

## TK-3701D

### USER MANUAL

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**ProTalk** DIGITAL



JVCKENWOOD Corporation

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## PREPARATION

### INSTALLING/ REMOVING THE BATTERY PACK

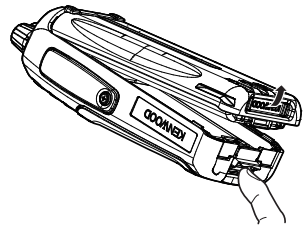
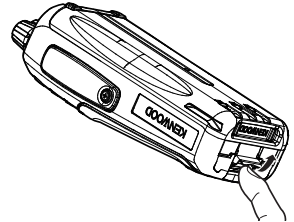
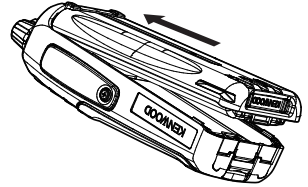
The battery pack is not charged at the factory; charge it before use.



#### CAUTION

- ◆ Do not short the battery terminals or dispose of the battery by fire.
- ◆ Never attempt to remove the casing from the battery pack.

- 1 Align the battery pack with the back of the transceiver, then press the battery pack and transceiver firmly together until the release latch on the base of the transceiver locks.
- 2 To remove the battery pack, lift the safety catch on the base of the transceiver, then press the release latch underneath the safety catch.
- 3 While pressing the release latch, pull the battery pack away from the transceiver.



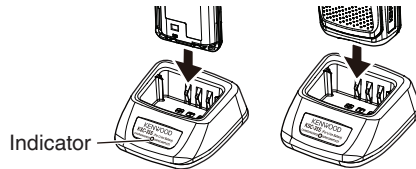
## CHARGING THE BATTERY PACK

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### ATTENTION:

- ◆ Always switch OFF a transceiver equipped with a battery pack before inserting the transceiver into the charger.
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- 1 Plug the AC adapter cable into the jack located on the rear of the charger.
- 2 Plug the AC adapter into an AC outlet.
- 3 Slide a battery pack or a transceiver equipped with a battery pack into the charging slot of the charger.
  - Make sure the metal contacts of the battery pack mate securely with the charger terminals.
  - The indicator lights red and charging begins.



- 4 When charging is completed, the indicator flashing green. Remove the battery pack or the transceiver from the charging slot of the charger.
  - It takes approximately 3 hours to charge the battery pack.
  - When the charger will not be used for a long time, unplug the AC adapter from the AC outlet.

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### Note:

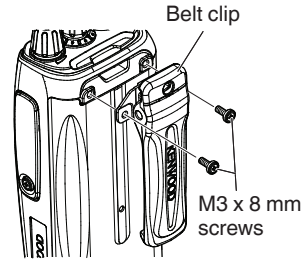
- ◆ When the indicator blinks red, the battery pack is either defective or the battery pack contacts are not properly mated with those of the charger.
  - ◆ When the indicator flashes green and orange, the battery pack has not satisfied the charging start temperature. Remove the battery pack from the charger and wait until it reaches a normal temperature before charging it again.
  - ◆ The ambient temperature should be between 5°C and 40°C while charging is in progress. Charging outside this range may not fully charge the battery.
  - ◆ The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Replace the battery pack.
-

## INSTALLING THE BELT CLIP

If necessary, attach the belt clip using the two supplied M3 x 8 mm binding screws.

**Note:**

- ◆ If the belt clip is not installed, its mounting location may get hot during continuous transmission or when left sitting in a hot environment.
- ◆ Use the Phillips #2 screwdriver.



**CAUTION**

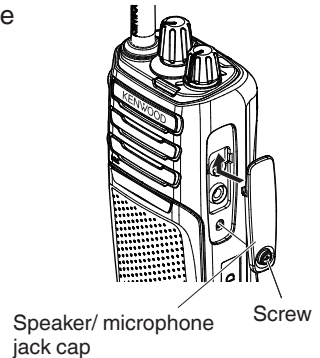
- ◆ Do not use glue which is designed to prevent screw loosening when installing the belt clip, as it may cause damage to the transceiver. Acrylic ester, which is contained in these glues, may crack the transceiver's back panel.

## INSTALLING THE CAP OVER THE SPEAKER/ MICROPHONE JACKS

**Note:**

- ◆ To keep the transceiver water resistant, you must cover the speaker/ microphone jacks with the supplied cap.
- ◆ Use the Phillips #1 screwdriver.

