# iCOM

## OPERATING GUIDE

**FOR  IC-F9010/IC-F9020/
IC-F9510/IC-F9520 SERIES
ANALOG/APCO P25 MODE
OPERATIONS**

Icom Inc.

# IMPORTANT

Thank you for purchasing this Icom transceiver.
Your transceiver will operate on Analog and APCO P25 systems.

## READ ALL INSTRUCTIONS OF THE SYSTEM
carefully and completely before using the transceiver.

## SAVE THIS OPERATING GUIDE — This operating
guide contains important operating instructions for,
- **IC-F9011B/S/T** VHF P25 TRUNKING HANDHELD TRANSCEIVERS
- **IC-F9021B/S/T, IC-F9023B/S/T** UHF P25 TRUNKING HANDHELD TRANSCEIVERS
- **IC-F9511S/T/HT** VHF P25 TRUNKING MOBILE TRANSCEIVERS
- **IC-F9521S/T, IC-F9523S/T** UHF P25 TRUNKING MOBILE TRANSCEIVERS

✔ *INFORMATION:*
In this operating guide, the following descriptions are used;
- "**Non-display types**" : Models ending in "B"
- "**Simple types**"      : Models ending in "S"
- "**10-key types**"      : Models ending in "T"

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# TABLE OF CONTENTS

# 1 PREPARATION

## ■ Programmable key functions

The programmable key functions can be assigned to the following keys and switches;

***Handheld transceivers:***
[EMR], [Side1], [Side2], [Side3], [I]*[1], [II]*[1], [III]*[1], [◀]*[1], [▶]*[1], [▲]*[1], [▼]*[1], [APP]*[1], [HOME]*[1], ABC switch and Toggle switch.

***Mobile transceivers:***
[UP]*[2], [DOWN]*[2], [P0], [P1], [P2], [P3] and [P4].

*[1] Available on Simple and 10-key types only
*[2] Available on 10-key types only

Consult your Icom dealer or system operator for details concerning your transceiver's PC programming.

**For Handheld transceivers:**
❍ **ABC and Toggle switches**
The programmable key functions for the ABC and Toggle switches are limited. (See p. 8 for details.)

❍ **Key indicator** (Simple and 10-key types only)
If the key indicator shows the programmed function key name, push the front panel key ([I], [II] or [III]) under the key indicator to activate the programmed function.
(In the explanations that follow, the function key name for that key indicator is displayed in double quotation marks; e.g. "EMR.")

❍ **Non-display types**
The programmable key functions are limited, and some key functions operate differently between the Simple and 10-key types.

◇ **Programmable key functions availability**

| Programmable key functions | Analog | | APCO P25 | | REF. |
|---|---|---|---|---|---|
| | HH | MB | HH | MB | |
| CH Up/Down | ✔ | ✔ | ✔ | ✔ | IM |
| Zone Up/Down | N/A | ✔ | N/A | ✔ | IM |
| Zone | ✔ | ✔ | ✔ | ✔ | IM |
| Scan A Start/Stop, Scan B Start/Stop | ✔ | ✔ | ✔ | ✔ | IM |
| Scan Add/Del(Tag) | ✔ | ✔ | ✔ | ✔ | IM |
| PrioA, PrioB | ✔ | ✔ | ✔ | ✔ | IM |
| PrioA(Rewrite), PrioB(Rewrite) | ✔ | ✔ | ✔ | ✔ | IM |
| MR-CH 1, 2, 3, 4 | ✔ | ✔ | ✔ | ✔ | IM |
| Moni | ✔ | ✔ | ✔ | ✔ | IM |
| Public Address | N/A | ✔ | N/A | ✔ | IM |
| RX Speaker | N/A | ✔ | N/A | ✔ | IM |
| Light | ✔ | ✔ | ✔ | ✔ | IM |
| Lock | ✔ | ✔ | ✔ | ✔ | IM |
| Talk Around | ✔ | ✔ | ✔ | ✔ | IM |

| Programmable key functions | Analog | | APCO P25 | | REF. |
|---|---|---|---|---|---|
| | HH | MB | HH | MB | |
| High/Low | ✔ | ✔ | ✔ | ✔ | IM |
| Surveillance | ✔ | ✔ | ✔ | ✔ | IM |
| Hook Scan | N/A | ✔ | N/A | ✔ | IM |
| OPT1 Out, OPT2 Out, OPT3 Out | ✔*1 | ✔ | ✔*1 | ✔ | IM |
| OPT1 Momentary, OPT2 Momentary, OPT3 Momentary | ✔ | ✔ | ✔ | ✔ | IM |
| User Set Mode | ✔*2 | ✔ | ✔*2 | ✔ | IM |
| Clock | ✔ | ✔ | ✔ | ✔ | IM |
| Menu <, Menu > | ✔ | N/A | ✔ | N/A | IM |
| Re-dial | ✔ | ✔ | N/A | N/A | p. 3 |
| DTMF Autodial | ✔*1 | ✔ | N/A | N/A | p. 3 |
| Scrambler | ✔*1 | ✔ | N/A | N/A | pgs. 3, 8 |
| Compander | ✔*1 | ✔ | N/A | N/A | pgs. 4, 8 |
| Lone Worker | ✔ | ✔ | ✔ | ✔ | p. 4 |

HH: Handheld  MB: Mobile  IM: Instruction Manual  N/A: Not Applicable

*1 Display and non-display units operate differently.

*2 Not available on Non-display types.

# 1 PREPARATION

◇ Programmable functions availability (Continued)

| Programmable key functions | Analog | | APCO P25 | | REF. |
|---|---|---|---|---|---|
| | HH | MB | HH | MB | |
| Emergency | ✔ | ✔ | ✔ | ✔ | p. 4 |
| Ext.CH Sel Mode | N/A | ✔ | N/A | ✔ | p. 4 |
| Home | ✔ | ✔ | ✔ | ✔ | p. 4 |
| Scrambler/Encryption | ✔*1 | ✔ | ✔*1 | ✔ | pgs. 5, 8 |
| Zeroize | N/A | N/A | ✔ | ✔ | p. 6 |
| Site Lock | N/A | N/A | ✔ | ✔ | pgs. 6, 8 |
| Encryption | N/A | N/A | ✔*1 | ✔ | pgs. 6, 8 |
| Digital Button | N/A | N/A | ✔*2 | ✔ | p. 6 |
| Dgital Page | N/A | N/A | ✔*2 | ✔ | p. 6 |
| Digital Status | N/A | N/A | ✔*2 | ✔ | p. 7 |
| Digital Message | N/A | N/A | ✔*2 | ✔ | p. 7 |
| Phone | N/A | N/A | ✔*2 | ✔ | p. 7 |
| Individual | N/A | N/A | ✔*2 | ✔ | p. 7 |
| Talkgroup | N/A | N/A | ✔*2 | ✔ | p. 7 |
| Site Select | N/A | N/A | ✔*2 | ✔ | p. 8 |
| Rekey | N/A | N/A | ✔*2 | ✔ | p. 8 |
| Keyset | N/A | N/A | ✔*2 | ✔ | p. 8 |

H.H.: Handheld  M.B.: Mobile
IM: Instruction Manual  N/A: Not Applicable
*1 Display and non-display units operate differently.
*2 Not available on Non-display types.

◇ **Analog mode operation**
(Common operation)
*RE-DIAL KEY* "DTMR"
Push to transmit the last-transmitted DTMF code.

(Display and non-display units operate differently)
*DTMF AUTODIAL KEY* "DTMA"

❍ *For Simple and 10-key types*
➥ Push to enter the DTMF channel selection mode.
  Then select the desired channel using **[CH Up]**/**[CH Down]** or **[CH Up/Down]**.
➥ After selecting the channel, push this key to transmit the DTMF code.

❍ *For Non-display types*
➥ Push to transmit the DTMF code.

*SCRAMBLER KEY* "SCR"

❍ *For Simple and 10-key types*
Push to turn the Voice Scrambler function ON or OFF.

❍ *For Non-display types*
➥ Push and hold for 1 sec. to turn the Voice Scrambler function ON.
➥ If the function is ON, push the key to turn it OFF.

3

**COMPANDER KEY** "COMP"

❍ *For Simple and 10-key types*
Push to turn the Compander function ON or OFF.
This function reduces noise components from the transmitted audio to provide clear communication.

❍ *For Non-display types*
➥ Push and hold for 1 sec. to turn the Compander function ON.
➥ If the function is ON, push the key to turn it OFF.

### ◊ Analog and APCO P25 modes operation
(Common operation)

**LONE WORKER KEY** "LONE"
Push to turn the Lone Worker function ON or OFF.
• If the Lone Worker function is activated, the Emergency function is automatically turned ON after the specified time period* has passed with no operation performed.
* Depending on the pre-setting. Ask your dealer for details.

**EMERGENCY KEY** "EMR"
Push and hold for the specified time period*, to enter the emergency mode. After the specified time period* has passed, an Emergency call or alarm is transmitted once, or repeatedly. (pgs. 7, 35)
• To exit the emergency mode, push and hold for the specified time period* again before transmitting.
* Depending on the pre-setting. Ask your dealer for details.

**Ext. CH Sel Mode KEY**  (Available on only the mobile types)
Push to turn the Memory Channel Select function from external input operation ON or OFF.
When this function is turned ON, and a signal is input from an external unit that is connected to the D-sub 25-pin connector, the operating channel changes to the desired memory channel. In this case, a memory channel selection with the key or dial operation, and the microphone hanger action functions, Move to Priority A Channel and On Hook Scan, are disabled.
When this function is turned OFF, the memory channel selection from external input operation is disabled.
• This function is usable when an external unit is connected to the transceiver.
• Ask your dealer for details of the external input operation.

