

[ID MR] ID MEMORY READ KEY
 Recalls detected ID codes.
 • Push this key, then push [^]/[v] for selection.
 • Up to 5 ID's are memorized.
 Push and hold this key to erase all memorized IDs.

[GRP] TRUNKING GROUP KEY
 Push to select the Trunking group.

[COMP] MIC COMPANDER KEY
 Push to toggle the mic compander function ON or OFF.

[SET] USER SET MODE KEY
 Changes the contents of the items in the User Set mode.
 • Push and hold [SET] for 1 sec. to enter set mode, push [SET] momentarily to select the item. Push [^] and [v] to set the desired level/condition.
 Push and hold [SET] again to exit set mode.
 • User set mode also available via the 'Power ON function'. Please refer p. 10 also.

[SCRM] SCRAMBLER KEY
 • Push and hold to turn the voice scrambler function ON.
 • Push to turn the voice scrambler function OFF.

NOTE:
 • Optional UT-109 (#02) or UT-110 (#02) VOICE SCRAMBLER UNIT is required.
 - UT-109: Non-rolling type. 32 codes are available.
 - UT-110: Rolling type. Provides higher communication security. 1020 (4 groups × 255) codes are available.
 • This transceiver requires version #02 unit, do not install version #01, as they are not compatible.
 • UT-109 and UT-110 require some PC board modifications. Please refer '■ Optional UT-109/UT-110 installation'. (p.17)
 • Please contact your Dealer for details.

■ Turning power ON

- ① Push [POWER] to turn the power ON.
 - A power-up alert tone sounds for about 1 sec. and an opening message may appear.
- ② If the transceiver is programmed for a start up passcode, input digit codes as directed by your Dealer.
 - The keys in the table below can be used for password input:
 - The transceiver detects numbers in the same block as identical. Therefore “01234” and “56789” are the same.

| KEY | [P0] | [P1] | [P2] | [P3] | [P4] |
|--------|------|------|------|------|------|
| NUMBER | 0 | 1 | 2 | 3 | 4 |
| | 5 | 6 | 7 | 8 | 9 |

- ③ When the “PASSWORD” indication does not clear after inputting 4 digits, the input code number may be incorrect. Turn power off and start over in this case.

■ Channel selection

Several types channel selections are available, methods may differ according to your system set up.

NON-BANK TYPE:

Push [CH UP]/[CH DN] to select the desired operating channel, in sequence; or, push one of the [CH 1] to [CH 4] to select a channel directly.

BANK-TYPE:

Push [BANK] to select the desired bank number.

AUTOMATIC SCAN TYPE:

Channel setting is not necessary for this type. When turning the power ON, the transceiver automatically starts scanning. Scanning stops when receiving a call or when taking the microphone off hook.

■ Receiving and transmitting

RECEIVING:

- ① Push [POWER] to turn the power ON.
- ② Push [CH UP] or [CH DN] to select a channel.
- ③ When receiving a call, adjust the audio output level to a comfortable listening level.

TRANSMITTING:

- ④ Take the microphone off hook.
 - 5-tone mute may be released (the 'audible' condition is selected and "🔊" appears).
 - A priority channel may be selected automatically.
- ⑤ Wait for the channel to become clear.
 - The channel is busy when "🔊" appears.
- ⑥ Push the [CALL] key when initiating a call from your side.
 - Coded audio may be heard from the transceiver, then "🔊" appears.
 - This operation may not be necessary depending on your signaling system. Ask your Dealer.
- ⑦ While pushing and holding [PTT], speak into the microphone at your normal voice level.
- ⑧ Release [PTT] to receive.

IMPORTANT: To maximize the readability of your signal:

- (1) Pause briefly after pushing [PTT]
- (2) Hold the microphone 2 to 5 cm from your mouth, then speak into the microphone at a normal voice level.

◇ Transmitting notes

• Transmit inhibit function

The transceiver has several inhibit functions which restrict transmission under the following conditions:

- The channel is in mute condition ('Inaudible' condition; "🔊") does not appear).
- Channel is busy.
- No matched (or matched) CTCSS is received.
- The selected channel is a 'receive only' channel.

• Time-out timer

After continuous transmission for a pre-programmed period, the time-out timer is activated causing the transceiver to stop transmitting and automatically select receive.

