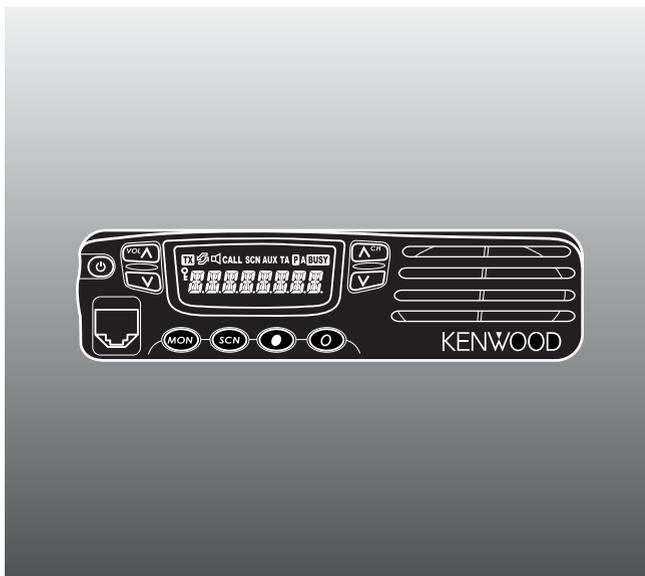


KENWOOD

# INSTRUCTION MANUAL



VHF FM TRANSCEIVER

## TK-7100

UHF FM TRANSCEIVER

## TK-8100

KENWOOD CORPORATION

© B62-1778-00 (K,M,M2)  
09 08 07 06 05 04 03 02 01 00

## THANK YOU!

We are grateful you chose **KENWOOD** for your personal mobile 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

The models listed below are covered by this manual:

- **TK-7100:** VHF FM Transceiver
- **TK-8100:** UHF FM Transceiver

## NOTICES TO THE USER

- ◆ Government law prohibits the operation of unlicensed transmitters within the territories under government control.
- ◆ Illegal operation is punishable by fine and/or imprisonment.
- ◆ 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. Do not carry spare fuel containers in the trunk of your vehicle if your transceiver is mounted in the trunk area.

- ◆ **INJURY FROM RADIO FREQUENCY TRANSMISSIONS**

Do not operate your transceiver when somebody is either touching the antenna or standing within two to three feet of it, to avoid the possibility of radio frequency burns or related physical injury.

- ◆ **DYNAMITE BLASTING CAPS**

Operating the transceiver within 500 feet (150 m) of dynamite blasting caps may cause them to explode. Turn OFF your transceiver when in an area where blasting is in progress, or where "TURN OFF TWO-WAY RADIO" signs have been posted. If you are transporting blasting caps in your vehicle, make sure they are carried in a closed metal box with a padded interior. Do not transmit while the caps are being placed into or removed from the container.

## PRECAUTIONS

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

- Do not attempt to configure the transceiver while driving; it is too dangerous.
- Do not modify the transceiver for any reason.
- Do not expose the transceiver to long periods of direct sunlight, nor place it near heating appliances.
- Do not place the transceiver in excessively dusty, humid, or wet areas, nor on unstable surfaces.
- If an abnormal odor or smoke is detected coming from the transceiver, turn OFF the power immediately. Contact your **KENWOOD** dealer.

## 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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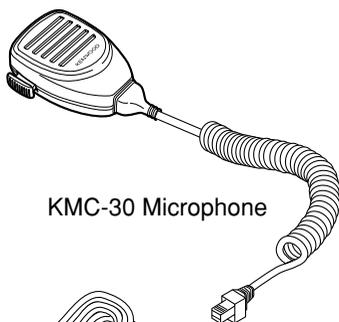
# UNPACKING AND CHECKING EQUIPMENT

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

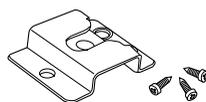
Carefully unpack the transceiver. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