4

# 1 PREPARATION

◇ Analog and APCO P25 modes operation (Continued)

***HOME KEY*** "HOME"
➠ Push to return to the normal operating mode from each selected mode, such as Individual ID, Talkgroup ID, DTMF code channel, and so on.
➠ When the Full Off Air Call SetUp (FOACSU) function is turned ON on the Trunking mode, push to ignore the receiving call. (p. 16)
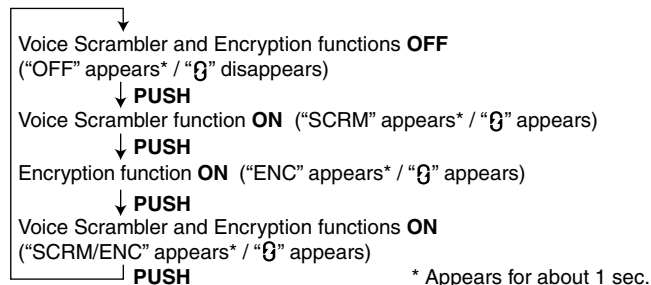
(Display and non-display units operate differently)
***SCRAMBLER/ENCRYPTION KEY*** "S/D"
(The optional UT-125 AES/DES ENCRYPTION UNIT is required for encryption.)

❍ *For Simple and 10-key types*
➠ While in the analog mode, push to turn the Voice Scrambler function ON or OFF.
➠ While in the APCO P25 mode, push to turn the Encryption function ON or OFF.
➠ While in the mixed (digital and analog) mode, push to turn the Voice Scrambler and Encryption functions ON or OFF, separately or simultaneously, as shown below.

Voice Scrambler and Encryption functions **OFF**
("OFF" appears* / " " disappears)
↓ **PUSH**
Voice Scrambler function **ON** ("SCRM" appears* / " " appears)
↓ **PUSH**
Encryption function **ON** ("ENC" appears* / " " appears)
↓ **PUSH**
Voice Scrambler and Encryption functions **ON**
("SCRM/ENC" appears* / " " appears)
└ **PUSH**                    * Appears for about 1 sec.

❍ *For Non-display types*
➠ While in the analog mode, push and hold for 1 sec. to turn the Voice Scrambler function ON. If the function is ON, push the key to turn it OFF.
➠ While in the APCO P25 mode, push and hold for 1 sec. to turn the Encryption function ON. If the function is ON, push the key to turn it OFF.
➠ While in the mixed (digital and analog) mode, push and hold for 1 sec. to turn both the Voice Scrambler and Encryption functions ON. If the functions are ON, push the key to turn them OFF.

◊ **For APCO P25 mode operation**

(Common operation)

*ZEROIZE KEY* "ZERO"

Push and hold this key for 1 sec. to zeroize the encryption key data which is programmed by the key loader.

After this operation is performed, the transceiver cannot decrypt the encrypted code.

*SITE LOCK KEY* "SLCK" (Trunking mode only) (p. 14)

Push to lock the transceiver in the current registered site.

When the Site Lock function is activated, roaming and the background scan are inhibited.

Push again to turn the Site Lock function OFF.

(Display and non-display units operate differently)

*ENCRYPTION KEY* "DENC" (p. 41)

(The optional UT-125 AES/DES ENCRYPTION UNIT is required.)

❍ *For Simple and 10-key types*

Push to turn the Encryption function ON or OFF.

❍ *For Non-display types*

➡ Push and hold for 1 sec. to turn the Encryption function ON.

➡ If the function is ON, push the key to turn it OFF.

(Not available for Non-display types)

*DIGITAL BUTTON KEY* "DSEL"

➡ Push to enter the digital call type selection mode. Then push **[CH Up]**/**[CH Down]** or rotate **[CH Up/Down]** to select the desired call type from "**PAGE**," "**RDO INHIBIT**," "**RDO UINHIBIT**," "**RDO MONITOR**," "**RDO CHECK**," "**STATUS**," "**SHORT MSG**," "**STATUS QUERY**," "**PHONE**" and "**ANNOUNCEMENT**." (p. 11)

After making the digital call type selection, push this key again to enter the ID selection mode.

• If "**STATUS**" or "**SHORT MSG**" is selected, the transceiver displays the Status Message or Short Message selection mode before entering the Individual ID selection mode.

• If "**PHONE**" is selected, the transceiver displays the phone number selection mode.

• If no operation is performed for about 30 sec., the transceiver returns to normal operation.

➡ Push and hold for 1 sec. to cancel and return to normal operation.

*DIGITAL PAGE KEY* "PAGE" (p. 19)

➡ Push to enter the Individual ID selection mode for a Page call. Then push **[CH Up]**/**[CH Down]** or rotate **[CH Up/Down]** to select the desired Individual ID.

• Push **[PTT]** to transmit a Page call.

• If no operation is performed for about 30 sec., the transceiver returns to normal operation.

➡ Push and hold for 1 sec. to cancel and return to normal operation.

# 1 PREPARATION

**DIGITAL STATUS KEY** "STAT" (p. 29)
➥ Push to enter the Status Message selection mode.
After selecting the desired Status Message, push again to enter the destination Individual ID selection mode to send a Status Message.
  • If no operation is performed for about 30 sec., the transceiver returns to normal operation.
  • While in the Trunking mode, the Individual ID selection mode does not appear.
➥ Push and hold for 1 sec. to cancel and return to normal operation.

**DIGITAL MESSAGE KEY** "MSG" (p. 31)
➥ Push to enter the Short Message selection mode.
After selecting the Short Message, push again to enter the destination Individual ID selection mode to send a Short Message.
  • If no operation is performed for about 30 sec., the transceiver returns to normal operation.
  • While in the Trunking mode, the Individual ID selection mode does not appear.
➥ Push and hold for 1 sec. to cancel and return to normal operation.

**PHONE KEY** "PHON" (p. 35)
➥ Push to enter the phone number selection mode for a Phone call. Then push **[CH Up]**/**[CH Down]** or rotate **[CH Up/Down]** to select the desired phone number.
  • Push **[PTT]** to transmit the Phone call.
  • If no operation is performed for about 30 sec., the transceiver returns to normal operation.
➥ Push and hold for 1 sec. to cancel and return to normal operation.

**INDIVIDUAL KEY** "INDV" (p. 15)
Push to directly enter the Individual ID selection mode. Then select the desired Individual ID code using **[CH Up]**/**[CH Down]** or **[CH Up/Down]**.
  • The Individual ID can be edited with the 10-keypad*. (Depending on the pre-setting.)
    *10-key types only.
  • While in the Individual ID selection mode, push to cancel and return to normal operation.

**TALKGROUP KEY** "TGID" (p. 17)
Push to directly enter the Talkgroup ID selection mode. Then select the desired Talkgroup ID code using **[CH Up]/[CH Down] or [CH Up/Down]**.
  • During the Talkgroup ID selection, push to cancel and return to normal operation.

*SITE SELECT KEY* "SSEL" (Trunking mode only) (p. 15)
Push to select "**SITE 1**," then push again to display the site information (RFSS ID and SITE ID), and you can edit the RFSS and SITE IDs. Push and hold **[Site Select]** for 1 sec. to set and return to normal operation.

*REKEY* "REKY" (OTAR mode only) (p. 42)
Push and hold for 1 sec. to transmit a Key Management Message (KMM-Hello command) to a Key Management Facility (KMF) to request rekeying.

*KEYSET* "KSET" (OTAR mode only) (p. 43)
➥ Push to enter the keyset selection mode, then select the desired keyset using **[CH Up]**/**[CH Down]** or **[CH Up/ Down]**.
➥ During the keyset selection mode, push and hold this key for 1 sec. to set the selected keyset, and push again to exit the keyset selection mode.

◇ **For ABC and Toggle switches only**
*SCRAMBLER SWITCH* (Analog mode only)
Turns the Voice Scrambler function ON or OFF.

*COMPANDER SWITCH* (Analog mode only)
Turns the Compander function ON or OFF.
The Compander function reduces noise components from the transmitted audio to provide clear communication.

*SCRAMBLER/ENCRYPTION SWITCH*
(Analog and APCO P25 modes)
(The optional UT-125 AES/DES ENCRYPTION UNIT is required for encryption.)
➥ While in the analog mode, turns the Voice Scrambler function ON or OFF.
➥ While in the P25 Conventional mode, turns the Encryption function ON or OFF.
➥ While in the mixed (digital and analog) mode, simultaneously turns the Voice Scrambler and Encryption functions ON or OFF.

*ENCRYPTION SWITCH* (APCO P25 mode only)
(The optional UT-125 AES/DES ENCRYPTION UNIT is required.)
Turns the Encryption function ON or OFF.

*SITE LOCK SWITCH* (APCO P25 Trunking mode only)
Locks the transceiver in the currently registered site.
When the Site Lock function is activated, roaming and the background scan are inhibited.

# 2 ANALOG MODE OPERATION

## ■ DTMF transmission

If the transceiver has **[DTMF Autodial]** assigned to it, the automatic DTMF Transmission function can be used. Up to 8 DTMF channels are selectable.

① Push **[DTMF Autodial]**— a DTMF channel appears.
② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired DTMF channel.
③ Push **[DTMF Autodial]** to transmit the DTMF code.

## ■ Scrambler function

The Voice Scrambler function provides private voice communication between users.

① Push **[Scrambler]** or **[Scrambler/Encryption]** to turn the Voice Scrambler function ON.
  • " " on Handheld types or " " on Mobile types appears. (Simple and 10-key types only)
② Push **[Scrambler]** or **[Scrambler/Encryption]** again to turn the function OFF.
  • " " on Handheld types or " " on Mobile types disappears. (Simple and 10-key types only)

## ■ Emergency transmission

When **[Emergency]** is pushed for the specified time period*, the DTMF emergency signal is transmitted once, or repeatedly, on the specified emergency channel.
* Depending on the pre-setting. Ask your dealer for details.

A repeat emergency signal is automatically transmitted until the transceiver receives the acknowledgement signal or turning the transceiver power OFF.
When no emergency channel is specified, the signal is transmitted on the previously selected channel.

If you want to cancel the emergency call, push and hold **[Emergency]** again before transmitting the call.

If your transceiver is programmed for Silent operation, you can transmit Emergency calls without the beep sounding or the LCD display lighting.

**IMPORTANT:** It is recommended to set an emergency channel individually to provide the certain emergency call operation.

◇ **NOTES**
Depending on the pre-setting, the following functions are automatically activated. Ask your dealer for details.

**• Auto TX function**
The transceiver automatically transmits the microphone audio for the specified time period* after the emergency call transmission.

