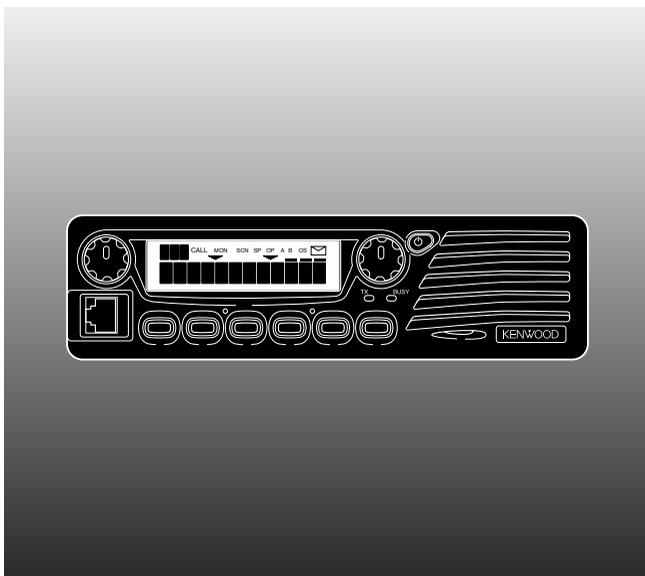


KENWOOD

INSTRUCTION MANUAL



VHF FM TRANSCEIVER

TK-7150

UHF FM TRANSCEIVER

TK-8150

KENWOOD CORPORATION

© B62-1619-10 (K)
09 08 07 06 05 04 03 02 01

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.

Note: This instruction manual covers only the basic functions of the transceiver. Consult your dealer for more detailed information.

MODELS COVERED BY THIS MANUAL

The models listed below are covered by this manual:

- **TK-7150:** VHF FM Transceiver
- **TK-8150:** UHF FM 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.

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. 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

Please 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.

CONTENTS

UNPACKING AND CHECKING EQUIPMENT	1
SUPPLIED ACCESSORIES	1
PREPARATION	2
TOOLS REQUIRED	2
POWER CABLE CONNECTION	2
INSTALLING THE TRANSCEIVER	3
ORIENTATION	4
FRONT PANEL AND MICROPHONE	4
DISPLAY	5
REAR PANEL	6
PROGRAMMABLE AUXILIARY FUNCTIONS	7
BASIC OPERATIONS	8
OPERATION OVERVIEW	8
SWITCHING POWER ON/ OFF	8
ADJUSTING THE VOLUME	8
SELECTING A ZONE AND CHANNEL/GROUP ID	8
TRUNKING ZONES	9
PLACING A DISPATCH CALL	9
RECEIVING A DISPATCH CALL	9
PLACING A TELEPHONE CALL	9
RECEIVING A TELEPHONE CALL	9
CONVENTIONAL ZONES	10
TRANSMITTING	10
RECEIVING	10
2-TONE SIGNALLING	10
SCAN	11
SCAN TYPES	11
DTMF CALLS	12
MANUAL DIALLING	12
STORING DTMF NUMBERS	12
DIALLING STORED DTMF NUMBERS	12
CLEARING STORED DTMF NUMBERS	13
REDIALLING	13
FleetSync™: ALPHANUMERIC TWO-WAY PAGING FUNCTION	14
KEY FUNCTIONS	14
OPTIONAL FEATURES	15
SELCALL (SELECTIVE CALLING)	15
STATUS MESSAGE	16
ADVANCED OPERATIONS	18
TIME-OUT TIMER (TOT)	18
BUSY CHANNEL LOCKOUT (BCL)	18
TALK AROUND	18
EMERGENCY OPERATION	19
BEGINNING/ END OF TRANSMISSION ID SIGNAL	19

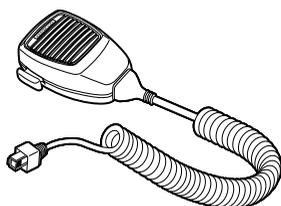
UNPACKING AND CHECKING EQUIPMENT

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

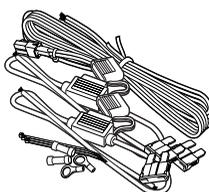
Item	Part Number	Quantity
Microphone and microphone cable	T91-0621-XX	1
Microphone hanger (with screws)	J19-1584-XX	1
DC power cable	E30-3478-XX	1
Fuse (15 A)	F05-1537-XX	3
Mounting bracket	J29-0697-XX	1
Connection plug	E37-1031-XX	1
Screw set	N99-2033-XX	1
Protective cover	F29-0478-XX	1
Key label sheet	B11-1297-XX	1
Cable tie	J61-0307-XX	1
Instruction manual	B62-1619-XX	1



