmium (Ni-Cd) battery packs indicates **KENWOOD's** voluntary participation in an industry program to collect and recycle Ni-Cd batteries after their operating life has expired. The RBRC program is an alternative to disposing Ni-Cd batteries with your regular refuse or in municipal waste streams, which is illegal in some areas.

For information on Ni-Cd battery recycling in your area, call (toll free) 1-800-8-BATTERY (1-800-822-8837).

**KENWOOD's** involvement in this program is part of our commitment to preserve our environment and conserve our natural resources.

## PRECAUTIONS

Observe the following precautions to prevent fire, personal injury, and transceiver damage.

- Do not modify this transceiver for any reason.
- Do not expose the transceiver to long periods of direct sunlight, nor place it close to heating appliances.
- Do not place the transceiver in excessively dusty, humid, and/or wet areas, nor on unstable surfaces.
- If an abnormal odor or smoke is detected coming from the transceiver, switch OFF the power immediately and remove the optional battery pack from the transceiver. Contact your **KENWOOD** dealer.

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# UNPACKING AND CHECKING EQUIPMENT

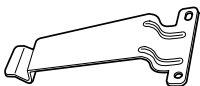
**Note:** The following unpacking instructions are for use by your **KENWOOD** dealer, an authorized **KENWOOD** service facility, or the factory.

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

## ■ Supplied Accessories

Antenna  
(TK-270G/ TK-278G)  
(M and C markets only)

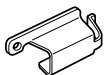
Antenna  
(TK-370G/ TK-378G)  
(M and C markets only)



Belt clip

Hand strap bracket  
(C market only)

Hand strap  
(C market only)



Screw set

Speaker/ microphone  
jacks cap

Speaker/ microphone  
locking bracket



Item		Part number	Quantity
Antenna (M and C markets only)	TK-270G (M)	T90-0679-X5	1
	TK-270G (M2)	T90-0680-X5	
	TK-370G (M)	T90-0682-X5	
	TK-370G (M2,M3)	T90-0683-X5	
	TK-370G (M4)	T90-0684-X5	
	TK-278G (C)	T90-0740-X5	
	TK-278G (C2)	T90-0742-X5	
	TK-378G (C)	T90-0743-X5	
	TK-378G (C4)	T90-0744-X5	
Belt clip		J29-0624-X3	1
Hand strap bracket (C market only)		J21-2393-X4	1
Hand strap (C market only)		J69-0339-X5	1
Screw set		N99-2012-X5	1
Speaker/ microphone jacks cap		B09-0351-X3	1
Speaker/ microphone locking bracket		J21-4493-X4	1
Warranty card (K market only)		—	1
Instruction manual		B62-1113-XX	1

**Note:** A market code (K, M, or C) can be found on the label attached to the package box.

# PREPARATION

## ■ Charging the Optional NiCd Battery Pack

The optional battery pack is not charged at the factory; charge it before use (refer to the battery pack instruction manual).



### CAUTION

- ◆ *DO NOT RECHARGE THE BATTERY PACK IF IT IS ALREADY FULLY CHARGED. DOING SO MAY CAUSE THE LIFE OF THE BATTERY PACK TO SHORTEN OR THE BATTERY PACK MAY BE DAMAGED.*
- ◆ *AFTER RECHARGING THE BATTERY PACK, DISCONNECT IT FROM THE CHARGER. IF THE CHARGER POWER IS RESET (TURNED ON AFTER BEING TURNED OFF), RECHARGING WILL START AGAIN AND THE BATTERY PACK WILL BECOME OVERCHARGED.*

Initially charging the battery pack after purchase or extended storage (greater than 2 months) will not bring the battery pack to its normal operating capacity. After repeating the charge/discharge cycle two or three times, the operating capacity will increase to normal.

## ■ Installing/ Removing the Optional NiCd Battery Pack

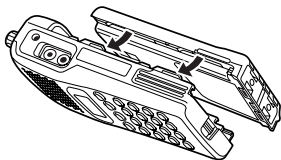
Only use the KNB-14 and KNB-15A battery packs with this transceiver.