**For Mobile transceivers:**
An HM-148G or HM-152 HAND MICROPHONE is required.

**• Auto RX function**
The transceiver stands by in the audible mode for the specified time period*, after the emergency call transmission.

* Depending on the pre-setting. Ask your dealer for details.

# ■ Man Down Emergency Call

## (Handheld types only)

This function requires the optional UT-124R MAN DOWN UNIT. When the transceiver has been left in a horizontal position for the specified time period*, the transceiver enters the emergency mode, and then the countdown starts.
After the specified time period* has passed, an emergency call is automatically transmitted once, or repeatedly.

If the transceiver is placed in a vertical position before the first transmission, the transceiver exits the emergency mode and the emergency call is cancelled.

# ■ Lone Worker Emergency Call

When the Lone Worker function is activated, and the specified time period* has passed with no operation is performed, the transceiver enters the emergency mode, and then the countdown starts.
After the specified time period* has passed, an emergency call is automatically transmitted once, or repeatedly.
If someone operates the transceiver before transmission, the transceiver exits the emergency mode, and the emergency call is cancelled.

➥ Push **[Lone Worker]** to toggle the Lone Worker function ON or OFF.

# 3 APCO P25 MODE OPERATION

## ■ General

APCO Project-25 (P25) is designed for public safety digital radio, and allows you to make a call to a specific station (Individual call) or to a particular group (Talkgroup call or Announcement call*) in the Conventional and Trunking mode.
Other P25 transceivers on the channel will not listen in on a call that does not match their Individual/Talkgroup/announcement group ID or NAC (Network Access Code).

Moreover, the following functions and calls are available:
Pager function, Radio Inhibit/Uninhibit function, Radio Monitor function, Radio Check function, Status Message, Short Message, Status Query, Phone Call, Emergency Call and Encryption function.
NAC matching is not necessary for the above functions and calls.

Each transceiver has a unique ID, and it allows to be substituted with an alphanumeric name, if programmed.
You can use this ID (or name) to select a target station to call, and the ID (or name) of the target station is displayed after receiving a call.

*Trunking mode only

✔ **IMPORTANT for Trunking mode operation:**
• The public Trunking transceiver should be registered and group affiliated with the control channel in a current repeater system, to be operated in the Trunking mode. After the registration and group affiliation are successful, the Trunking operation can be performed.
• When the Full Off Air Call SetUp (FOACSU) function is turned ON, beeps sound after receiving an Individual call on the Trunking mode, which is a request for the user's permission to accept the call. (p. 16)

◇ **Construction of the P25 Trunking system**

P25 Trunking system

— WACN (Wide Area Communication Network) 1

    — SYSTEM 1

        — RFSS (RF Sub System) 1

           — SITE 1
           — SITE 2
           — SITE 3

        — RFSS 2
        — RFSS 3

    — SYSTEM 2
    — SYSTEM 3

— WACN 2
— WACN 3

⬡ SITE 1

• Registration
• Group affiliation

  — Repeater 1
    (Control CH*)
  — Repeater 2
    (Traffic CH 1)
  — Repeater 3
    (Traffic CH 2)
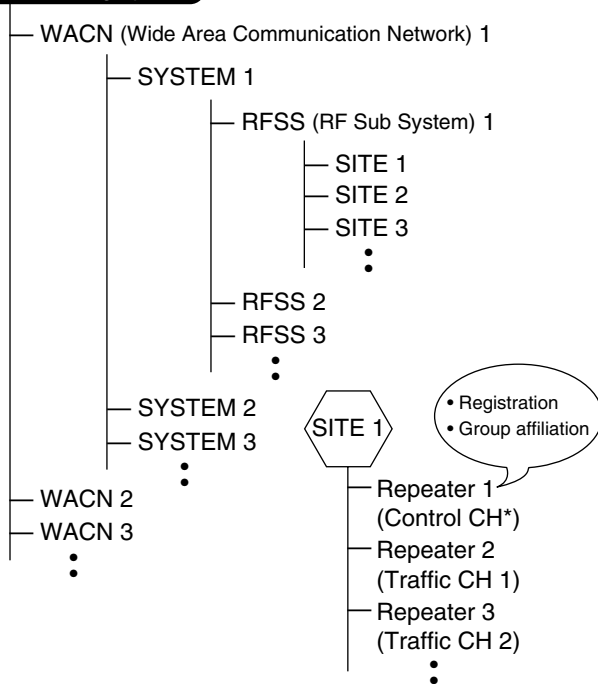
*One control channel
exists in each site.

# ■ Control Channel Hunt function (P25 Trunking mode only)

The P25 Trunking mode allows the transceiver to automatically hunt for a control channel in a repeater system, according to the pre-programmed hunt list* when;
- Turning the power ON.
- The P25 Trunking mode is selected.
- The transceiver goes out of the range and does not receive the downlink signal from the current registered control channel.
  - "**OUT OF RANGE**" is displayed. (Simple and 10-key types only)
  - S-meter icon is displayed according to the received signal strength level. (Simple and 10-key types only)

***For Handheld types:***    ***For Mobile types:***

" " and " " are not indicated.
(Simple and 10-key types only)



ch-01
OUT OF RANGE

ch-01
OUT OF RANGE
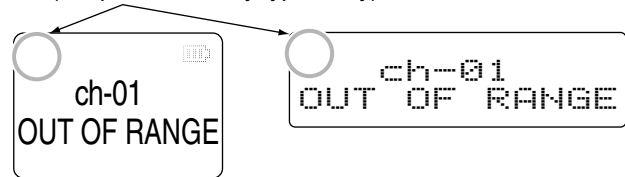
* The valid control channels (up to 64) are listed on the hunt list. Ask your dealer for details.

■ Control Channel Hunt function (P25 Trunking mode only)
(Continued)

If the control channel is found, the transceiver attempts registration and group affiliation.

### *For Handheld types:* *For Mobile types:*

Blinks when registration and group affiliation
are performed. (Simple and 10-key types only)

ch-03
D-TRUNK 03

ch-03
D-TRUNK 03
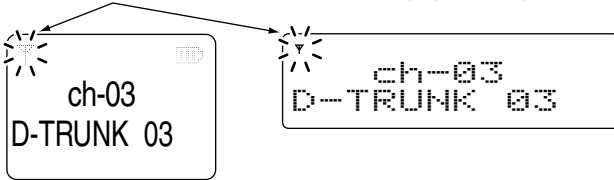
✔ **FAILED:**
The transceiver will continue to hunt for the next site.

✔ **SUCCEEDED:**
The transceiver can be operated in the P25 Trunking system.

### *For Handheld types:* *For Mobile types:*

Appears after registration and group affiliation
are successful. (Simple and 10-key types only)

ch-03
D-TRUNK 03

ch-03
D-TRUNK 03
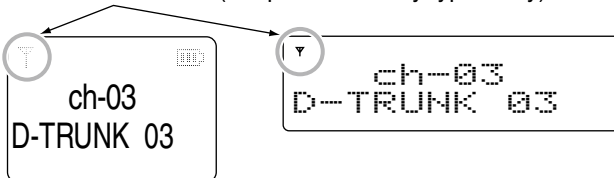
**NOTE:** "**NO COMM**" message is displayed, as illustrated below, when the group affiliation has failed (Simple and 10-key types only). In that case, change the operating channel or turn power OFF then ON again to retry hunting.

### *For Handheld types:* *For Mobile types:*

ch-03
NO COMM

ch-03
NO COMM
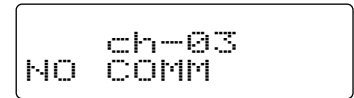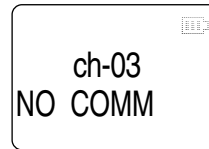
## ■ **Roaming function**

### **(P25 Trunking mode only)**

The P25 Trunking mode allows the transceiver to move to an-other system or WACN (Wide Area Communication Network), according to the pre-programmed roaming list*, in order to find a site that has a higher quality signal, or provides better services.

The Roaming function is automatically activated when the transceiver goes out of the range and does not receive the downlink signal from the repeater in the current registered home system.

\* The valid roaming areas (up to 10) are listed on the roaming list. Ask your dealer for details.

## ■ **Site Lock function**

### **(P25 Trunking mode only)**

The transceiver can be locked into the current site with **[Site Lock]**.

When the Site Lock function is activated, roaming and the background scan are inhibited.

This function is helpful when staying within one site and you don't want the transceiver to roam or scan other sites.

However if the transceiver goes out of the range and does not receive the downlink signal from the current site, the transceiver will automatically start hunting for a valid site, even if the Site Lock function is activated.

✔ *What is the Background Scan?*
When this function is ON, the transceiver always monitors a control channel of an adjacent site while operating in the registered site. (Default: OFF)

## ■ Site Select function

### (P25 Trunking mode only)

The RFSS and SITE IDs can be edited manually with **[Site Select]**.

*✕ Not available on Non-display types.*

***To edit the RFSS and SITE IDs:***
① Push **[Site Select]** to select "**SITE 1**."
② Push **[Site Select]** again to display the site information (RFSS ID and SITE ID).
  • Push **[Site Select]** to return to normal operation.
③ Push and hold **[Site Select]** for 1 sec. to enter the RFSS ID edit mode.
④ Push **[CH Up]**/**[CH Down]** or rotate **[CH Up/Down]** to edit the ID.
⑤ After editing, push **[Site Select]** to store the RFSS ID, and enter the SITE ID edit mode.
⑥ Repeat step ④ to edit.
⑦ Push and hold **[Site Select]** for 1 sec. to return to "**SITE 1**" indication as in step ①.
⑧ Push and hold **[Site Select]** for 1 sec. to store the SITE ID, and return to normal operation.

*✕ For P25 Trunking mode operation:*
*The transceiver should be registered and group affiliated with the control channel before the following operations can be performed.*

## ■ Individual call

### ◇ Transmitting
Individual call allows you to make a call to a specific station, and it provides private communication.