## SUPPLIED ACCESSORIES

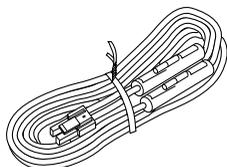
Item	Part Number	Quantity
KMC-30 Microphone (K type only)	T91-0624-XX	1
Microphone hanger (K type only)	J19-1584-XX	1
DC power cable • Fuse (10 A)	E30-3339-XX	1
	F51-0016-XX	2
Mounting bracket	J29-0662-XX	1
Screw set: • Self-tapping screw (4 pieces) • Hex-headed screw with washer (4 pieces) • Spring washer (4 pieces) • Flat washer (4 pieces)	N99-0395-XX	1
Instruction manual	B62-1778-XX	1



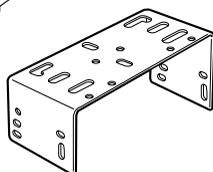
KMC-30 Microphone



Microphone hanger



DC power cable with fuses



Mounting bracket



Screw set

**Note:** The microphone and microphone hanger are not supplied with M or M2 type models. The model type is marked on the carton.

# PREPARATION



## WARNING

Various electronic equipment in your vehicle may malfunction if they are not properly protected from the radio frequency energy which is present while transmitting. Electronic fuel injection, anti-skid braking, and cruise control systems are typical examples of equipment that may malfunction. If your vehicle contains such equipment, consult the dealer for the make of vehicle and enlist his/her aid in determining if they will perform normally while transmitting.

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

## TOOLS REQUIRED

**Note:** Before installing the transceiver, always check how far the mounting screws will extend below the mounting surface. When drilling mounting holes, be careful not to damage vehicle wiring or parts.

The following tools are required for installing the transceiver:

- 6 mm (1/4 inch) or larger electric drill
- 4.2 mm (5/32 inch) drill bit for the self-tapping screws
- Circle cutters

## POWER CABLE CONNECTION



## CAUTION

The transceiver operates in **12 V** negative ground systems only! Check the battery polarity and voltage of the vehicle before installing the transceiver.

- 1 Check for an existing hole, conveniently located in the firewall, where the power cable can be passed through.
  - If no hole exists, use a circle cutter to drill the firewall, then install a rubber grommet.
- 2 Run the two power cable leads through the firewall and into the engine compartment, from the passenger compartment.
- 3 Connect the red lead to the positive (+) battery terminal and the black lead to the negative (-) battery terminal.
  - Locate the fuse as close to the battery as possible.
- 4 Coil and secure the surplus cable with a retaining band.
  - Be sure to leave enough slack in the cables so the transceiver can be removed for servicing while keeping the power applied.

## INSTALLING THE TRANSCEIVER



### WARNING

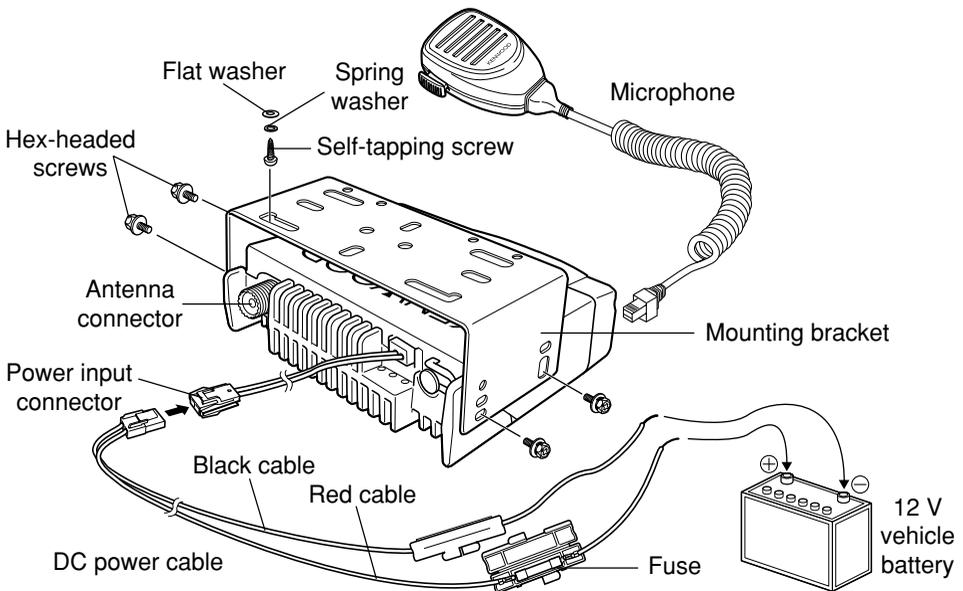
For passenger safety, install the transceiver securely, using the supplied mounting bracket, so the transceiver will not break loose in the event of a collision.