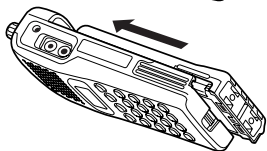
CAUTION

- ◆ *DO NOT SHORT THE BATTERY TERMINALS OR DISPOSE OF THE BATTERY BY FIRE.*
- ◆ *NEVER ATTEMPT TO REMOVE THE CASING FROM THE BATTERY PACK.*

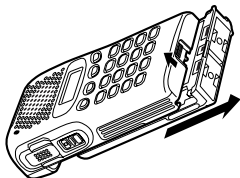
1 Match the four grooves of the battery pack with the corresponding guides on the back of the transceiver.



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, pull back on the release latch and slide the pack away from the transceiver.



## ■ Installing the Antenna

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.

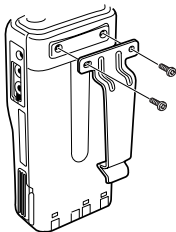
**Note:** An antenna is not provided for K market models. It must be purchased separately.



## ■ Installing the Belt Clip

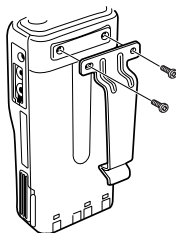
If necessary, attach the belt clip using the two supplied 3 x 8 mm screws.

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



## ■ Installing the Hand Strap

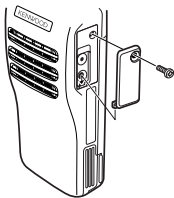
- 1 Attach the hand strap bracket using the two supplied 3 x 8 mm screws.
- 2 Loop the hand strap through the center hole of the hand strap bracket.



**Note:** If desired, you can install the hand strap bracket over the belt clip.

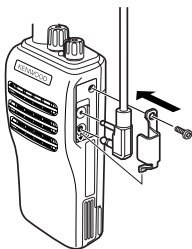
## ■ Installing the Cap over the Speaker/ Microphone Jacks

If you are not using an optional speaker/ microphone, install the cover over the **SP/MIC** jacks using the supplied 3 x 6 mm screw.

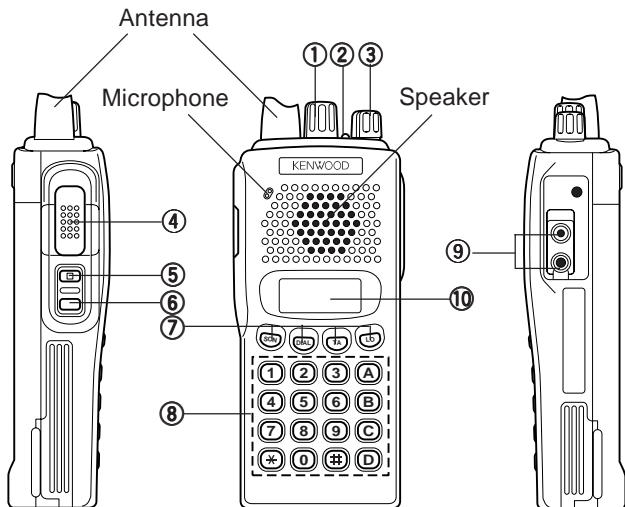


## ■ Installing the Optional Speaker/ Microphone

- 1 Insert the speaker/ microphone plugs into the **SP/MIC** jacks.
- 2 Install the speaker/ microphone locking bracket over the plugs using the supplied 3 x 6 mm screw.



# GETTING ACQUAINTED



*The transceiver is shown with the optional KNB-14 battery pack.*

## ① Rotary encoder

Your dealer can program the encoder as either Group Up/Down or Channel Up/Down (default setting). Rotate to select a group or channel. Also rotate to adjust the squelch in Squelch Adjustment mode.

## ② LED indicator

Lights red while transmitting. Lights green while receiving. Flashes orange while receiving a Code Squelch code or a Selective Call code, or a 2-Tone or DTMF signal that matches the one set up in your transceiver. Flashes red when the battery power is low while transmitting.

### ③ **Power switch/ Volume control**

Turn clockwise to switch ON the transceiver. Rotate to adjust the volume. To switch OFF the transceiver, turn counterclockwise fully.

### ④ **PTT (Push-to-Talk) switch**

Press this switch, then speak into the microphone to call a station.

### ⑤ **Side 1 key**

This is a PF (Programmable Function) key. Press it to activate its auxiliary function {page 10}.