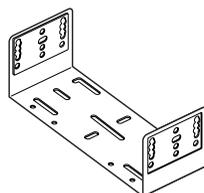
Microphone and microphone cable



Microphone hanger with self-tapping screws



DC power cable with fuses



Mounting bracket



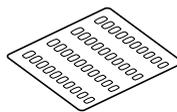
Connection plug



Screw set



Protective cover



Key label sheet



Cable tie

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 that make of vehicle and enlist their aid in determining if the equipment 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 5 x 16 mm self-tapping screws
- 3.2 mm (1/8 inch) drill bit for 4 x 16 mm 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 the provided cable tie.
 - 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

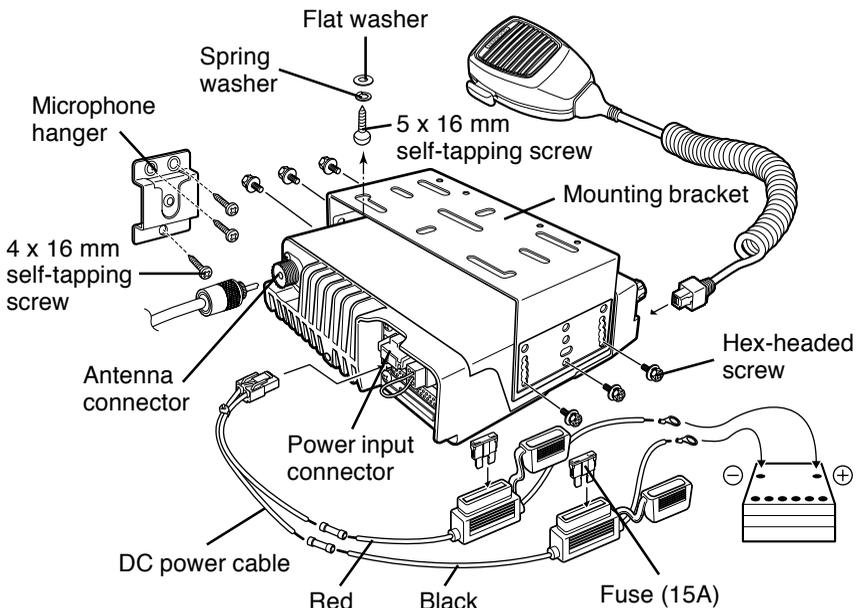
For passenger safety, install the transceiver securely, using the supplied mounting bracket, so the transceiver will not break loose in the event of a collision.

- 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 5 x 16 mm 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 and ventilation.
- 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, using the supplied 4 x 16 mm screws, 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.
- 5 Connect the microphone plug to the microphone jack on the front panel of the transceiver, then place the microphone on the hanger.



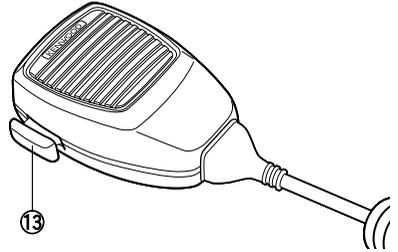
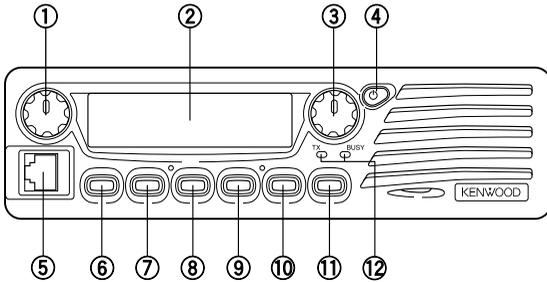
CAUTION

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.