- 1 Mark the position of the holes in the dash by using the mounting bracket as a template. Drill the holes, then attach the mounting bracket using the supplied self-tapping screws.
  - Be sure to mount the transceiver in a location where the controls are within easy reach of the user and where there is sufficient space at the rear of the transceiver for cable connections.
- 2 Connect the antenna and the supplied power cable to the transceiver.
- 3 Slide the transceiver into the mounting bracket and secure it using the supplied hex-headed screws.
- 4 Mount the microphone hanger in a location where it will be within easy reach of the user.
  - The microphone and microphone cable should be mounted in a place where they will not interfere with the safe operation of the vehicle.



### CAUTION

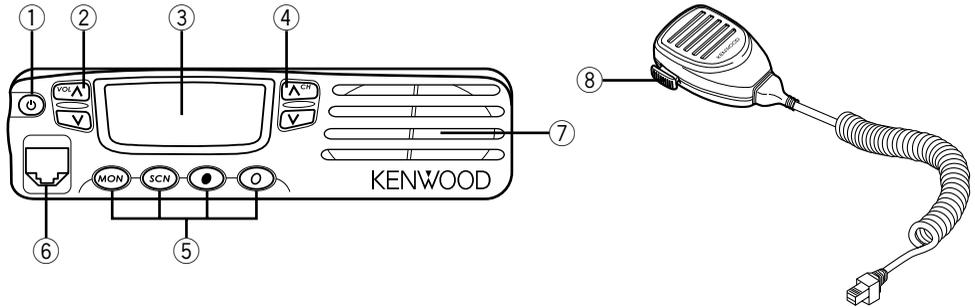
When replacing the fuse in the DC power cable, be sure to replace it with a fuse of the same value. Never replace a fuse with a fuse that has a higher value.



**Note:** The microphone is supplied only with K type models. It is not supplied with M or M2 type models. The model type is marked on the carton.

# ORIENTATION

## FRONT PANEL



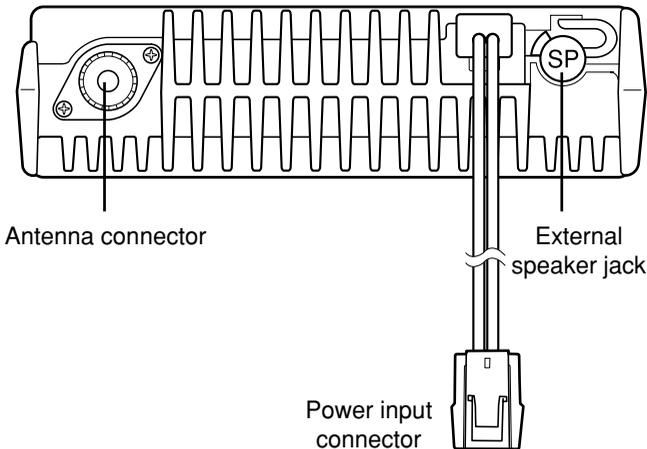
- ① **⏻ (Power) switch**  
Press to switch the transceiver ON. Press and hold for approximately 1 second to switch the transceiver OFF.
- ② **VOL  $\wedge$  /  $\vee$  keys (left side)**  
Press to increase or decrease the volume level.
- ③ **Display**  
Refer to page 5.
- ④ **CH  $\wedge$  /  $\vee$  keys (right side)**  
Press to increase or decrease the channel number.
- ⑤ **MON / SCN / ● / O keys**  
PF (Programmable Function) keys. Press each key to activate its programmable function (page 6).
- ⑥ **Microphone jack**  
Insert the microphone plug into this jack.
- ⑦ **Speaker**  
Internal speaker.
- ⑧ **PTT switch**  
Press this switch, then speak into the microphone to call a station.