**[Individual]** key assignment is necessary to transmit the Individual call.

*✕ Not available on Non-display types.*

① Push **[Individual]** to enter the Individual ID selection mode.
  • "INDV" inverts to "INDV." (on Handhelds)
  • The key indicator appears above the key to which **[Individual]** is assigned. (on Mobiles)
  • A pre-programmed ID name is displayed.
  • When the ID name is not programmed, the ID code is displayed.
  • Push again to cancel and return to normal operation.

**For Handheld types:**     **For Mobile types:**

3
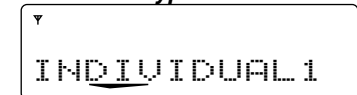
② Select the desired Individual ID (or name) using **[CH Up]**/
**[CH Down]** or **[CH Up/Down]**.
- The Individual ID can be edited with the 10-keypad*. (Depending on the pre-setting.)
- * 10-key types only.

### *To edit the Individual ID using the 10-keypad:*
Input the Individual ID directly with the 10-keypad.
- Push **[∗]** to clear a code.

**For Handheld types:**     **For Mobile types:**



③ Push and hold **[PTT]** to transmit the Individual call to the target station, then speak into the microphone.
- The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
- Depending on the pre-setting, the target station does not open the squelch, and communication is not established, if the Individual ID or NAC (Network Access Code) is not matched. Ask your dealer for details.

④ Release **[PTT]** to receive.

### ◇ **Receiving**
① When an Individual call is received;
- The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
- The ringer sounds. (Depending on the pre-setting.)
- The calling station ID (or name) is displayed for 2 sec. (Depending on the pre-setting.)
- Depending on the pre-setting, the transceiver does not open the squelch, and communication is not established, if the Individual ID or NAC (Network Access Code) is not matched. Ask your dealer for details.

**For Handheld types:**     **For Mobile types:**
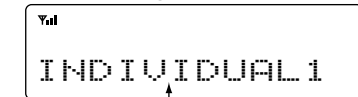


The calling station name (or ID)

② Push and hold **[PTT]** and speak into the microphone.
③ Release **[PTT]** to receive a response.

### *For P25 Trunking mode operation:*
When the Full Off Air Call SetUp (FOACSU) function is turned ON, beeps sound after receiving a call. In that case, push **[PTT]** to accept the call. Then, operate as described in steps ② and ③ above. If you ignore the call by not pushing **[PTT]** for a specified time period*, communication is not established. Or, pushing **[Home]** after receiving the call will also ignore it.
* Depending on the pre-setting. Ask your dealer for details.

# ■ Talkgroup call

## ◇ Transmitting

A Talkgroup call allows you to make a call to a specific group only.

**[Talkgroup]** key assignment is necessary to transmit the Talkgroup call.

**✔ For Trunking mode operation:**
The **[Talkgroup]** key is not usable while in the Trunking mode. To make a Talkgroup call, the group affiliation should be performed with the desired Talkgroup ID to call.

① Push **[Talkgroup]** to enter the Talkgroup ID (or name) selection mode.
  • "TGID" inverts to " TGID ." (on Handhelds)
  • The key indicator appears above the key to which **[Talkgroup]** is assigned. (on Mobiles)
  • A pre-programmed ID name is displayed.
  • When the ID name is not programmed, the ID code is displayed.
  • Push again to cancel and return to normal operation.

*For Handheld types:*     *For Mobile types:*

TG:1

INDV  TGID  SET

TG:1

② Select the desired Talkgroup ID (or name) using **[CH Up]**/ **[CH Down]**, or **[CH Up/Down]**.

    **NOTE:** When '65535' is selected as the Talkgroup ID, All Call is an open call to everyone on your system.

③ Push and hold **[PTT]** to transmit the Talkgroup call to the specific group, then speak into the microphone.
  • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
  • Depending on the pre-setting, the target station does not open the squelch, and communication is not established, if the Talkgroup ID or NAC (Network Access Code) is not matched. Ask your dealer for details.
  • The Talkgroup ID (or name) is displayed for 2 sec. when **[PTT]** is pushed. (Depending on the pre-setting.)

④ Release **[PTT]** to receive.

**3**

## ◇ Receiving

① When a Talkgroup call is received;
- The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
- The ringer sounds. (Depending on the pre-setting.)
- The Talkgroup ID (or name) and calling station ID (or name) are displayed for 2 sec. (Depending on the pre-setting.)
  "**ALL CALL**" is displayed instead of the Talkgroup ID (or name) when All Call is received.
- Depending on the pre-setting, the transceiver does not open the squelch, and communication is not established, if the Talkgroup ID or NAC (Network Access Code) is not matched. Ask your dealer for details.

*For Handheld types:*      *For Mobile types:*

The talkgroup ID

TG:1
INDIVIDUAL1
INDV   TGID   SET

TG:1
INDIVIDUAL1

The calling station name (or ID)
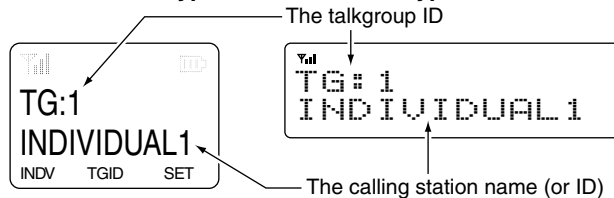
② Push and hold **[PTT]** and speak into the microphone.
  ⌁ **NOTE:** Only one station is permitted to speak at a time.
③ Release **[PTT]** to receive a response.

⌁ **NOTE:** When the Talkgroup ID is set to '65535,' any Talkgroup call can be received (if NAC is matched). Ask your dealer for details.

## ◇ Talkgroup display on mode change

The Talkgroup ID (or name) is displayed for 2 sec. on the upper line of the LCD when the operating channel or zone is changed.
This function can be turned OFF by your dealer.

## ◇ Talkgroup display on PTT

The Talkgroup ID (or name) is displayed for 2 sec. on the upper line of the LCD when **[PTT]** is pushed.
This function can be turned OFF by your dealer.

# ■ Pager function

## ◇ Transmitting

This function can be used as a "message pager" to confirm the target station of a caller's identification, even when the operator leaves the transceiver temporarily unattended.

If the target station is active when receiving a signal, an acknowledgement is automatically transmitted.

The caller station can verify whether a target station is active or not.

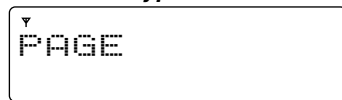**[Digital Button]** or **[Digital Page]** key assignment is necessary to transmit the pager signal.

/// Not available on Non-display types.

① Push **[Digital Button]** to enter the digital call type selection mode.

**For Handheld types:**      **For Mobile types:**

PAGE

DSEL     PAGE     STAT

PAGE

/// ✔ **Quick access**
/// Push **[Digital Page]** to directly enter the Individual ID
/// selection mode. In this case, skip step ②.

② Push **[Digital Button]** again to enter the Individual ID selection mode.
• A pre-programmed ID name is displayed.
• When the ID name is not programmed, the ID code is displayed.

**For Handheld types:**      **For Mobile types:**

PAGE
INDIVIDUAL1

DSEL     PAGE     STAT
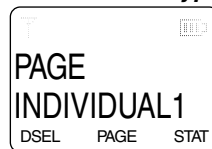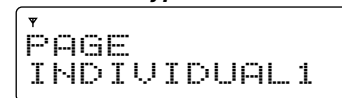
PAGE
INDIVIDUAL1

③ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name).
• Push and hold **[Digital Button]** or **[Digital Page]** for 1 sec. to cancel and return to normal operation.
• The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.
  * 10-key types only.

④ Push **[PTT]** to transmit the pager signal to the target station.
• The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
• "**PLEASE WAIT**" is displayed.

⑤ Release **[PTT]**.
  • "**ACK RECEIVED**" is displayed after receiving an acknowledgement from the target station, and then the transceiver returns to normal operation.
  • "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.
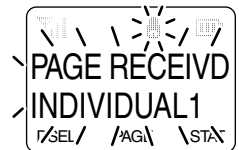
◊ **Receiving**
░ Not available on Non-display types.

① When a pager signal is received;
  • The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
  • The ringer sounds. (Depending on the pre-setting.)
  • " ░ " (for Handhelds) or "♣" (for Mobiles) blinks. (Depending on the pre-setting.)
  • "**PAGE RECEIVD**" and the calling station ID (or name) blink.

*For Handheld types:*     *For Mobile types:*

PAGE RECEIVD
INDIVIDUAL1
SEL   AG   STA

PAGE RECEIVD
INDIVIDUAL1

② An acknowledgement is automatically transmitted.
  • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
③ Push any key (except for **[ ⏻ ]**) to stop the display from blinking and return to normal operation.

20

# ■ Radio Inhibit function

## ◇ Transmitting

A Radio Inhibit function allows you to send a signal that will inhibit (stun or kill, depending on the pre-setting) the target transceiver.

**[Digital Button]** key assignment is necessary to transmit the radio inhibit signal.

※ Not available on Non-display types in the Conventional mode.
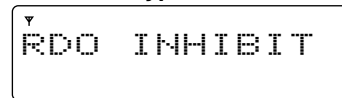
✔ *For Trunking mode operation:*
This function is available only for a dispatcher in the Trunking mode.

① Push **[Digital Button]** to enter the digital call type selection mode.

② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**RDO INHIBIT**."

***For Handheld types:***          ***For Mobile types:***

RDO INHIBIT

DSEL          PAGE          STAT

RDO INHIBIT

③ Push **[Digital Button]** again to enter the Individual ID selection mode.
  • A pre-programmed ID name is displayed.
  • When the ID name is not programmed, the ID code is displayed.

***For Handheld types:***          ***For Mobile types:***

RDO INHIBIT
INDIVIDUAL1

DSEL          PAGE          STAT

RDO INHIBIT
INDIVIDUAL1

④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name).
  • Push and hold **[Digital Button]** for 1 sec. to cancel and return to normal operation.
  • The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.
    * 10-key types only.

3

⑤ Push **[PTT]** to transmit the radio inhibit signal to the target station.
  • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
  • "**PLEASE WAIT**" is displayed.
⑥ Release **[PTT]**.
  • "**ACK RECEIVED**" is displayed after receiving an acknowledgement from the target station, and then the transceiver returns to normal operation.
  • "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.