ORIENTATION

FRONT PANEL AND MICROPHONE



- ① **Volume Control**
Rotate to adjust the volume level. Clockwise increases the volume and counterclockwise decreases the volume.
- ② **Display**
(See page 5.)
- ③ **Selector**
Rotate to select a zone or channel/group ID. Clockwise increases the zone / channel/group ID and counterclockwise decreases the zone / channel/group ID. The default setting is Channel/Group ID Up/Down
- ④ **⏻ (Power) switch**
Press to switch the transceiver ON. Press and hold for approximately 1 second to switch the transceiver OFF.
- ⑤ **Microphone Jack**
Insert the microphone plug into this jack.
- ⑥ **PF1 Key**
Press this key to activate its programmable auxiliary function {page 7}. The default setting is Zone Up.
- ⑦ **PF2 Key**
Press this key to activate its programmable auxiliary function {page 7}. The default setting is Zone Down.
- ⑧ **PF3 Key**
Press this key to activate its programmable auxiliary function {page 7}. The default setting is None.
- ⑨ **PF4 Key**
Press this key to activate its programmable auxiliary function {page 7}. The default setting is None.

⑩ **PF5 Key**

Press this key to activate its programmable auxiliary function {page 7}.
The default setting is None.

⑪ **PF6 Key**

Press this key to activate its programmable auxiliary function {page 7}.
The default setting is None.

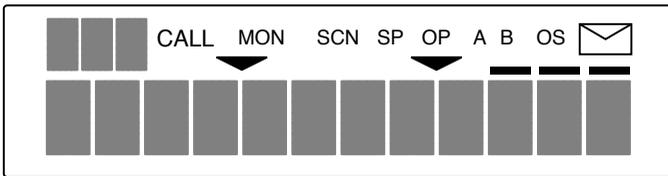
⑫ **TX / BUSY LEDs**

The TX LED lights red while transmitting. In Conventional Groups, the BUSY LED lights green while receiving.

⑬ **PTT switch**

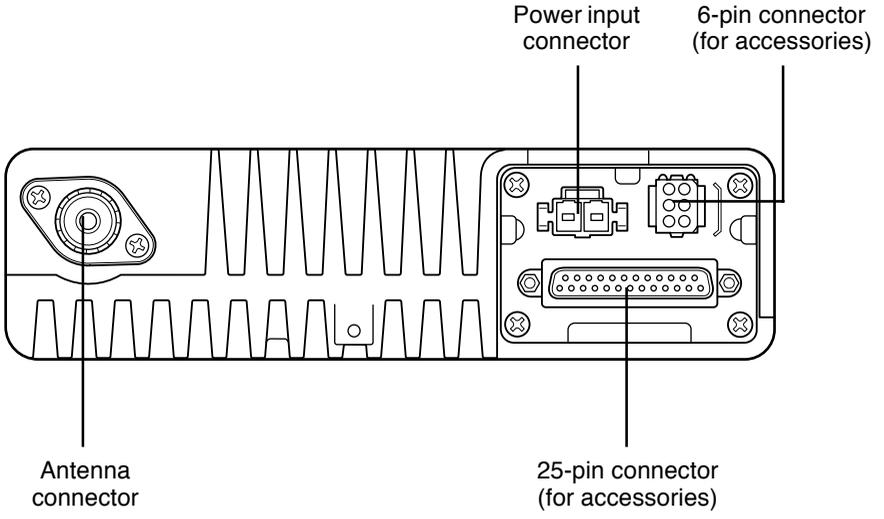
To transmit, press and hold this switch, then speak into the microphone.
Release to receive.

DISPLAY



Indicator	Description
	Displays the zone, group ID, and channel numbers. Also displays various functions which have been programmed by your dealer.
CALL	Appears when the squelch opens during a 2-Tone or DTMF call.
MON	Appears when the key programmed as Monitor is pressed.
(left side)	Appears when the selected Zone is added to the scan list.
SCN	Appears when you are using Scan mode.
SP	Appears when you are using an external speaker.
OP	Appears when the optional scrambler board is installed and activated.
(right side)	Appears when the selected Channel/Group ID is added to the scan list.
A	Appears when the auxiliary A function is activated.
B	Appears when the auxiliary B function is activated.
OS	Appears when Operator Selectable Tone is activated.
	Appears when a FleetSync message is stored in the transceiver memory. Appears and blinks when a new message is received.
	Displays the zone, group ID, and channel numbers. Your dealer can program the zone, group ID, and channel names with up to 12 characters, in place of numbers.

REAR PANEL



PROGRAMMABLE AUXILIARY FUNCTIONS

Keys ⑥ to ⑪ {pages 4 and 5} can be programmed with the auxiliary functions listed below. The keys can only be programmed with functions, depending on whether you are using a Conventional Group or a Trunking System. Please contact your dealer for further details on these functions.