## DISPLAY



Indicator	Description
<b>TX</b>	Appears while transmitting.
	Appears when trunking is activated.
	Appears while monitoring the selected channel (squelch is OFF).
<b>CALL</b>	Appears when making a call using Code Squelch or Selective Call. Appears and blinks when receiving a Code Squelch call.
<b>SCN</b>	Appears while scanning.
<b>AUX</b>	Appears when the AUX port has been activated.
<b>TA</b>	Appears while using the Talk Around function.
<b>P</b>	The selected channel is set as a Priority channel.
<b>A</b>	The selected channel is added to the scanning sequence.
<b>BUSY</b>	Appears when a signal is detected on the currently selected channel.
	Appears when the transceiver keys have been locked, using the Key Lock function.
	Displays the currently selected group and channel number, or the channel name.

## REAR PANEL



# PROGRAMMABLE AUXILIARY FUNCTIONS

The **MON**, **SCN**, **●**, and **○** keys can be programmed with the functions listed below:

- **AUX**  
Press to activate the auxiliary port. Press again to deactivate the auxiliary port. Auxiliary is used with optional boards, allowing you to activate and deactivate these optional functions. While activated, the AUX icon appears on the display.
- **CH Direct**  
Press and hold for 2 seconds to store the currently selected channel as the Direct Channel. Press at any time to immediately change to the transceiver's Direct Channel. (The default value for the Direct Channel is the lowest channel of the lowest group.)
- **Del/Add**  
Press and hold for 1 second during Scan (while Scan is paused) to temporarily remove or add a channel from/to the Scan list. Press and hold this key for 1 second while not scanning to permanently remove or add a channel from/to the Scan list. Refer to page 11 for details.
- **Display Character**  
Press to toggle the display between the group number and channel number, and the channel name. If no channel name has been programmed for the selected channel, the group number and channel number will be displayed.
- **Emergency**  
Press and hold for 1 second to enter into Emergency Operation 1. While in Emergency Operation 1, press and hold for 1 second to enter Emergency Operation 2. Press and hold for 10 seconds to exit Emergency Operation. Refer to page 16 for details.
- **Group Down**  
Press to decrease the group number.
- **Group Up**  
Press to increase the group number.
- **Horn Alert**  
Press to activate the Horn Alert function. Refer to page 19 for details.
- **Key Lock**  
Press to lock the transceiver keys. Press again to unlock the keys. Refer to page 19 for details.
- **LCD Brightness**  
Press to toggle the display brightness between high and low. The default setting is high.

- **Monitor**  
Press momentarily to turn the transceiver signalling OFF. Press again to return to normal operation. Also, press and hold for 1 second to unmute the speaker. Press again to return to normal operation. Refer to page 18 for details.
- **None**  
No function is programmed onto the key.
- **Operator Selectable Tone (OST)**  
Press to enter OST (Operator Selectable Tone) Select mode. Press again to exit OST Select mode. Refer to page 18 for details.
- **Scan**  
Press to begin scanning the transceiver channels. Press again to stop scanning. Refer to page 10 for details.
- **Talk Around**  
Press to communicate with other transceivers without the use of a repeater. Press again to return to normal operation. Refer to page 17 for details.
- **Trunking Group Code Select**  
Press to increase the Trunking Group Code memory number while operating the transceiver in SmarTrunk® mode. This key will not function while operating the transceiver in a non-trunking group.

# BASIC OPERATIONS

## SWITCHING POWER ON/ OFF

Press the **⏻** switch to switch the transceiver ON.