### ⑥ **Side 2 key**

This is a PF (Programmable Function) key. Press it to activate its auxiliary function {page 10}.

### ⑦ **o, ●, <, > keys**

These are PF (Programmable Function) keys. Press each key to activate its auxiliary function {page 10}.

### ⑧ **DTMF keypad**

Used for storing and transmitting DTMF numbers.

### ⑨ **SP/MIC jacks**

Connect an optional speaker/ microphone here.

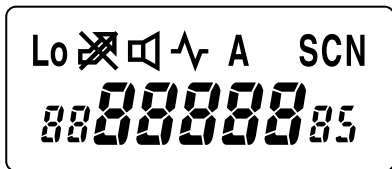
### ⑩ **Display**





(See page 9.)

**Note:** *The PF keys are programmed with default functions:*

- **Side 1 key:** *Lamp*
- **Side 2 key:** *Monitor A*
- **o key:** *Scan*
- **● key:** *Scan Del/Add*
- **< key:** *Talk Around (K and M markets)  
Reverse (C market)*
- **> key:** *RF Power Lo*

## ■ Display



Icon	Description
	Appears while the <b>Monitor</b> function is active, allowing you to hear background noise.
	Appears when the selected channel is busy.
	Appears when QT, DQT, DTMF, or 2-Tone decoding is deactivated (by pressing the <b>Monitor</b> key).
<b>CALL</b>	Appears when you receive a Code Squelch, Selective Call, 2-Tone, or DTMF Signalling call. Also appears when you transmit using Code Squelch or Selective Call.
<b>SCN</b>	Appears while scanning.
<b>LO</b>	Appears when using low power on the selected channel.
<b>A</b>	Appears when the selected channel is included in the scanning sequence.
	Displays the selected channel, the squelch level, DTMF digits (when entering digits, confirming digits, or making a call), and messages received via Selective Call.



# PROGRAMMABLE AUXILIARY FUNCTIONS

**Side 1, Side 2, o, ●, <, and >** can be programmed with the auxiliary functions listed below.

- Channel Down
- Channel Up
- Display Character
- Group Down
- Group Up
- Home Channel
- Key Lock
- Lamp
- Monitor A (Monitor Unmute–Momentary)
- Monitor B (Monitor Unmute–Toggle)
- Monitor C (Carrier Squelch–Momentary)
- Monitor D (Carrier Squelch–Toggle)
- None
- Operator Sel Tone <sup>1</sup>
- Redial
- Reverse <sup>2</sup>
- RF Power Lo
- Scan
- Scan Del/Add
- Scrambler
- Selectable QT <sup>3</sup>
- Talk-Around <sup>1</sup>
- TX Code Select

<sup>1</sup> Available for K and M market models only.

<sup>2</sup> Available for C market models only.

<sup>3</sup> Available for C and M market models only.

## ■ Switching Power ON/OFF

Turn the **Power** switch/ **Volume** control clockwise to switch the transceiver ON.

Turn the **Power** switch/ **Volume** control counterclockwise to switch the transceiver OFF.

## ■ Adjusting the Volume

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

- You may need to adjust the volume more precisely while communicating with other parties.

***Note:** Depending on dealer programming, you may be able to use the **Monitor** key while adjusting the volume (refer to “Monitor” on page 29).*

## ■ Selecting a Group or Channel

Rotate the **Rotary encoder** (or press the keys programmed as **Group Up/Down** or **Channel Up/Down**) to choose your desired group or channel. Clockwise increases the number and counterclockwise decreases it.

- If a group or channel has not been programmed, it cannot be used.

## ■ Adjusting the Squelch Level

Squelch is used to silence the speaker when no signals are present. When squelch is turned OFF, you will hear background noise from the speaker. When it is ON, you will not hear background noise.

The squelch level you select determines when squelch will turn OFF and ON. If you select a squelch level that is too high, you will not hear weaker signals. If you select a squelch level that is too low, you will hear background noise between signals.

To adjust the squelch:

- 1 Press and hold the **Side 2** key, then press the **>** key.
  - “SQL” and the current squelch level appear.
- 2 Rotate the **Rotary encoder** to select a squelch level from 0 ~ 9.
  - Clockwise increases the squelch level and counterclockwise decreases it.
- 3 Press any key other than the key programmed as **Lamp** to complete the setting.
  - Normal operation is restored.