- Auto Telephone
- AUX A
- AUX B
- Channel/GID* Down
- Channel/GID Recall
- Channel/GID Up
- Direct CH**/GID 1
- Direct CH/GID 2
- Direct CH/GID 3
- Direct CH/GID 4
- Direct CH/GID 5
- Display Character
- Emergency Call ¹
- Home Channel/GID
- Horn Alert
- LCD Backlight
- Message Mode ²
- Monitor
- None
- Operator Selectable Tone ³
- Public Address
- Scan
- Scan Del/Add
- Scrambler ⁴
- Send GPS ⁵
- Speaker Internal/External
- Squelch Level ³
- Talk Around
- TEL Disconnect
- 2-Tone Encode ³
- Zone Down
- Zone Up

¹ This function can be programmed only on keys ⑥ to ⑪ (**PF1 to PF6**).

² This function can be programmed only on keys ⑦, ⑧ and ⑪ (**PF2, PF3 and PF6**).

³ These functions can be used only in Conventional Groups.

⁴ This function can be selected only when the Scrambler board has been installed.

⁵ This function can be selected only when an external GPS receiver has been installed.

* GID = Group ID

** CH = Channel

The selector can be programmed with the following three functions. Please contact your dealer for further details on these functions.

- Channel/GID Up/Down
- None
- Zone Up/Down

BASIC OPERATIONS

OPERATION OVERVIEW

Your dealer can program your transceiver with Trunking Systems and Conventional Groups. Trunking Systems can handle 32 zones with up to 250 group IDs. Conventional Groups can handle up to 128 zones with up to 128 channels. The transceiver can handle a maximum combination of 128 zones in Trunking Systems and Conventional Groups.

SWITCHING POWER ON/ OFF

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

If the transceiver is password protected, "Password" will appear on the display when the power is turned ON. To unlock the transceiver, enter the correct password:

- 1 Select a character by rotating the selector.
 - If you are using an optional microphone equipped with a keypad, you can also enter the password by pressing the appropriate keypad keys.
- 2 Press the **PF5** key to accept the character.
 - This step is unnecessary when using the keypad.
- 3 Repeat steps 1 and 2 to enter the entire password.
 - If no key is pressed within 10 seconds, the transceiver will return to the password protect state.
- 4 Press the **PF5** key or the keypad **#** key to complete the entry.
 - If you enter an incorrect password, an error tone sounds and the transceiver remains locked.
 - The password can contain a maximum of 6 digits.

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

ADJUSTING THE VOLUME

Turn the **Volume Control** clockwise to increase the volume and counterclockwise to decrease the volume.

SELECTING A ZONE AND CHANNEL/GROUP ID

Select the desired zone using the selector if it has been programmed with **Zone Select** or the keys programmed with **Zone Up** and **Zone Down**. Each zone contains a group of channels.

Select the desired channel/group ID using the selector if it has been programmed with **Channel/Group ID Select** or the keys programmed with **Channel/Group ID Up** and **Channel/Group ID Down**. Each channel/group ID is programmed with specific settings to allow you to send and receive calls.

TRUNKING ZONES

PLACING A DISPATCH CALL

- 1 Select the desired trunking zone and a group ID.
- 2 Press and hold the **PTT** switch.
- 3 If the “Clear to Talk” tone sounds, communication is possible; start speaking into the microphone. Release the **PTT** switch to receive.
 - For best sound quality at the receiving station, hold the microphone approximately 1.5 inches (3 ~ 4 cm) from your mouth.
- 4 When your conversation is finished, return the microphone to its hanger.

RECEIVING A DISPATCH CALL

- 1 When a dispatch call is received, the transceiver will automatically change to the correct channel and you will hear the call.
- 2 Readjust the volume as necessary.

PLACING A TELEPHONE CALL

Note: You can only make a telephone call if the telephone service is available and you have an optional keypad microphone. Refer to “DTMF CALLS” on page 12. Consult your dealer for further details.

- 1 Select the desired trunking zone and a group ID.
- 2 Press and hold the **PTT** switch for approximately 1 second to ensure a connection.
 - Confirm that there is a dial tone after releasing the **PTT** switch.
- 3 Dial using the microphone keypad.
 - After dialling, wait for a response from the called party.
- 4 When the called party responds, press and hold the **PTT** switch and speak into the microphone. Release the **PTT** switch to receive.
 - Only one person can speak at a time.
- 5 To end the call, press the **#** key or the key programmed as **TEL Disconnect**.