- A beep sounds and “**KENWOOD**” appears momentarily.
- If the Radio Password function is programmed, “**PASSWORD**” will appear on the display when the power is turned ON. Refer to “Radio Password”, below.

Press and hold the **⏻** switch for approximately 1 second to switch the transceiver OFF.

### ■ Radio Password

To unlock the transceiver, enter the password as described below. The password can contain a maximum of 6 digits.

To enter the password using the keypad of an optional microphone (KMC-32):

- 1 Press the microphone numeric keys corresponding to the password digits.
- 2 Press the microphone **#** key to confirm the password.
  - If you enter the wrong password, an error tone sounds and the transceiver remains locked.

To enter the password using the transceiver front panel keys:

- 1 Press the front panel keys corresponding to the password digits:  
**MON** = 1, **SCN** = 2, **●** = 3, **○** = 4.
- 2 Press the **CH** **▼** key (right side) to confirm the password.
  - If you enter the wrong password, an error tone sounds and the transceiver remains locked.

## ADJUSTING THE VOLUME

Press the **VOL** **▲** key (left side) to increase the volume. Press the **▼** key (left side) to decrease the volume.

If Monitor has been programmed onto a key, you can press and hold the **Monitor** key to listen to background noise while adjusting the volume level (refer to “MONITOR” on page 18).

## SELECTING A CHANNEL

Press the **CH ^** key (right side) to increase the channel number. Press the **v** key (right side) to decrease the channel number.

## SELECTING A GROUP

If Group Up or Group Down has been programmed onto a key, press the **Group Up** or **Group Down** key to select your desired group.

If a trunking group is selected, the  icon appears on the display.

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**Note:** You cannot select a trunking group unless Group Up or Group Down has been programmed.

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## TRANSMITTING

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**Note:** Before transmitting, first monitor the channel to make sure it is not already in use.

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- 1 Select your desired group and channel (above).
  - If the channel is busy, wait until it becomes free.
- 2 Press the microphone **PTT** switch and speak into the microphone in your normal voice. Release the **PTT** switch when you have finished speaking.
  - For best sound quality at the receiving station, hold the microphone approximately 1.5 inches (3 ~ 4 cm) from your mouth.

## RECEIVING

- 1 Select your desired group and channel (above).
- 2 When you hear a signal, readjust the volume level if necessary.
  - Your dealer may have programmed an encode and decode tone pair on your transceiver. If your selected channel is programmed with these tones, you will hear calls only when another party in your system makes a call. All other calls will not be heard.
- 3 Respond to the call as described in step 2 of “TRANSMITTING”, above.

# SCAN

Scan is useful for monitoring signals on the transceiver channels. While 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. When the signal “drops out”, the transceiver will remain on the channel momentarily before scan resumes. This delay time is programmed by your dealer. If a signal is received during the delay time, the transceiver will remain on the same channel.

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

- “**SCAN**” and the SCN icon appear.

When a signal is detected on a channel, “**SCAN**” is replaced with the group number and channel number or the channel name.

When the signal is no longer present, Scan resumes and “**SCAN**” appears again.

To stop scanning, press the **Scan** key again.

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**Note:** In order for Scan to function, there must be at least 2 channels added to the scanning sequence. If there are less channels than this, Scan will not operate.

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## GROUP SCAN

Scan can be used as either Single Scan or Multi Scan and is programmed by your dealer.

- Single Scan monitors only the channels of a single group. To monitor other groups, press the **Group Up** or **Group Down** key during Scan. Scan will then begin monitoring the channels of the newly selected group.
- Multi Scan monitors all channels of every group.

## PRIORITY SCAN

Your dealer may have set up a Priority channel on your transceiver.

During Priority Scan, the transceiver will continuously monitor the Priority channel while receiving a signal on another channel. When a signal is received on the Priority channel, the transceiver immediately switches to that channel. The  icon appears on the display, indicating that the Priority channel is the current channel.