- 1 If you are not using an optional speaker/ microphone or headset, install the cap over the speaker/ microphone jacks.
- 2 Secure the cap in place using the attached screw.



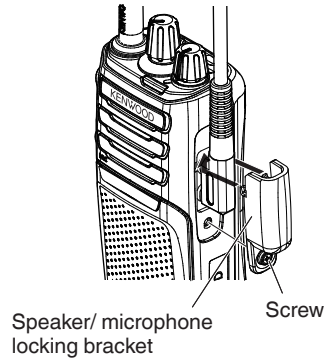
## INSTALLING THE SPEAKER/ MICROPHONE OR HEADSET

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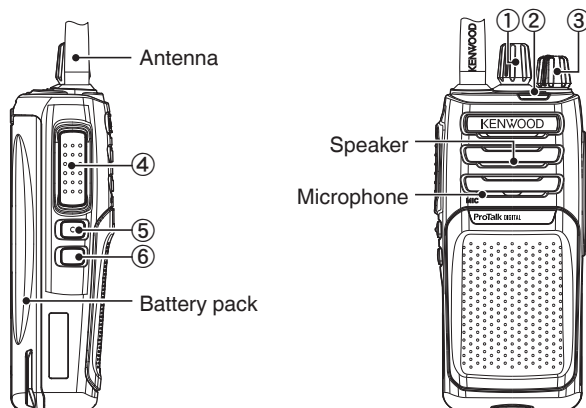
### Note:

- ◆ The transceiver is not fully water resistant when using a speaker/ microphone or headset.
  - ◆ Use the Phillips #1 screwdriver.
- 

- 1 Insert the speaker/ microphone plugs into the speaker/ microphone jacks of the transceiver.
- 2 Place the locking bracket over the speaker/ microphone plugs so that the locking tabs insert into the transceiver grooves.
- 3 Secure the locking bracket in place using the attached screw.



## ORIENTATION



### ① Selector

Rotate to change the operating channel.

### ② LED indicator

Refer to the “LED Indicator Status” {p. 9}.

### ③ Power switch/ Volume control

Turn clockwise to switch the transceiver ON. To switch the transceiver OFF, turn counterclockwise until a click sounds. Rotate to adjust the volume level.

### ④ PTT (Push to Talk) switch

Press and hold, then speak into the microphone to transmit.

### ⑤ Side 1 button

Press to activate its programmable function.

Default Function	
Press	None (No function)
Press and hold	Zone

- For function descriptions and details on how to change the function of the **Side 1** button. Refer to “BUTTON FUNCTION PROGRAMMING MODE” {p. 20}.

### ⑥ Side 2 button

Press to activate its programmable function.

Default Function	
Press	Squelch Off Momentary
Press and hold	None (No function)

- For function descriptions and details on how to change the function of the **Side 2** button. Refer to “BUTTON FUNCTION PROGRAMMING MODE” {p. 20}.

## BASIC OPERATION

### POWER ON

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

- Beep A (1 beep) will sounds.



### ADJUST THE VOLUME

Rotate the **Power** switch/ **Volume** control to adjust the volume.

- Clockwise increases the volume and counterclockwise decreases the volume.

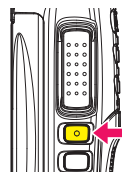
#### Note:

- ◆ To adjust the volume using background noise as a reference in Analogue mode, use the **[Monitor]** or **[Squelch Off]** (**Side 2** button default) function.

### SELECT A ZONE

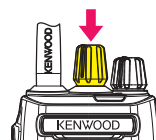
Press and hold the **Side 1** button for 1 second to change Zone 1, Zone 2, and Zone 3.

- **Side 1** button is the default setting.



### SELECT A CHANNEL

Rotate the **Selector** to select your desired channel.

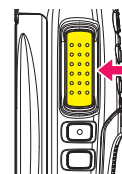


### MAKE A CALL

Press and hold the **PTT** switch, then speak into the microphone using your normal speaking voice.

- Hold the microphone approximately 3 to 4 cm (1.5 inches) from your mouth.

Release the **PTT** switch to receive.



#### Note:

- ◆ When the battery pack voltage becomes too low, transmission will stop and an alert tone will sound.