RECEIVING A TELEPHONE CALL

- 1 When a telephone call is received, the transceiver will automatically change to the correct channel and you will hear the call.
- 2 To respond to the call, press and hold the **PTT** switch and speak into the microphone. Release the **PTT** switch to receive.
 - Only one person can speak at a time.
- 3 To end the call, press the **#** key or the key programmed as **TEL Disconnect**.

CONVENTIONAL ZONES

TRANSMITTING

- 1 Select the desired conventional zone and a channel.
 - Make sure the channel is not in use. When a channel is in use, the BUSY (green) LED will light.
- 2 Press and hold the **PTT** switch, then 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.
- 4 When your conversation is finished, return the microphone to its hanger.

RECEIVING

- 1 Select the desired zone and channel.
- 2 When you hear a call, readjust the volume as necessary.

2-TONE SIGNALLING

2-Tone Signalling only opens the squelch when the transceiver receives two tones corresponding to those set up in the transceiver. When the squelch opens, you will be able to hear the caller without any further action.

- When the squelch opens, the CALL icon flashes.

After a correct 2-Tone signal is received and the squelch opens, pressing the key programmed as **Monitor** will cancel the connection.

If your dealer programmed Transpond for 2-Tone Signalling, the transceiver automatically sends an acknowledgment signal to the station that called you after receiving the 2-Tone signal.

If your dealer has programmed Tone Alert for 2-Tone Signalling, the transceiver will emit a beep when the correct 2-Tone signal is received.

To transmit a 2-Tone signal:

- 1 While pressing the **PTT** switch, press the key programmed as **2-Tone Encode**.
- 2 Continue to transmit as normal.

SCAN

To activate the Scan function, press the key programmed as **Scan**.

- The SCN icon lights and “-SCAN-” appears on the display.

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

- The transceiver returns to the channel that was selected before Scan started.

SCAN TYPES

There are three types of scans available: Single Zone Scan, Multi Zone Scan, and List Zone Scan. Depending on how your transceiver has been set up, scan will operate differently.

- **Single Zone Scan:** All channels within the currently selected zone that have been added to the scanning sequence are scanned. If set up to scan priority channels, the priority channels will be scanned even if they are not within the currently selected zone.
- **Multi Zone Scan:** All channels on the transceiver that have been added to the scanning sequence are scanned.
- **List Zone Scan:** All channels within the specified range of zones that have been added to the scanning sequence are scanned. If set up to scan priority channels, the priority channels will be scanned even if they are not within any of the zones in the list.

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 does not operate. The 2 channels can include both priority channels.

DTMF CALLS

Note: To make DTMF calls, you must have an optional microphone with a DTMF keypad.

MANUAL DIALLING

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

- You can enter the digits **0 ~ 9**, *****, and **#**.
- If programmed by your dealer, you do not need to continuously hold the **PTT** switch; the transceiver will remain in the transmit state momentarily after releasing each key. The length of time it remains in the transmit state is programmed by your dealer.
- While transmitting DTMF tones, the microphone is muted.
- To “store and send” a number, enter the digits then press the **PTT** switch to transmit.

STORING DTMF NUMBERS

If Auto Dialling has been activated by your dealer, you can store DTMF numbers (16 digits maximum) in each of the 32 Auto Dial memory locations (01 ~ 32).

- 1 Press and hold the microphone **#** key for 1 second.
 - “D” appears on the display.
- 2 Enter the desired digits on the microphone keypad.
 - You can enter the digits **0 ~ 9**, *****, and **#**. When entering ***** or **#**, you must first press the **PTT** switch. To enter A, B, C, or D, press the **PTT** switch and enter 2, 5, 8, or 0 respectively.
 - To cancel, press the ***** key or any key on the transceiver front panel, other than the **⏏** switch.
- 3 Press the microphone **#** key.
 - “D-” appears on the display.
- 4 Enter a memory location number (01 ~ 32).

DIALLING STORED DTMF NUMBERS

- 1 Press and hold the microphone ***** key for 1 second.
 - “A” appears on the display.
- 2 Enter the desired memory location number (01 ~ 32).
- 3 Press the **PTT** switch to make the call.