The transceiver remains on the Priority channel until the signal is no longer present. When the signal “drops out”, the transceiver will remain on the channel momentarily before scan resumes. This delay time is programmed by your dealer.

## DELETE FROM SCAN/ ADD TO SCAN

Depending on how your transceiver has been set up, a key may have been programmed with the **Del/Add** function. This function allows you to scan only those channels which you desire.

To temporarily remove (or add) a channel from the Scan list, press and hold the **Del/Add** key for approximately 1 second during Scan, while Scan is paused on the undesired (or desired) channel, to temporarily remove (or add) that channel from the scanning sequence. After switching the Scan function OFF, or switching the transceiver OFF and then ON again, the Scan settings return to normal.

To permanently remove (or add) a channel from the Scan list, while not scanning, select the undesired channel then press and hold the **Del/Add** key for approximately 1 second.

The **A** icon appears on the display when the selected channel is added to the Scan list. The **A** icon disappears when the channel is removed from the Scan list.

## 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 with one of the following four types:

- **Selected:** The last channel selected is assigned as the new revert channel.
- **Selected + Talkback:** If the channel has been changed during Scan, the newly selected channel is assigned as the new revert channel, but while the transceiver is paused on a channel, pressing the **PTT** switch will allow you to transmit (talk back) on the current channel.
- **Priority:** If your dealer has programmed a Priority channel, this channel is the revert channel.
- **Priority + Talkback:** If your dealer has programmed a Priority channel, this channel is the revert channel, but while the transceiver is paused on a channel, pressing the **PTT** switch will allow you to transmit (talk back) on the current channel.

# DTMF CALLS

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**Note:** To make DTMF calls, you must have an optional microphone with a DTMF keypad (KMC-32).

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## STORE & SEND

- 1 Enter the desired digits on the microphone keypad.
  - You can enter a maximum of 16 digits (**0 ~ 9**, **A ~ D**, **\***, and **#**).
  - The digits appear on the display as you enter them.
  - If Keypad Auto-PTT is enabled by your dealer, this method of entering a string of digits will not function. Refer to “MANUAL DIALLING”, below.
- 2 Press the **PTT** switch to transmit the entered digits.

## MANUAL DIALLING

Press and hold the **PTT** switch, then enter the digits on the microphone keypad.

- You can enter the digits **0 ~ 9**, **A ~ D**, **\***, and **#**. (**A ~ D** may be disabled by your dealer.)
- If Keypad Auto-PTT is enabled by your dealer, you do not need to press the **PTT** switch while entering digits; the transceiver will transmit the DTMF tones automatically as you enter the digits.

## STORING DTMF NUMBERS

If Auto Dialling has been 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 microphone **#** key.
  - “**D**” appears on the display.
- 2 Enter the desired digits on the microphone keypad.
  - You can enter the digits **0 ~ 9**, **A ~ D**, **\***, and **#**.
  - When entering “**#**”, you must first press the **PTT** switch.
  - To cancel, press any key on the transceiver front panel, other than the **⏏** switch.
- 3 Press the microphone **#** key, then enter a memory location number (1 ~ 9).

## DIALLING STORED DTMF NUMBERS

- 1 Press the microphone \* key.
  - “R” appears on the display.
- 2 Enter the desired memory location number (1 ~ 9).
  - The digits stored in the selected location number appear on the display.
  - To cancel, press any key other than the **PTT** switch.
- 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

- 1 Press the microphone # key.
  - “J” appears on the display.
- 2 Press the microphone # key again.
  - “J-CLR” appears on the display.
  - To cancel, press any key other than **1 ~ 9**.
- 3 Enter the memory location number (1 ~ 9) you want to clear.
  - The memory location number is cleared and the display returns to normal.

## REDIALLING

- 1 Press the microphone \* key.
  - “R” appears on the display.
- 2 Press the microphone 0 key.
  - The digits last dialled appear on the display.
  - If there is no data in the redial memory, an error tone will sound.
  - To cancel, press any key other than the **PTT** switch.
- 3 Press the **PTT** switch.