### ◇ Receiving

If a radio inhibit signal is received that matches your Individual ID, you cannot receive or transmit afterwards. (Depending on the pre-setting.)

① When a radio inhibit signal is received;
  • The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
  • The ringer sounds. (Depending on the pre-setting.)
  • "SORRY" (default) appears. (Simple and 10-key types only)
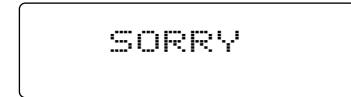
*For Handheld types:*     *For Mobile types:*

SORRY

SORRY

② An acknowledgement is automatically transmitted.
  • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) does not light because the radio inhibit is activated.

**NOTE:** The transceiver will not be revived until one of following operations is performed. (Depending on the pre-setting.)
• Receiving a radio uninhibit signal.
• Inputting the user passcode.
When the decode action is set to "Kill," the cloning operation is necessary to revive. Ask your dealer for details.

## ■ Radio Uninhibit function

### ◇ Transmitting

A Radio Uninhibit function allows you to send a signal that will revive the inhibited transceiver.

**[Digital Button]** key assignment is necessary to transmit the radio uninhibit signal.

※ Not available on Non-display types in the Conventional mode.
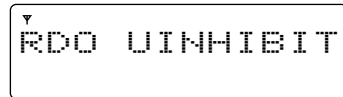
**✔ For Trunking mode operation:**
This function is available only for a dispatcher in the Trunking mode.

① Push **[Digital Button]** to enter the digital call type selection mode.
② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**RDO UINHIBIT**."

**For Handheld types:**     **For Mobile types:**

```
RDO UNINHIBIT

DSEL    PAGE    STAT
```

```
RDO UINHIBIT
```

③ Push **[Digital Button]** again to enter the Individual ID selection mode.
  • A pre-programmed ID name is displayed.
  • When the ID name is not programmed, the ID code is displayed.

**For Handheld types:**     **For Mobile types:**

```
RDO UNINHIBIT
INDIVIDUAL1
DSEL    PAGE    STAT
```

```
RDO UINHIBIT
INDIVIDUAL1
```

④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name).
  • Push and hold **[Digital Button]** for 1 sec. to cancel and return to normal operation.
  • The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.
    * 10-key types only.
⑤ Push **[PTT]** to transmit the radio uninhibit signal to the target station.
  • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
  • "**PLEASE WAIT**" is displayed.
⑥ Release **[PTT]**.
  • "**ACK RECEIVED**" is displayed after receiving an acknowledgement from the target station, and then the transceiver returns to normal operation.
  • "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.

◇ **Receiving (Reviving the transceiver)**
A Radio uninhibit signal revives the inhibited transceiver.

① When an inhibited transceiver receives a radio uninhibit signal, the Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) does not light because the Radio Inhibit is still activated.
② An acknowledgement is automatically transmitted, and the transceiver is revived and returns to normal operation.
   • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.

**For Handheld types:**

SORRY

ch-01
P25 Conv.
DSEL     PAGE     STAT

**For Mobile types:**

SORRY

ch-01
P25 Conv.

**NOTE:** If the transceiver is not revived even, after a radio uninhibit signal is received, cloning is required to revive it. Ask your dealer for details.

**3**
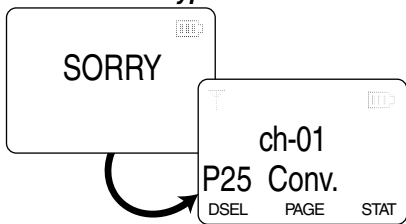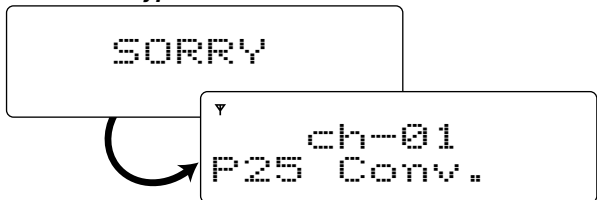
# ■ Remote Monitor function

## ◇ Transmitting

A Remote Monitor function allows you to send a signal that requires the target station to transmit audio from the microphone, or from the external unit connected to the D-sub 25-pin connector (for Mobile types only).

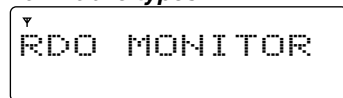**[Digital Button]** key assignment is necessary to transmit the remote monitor signal.

〲 Not available on Non-display types.

① Push **[Digital Button]** to enter the digital call type selection mode.
② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**RDO MONITOR**."

*For Handheld types:*     *For Mobile types:*

RDO MONITOR

DSEL     PAGE     STAT

RDO MONITOR

③ Push **[Digital Button]** again to enter the Individual ID selection mode.
• A pre-programmed ID name is displayed.
• When the ID name is not programmed, the ID code is displayed.

*For Handheld types:*     *For Mobile types:*

RDO MONITOR
INDIVIDUAL1

DSEL     PAGE     STAT

RDO MONITOR
INDIVIDUAL1
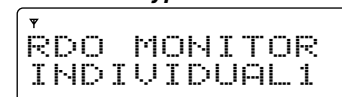
④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name).
• Push and hold **[Digital Button]** for 1 sec. to cancel and return to normal operation.
• The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.
  * 10-key types only.

⑤ Push **[PTT]** to transmit the remote monitor signal to the target station.
- The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
- "**PLEASE WAIT**" is displayed.

⑥ Release **[PTT]**.
- "**ACK RECEIVED**" is displayed after receiving an acknowledgement from the target station, and then the transceiver returns to normal operation.
- Busy indicator lights green.
- "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.

### ◇ **Receiving**

➥ When a remote monitor signal is received, the transceiver automatically transmits an acknowledgement and audio*.
  *The audio is transmitted for a pre-set time period. Ask your dealer for details.
- The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green while receiving, and lights red while transmitting an acknowledgement or the audio.

#### ✔ *For Mobile transceivers operation:*
When the optional SM-25 DESKTOP MICROPHONE, HM-152T or HM-148T HAND MICROPHONES is connected, the audio will not be transmitted.

# ■ Radio Check function

## ◇ Transmitting

A Radio Check function allows an operator to know if the target station is within communication range.
The target station transceiver automatically responds after receiving a radio check signal.

**[Digital Button]** key assignment is necessary to transmit the radio check signal.

⚠ Not available on Non-display types in the Conventional mode.
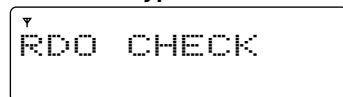
**✔ For Trunking mode operation:**
This function is available only for a dispatcher in the Trunking mode.

① Push **[Digital Button]** to enter the digital call type selection mode.

② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**RDO CHECK**."

**For Handheld types:**

```
RDO CHECK


DSEL    PAGE    STAT
```
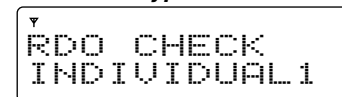
**For Mobile types:**

```
RDO CHECK
```

③ Push **[Digital Button]** again to enter the Individual ID selection mode.
• A pre-programmed ID name is displayed.
• When the ID name is not programmed, the ID code is displayed.

**For Handheld types:**

```
RDO CHECK
INDIVIDUAL1
DSEL    PAGE    STAT
```

**For Mobile types:**

```
RDO CHECK
INDIVIDUAL1
```
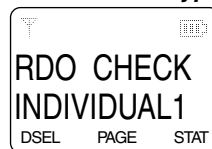
④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name).
• Push and hold **[Digital Button]** for 1 sec. to cancel and return to normal operation.
• The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.
  * 10-key types only.

⑤ Push **[PTT]** to transmit the radio check signal to the target station.
- The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
- "**PLEASE WAIT**" is displayed.

⑥ Release **[PTT]**.
- "**ACK RECEIVED**" is displayed after receiving an acknowledgement from the target station, and then the transceiver returns to normal operation.
- Busy indicator lights green.
- "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.

◇ **Receiving**

Not available on Non-display types in the Conventional mode.

➥ When a radio check signal is received, the transceiver automatically transmits an acknowledgement.
- The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green while receiving, and lights red while transmitting an acknowledgement.
- The function display does not change while transmitting.

# ■ Status Message

## ◇ Transmitting

The transceiver can send one of up to 100 different pre-programmed Status Messages.

**[Digital Button]** or **[Digital Status]** key assignment is necessary to transmit the Status Message.

░ Not available on Non-display types.

✔ *For Trunking mode operation:*
The Status Message can be sent only to a dispatcher in the Trunking mode.

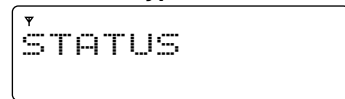① Push **[Digital Button]** to enter the digital call type selection mode.

░ ✔ *Quick access*
░ Push **[Digital Status]** to directly enter the Status Message selection mode. In this case, skip steps ② and ③.
░ Go to step ④.

② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**STATUS**."
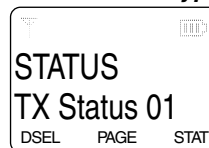
**For Handheld types:** **For Mobile types:**

```
⊤              ▥
STATUS

DSEL   PAGE   STAT
```
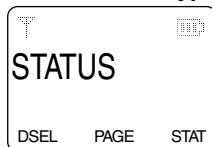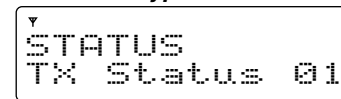
```
▼
STATUS
```

③ Push **[Digital Button]** again to enter the Status Message selection mode.
• A pre-programmed Status Message is displayed.

**For Handheld types:** **For Mobile types:**

```
⊤              ▥
STATUS
TX Status 01
DSEL   PAGE   STAT
```

```
▼
STATUS
TX Status 01
```

④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired Message.

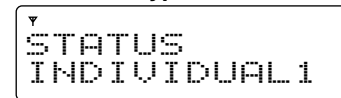░ While in the Trunking mode, the following steps ⑤ and ⑥ are not necessary. Go to step ⑦.

⑤ Push **[Digital Button]** (or **[Digital Status]**) again to enter the Individual ID selection mode.
• A pre-programmed ID name is displayed.
• When the ID name is not programmed, the ID code is displayed.