CLEARING STORED DTMF NUMBERS

- 1 Press and hold the microphone # key for 1 second.
 - “D” appears on the display.
- 2 Press the # key again.
 - “D-CLEAR” appears on the display.
 - To cancel the process, press any key other than 0 ~ 9.
- 3 Enter the desired memory location number (01 ~ 32).

REDIALLING

- 1 Press and hold the microphone * key for 1 second.
 - “A” appears on the display.
- 2 Press the 0 key two times.
- 3 Press the **PTT** switch to make the call.

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

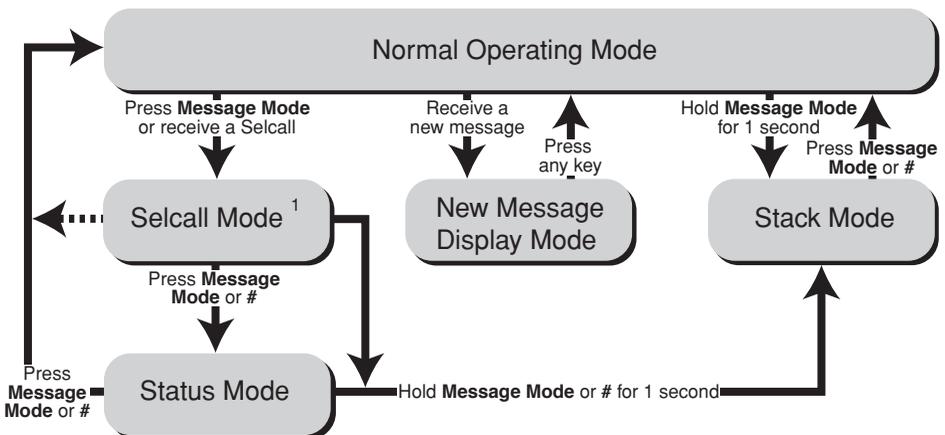
FleetSync™: ALPHANUMERIC TWO-WAY PAGING FUNCTION

FleetSync™ is an Alphanumeric Two-way Paging Function, and is a protocol owned by **KENWOOD** Corporation. FleetSync™ enables a variety of paging functions on your transceiver, some of which depend on dealer programming.

Your dealer can set up either FleetSync™ or FleetSync™ II on your transceiver. Transceivers set up with FleetSync™ can communicate with other transceivers that have been set up with FleetSync™. Likewise, transceivers set up with FleetSync™ II can communicate with other transceivers that have been set up with FleetSync™ II. However, transceivers set up with FleetSync™ cannot communicate with transceivers that have been set up with FleetSync™ II and vice-versa.

KEY FUNCTIONS

Key	Function
Message Mode , Keypad #	Press to change the transceiver mode as shown in the diagram below.
PF4 key, PF5 key	Press to scroll through the message if the entire message does not appear on the display.
Selector	Rotate to select an ID from the pre-programmed ID list or Status list.
PTT	Press to initiate a call.
Keypad 0 ~ 9	Use the DTMF keypad to enter Selcall or Status numbers.
PF1 key, Keypad *	Press to cancel a manually entered Selcall or Status number.



¹ Depending on how your dealer programmed the transceiver, Selcall Mode may be skipped or the transceiver may exit Selcall Mode automatically (as shown by the dash arrow).

OPTIONAL FEATURES

Short Messages: Received short messages (maximum of 48 characters) are displayed the same as Status messages {page 16}, however only 4 short messages can be stored in the stack memory. “M” (Message) and the message number appear with the message.

GPS Report: If an external GPS receiver (NMEA-0183 format) is installed on the transceiver and the Send GPS function is programmed onto a key by your dealer, you can press the programmed key to send your location data.

SELCALL (SELECTIVE CALLING)

A Selcall is a voice call to a particular station or to a group of stations.

■ Transmitting

- 1 Select your desired zone and channel/group ID.
- 2 Press the key programmed as **Message Mode** to enter Selcall Mode.
- 3 Rotate the **Selector** to select the ID of the station you want to call.
 - You can also enter digits by using the DTMF keypad if Manual Dial is enabled. (Press the **PF1** key or the * key to erase an incorrect digit.)
- 4 Press the **PTT** switch and begin your conversation.

■ Receiving

An alert tone will sound, the transceiver will automatically enter Selcall Mode, and the calling station’s ID will appear when a Selcall is received.

To respond to the call, press the **PTT** switch and speak into the microphone.

■ Reviewing Caller IDs in the Stack Memory

The mail icon () will flash when a Selcall call is received and stacked.