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

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# CODE SQUELCH (ID CODE)

Code Squelch is enabled or disabled by your dealer. This function turns the transceiver squelch OFF only when it receives the DTMF ID 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 send information to a number of units in a fleet. Ask your dealer for details.

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**Note:** Code Squelch cannot be used on this transceiver if Selective Call (page 15) or DTMF Number Display (page 19) have been programmed.

---

## RECEIVING

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

- The **CALL** icon appears on the display and blinks.
- To mute the speaker after the squelch opens, press the key programmed as **Monitor**.
- Your dealer can program the transceiver to mute the speaker after a specified time period elapses.
- If Transpond is programmed, an acknowledgment signal is returned to the calling station. Transpond does not function when you are called with a Group code. Transpond can send an alert tone, a transceiver ID code, or autodial memory location number 1 (refer to “STORING DTMF NUMBERS” on page 12).
- If Call Alert is programmed, an alert tone will sound when the correct ID code is received.

## TRANSMITTING

- 1 Press and hold the **PTT** switch.
- 2 Enter the ID code of the transceiver you want to call or enter a Group code on the microphone keypad.
- 3 Use the transceiver the same as in a regular call; press the **PTT** switch to transmit and release it to receive.
  - The **CALL** icon appears on the display.
  - When you release the **PTT** switch, the squelch opens. If no signal is received for a pre-determined time, the speaker will mute.
  - Pressing the key programmed as **Monitor** at any time will mute the speaker.

# SELECTIVE CALL

Selective Call is enabled or disabled by your dealer. This function is similar to Code Squelch (page 14). The differences from Code Squelch are:

- You can send or receive Status codes containing up to 5 digits.
- Selective Call opens the squelch only when the transceiver receives a predetermined DTMF code in the correct sequence (3-digit or 4-digit ID code — 1-digit Intermediate code — Status code of up to 5 digits).

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

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**Note:** Selective Call cannot be used on this transceiver if Code Squelch (page 14) or DTMF Number Display (page 19) have been programmed.

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## RECEIVING

When you receive the correct ID and Intermediate codes, the squelch opens and you will hear the call. If a Status code is also received, the code will appear on the display. For example, if the Status code “12345” was received, “*ℓ* 12345” appears on the display. (“*ℓ*” appears in place of “*ℓ*” for group calls.)

- The **CALL** icon appears on the display.
- When no Status code is received “*NO DATA*” appears on the display.
- You can clear the Status code by pressing any key or returning the microphone to its hook.
- To mute the speaker after squelch opens, press the key programmed as **Monitor**.
- Your dealer can program the transceiver to mute the speaker after a specified time period elapses.
- If Transpond is programmed, an acknowledgment signal is returned to the calling station. Transpond does not function when you are called with a Group code. Transpond can send an alert tone, a transceiver ID code, or autodial memory location number 1 (refer to “STORING DTMF NUMBERS” on page 12).
- If Call Alert is programmed, an alert tone will sound when the correct code is received.

## TRANSMITTING

- 1 Press and hold the **PTT** switch.
- 2 Enter the ID code (or Group code) and Intermediate code of the transceiver you want to call on the microphone keypad.
  - If desired, you can also enter a Status code of up to 5 digits.
  - You can send codes the same way you make DTMF calls (page 12).
- 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, the squelch opens. If no signal is received for a pre-determined time, the speaker will mute.
  - Pressing the key programmed as **Monitor** at any time will mute the speaker.

# EMERGENCY OPERATION

There are two Emergency Operation modes:

**Emergency Operation 1:** The transceiver is programmed to automatically transmit an emergency code to the base station. This code is repeatedly transmitted until the base station acknowledges your emergency situation or you exit Emergency Operation 1.

**Emergency Operation 2:** The transceiver is programmed to automatically activate the function attached to its control function port, such as the vehicle horn or headlights. If attached to the vehicle horn, the horn will sound either continuously or on a preset pulse. If attached to the vehicle headlights, the headlights will turn on. If the headlight control port is connected to the vehicle ignition control line, the vehicle engine will not start up.