## ■ **Placing a Call**

- 1 Make sure no parties are currently transmitting on your selected channel.
- 2 Press the **PTT** switch and speak into the microphone in your normal speaking voice.
  - For best sound quality at the receiving station, hold the microphone approximately 1.5 inches (3 ~ 4 cm) from your mouth.
- 3 Release the **PTT** switch to receive.

## ■ **Receiving a Call**

Your dealer may have programmed QT or DQT signalling on your transceiver. If your selected channel is programmed with one of these features, you will hear calls only when another party in your system makes a call. All other calls will not be heard.

If your selected channel is not set up with QT or DQT, you will hear calls made by any party (not just those in your system).

## CHANNEL SCAN

Scan is useful for monitoring signals on the channels programmed on the transceiver. When scanning, the transceiver checks for a signal on each channel, and only stops on a channel if a signal is present.

The transceiver will remain on a busy channel until the signal is no longer present. Your dealer programs the delay time between signal drop-out and scan resumption. If a signal is received during the delay time, the transceiver will remain on the same channel.

**Note:**

- ◆ *You can only use Scan if your dealer has programmed at least 2 channels on the transceiver. Also, there must be at least 2 channels not locked out of Scan.*
- ◆ *Ask your dealer for an explanation on how Channel Scan functions when using Code Squelch, Selective Call, or 2-Tone signalling.*

To start scanning, press the key programmed as **Scan**.

- Scanning starts from the current channel and ascends through the channel numbers.
- The SCN icon and “SCAN” appear on the display.

To end Scan, press the **Scan** key again.

## ■ Priority Scan

If your dealer set up a priority channel on your transceiver, the transceiver will continuously monitor that channel while receiving a signal on another channel. When a signal is received on the Priority channel, the transceiver immediately switches to that channel.

- “P” appears on the display.

The transceiver will remain on the Priority channel until the signal drops out. Your dealer programs the delay time between signal drop-out and scan resumption.

## ■ Channel Lockout

If programmed by your dealer, you can select channels to lock out of the scanning sequence. Perform the following steps while not in Scan mode.

- 1 Rotate the **Rotary encoder** to select the channel you want to lock out of Scan.
- 2 Press the key programmed as **Scan Del/Add**.
  - Each press of **Scan Del/Add** toggles the lockout status of the selected channel ON and OFF.
  - Channels that are included in Scan are represented by an “A” on the display. Channels locked out of Scan do not have an “A” on the display.

## ■ Revert Channel

During Scan, pressing the **PTT** switch to transmit will cause the transceiver to select the revert channel. Your dealer programs the Revert channel for your transceiver. Consult your dealer for details.

## ■ Manual Dialling

There are two ways to manually call a number:

- 1) Press and hold the **PTT** switch, then enter the desired digits on the keypad.
  - You can enter the digits **0 ~ 9**, **A ~ D**, **\***, and **#**. (**A ~ D** may be disabled by your dealer.)
  - If programmed by your dealer, you do not need to continuously hold the **PTT** switch. The transceiver will remain in the transmit state for 2 seconds after releasing each key.
  - While transmitting DTMF tones, the microphone is muted. You can monitor tones as they are transmitted by listening to the speaker audio.
- 2) First enter the desired digits on the keypad (16 digits maximum).
  - Each digit appears on the display as it is entered and its corresponding DTMF tone sounds.
  - You can enter the digits **0 ~ 9**, **A ~ D**, **\***, and **#**. (**A ~ D** may be disabled by your dealer, however you can still enter them if desired.)
  - If you entered a wrong digit or decide not to dial the number, press the **o**, **●**, **<**, or **>** key to exit.

After entering the desired digits, press the **PTT** switch to make the call.

- The digits scroll across the display and their corresponding DTMF tone sounds.
- If programmed by your dealer, no DTMF tone will sound when “D” is transmitted. “D” is used for a pause time. The pause duration is programmed by your dealer.

## ■ Storing DTMF Numbers

*Note:* Auto Dialling must first be activated by your dealer.

You can store DTMF numbers (16 digits maximum) in each of the 9 Auto Dial memory locations (1 ~ 9).