• Penalty timer

Once the time-out timer is activated, transmission is further inhibited for a period determined by the penalty timer.

2 OPERATION

◇ Tx code channel selection

If the transceiver has a **[TX CH]** key, display can be toggled between the operating channel number (or name) and Tx code channel number (or name). When the Tx code channel number (or name) is displayed, the **[CH UP]/[CH DN]** keys select the Tx code channel.

TO SELECT A TX CHANNEL:

- ① Push **[TX CH]** — a Tx code channel appears.
- ② Push **[CH UP]/[CH DN]** to select the desired Tx code channel.
- ③ Push **[CALL]** to transmit the selected Tx code.
- ④ Push **[TX CH]** again to return to the channel display.

◇ Tx code number selection

If the transceiver has a **[CODE]** key, Tx code contents can be changed within the allowable digits.

TO SELECT A TX CODE:

- ① Push **[CODE]** — a Tx code number appears and an allowable digit blinks.
- ② Push **[CH UP]/[CH DN]** to select the desired number at the blinking digit.
- ③ Push **[CODE]** to enter the selected number.
- ④ Repeat steps ② and ③ to input all allowed digits.
- ⑤ Push **[CALL]** to transmit the selected Tx code.

◇ DTMF transmission

If the transceiver has a **[DTMF]** key, the automatic DTMF transmission function is available. Up to 7 DTMF channels are available.

- ① Push **[DTMF]** — a DTMF code channel appears.
- ② Push **[CH UP]/[CH DN]** to select the desired DTMF channel.
- ③ Push and hold **[DTMF]** to transmit the selected DTMF.

◇ Scrambler function

UT-109 (#02) or UT-110 (#02) optional voice scrambler unit provides high performance private communication between stations with the same scrambler codes.

- ① Push and hold **[SCRM]** to turn the scrambler function ON.
- ② “**g**” appears.
- ③ Push **[SCRM]** to turn the function OFF.

◇ User set mode

User set mode is accessed at power ON and allows you to set seldom-changed settings. In this case you can “customize” transceiver operation to suit your preferences and operating style.

Entering the user set mode:

- ① While pushing and holding [▲] and [▼], push [POWER] to enter user set mode ON, allowing you to set seldom-changed settings.
- ② Push and hold [P0] to enter user set mode. Push [P0] momentarily to select the item.
Then push [▲] and [▼] to set the desired level/condition.
Available set mode functions:
 - Backlight :AUTO, DIM, OFF or ON
 - Beep :ON or OFF
 - Beep Level :1 to 5 or Link (links to audio output level)
 - SQL Level :0 to 255
 - AF Min level :0 to 255
 - Audio Filter :3000, 3400, 0 or 300
 - Mic Gain :1 to 5
- ③ Push [POWER] (or push and hold [P0]) again to exit set mode.


User set mode also available via the programmable key.
Please refer p. 6 [SET] section.

■ SmarTrunk II™ and conventional modes

This transceiver is capable of SmarTrunk II™ functions.

The optional UT-105 allows communication in conventional channels or SmarTrunk II™ channels. Select a channel bank for SmarTrunk II™ before trunking operation.

- Push [**BANK**] several times to select a channel bank for conventional channels or SmarTrunk II™ channels.
 - Scanning starts when a channel bank for SmarTrunk II™ operation is selected.
 - Contact your Dealer for channel bank details.

 **NOTE:** Optional HM-100TN DTMF MICROPHONE is required. Contact your Dealer for details.

■ SmarTrunk II™ operation

These features are enabled by a Dealer and may not be available in your system. Contact your Dealer for details.

◇ Placing a telephone call

Enter the phone number followed by [1], [*].

- A high-pitched beep indicates that the number is accepted.
- When the called party answers, push the [PTT] switch to talk, and release it to listen.

◇ Calling another local system subscriber

Enter the subscriber number followed by [3], [*].

- A high-pitched beep indicates that the number is accepted.
- You hear ringing, then two short beeps when the subscriber answers.
- If the other subscriber is on another call or out of range, you hear a fast busy signal and the call terminates automatically.

◇ Receiving a call

When you hear ringing, push [*] to answer.

- For a group call, you hear a short ring followed by two short beeps. You do not have to answer a group call to hear it over the air.

◇ Terminating a call

After completing a call, push [#] to disconnect (hang up).

IMPORTANT: If one person in the conversation terminates a call, all participants will be cut off.