**For Handheld types:** **For Mobile types:**

```
⊤              ▥
STATUS
INDIVIDUAL1
DSEL   PAGE   STAT
```

```
▼
STATUS
INDIVIDUAL1
```
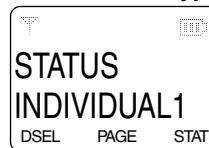
⑥ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name).

• Push and hold **[Digital Button]** (or **[Digital Status]**) for 1 sec. to cancel and return to normal operation.

• The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.

\* 10-key types only.

⑦ Push **[PTT]** to transmit the Status Message to the target station.

• The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.

• "**PLEASE WAIT**" is displayed.

⑧ Release **[PTT]**.

• "**ACK RECEIVED**" is displayed after receiving an acknowledgement from the target station, and then the transceiver returns to normal operation.

• "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.
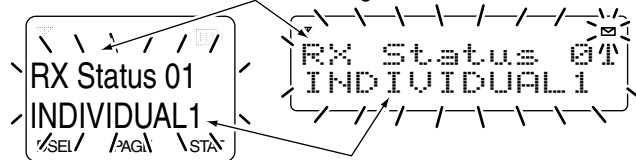
◇ **Receiving**

⚠ Not available on Non-display types.

① When a Status Message is received;

• The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.

• The ringer sounds. (Depending on the pre-setting.)

• The calling station ID name (or code) and the Status Message blink.

• "✉" blinks. (for Mobiles)

*For Handheld types:*     *For Mobile types:*

The received status message

RX Status 01
INDIVIDUAL1

RX Status 01
INDIVIDUAL 1

The calling station ID name

② An acknowledgement is automatically transmitted.

• The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.

③ Push any key (except for **[ ]**) to stop the display from blinking and return to normal operation.

# ■ Short Message

## ◇ Transmitting

The transceiver can send one of up to 10 different pre-programmed Short Messages.

**[Digital Button]** or **[Digital Message]** key assignment is necessary to transmit the Short Message.

░ Not available on Non-display types.

✔ *For Trunking mode operation:*
The Short Message can be sent only to a dispatcher in the Trunking mode.

① Push **[Digital Button]** to enter the digital call type selection mode.
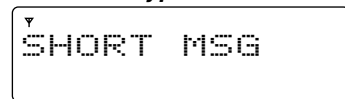
░ ✔ *Quick access*
░ Push **[Digital Message]** to directly enter the Short Message selection mode. In this case, skip steps ② and ③.
░ Go to step ④.

② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**SHORT MSG**."

**For Handheld types:**       **For Mobile types:**

```
┌─────────────────┐     ┌─────────────────┐
│ ▼          ▥▥▥  │     │ ▼               │
│                 │     │ SHORT  MSG      │
│ SHORT  MSG      │     │                 │
│                 │     │                 │
│ DSEL  PAGE  STAT│     └─────────────────┘
└─────────────────┘
```
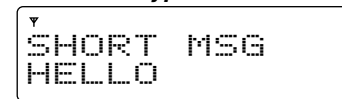
③ Push **[Digital Button]** again to enter the Short Message selection mode.
• A pre-programmed Short Message is displayed.
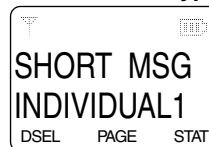
**For Handheld types:**       **For Mobile types:**

```
┌─────────────────┐     ┌─────────────────┐
│ ▼          ▥▥▥  │     │ ▼               │
│                 │     │ SHORT  MSG      │
│ SHORT  MSG      │     │ HELLO           │
│ HELLO           │     │                 │
│ DSEL  PAGE  STAT│     └─────────────────┘
└─────────────────┘
```

④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired Short Message.

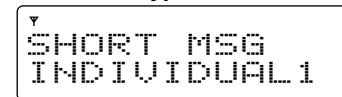░ While in the Trunking mode, the following steps ⑤ and ⑥ are not necessary. Go to step ⑦.

⑤ Push **[Digital Button]** (or **[Digital Message]**) again to enter the Individual ID selection mode.
• A pre-programmed ID name is displayed.
• When the ID name is not programmed, the ID code is displayed.

**For Handheld types:**       **For Mobile types:**

```
┌─────────────────┐     ┌─────────────────┐
│ ▼          ▥▥▥  │     │ ▼               │
│                 │     │ SHORT  MSG      │
│ SHORT  MSG      │     │ INDIVIDUAL1     │
│ INDIVIDUAL1     │     │                 │
│ DSEL  PAGE  STAT│     └─────────────────┘
└─────────────────┘
```

⑥ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name).
   • Push and hold **[Digital Button]** (or **[Digital Message]**) for 1 sec. to cancel and return to normal operation.
   • The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.
     * 10-key types only.
⑦ Push **[PTT]** to transmit the Short Message to the target station.
   • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
   • "**PLEASE WAIT**" is displayed.
⑧ Release **[PTT]**.
   • "**ACK RECEIVED**" is displayed after receiving an acknowledgement from the target station, and then the transceiver returns to normal operation.
   • "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.
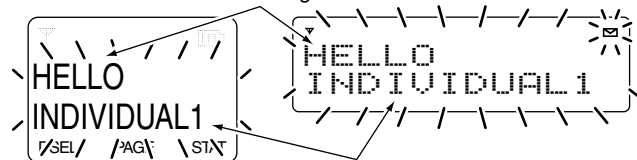
◇ **Receiving**
🔅 Not available on Non-display types.

① When a Short Message is received;
   • The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
   • The ringer sounds. (Depending on the pre-setting.)
   • The calling station ID name (or code) and the Short Message blink.
   • "✉" blinks. (for Mobiles)

*For Handheld types:*        *For Mobile types:*

The received message



The calling station ID name

② An acknowledgement is automatically transmitted.
   • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
③ Push any key (except for **[⏻]**) to stop the display from blinking and return to normal operation.

# ■ Status Query function

## ◇ Transmitting

A Status Query function allows you to send a signal that requests the last transmitted Status Message to the target station.

The target station transceiver automatically responds after receiving a Status Query signal.

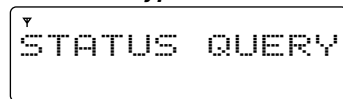**[Digital Button]** key assignment is necessary to transmit the Status Query.

〰 Not available on Non-display types.

① Push **[Digital Button]** to enter the digital call type selection mode.

② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**STATUS QUERY**."
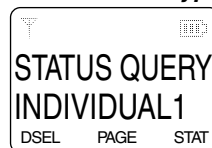
*For Handheld types:*    *For Mobile types:*
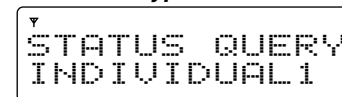
STATUS QUERY

DSEL    PAGE    STAT

STATUS QUERY

③ Push **[Digital Button]** again to enter the Individual ID selection mode.
  • A pre-programmed ID name is displayed.
  • When the ID name is not programmed, the ID code is displayed.

*For Handheld types:*    *For Mobile types:*

STATUS QUERY
INDIVIDUAL1

DSEL    PAGE    STAT

STATUS QUERY
INDIVIDUAL1

④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired ID (or name.)
  • Push and hold **[Digital Button]** for 1 sec. to cancel and return to normal operation.
  • The ID can be edited with the 10-keypad*. (Depending on the pre-setting.) See p. 16 for editing details.
    * 10-key types only.
⑤ Push **[PTT]** to transmit the status query signal to the target station.
  • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
  • "**PLEASE WAIT**" is displayed.
⑥ Release **[PTT]**.
  • "**STATUS QUERY**" and the last transmitted Status Message by the target station blink.
  • "**NO ACKNOWLDG**" is displayed when an acknowledgement is not received, and then transceiver returns to normal operation.

◇ **Receiving**

  Not available on Non-display types.

➡ When a status query signal is received, the last transmitted Status Message is automatically transmitted.
  • The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green while receiving, and lights red while transmitting an acknowledgement or the Status Message.
  • The function display does not change while transmitting.

# ■ Phone call

## ◇ Transmitting

The transceiver can make a Phone call that is similar to standard phone calls. A transceiver and a PSTN (Public Switched Telephone Network) can access each other.

If no phone number is pre-programmed, the Phone call function is not available.

**[Digital Button]** or **[Phone]** key assignment is necessary to transmit the Phone call.

✗ Not available on Non-display types.

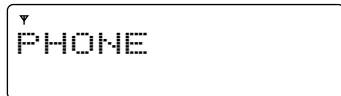① Push **[Digital Button]** to enter the digital call type selection mode.

✔ **Quick access**
Push **[Phone]** to enter the phone number selection mode directly. In this case, skip step ②. Go to step ③.

② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**PHONE**."
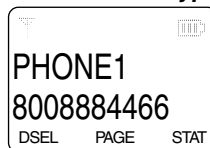
**For Handheld types:** **For Mobile types:**
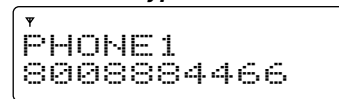
PHONE

DSEL    PAGE    STAT

PHONE

③ Push **[Digital Button]** again to enter the phone number selection mode.
• A pre-programmed phone number and text are displayed.

**For Handheld types:** **For Mobile types:**

PHONE1
8008884466

DSEL    PAGE    STAT

PHONE1
8008884466

④ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the desired phone number.
• Push and hold **[Digital Button]** (or **[Phone]**) for 1 sec. to cancel and return to normal operation.
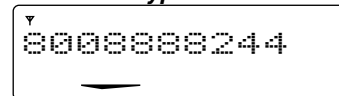• The phone digits (0 to 9, ∗ and #) can be edited with the 10-keypad*. (Depending on the pre-setting.)
  * 10-key types only.

**To edit the Phone number with the 10-keypad:**
Input the phone number directly with the 10-keypad.
• Push **[Digital Button]** (or **[Phone]**) to clear a code.