# RECEIVE VOICE

The LED lights in green.  
When the other party transmits it, you hear the voice of the other party.

# POWER OFF

After use, turn off the power. To switch the transceiver power OFF, turn the **Power** switch/ **Volume** control fully counterclockwise, until a click sounds.



# LED Indicator Status

Indicator Colour	Meaning
Lights red	Transmitting
Lights green	Receiving a call
Blinks red	Battery power is low.
Blinks green *	Scanning
Blinks blue/ yellow	The selected channel has not been programmed and cannot be used.

\*: The LED colour can be changed by your dealer.

## SELF-PROGRAMMING MODE

This transceiver allows you to reprogram each of the channels with different frequencies and QT/DQT (Analogue)/ Common ID (Digital) settings. The table below lists the default channel settings.

### Zone 1 (Analogue)

Channel Number	Frequency (MHz)	QT/DQT
1	446.006250	94.8 Hz
2	446.093750	88.5 Hz
3	446.031250	103.5 Hz
4	446.068750	79.7 Hz
5	446.043750	118.8 Hz
6	446.018750	123.0 Hz
7	446.081250	127.3 Hz
8	446.056250	85.4 Hz
9	446.006250	107.2 Hz
10	446.093750	110.9 Hz
11	446.031250	114.8 Hz
12	446.068750	82.5 Hz
13	446.043750	D132N
14	446.018750	D155N
15	446.056250	D134N
16	446.081250	D243N

### Zone 2 (Digital)

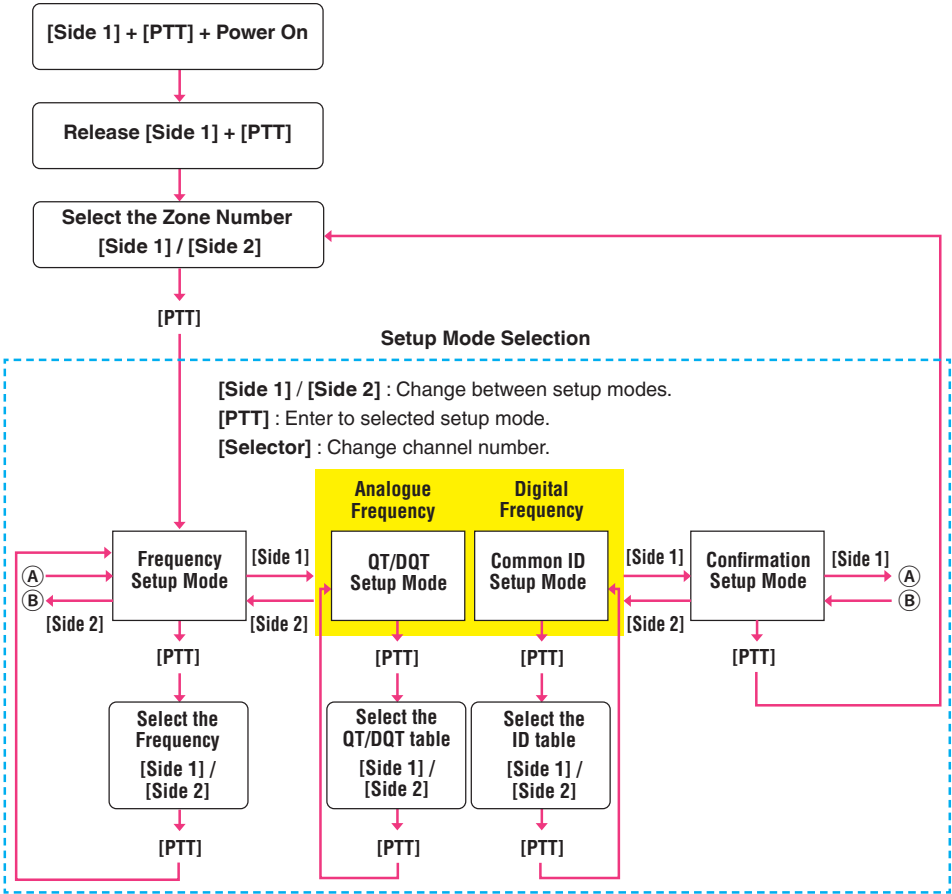
Channel Number	Frequency (MHz)	Common ID
1	446.103125	1
2	446.109375	2
3	446.115625	3
4	446.121875	4
5	446.128125	5
6	446.134375	6
7	446.140625	7
8	446.146875	8
9	446.153125	9
10	446.159375	10
11	446.165625	11
12	446.171875	12
13	446.178125	13
14	446.184375	14
15	446.190625	15
16	446.196875	16