Press and hold the key programmed as **Emergency** for approximately 1 second to enter Emergency Operation 1.

- The transceiver will beep unless your dealer has activated “Secret” Emergency Operation 1. “Secret” Emergency Operation is a feature of this transceiver that allows you to activate Emergency Operation without others recognizing the Emergency status of the transceiver.
- The channel will switch to the pre-programmed emergency channel.

While in “Secret” Emergency Operation 1, the three left-most decimal places appear on the display. When your signal has been acknowledged by the base station, the two right-most decimal places appear on the display.

Press and hold the **Emergency** key again for approximately 1 second to enter Emergency Operation 2.

- The transceiver will beep unless your dealer has activated “Secret” Emergency Operation 2.

While in “Secret” Emergency Operation 2, the transceiver will wait for 1 minute, then activate the function attached to its control function port. This could be your car horn or headlights.

When the transceiver receives an Emergency Reset code, it will return to normal operation. Or, if you press and hold the **Emergency** key for more than 10 seconds, you can return the transceiver to normal operation.

If enabled by your dealer, the transceiver can continue Emergency Operation even while the transceiver power is OFF.

# ADVANCED OPERATIONS

## 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 this warning tone to sound, allowing you to finish your transmission before the TOT expires.

## 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**.

- The **TA** icon appears on the display while the Talk Around function is ON.
- When using Talk Around, the receive frequency is used for both transmission and reception, and the decode signalling is used for both encoding and decoding.

## MONITOR

Press the key programmed as **Monitor** to turn the transceiver signalling OFF. While signalling is OFF, you can hear all signals received on your current channel. With signalling ON, you can hear only signals that match the signalling programmed in your transceiver. Press the **Monitor** key again to return to normal operation.

Press and hold the key programmed as **Monitor** for approximately 1 second 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. Press the **Monitor** key again to return to normal operation.

- The  icon appears on the display while Monitor is activated.

## OPERATOR SELECTABLE TONE (OST)

You can change the preset encode and decode tones for the selected channel. Upt to 12 tones can be pre-programmed by your dealer.

1 Press the key programmed as **OST**.

- "TONE OFF" or the OST number appears on the display.

2 Press the **CH**  /  keys (right side) to select the desired OST.

To exit OST mode and return to the preset encode and decode tones, press the **OST** key again.

## KEY LOCK

Press the key programmed as **Key Lock** to lock the keys of the transceiver. Locking the transceiver keys prevents you from accidentally changing the channel and channel settings. While key lock is active, you can still use the microphone **PTT** switch, the  (power) switch, and the **Emergency** and **Monitor** keys. If set up by your dealer, you can also use the Volume keys.

- The  icon appears on the display while the Key Lock function is ON.

Press the **Key Lock** key again to turn this function OFF.

## HORN ALERT

Horn Alert is a useful feature that will notify you of a received call while you are away from your vehicle. The transceiver is programmed to sound the vehicle horn or some other external alert device (such as the vehicle headlights) when a call is received that has correct signalling.

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

- "-HFI-" appears on the display while Horn Alert is turned ON.

## DTMF NUMBER DISPLAY

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**Note:** This feature can only be activated when DTMF Signalling is turned OFF.

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When you receive a DTMF code containing at least 3 digits, it will appear on the display. Each successive digit will continue to scroll across the display, as long as each digit is received within 1 second of the previous digit. If no digit is received for more than 1 second, then a new digit is received, the display will clear and begin with the new digit.

Cancel the DTMF Number Display by pressing any key other than **VOL ▲ / ▼** (left side).

You can transmit DTMF codes by entering them into an optional microphone with a DTMF keypad (KMC-32).

## BEGINNING/ END OF TRANSMISSION ID 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.

A Beginning of Transmission ID Signal is sent when you press the **PTT** switch.

An End of Transmission ID Signal is sent when you release the **PTT** switch.

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