**For Handheld types:** **For Mobile types:**

8008888244

DSEL    PAGE    STAT

800888244

⑤ Push **[PTT]** to make a Phone call to the target telephone station.
 • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
 • Beeps (PiPi) sound after the Phone call is connected to the target telephone station.
 • If your Phone call is not connected, push **[Digital Button]** (or **[Phone]**) to return to normal operation.
⑥ Push and hold **[PTT]** and speak into the microphone.
⑦ Release **[PTT]** to receive.
⑧ After conversation is finished, push **[Digital Button]** (or **[Phone]**) to disconnect the Phone call and return to normal operation.

◇ **Receiving**

✐ Not available on Non-display types.

① When a Phone call is received;
 • The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
 • The ringer sounds. (Depending on the pre-setting.)
 • "**PHONE CALL**" blinks.
 • The phone number of the calling telephone station is displayed. (Trunking mode only.)
 • " ▒ " (for Handhelds) or "☎" (for Mobiles) blinks.

*For Handheld types:*     *For Mobile types:*

PHONE CALL
8008882345
DSEL     PAGE     STAT

PHONE CALL
8008882345
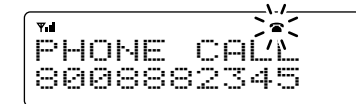
② Speak into the microphone while pushing and holding **[PTT]**.
 • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
③ Release **[PTT]** to receive.
④ After the conversation is finished, push **[Digital Button]** (or **[Phone]**) to hang up and return to normal operation.

# ■ Announcement function

## ◇ Transmitting

The Announcement function allows you to send an announcement signal to only a specific group, and only in the Trunking mode.
The members of the target group can only receive, and not transmit, announcements.

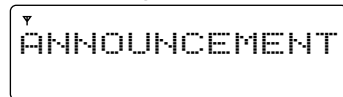**[Digital Button]** key assignment is necessary to use the Announcement function.

⚠ Not available on Non-display types.

① Push **[Digital Button]** to enter the digital call type selection mode.
② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**ANNOUNCEMENT**."

*For Handheld types:*          *For Mobile types:*

```
ANNOUNCEMENT

DSEL   PAGE   STAT
```

```
ANNOUNCEMENT
```

③ Push and hold **[PTT]** to transmit the announcement signal to the target group.
  • The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.
④ Push and hold **[PTT]** and speak into the microphone.
⑤ Release **[PTT]** to stop transmitting.

## ◇ Receiving

⚠ Not available on Non-display types.

① When a matched announcement signal is received;
  • The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
  • The ringer sounds. (Depending on the pre-setting.)
  • "**ANNOUNCEMENT**" and calling station ID (or name) are displayed for 2 sec. (Depending on the pre-setting.)

*For Handheld types:*          *For Mobile types:*

```
ANNOUNCEMENT
INDIVIDUAL1

DSEL   PAGE   STAT
```

```
ANNOUNCEMENT
INDIVIDUAL1
```
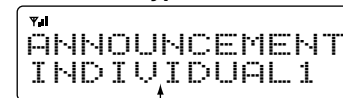
The calling station name (or ID)

② You can listen to the announcement.

# ■ **Emergency transmission**

The P25 emergency mode can be accessed by pushing the **[Emergency]** key. An Emergency alarm is automatically transmitted once, or repeatedly*[1], to the dispatcher (Trunking mode) or Talkgroup (Conventional mode).

Moreover, while in the emergency mode, Emergency calls can be transmitted with **[PTT]** to a Talkgroup.

If your transceiver is programmed for Silent operation, you can transmit Emergency alarms and Emergency calls without the beep sounding or the LCD display lighting.

**[Emergency]** key assignment is necessary to transmit the Emergency alarm.

**NOTES:**
• When the Auto TX function is pre-set, the transceiver automatically transmits the microphone audio for the specified time period*[2] after the emergency alarm transmission, even if the emergency repeat cycle is set to '1.' Ask your dealer for details.
 - An HM-148G or HM-152 HAND MICROPHONE is required for the mobile transceivers.
• When the Auto RX function is pre-set, the transceiver stands-by in the audible mode, for the specified time period*[2], after the emergency alarm transmission.

*[1] Depending on the emergency repeat cycle setting.

*[2] Depending on the pre-setting. Ask your dealer for details.

◇ **Transmitting an Emergency alarm**

① Push and hold **[Emergency]** for the specified time period*[2] to enter the emergency mode.
• The countdown starts immediately.

② After the specified time period*[2] has passed, the transceiver automatically transmits an Emergency alarm once, or repeatedly, to inform the dispatcher that the transceiver is in the emergency condition.
• To exit the emergency mode, push and hold **[Emergency]** before transmitting an Emergency alarm.
• When the emergency repeat cycle is set to '1,' the transceiver transmits an Emergency alarm, exits the emergency mode and returns to normal operation.
• After receiving an acknowledgement, "**ACK RECEIVED**" is displayed (Simple and 10-key types only), and depending on the pre-setting, the transceiver exits the emergency mode.
• When an acknowledgement is not received, "**NO ACKNOWLDG**" is displayed. (Simple and 10-key types only) And depending on the pre-setting, the transceiver automatically transmits the microphone audio (Auto TX).

③ To exit the emergency mode, turn the power OFF.

◇ **Transmitting an Emergency call along with an Emergency alarm**

① Push and hold **[Emergency]**\*1 for the specified time period\*2 to enter the emergency mode.
• The countdown starts immediately.

② After the specified time period\*2 has passed, the transceiver automatically, and repeatedly, transmits an Emergency alarm.
• To exit the emergency mode, push and hold **[Emergency]** again before transmitting an Emergency alarm.
• After receiving an acknowledgement, "**ACK RECEIVED**" is displayed (Simple and 10-key types only), and depending on the pre-setting, the transceiver exits the emergency mode.
• When an acknowledgement is not received, "**NO ACKNOWLDG**" is displayed. (Simple and 10-key types only) And depending on the pre-setting, the transceiver automatically transmits the microphone audio (Auto TX).

③ Push and hold **[PTT]** to transmit an Emergency call.
• The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.

④ To exit the emergency mode, turn the power OFF.

\*1 The emergency repeat cycle must be set to '2' or above.
\*2 Depending on the pre-setting. Ask your dealer for details.

◇ **Receiving an Emergency alarm**

An Emergency alarm can be received only while in the Conventional mode.

An emergency alarm decode action and automatic acknowledgement capability should be enabled by your dealer with the CS-F9010/F9510 CLONING SOFTWARE. Ask your dealer for details.

① When an Emergency alarm is received;
• The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
• The ringer sounds.
• "**EA RECEIVED**" and the calling station ID (or name) blink. (Simple and 10-key types only)
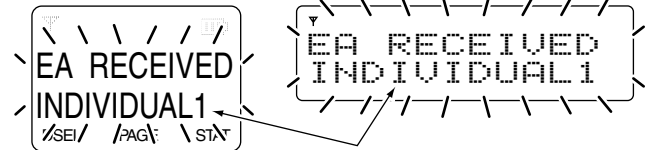
*For Handheld types:*     *For Mobile types:*
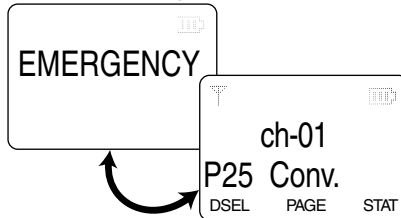
EA RECEIVED
INDIVIDUAL1

EA RECEIVED
INDIVIDUAL1

The calling station ID name

② An acknowledgement is automatically transmitted.
• The Busy/Transmit indicator (for Handhelds) or Transmit indicator (for Mobiles) lights red.

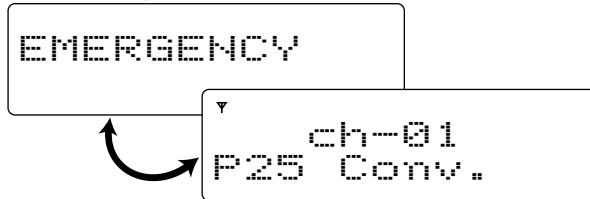③ Push any key (except for **[ ]**) to stop the display from blinking and return to normal operation.

◇ **Receiving an Emergency Call**
➥ When an Emergency call is received;
  • The Busy/Transmit indicator (for Handhelds) or Busy indicator (for Mobiles) lights green.
  • The ringer sounds, depending on the pre-setting.
  • The pre-programmed emergency text (e.g. "**EMERGENCY**") and the channel indication is displayed alternately. (Simple and 10-key types only)
  Depending on the pre-setting, the calling station ID (or name) is displayed instead of the channel display.

### *For Handheld types:*

EMERGENCY

ch-01
P25 Conv.
DSEL   PAGE   STAT

### *For Mobile types:*

EMERGENCY

ch-01
P25 Conv.

\* Depending on the pre-setting. Ask your dealer for details.

## ■ Man Down Emergency Call

### (Handheld types only)

This function requires the optional UT-124R MAN DOWN UNIT.
When the transceiver has been left in a horizontal position for the specified time period\*, the transceiver enters the emergency mode, and then the countdown starts.
After the specified time period\* has passed, an emergency alarm is automatically transmitted once, or repeatedly.

If the transceiver is placed in a vertical position before the first transmission, the transceiver exits the emergency mode and the emergency alarm is cancelled.

## ■ Lone Worker Emergency Call

When the Lone Worker function is activated, and the specified time period\* has passed with no operation is performed, the transceiver enters the emergency mode, and then the countdown starts.
After the specified time period\* has passed, an emergency alarm is automatically transmitted once, or repeatedly.
If someone operates the transceiver before transmission, the transceiver exits the emergency mode, and the emergency alarm is cancelled.

➥ Push **[Lone Worker]** to toggle the Lone Worker function ON or OFF.

# ■ Encryption function

The Encryption function enables secure voice communication, which provides private digital communication between users.

① Push **[Encryption]** or **[Scrambler/Encryption]** to turn the Encryption function ON.
  • " " on Handheld types or " " on Mobile types appears. (Simple and 10-key types only)
② Push **[Encryption]** or **[Scrambler/Encryption]** again to turn the Encryption function OFF.
  • " " on Handheld types or " " on Mobile types disappears. (Simple and 10-key types only)

## ◇ Key Fail Indication
The transceiver indicates "Key Fail" for the specified time period* when the Common Key Reference (CKR) of the selected channel is not stored in the encryption unit. (Simple and 10-key types only)

## ◇ Decryption Multi Keys function
When this function is enabled, the transceiver releases the mute after receiving the audio signals for decryption, even if the CKR setting is not matched to the selected channel.