### Zone 3 (Digital)

Channel Number	Frequency (MHz)	Common ID
1	446.003125	1
2	446.009375	2
3	446.015625	3
4	446.021875	4
5	446.028125	5
6	446.034375	6
7	446.040625	7
8	446.046875	8
9	446.053125	9
10	446.059375	10
11	446.065625	11
12	446.071875	12
13	446.078125	13
14	446.084375	14
15	446.090625	15
16	446.096875	16

# SELF-PROGRAMMING FLOW

The flow of Self-Programming is as follows.



## ZONE SELECTION

- 1 With the transceiver power OFF, press and hold the **PTT** switch and **Side 1** button while turning the transceiver power ON.
  - Continue to hold the **PTT** switch and **Side 1** button until the LED lights yellow and the transceiver announces “Self”.
- 2 Release the **PTT** switch and **Side 1** button.
  - The transceiver announces “Zone 1”.
- 3 Press the **Side 1** or **Side 2** button to select a zone number.
  - A voice announcement will inform you of the currently selected zone number.
- 4 Press the **PTT** switch to decide current selected zone and enter to Setup Mode Selection.
  - A voice announcement will inform you of the currently selected zone number and channel number “Zone X” (X = 1 to 3 for zone number), “Channel X” (X = 1 to 16 for channel number).
- 5 Go to “FREQUENCY SETUP” {p. 14}, “QT/DQT SETUP (ANALOGUE)” {p. 16}, or “COMMON ID SETUP (DIGITAL)” {p. 18}.

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### Note:

- ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
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## FREQUENCY SETUP

- 1 During Setup Mode Selection, rotate the **Selector** to select a channel number.
  - The transceiver announces the zone number and channel number.
- 2 Press the **Side 1** or **Side 2** button to select the Frequency Setup Mode.
  - The transceiver announces “Channel”.
- 3 Press the **PTT** switch to enter Frequency Setup Mode.
- 4 Press the **Side 1** or **Side 2** button to increment/ decrement the frequency table number, to select the new channel frequency.
  - Voice announcement: “Analogue Table X” (X = 1 to 16 for Analogue Frequency).
  - Voice announcement: “Digital Table X” (X = 1 to 32 for Digital Frequency).
  - Table numbers and their corresponding operating frequencies are provided in the table {p. 15}.
  - A voice announcement will inform you of the currently selected frequency table number.
- 5 Press the **PTT** switch to temporary save the selected frequency table number.
  - Beep B (2 beeps) will sound.
  - Repeat steps 1 to 5 to set up another channel.
- 6 Press the **Side 1** or **Side 2** button to select the Confirmation Setup Mode.
  - The transceiver announces “Confirm”.
- 7 Press the **PTT** switch to save the setting and return to zone selection.
  - Beep B (2 beeps) will sound.

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### Note:

- ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
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# Frequency Table

Digital			
Table Number	Frequency (MHz)	Table Number	Frequency (MHz)
D01	446.103125	D17	446.003125
D02	446.109375	D18	446.009375
D03	446.115625	D19	446.015625
D04	446.121875	D20	446.021875
D05	446.128125	D21	446.028125
D06	446.134375	D22	446.034375
D07	446.140625	D23	446.040625
D08	446.146875	D24	446.046875
D09	446.153125	D25	446.053125
D10	446.159375	D26	446.059375
D11	446.165625	D27	446.065625
D12	446.171875	D28	446.071875
D13	446.178125	D29	446.078125
D14	446.184375	D30	446.084375
D15	446.190625	D31	446.090625
D16	446.196875	D32	446.096875

Analogue	
Table Number	Frequency (MHz)
A01	446.00625
A02	446.01875
A03	446.03125
A04	446.04375
A05	446.05625
A06	446.06875
A07	446.08125
A08	446.09375
A09	446.10625
A10	446.11875
A11	446.13125
A12	446.14375
A13	446.15625
A14	446.16875
A15	446.18125
A16	446.19375

## QT/DQT SETUP (ANALOGUE)

Quiet Talk (QT) and Digital Quiet Talk (DQT) are functions that reject undesired signals on your channel. You will hear a call only when you receive a signal that contains a matching QT tone or DQT code. If a call containing a different tone or code is received, squelch will not open and you will not hear the call. Likewise, when transmitting using QT or DQT, the receiving station must have a matching tone or code to hear your call.