- 1 Press the **#** key.
  - “D” appears on the display.
- 2 Enter the desired digits on the keypad.
  - You can enter the digits **0 ~ 9**, **A ~ D**, **\***, and **#**. (**A ~ D** may be disabled by your dealer, however you can still enter them if desired.) When entering “**#**”, you must first press the **PTT** switch.
  - To cancel, press **o**, **●**, **<**, or **>**.
- 3 Press the **#** key, then enter a single digit number (1 ~ 9) for the memory location.
  - The original display is restored.

## ■ Confirming Stored DTMF Numbers

To confirm the numbers stored in memory locations:

- 1 Press the **\*** key.
  - “A” appears on the display.
- 2 Enter the desired memory location number (1 ~ 9).
  - The stored digits are displayed and their corresponding DTMF tones sound.
  - If programmed by your dealer, no DTMF tone will sound when “D” is transmitted. “D” is used for a pause time. The pause duration is programmed by your dealer.
- 3 Press any key other than the **PTT** switch to exit.



## ■ Dialling Stored DTMF Numbers

To call a number stored in a memory location:

- 1 Press the \* key.
  - “A” appears on the display.
- 2 Enter the desired memory location number (1 ~ 9).
  - The stored digits are displayed.
- 3 Press the **PTT** switch.
  - If programmed by your dealer, no DTMF tone will sound when “D” is transmitted. “D” is used for a pause time. The pause duration is programmed by your dealer.

## ■ Clearing Stored DTMF Numbers

To clear the numbers from a memory location:

- 1 Press the # key twice.
  - “D- CLR” appears on the display.
  - To cancel the process, press any key other than 1 ~ 9.
- 2 Enter the desired memory location number (1 ~ 9).

## ■ Redialling

You can redial the last number you transmitted (16 digits maximum).

- 1 Press the \* key, then press the 0 key.
  - “A” and the digits are displayed.
- 2 Press the **PTT** switch.

***Note:** Switching OFF the transceiver power clears the redial memory.*

# CODE SQUELCH

Code Squelch is enabled or disabled by your dealer. This function turns the transceiver squelch OFF only when it receives the DTMF code that has been set up in your transceiver. Transceivers that do not transmit the correct code will not be heard. Consequently, you can communicate with a specific party without listening to other parties using the same channel.

Your dealer may also activate Group Call for your transceiver. This is useful when you want to pass information to a number of units in a fleet. Ask your dealer for details.

***Note:** Code Squelch cannot be used on channels programmed with Selective Call or 2-Tone Signalling.*

## ■ Receiving

When you receive a signal containing the correct code, squelch turns OFF and you will hear the call.

- “CALL” appears on the display and the LED indicator flashes orange.
- To mute the speaker after squelch turns OFF, press the key programmed as **Monitor**.
- Your dealer can program squelch to automatically turn back ON after a specific time period elapses.
- If Transpond for Code Squelch is programmed, an acknowledgment signal is returned to the calling station. Transpond does not function when you are called with a Group code. Transpond for Selective Call can send an alert tone, a transceiver ID code, or a code stored in memory location 1.
- If Tone Alert for Code Squelch is programmed, an alert tone will sound when the correct code is received.

## ■ Transmitting

- 1 Press and hold the **PTT** switch.
- 2 Enter the code of the transceiver you want to call or enter a Group code on the keypad.
  - If desired, you can send codes the same way you make DTMF calls {page 16}. Both manual methods can be used or you can store codes in memory, then dial them from a memory location.
  - “CALL” appears on the display and the LED indicator lights red.
- 3 Use the transceiver the same as in a regular call; press the **PTT** switch to transmit and release it to receive.
  - The called transceiver’s squelch will turn OFF while you are transmitting. After you stop transmitting, the squelch will turn back ON after a pre-set time period elapses. This time period is programmed by your dealer.
  - When you release the **PTT** switch, squelch turns OFF and the LED indicator flashes orange. When you receive a signal, the LED indicator lights green. When the signal drops out, the LED indicator flashes orange again. If no signal is received for a pre-determined time, squelch turns back ON.
  - Pressing the key programmed as **Monitor** at any time will turn the squelch back ON.