◇ Last number re-dial

Push [*] 2times to automatically re-dial the last called number.

- A high-pitched beep indicates that the number is accepted.

◇ Memory speed-dialling

To automatically dial a commonly used number from memory:

- Push [*] followed by the memory location (0–9).

◇ Turbo Speedial

To automatically dial a commonly used number with one push:

- Push one of the turbo Speedials ([A], [B], [C] or [D]).

◇ Programming memory speed dial

- ① Push and hold [*] until you hear a high-pitched beep.
- ② Enter the memory location (0–9, A, B, C, D), the telephone or subscriber number, then [1], [*] (or [3], [*] if for another system subscriber).
 - A high-pitched beep indicates successful programming.
 - Memories [A]–[D] are used for the Turbo Speedial.

◇ System busy indication

If all channels are busy, three low beeps sound after you initiate a call. Try the call again later.

◇ PTT dispatch operation

- ① Push [PTT] once (without dialling) to initiate a dispatch call.
- ② Begin talking after you hear three beeps (one short, high-pitched, two very-short, low-pitched).
- ③ Receiving a dispatch call is indicated by the same three-beep sequence.
 - It is not necessary to push [*] to answer a dispatch call.

◇ Emergency call

Push [0], [*] to initiate an emergency call.

- Contact your dealer for details.

◇ Clear channel alerting

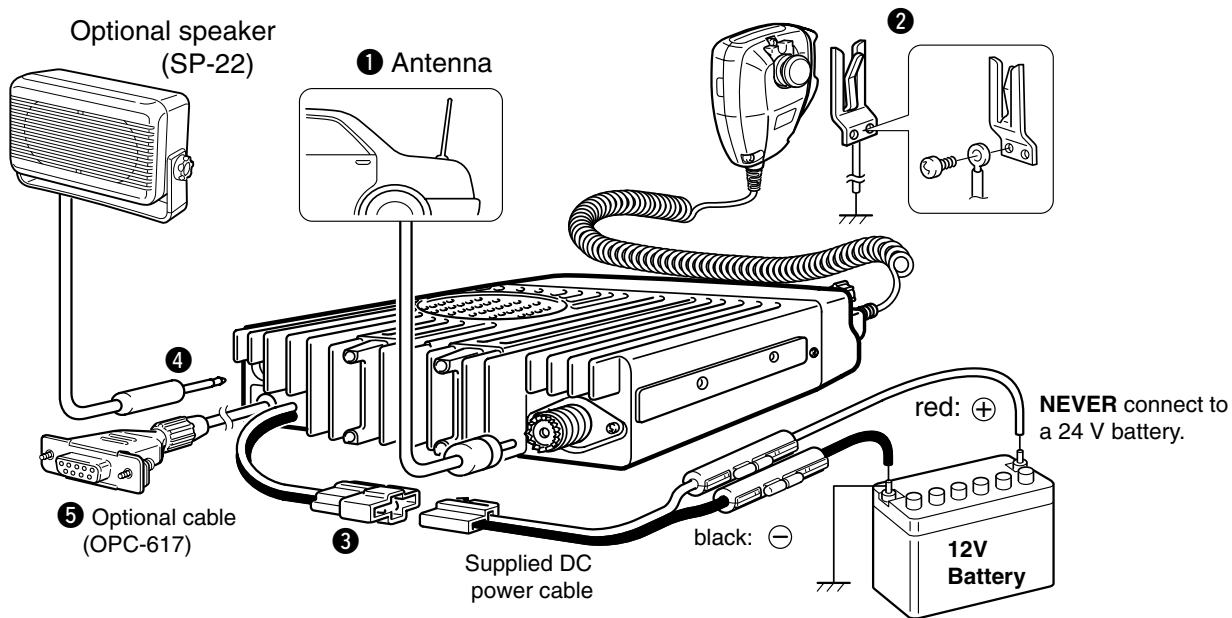
If all channels are busy, the transceiver automatically begins searching for an open channel and beeps every ten seconds. When two short beeps (low-pitched, then high-pitched) are heard, a channel is available. Push [*], [*] immediately to re-dial the last number.

NOTE: For additional operating instructions, contact your Dealer or System Operator.

4

CONNECTION AND MAINTENANCE

■ Rear panel and connection



Note: Use the terminals for the cable connections.