Be aware that other parties can still hear your calls if they set up their transceiver with the same tone or code.

The default QT/DQT settings for each channel are provided in the table {p. 10}.

To change the QT/DQT settings of a channel of Analogue:

- 1 During Setup Mode Selection, rotate the **Selector** to select a channel number.
  - The transceiver announces the zone number and channel number.
- 2 Press the **Side 1** or **Side 2** button to select the QT/DQT Setup Mode.
  - The transceiver announces “QT/DQT”.
- 3 Press the **PTT** switch to enter QT/DQT Setup Mode.
  - The transceiver announces the QT/DQT table number.
- 4 Press the **Side 1** or **Side 2** button to increment/ decrement the QT/DQT table number.
  - QT/DQT table numbers and their corresponding tones/ codes are provided in the table {p. 17}.
  - Press and hold the **Side 1** or **Side 2** button to increment/ decrement the Tone number by 5 at a time.
  - A voice announcement will inform you of the currently selected QT/DQT table number.
- 5 Press the **PTT** switch to temporary save the selected QT/DQT.
  - Beep B (2 beeps) will sound.
  - Repeat steps 1 to 5 to set up another channel.
- 6 Press the **Side 1** or **Side 2** button to select the Confirmation Setup Mode.
  - The transceiver announces “Confirm”.
- 7 Press the **PTT** switch to save the setting and return to zone selection.
  - Beep B (2 beeps) will sound.

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### Note:

- ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
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# QT/DQT Table

Table Number	QT frequency DQT Code	Table Number	QT frequency DQT Code
1	67.0 Hz	21	136.5 Hz
2	71.9 Hz	22	141.3 Hz
3	74.4 Hz	23	146.2 Hz
4	77.0 Hz	24	151.4 Hz
5	79.7 Hz	25	156.7 Hz
6	82.5 Hz	26	162.2 Hz
7	85.4 Hz	27	D132N
8	88.5 Hz	28	D155N
9	91.5 Hz	29	D134N
10	94.8 Hz	30	D243N
11	97.4 Hz	31	D311N
12	100.0 Hz	32	D346N
13	103.5 Hz	33	D315N
14	107.2 Hz	34	D351N
15	110.9 Hz	35	D423N
16	114.8 Hz	36	D664N
17	118.8 Hz	37	D431N
18	123.0 Hz	38	D723N
19	127.3 Hz	0	OFF
20	131.8 Hz		

## COMMON ID SETUP (DIGITAL)

Common ID is a signaling system designed for Digital communications. When a channel is setup with an ID, squelch will only open when a call containing a matching Common ID is received. If a call containing a different Common ID is made on the same channel you are using, you will not hear the call. This allows you to ignore (not hear) calls from another parties who are using the same channel.

To change the ID settings of a channel of Digital:

- 1 During Setup Mode Selection, rotate the **Selector** to select a channel number.
  - The transceiver announces the zone number and channel number.
- 2 Press the **Side 1** or **Side 2** button to select the Common ID Setup Mode.
  - The transceiver announces "ID".
- 3 Press the **PTT** switch to enter Common ID setup mode.
  - The transceiver announces the ID number (1 to 255).
- 4 Press the **Side 1** or **Side 2** to increment/ decrement the ID number.
  - Press and hold the **Side 1** or **Side 2** button to increment/ decrement the ID number by 5 at a time.
  - A voice announcement will inform you of the currently selected ID number.
- 5 Press the **PTT** switch to temporary save the selected ID number.
  - Beep B (2 beeps) will sound.
  - Repeat steps 1 to 5 to set up another channel.
- 6 Press the **Side 1** or **Side 2** button to select the Confirmation Setup Mode.
  - The transceiver announces "Confirm".
- 7 Press the **PTT** switch to save the setting and return to zone selection.
  - Beep B (2 beeps) will sound.