## SELECTIVE CALL

Selective Call is enabled or disabled by your dealer. This function is similar to Code Squelch {page 19}. The differences from Code Squelch are:

- You can send or receive message codes containing a maximum of 5 digits.
- Selective Call turns the squelch OFF only when the transceiver receives a predetermined DTMF code in the correct sequence:
  - 1) A 3-digit ID code
  - 2) A 1-digit Intermediate code
  - 3) A message code (up to 5 digits)

Your dealer may also activate Group Call for your transceiver. This is useful when you want to pass information to a number of units in a fleet. Ask your dealer for details.

**Note:** *Selective Call cannot be used on channels programmed with Code Squelch or 2-Tone Signalling.*

## ■ Receiving

When you receive the correct ID and Intermediate codes, squelch turns OFF and you will hear the call. If a message code is also received, the message appears on the display

- “CALL” appears on the display and the LED indicator flashes orange.
- When you receive a call with your ID code, “C” appears on the display (i.e.- C 12345).
- When you receive a call with your Group code, “A” appears on the display (i.e.- A 12345).
- When no message is received, “NO DATA” appears on the display.
- You can clear a message by pressing any key other than the key programmed as **Lamp**.
- To mute the speaker after squelch turns OFF, press the key programmed as **Monitor**.
- Your dealer can program squelch to automatically turn back ON after a specific time period elapses.
- If Transpond for Selective Call is programmed, an acknowledgment signal is returned to the calling station. Transpond does not function when you are called with a Group code. Transpond for Selective Call can send an alert tone, a transceiver ID code, or a code stored in memory location 1.
- If Tone Alert for Selective Call is programmed, an alert tone will sound when the correct code is received.

## ■ Transmitting

- 1 Press and hold the **PTT** switch.
- 2 Enter the code of the transceiver you want to call or enter a Group code on the keypad.
  - Be sure to enter the ID or Group code, followed by the Intermediate code of the transceiver you want to call. If desired, you can also enter a message code of up to 5 digits.
  - If desired, you can send codes the same way you make DTMF calls {page 16}. Both manual methods can be used or you can store codes in memory, then dial them from a memory location.
  - “CALL” appears on the display and the LED indicator lights red.
- 3 Use the transceiver the same as in a regular call; press the **PTT** switch to transmit and release it to receive.
  - When you release the **PTT** switch, squelch turns OFF and the LED indicator flashes orange. When you receive a signal, the LED indicator lights green. When the signal drops out, the LED indicator flashes orange again. If no signal is received for a pre-determined time, squelch turns back ON.
  - Pressing the key programmed as **Monitor** at any time will turn the squelch back ON.

## 2-TONE SIGNALLING

2-Tone Signalling is enabled or disabled by your dealer. This function turns the transceiver squelch OFF only when it receives the 2-tone signal that has been set up in your transceiver. Transceivers that do not transmit the correct tones will not be heard.

Your dealer may also activate Group Call for your transceiver. Ask your dealer for details.

### ■ Receiving

When you receive a signal containing the correct tones, squelch turns OFF and you will hear the call.

- “CALL” appears on the display and the LED indicator flashes orange.
- To mute the speaker after squelch turns OFF, press the key programmed as **Monitor**.
- Your dealer can program squelch to automatically turn back ON after a specific time period elapses.
- If Transpond for 2-Tone Signalling is programmed, an acknowledgment signal is returned to the calling station. Transpond for 2-Tone Signalling can transmit an alert tone only.
- If Tone Alert for Code Squelch is programmed, an alert tone will sound when the correct tones are received.

## ■ Transmitting

- 1 Press the key programmed as **TX Code Select**.
  - A 2-Tone code appears on the display.
- 2 Rotate the **Rotary encoder** to select your desired 2-Tone code.
- 3 Use the transceiver the same as in a regular call; press the **PTT** switch to transmit and release it to receive.
  - When you release the **PTT** switch, squelch turns OFF and the LED indicator flashes orange. When you receive a signal, the LED indicator lights green. When the signal drops out, the LED indicator flashes orange again. If no signal is received for a pre-determined time, squelch turns back ON.
  - Pressing the key programmed as **Monitor** at any time will turn the squelch back ON.



## ■ Selecting an Output Power

Each channel is programmed with either high or low output power by your dealer. You can change the output power of only channels programmed as high.