- 1 Press and hold the key programmed as **Message Mode** for more than 1 second to enter Stack Mode.
 - The last received Caller ID is displayed with the Caller ID number. “1” (ID) appears with the number.
- 2 Rotate the **Selector** to select the ID you want to view (if more than one ID is stored in the stack memory).
- 3 To erase the ID, press and hold the **PF1** key or the * key for more than 1 second.

■ Identification Codes

An ID code is a combination of a 3-digit Fleet number and a 4-digit ID number. Each transceiver must have its own Fleet and ID number.

- Enter a Fleet number (100 ~ 349) to make a group call.
- Enter an ID number (1000 ~ 4999) to make an individual call in your fleet.
- Enter a Fleet number followed by an ID number to make an individual call in your desired fleet (Inter-fleet call).
- Select “ALL” Fleet and “ALL” ID to make a call to all units (Broadcast call).
- Select “ALL” Fleet and enter an ID number to make a call to the selected ID in all fleets (Supervisor call).

Note:

- ◆ Broadcast and Supervisor calls are programmed functions that cannot be made with a keypad.
 - ◆ The ID range may be limited by programming.
-

STATUS MESSAGE

You can send and receive 2-digit Status messages (10 ~ 79) which may be decided in your talk group. Messages can contain up to 16 alphanumeric characters.

A maximum of 9 received messages can be stored in the stack memory of your transceiver. These saved messages can be reviewed after reception. If the stack memory is full, the oldest message will be erased when a new message is received. The mail icon () lights when a message is stored in the stack memory.

Note: All stored messages will be cleared when the transceiver power is turned OFF.

■ Transmitting

- 1 Select your desired zone and channel/group ID.
- 2 Press the key programmed as **Message Mode** to enter Selcall Mode.
- 3 Rotate the **Selector** to select the ID of the station you want to call.
 - You can also enter digits by using the DTMF keypad if Manual Dial is enabled. (Press the **PF1** key or the * key to erase an incorrect digit.)
- 4 Press the key programmed as **Message Mode** or the # key to enter Status Mode.
- 5 Rotate the **Selector** to select the status you want to transmit.
 - You can also enter digits by using the DTMF keypad if Manual Dial is enabled. (Press the **PF1** key or the * key to erase an incorrect digit.)
- 6 Press the **PTT** switch to initiate the Status call.
 - “COMPLETE” is displayed when the call has been successfully transmitted.

■ Receiving

The mail icon () will flash and a calling ID or text message will appear when a Status call is received.

- The display alternates between the caller ID and the message.

Press any key to return to Normal Operation Mode.

■ Reviewing Messages in the Stack Memory

- 1 Press and hold the key programmed as **Message Mode** for more than 1 second to enter Stack Mode.
 - The last received message is displayed with the message number. “S” (Status) appears with the number.
- 2 Rotate the **Selector** to select the message you want to view (if more than one message is stored in the stack memory).
- 3 To erase the message, press and hold the **PF1** key or the * key for more than 1 second.

■ Automatic Status Response

If you pre-select a status number and then leave the transceiver in Status Mode, the transceiver will automatically respond with that status number when a request from the base station is received. (The base station request function is optional.)

ADVANCED OPERATIONS

TIME-OUT TIMER (TOT)

The Time-out Timer prevents any single 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 can be 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.

If BCL Override is also activated, you can override the BCL and transmit on a channel already in use. To override the BCL, release the **PTT** switch when the alert tone sounds, then press the **PTT** switch again within 0.5 seconds.

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**.

- “TA” appears on the display when Talk Around is ON.

EMERGENCY OPERATION

Press and hold the key programmed as **Emergency** to enter Emergency Operation.

- The duration you need to hold the key depends on how your transceiver has been set up.
- The transceiver will switch to the pre-programmed emergency channel/ group ID.

While in Emergency Operation, the transceiver will perform the emergency cycle; it will automatically switch between transmitting and receiving. The duration of each transmission and reception period is set up by your dealer. The emergency cycle can be set to continue for a certain number of times and can also be cancelled by pressing the **Emergency** key.

- The duration you need to hold the key depends on how your transceiver has been set up.
- The transceiver will return to the channel that was operated before Emergency Operation began.

If programmed by your dealer, the TX LED will not light red while transmitting nor will the BUSY LED light green while receiving.

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.

The dealer can set up the BOT (beginning), EOT (end), or both.