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### Note:

- ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
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## CHANNEL CONFIRMATION MODE

To confirm your channel settings:

- 1 With the transceiver power OFF, press and hold the **PTT** switch while turning the transceiver power ON.
  - Continue to hold the **PTT** switch until the LED lights yellow and the transceiver announces “Confirm”.
- 2 Release the **PTT** switch.
  - The transceiver announces the Zone number of the selected channel.
- 3 Rotate the **Selector** to desired channel.
  - The transceiver announces the information of the current channel.  
**Analogue Channel:** Zone number, Channel table number, QT/DQT table number, scrambler status, and VOX status.  
**Digital Channel:** Zone number, Channel table number, ID number, and VOX status.
  - Press the **PTT** switch to repeat the voice announcement of the channel information of the current channel.
  - Press the **Side 1** or **Side 2** button to increment or decrement the zone number with voice announcement of zone number.

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### Note:

- ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
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## BUTTON FUNCTION PROGRAMMING MODE

This transceiver allows you to reprogram the **Side 1** and **Side 2** buttons with any of the functions listed in the table below. Explanations on the use of each function are provided under “PROGRAMMABLE FUNCTIONS” {p. 22}.

### Functions List

Table Number	Press	Press and hold	Digital	Analogue
0	None	None	✓	✓
1	Calling Alert	None	✓	✓
2	None	Button Lock	✓	✓
3	Monitor	None	✓	✓
4	Monitor Momentary	None	✓	✓
5	Scan	Scan Temporary Delete	✓	✓
6	Scrambler	None	N/A	✓
7	Squelch Off	None	✓	✓
8	Squelch Off Momentary	None	✓	✓
9	Zone	None	✓	✓
10	None	Zone	✓	✓

✓ : Available

N/A: Not Available

#### Note:

- ◆ The “Press and hold” function is assigned automatically.
- ◆ To activate hold function of Table No. 2 and Table No. 5, user needs to hold for 2 seconds.

To change the functions of the **Side 1** and **Side 2** buttons:

- 1 With the transceiver power OFF, press and hold the **Side 1** and **Side 2** buttons while turning the transceiver power ON.
  - Continue to hold the **Side 1** and **Side 2** buttons until the LED lights yellow and the transceiver announces “Setup”.
- 2 Release the button.
- 3 Press and hold the button to be reprogrammed (either the **Side 1** or **Side 2** button).
  - The transceiver will announce “Table zero”.
- 4 Release the button.
- 5 Press the **Side 1** or **Side 2** button to increment/ decrement the number, to select the new button function.
  - Table numbers and their corresponding functions are provided in the table {p. 20}.
  - A voice announcement will inform you of the currently selected table number.
- 6 Press the **PTT** switch to save the setting.
  - Beep B (2 beeps) will sound and the transceiver will announce the new table number.
- 7 Turn the transceiver power OFF and then ON again to activate the new settings.

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**Note:**

- ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
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## PROGRAMMABLE FUNCTIONS

### Calling Alert

Calling alert tones help identify yourself to party members and inform them that you are calling. Your dealer can set up your transceiver with 1 of 10 calling alert tones. If each party member uses a different tone, it is easy to know who is calling. To make a call, press the button programmed as Calling Alert.

### Button Lock

Press and hold this button for 2 seconds to lock/ unlock the transceiver buttons.

The following buttons/ functions can still be used when Button Lock is active:

Button Lock, Monitor, Monitor Momentary, Squelch Off, and Squelch Off Momentary.

### Monitor

On Digital mode, press this button to deactivate Common ID signaling. Press the button again to return to normal operation. Squelch will open with any dPMR446 signals received regardless of the Common ID setting.

On Analogue mode, press this button to deactivate QT or DQT signaling. Press the button again to return to normal operation.

### Monitor Momentary

On Digital mode, press and hold this button to deactivate Common ID signaling. Release the button to return to normal operation. Squelch will open with any dPMR446 signals received regardless of the Common ID setting.

On Analogue mode, press and hold this button to deactivate QT or DQT signaling. Release the button to return to normal operation.

## Scan

Press this button to start scanning the transceiver channels.

**Second Channel Scan:** This scan type to start the Second Channel Scan on the current zone. The Second Channel Scan is set by your dealer.

**Priority Scan:** The Priority channel is a channel that is given first priority to while scanning. The Priority channel is set by your dealer.

**Revert Channel:** During Scan, pressing the **PTT** switch will automatically select the transceiver's Revert channel and you will begin transmitting. Your dealer can program the Revert channel using one of the following methods:

- Last Called + Selected
- Selected
- Selected + Talkback
- Priority
- Priority + Talkback

## Scan Temporary Delete

When Scan pauses at an undesired channel, you can remove that channel from the scanning sequence by pressing this button.