* Depending on the pre-setting. Ask your dealer for details.

# ■ OTAR function

P25 Over-The-Air-Rekeying (OTAR) function allows the Key Management Facility (KMF) to change the encryption keys in a transceiver remotely, ("over the air") to protect the secure communications.
Moreover, several OTAR commands are used to perform the following operations.

### *From KMF to transceiver:*
• Change Active Keyset
• Change Group RSI
• Radio Check
- The transceiver automatically responds to any command.

### *From transceiver to KMF:*
• Registration to the OTAR system
• Deregistration from the OTAR system
• Rekeying
- When the channel in which the OTAR function is enabled is selected, the transceiver automatically attempts registration to the OTAR system by transmitting a Key Management Message (KMM) to KMF.

Various other commands are exchanged between KMF and a transceiver, other than above.

〳〴 Not available on Non-display types.

**3**

## ◇ Registration to the OTAR system

➤ Push **[Zone]**, then push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]**, to select the channel in which the OTAR function is enabled.

After selecting the channel, the transceiver automatically attempts registration to the OTAR system by transmitting a KMM 'Registration' command to KMF.

**NOTE:** There are 2 types of KMM— Standard and Packet. If the pre-programmed KMM type is not matched to the system to which the transceiver attempts to register with, the registration attempt may fail. In that case, the transceiver's KMM type should be changed to another type. Ask your dealer for details.

## ◇ Deregistration from the OTAR system

➤ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]**, to exit the channel in which the OTAR function is enabled.

After exiting the channel, the transceiver automatically attempts deregistration from the OTAR system by transmitting a KMM 'Deregistration' command to KMF.

## ◇ Rekey request function

Normally, the encryption keys are managed and securely changed by KMF over the air without receiving a Rekey request.

But the transceiver can control KMF remotely by sending a Rekey request to perform the rekey operation.

① Push and hold **[Rekey]** for 1 sec. to send a KMM 'Hello' command to KMF for a Rekey request.
• "REQUEST REKE" appears.
② After receiving a Rekey request from the transceiver, KMF performs the rekey operation.
③ When the rekey operation is successful, "REQUEST REKE" disappears.
• If the rekey operation fails, "FAILED" appears.

◇ **Active Keyset selection**
This function allows you to select the Active Keyset that is stored in the transceiver.
The keyset structures a group of keys. By changing the keyset, the group of keys will be automatically switched to another group.

① Push **[Keyset]** to enter the keyset selection mode.
   • The selected keyset name ("KEYSET1" or "KEYSET2") appears.
② Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]**, to select the desired keyset.
③ Push and hold **[Keyset]** for 1 sec. to set the selected keyset.
④ Push **[Keyset]** to exit the keyset selection mode.

## ■ Tactical Group function

The Tactical Group function enables commonly used channels to be placed together in zone 128.

Non-display types can be operated only as the sub transceiver.

### ◇ Creating the tactical group in zone 128 — Individual channel copy

① Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the channel which you wish to copy to zone 128, then turn power OFF.

② **For Handheld types:**
While pushing **[I]** and **[III]**, rotate **[VOL]** to turn power ON.
**For Mobile types:**
While pushing **[P1]** and **[P3]**, push [ ⏻ ] to turn power ON.
• "**COPY ?**" is displayed.
• When all 512 channels are already used, the transceiver has no capacity. "**NOT COPY**" is displayed for 2 sec. and error beeps sound.
• Turn power OFF to cancel copy.

③ Push **[◄]** (for Handhelds) or **[P0]** (for Mobiles) to copy the selected channel to zone 128.
• "**COPIED**" is displayed.

### ◇ Creating the tactical group in zone 128 — Zone copy

① Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the channel belonging to the zone which you wish to copy to zone 128, then turn power OFF.

② **For Handheld types:**
While pushing **[I]** and **[III]**, rotate **[VOL]** to turn power ON.
**For Mobile types:**
While pushing **[P1]** and **[P3]**, push [ ⏻ ] to turn power ON.
• "**COPY ?**" is displayed.
• When all 512 channels are already used, the transceiver has no capacity. "**NOT COPY**" is displayed for 2 sec. and error beeps are emitted.
• Turn power OFF to cancel copy.

③ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**ZONE COPY ?**".

④ Push **[◄]** (for Handhelds) or **[P0]** (for Mobiles) to copy the selected zone data to zone 128.
• "**COPIED**" is displayed.

**NOTE:**
When the transceiver has not enough capacity to create the tactical group with zone copy, all channel data may not be copied completely.

# 4 TACTICAL GROUP FUNCTION

◇ **Clearing the tactical group in zone 128 — Individual channel clearing**

① Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select the channel which you wish to clear from zone 128, then turn power OFF.

② *For Handheld types:*
While pushing **[I]** and **[III]**, rotate **[VOL]** to turn power ON.
*For Mobile types:*
While pushing **[P1]** and **[P3]**, push [🔱] to turn power ON.
• "**CLEAR ?**" is displayed.
• Turn power OFF to cancel clearing.

③ Push **[◄]** (for Handhelds) or **[P0]** (for Mobiles) to clear the selected channel from zone 128.
• "**CLEARED**" is displayed.

◇ **Clearing the tactical group in zone 128 — Zone clearing**

① Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select a channel in zone 128, then turn power OFF.

② *For Handheld types:*
While pushing **[I]** and **[III]**, rotate **[VOL]** to turn power ON.
*For Mobile types:*
While pushing **[P1]** and **[P3]**, push [🔱] to turn power ON.
• "**CLEAR ?**" is displayed.
• Turn power OFF to cancel clearing.

③ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**ALL CLEAR ?**".

④ Push **[◄]** (for Handhelds) or **[P0]** (for Mobiles) to clear the zone data from zone 128.
• "**ALL CLEARED**" is displayed.

## ◇ Cloning the tactical group
### <Master (Zone 128) ➔ Sub (Zone 128)>

This operation enables the master transceiver to clone it's own tactical group in zone 128 to zone 128 of the sub transceiver.

**IMPORTANT!**
To perform the tactical group cloning, "Set mode access" must be enabled, and the dealer passcode must be inputted. Ask your dealer for details.

① Connect the two transceivers (master and sub) with the optional zone copy cable.
The following zone copy cables are available;
  • OPC-1532 : Used for the Mobile and Mobile connection.
  • OPC-1870 : Used for the Handheld and Handheld connection.
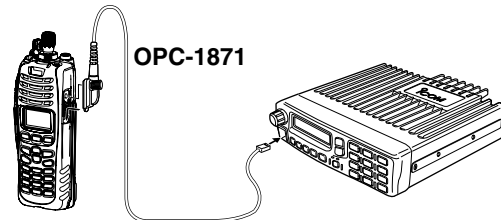  • OPC-1871 : Used for the Handheld and Mobile connection.

Mobile and Mobile connection
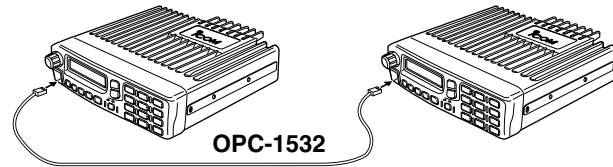


**OPC-1532**

Handheld and Handheld connection



**OPC-1870**

Handheld and Mobile connection



**OPC-1871**
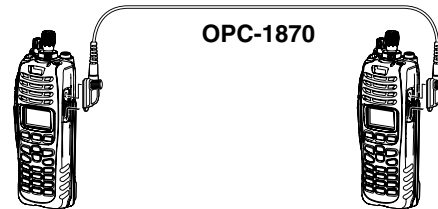
# 4 TACTICAL GROUP FUNCTION

◇ Cloning the tactical group
  <Master (Zone 128) ➜ Sub (Zone 128)> (Continued)

② Turn the sub transceiver power ON.
③ Set the master transceiver into the set mode as follows;
  **For Handheld types:**
  While pushing **[◄]** and **[►]** on the master transceiver, ro-
  tate **[VOL]** to turn the power ON.
  **For Mobile types:**
  While pushing **[P0]** and **[P4]** on the master transceiver,
  push **[⏻]** to turn the power ON.
  • "**DEALER**" is displayed.

④ Input the 6 digit dealer passcode, as specified by your
  dealer.
  • The 10-keypad* can be used for passcode input.
    * 10-key types only
  • When using a Simple type transceiver, the keys in the table
    shown below can be used for passcode input.
  • The transceiver detects numbers in the same block as identical.
    Therefore 0 and 5, 1 and 6, etc. are the same.

### For Handheld types:

| KEY | **[◄]** | **[I]** | **[II]** | **[III]** | **[►]** |
|---|---|---|---|---|---|
| NUMBER | 0 5 | 1 6 | 2 7 | 3 8 | 4 9 |

### For Mobile types:

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

**NOTE:** When the "**DEALER**" indication does not clear after
inputting 6 digits, the input code number may be wrong.
In that case, turn the power OFF, and start over.

**NOTE:** A default passcode is "159357";
Push **[I]**, **[◄]**, **[►]**, **[III]**, **[◄]**, **[II]** (Handhelds) or **[P1]**, **[P0]**,
**[P4]**, **[P3]**, **[P0]**, **[P2]** (Mobiles) in sequence.

**4**

⑤ If "**SETMODE**" is displayed after inputting the dealer passcode, push **[III]** (for Handhelds) or **[P3]** (for Mobiles).
• "**CLONE**" is displayed.
⑥ Push **[CH Up]** or **[CH Down]**, or rotate **[CH Up/Down]** to select "**TACTICAL**."
⑦ Push **[PTT]** (for Handhelds) or **[ ⏻ ]** (for Mobiles) to copy zone 128 data of the master transceiver, to zone 128 of the sub transceiver.

**NOTE:** If **[PTT]** (for Handhelds) or **[ ⏻ ]** (for Mobiles) is pushed when "**CLONE**" is displayed, the regular cloning operation is performed (all data, including zone 128, of the master transceiver is written to the sub transceiver).

**Count on us!**