When you can reliably communicate with other parties without using high power, select low power by pressing the key programmed as **RF Power Lo**.

Each time you press **RF Power Lo**, the output power toggles between high and low.

- Using low power conserves battery power and reduces the risk of interfering with other communications.
- The “LO” icon appears when you are using low power.

### **Note:**

- ◆ *Pressing **RF Power Lo** while using a channel programmed with low power causes an error tone to sound.*
- ◆ *When changing a channel from high power to low power, all channels programmed with high power are changed to low.*

## ■ Time-out Timer (TOT)

The purpose of the Time-out Timer is to prevent any caller from using a channel for an extended period of time.

If you continuously transmit for a period of time that exceeds the programmed time, the transceiver will stop transmitting and an alert tone will sound. To stop the tone, release the **PTT** switch.

Your dealer can program a warning function to alert you before the TOT expires. Continuously transmitting for the time specified by your dealer will cause the warning tone to sound.

## ■ Busy Channel Lockout (BCL)

The Busy Channel Lockout feature is activated or deactivated by your dealer.

When activated, BCL prevents you from interfering with other parties who may be using the same channel that you selected. Pressing the **PTT** switch while the channel is in use will cause your transceiver to emit an alert tone and transmission will be inhibited (you cannot transmit). Release the **PTT** switch to stop the tone and return to receive mode.

## ■ Talk-Around

You may occasionally experience an interruption in service (due to a power failure, etc.). During such an occurrence, you can continue communication by using the Talk-Around feature, if it has been programmed by your dealer. Talk-Around allows you to communicate directly with other transceivers, without the use of a repeater. However, if the station you want to contact is too far away, or there are geographical obstacles in the way, you may not be able to contact the station.

Toggle Talk-Around ON and OFF by pressing the key programmed as **Talk-Around**.

- “T” or “TA” appears on the display while Talk-Around is active.
- When using Talk-Around, the “receive” frequency is used for both transmission and reception, and the QT/DQT “decode” signalling is used for both encoding and decoding.

## ■ Reverse

Your dealer may have programmed the Reverse function instead of the Talk-Around function.

When using Reverse, the transmit and receive frequencies are swapped. This means that you will transmit on the “receive” frequency and receive on the “transmit” frequency. The QT/DQT encoding and decoding signals are also reversed, meaning that transmitted signals are encoded using the “decode” signal, and received signals are decoded using the “encode” signal.

Toggle Reverse ON and OFF by pressing the key programmed as **Reverse**.

- “R” or “RE” appears on the display while Reverse is active.

## ■ Battery Voltage Level

While transmitting, the transceiver automatically checks the battery voltage level. When the voltage level becomes low, the LED indicator flashes red. When a tone sounds, transmission stops. Recharge or replace the battery pack at this time.

## ■ Lamp

Press the key programmed as **Lamp** to toggle the display backlight ON or OFF. The backlight automatically turns OFF approximately 5 seconds after it is switched ON.

Press any key other than **Lamp** while the backlight is ON to reset the 5 second timer. The timer will reset and the backlight will remain on for 5 seconds.

## ■ Monitor

Your dealer can program a key with the Monitor function one of four ways:

- A** Press and hold the **Monitor** key to hear background noise. Release the key to return to normal operation.
- B** Momentarily press the **Monitor** key to hear background noise. Press the key again to return to normal operation.
- C** Press and hold the **Monitor** key to deactivate QT, DQT, or 2-Tone signalling. Release the key to return to normal operation.
- D** Momentarily press the **Monitor** key to deactivate QT, DQT, or 2-Tone signalling. Press the key again to return to normal operation.

You can use the **Monitor** key to listen to weak signals that you cannot hear during normal operation and to adjust the volume when no signals are present on your selected channel.

## ■ Beginning/ End of Transmission Signal

Your dealer can enable or disable the Beginning/ End of Transmission identification signals. These signals are used to access and release some repeaters and telephone systems.

To send a Beginning of Transmission signal, either press the **PTT** switch, or press the **\*** key two times.

To send an End of Transmission signal, either release the **PTT** switch or press the **\*** key followed by the **#** key.

- Ask your dealer which method has been activated on your transceiver.

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