## Scrambler

The Scrambler function allows you to hold a conversation in complete privacy. When the Scrambler function is activated, any other party that is listening to your channel will be unable to understand your conversation.

## Squelch Off

Press this button to hear background noise. Press the button again to return to normal operation.

## Squelch Off Momentary (Side 2 button default)

Press and hold this button to hear background noise. Release the button to return to normal operation.

## Zone

Press this button to select the Zone 1, Zone 2, and Zone 3.

- **Side 1** default (press and hold)

## VOICE OPERATED TRANSMISSION (VOX)

VOX (VOX/ Semi-VOX) operation allows you to transmit hands-free. VOX can only be used if you are using a supported headset.

### VOX Type

**VOX:** When the voice level to the microphone is higher than the reference level (VOX Gain Level), the transceiver automatically starts transmission.

**Semi-VOX:** Transmission is started by pressing **PTT** switch and transmission continues while speaking even after **PTT** switch is released.

The Semi-VOX function is effective in the following cases.

- Incorrect transmission due to noise.
- Voice at start of transmission is interrupted.

### VOX Function Setup

To activate VOX and set the VOX Gain level, perform the following steps:

- 1 Connect the headset to the transceiver.
  - The VOX function does not activate when a headset is not connected to the accessory terminal of the transceiver.
- 2 With the transceiver power OFF, press and hold the **Side 1** button while turning the transceiver power ON.
- 3 Continue to hold the **Side 1** button until Beep A (1 beep) sounds.
  - The LED indicator lights turn yellow.
  - When the **Side 1** button is released, the transceiver will announce: Zone number, Channel number, VOX Gain level.
- 4 Use the button below to set VOX function.
  - Press the **Side 2** button to enable or disable the VOX function for the current zone-channel. When turned ON, Beep A (1 beep) sounds. When turned OFF, Beep B (2 beeps) sounds.
    - You can change this setting for each zone and channel (selecting a zone: press and hold the **Side 2**, selecting a channel: rotate the **Selector**).
  - Press the **Side 1** button to set the VOX Gain level, from 1 (least sensitive) to 10 (most sensitive).
  - Press and hold the **Side 1** button to toggle VOX type to VOX or Semi-VOX. When Semi-VOX is selected, Beep A (1 beep) sounds. When VOX is selected, Beep B (2 beeps) sounds.
- 5 Press the **PTT** switch to save the setting.
  - Beep A (1 beep) will sound.
  - The transceiver announces the new VOX Gain level.
- 6 Turn the transceiver power OFF and then ON again to activate VOX.



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**Note:**

- ◆ If a headset is connected to the transceiver while the VOX function is switched ON and the VOX Gain level is configured to a higher, more sensitive level, louder received signals may cause the transceiver to start transmission.
  - ◆ The transceiver will automatically return to normal operation if no action is performed for 20 seconds.
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## VOX Operation

- 1 To transmit, simply speak to the microphone.
- 2 When you finish speaking, transmission ends.

## Semi-VOX Operation

- 1 To transmit, press the **PTT** switch.
- 2 Release the **PTT** switch.
- 3 Transmission continues while speaking.
- 4 When you finish speaking, transmission ends.

## SECOND PTT FUNCTION

Apart from the channel you normally select, you can use another channel (second channel) with a dedicated **[Second PTT]**.

- Second PTT function can be activated by your dealer.

## SECOND PTT OPERATION

### Second Channel Scan

“Scan Type” is set to “Second Channel”, it alternately scans the second channel with the channel you normally select.

- Second Channel Scan cannot be used with Priority Scan.

### Transmitting

- 1 Press the button programmed as **[Second PTT]** to move to second channel.
- 2 After moving to second channel, press and hold the button programmed as **[Second PTT]** to start transmission.
  - When transmitting with Second Channel, Second Channel Tone will sound if “Second Channel Tone” is enabled.
  - If “Second PTT Transmit Time” is set (“1” second or “Immediate”), transmission starts when that time elapses.
- 3 Release the button programmed as **[Second PTT]**, return to previous normal selected channel.
  - If “Second Channel Hold Time” is set (“1” ~ “10” seconds or “Immediate”), the second channel is held until that time elapses.

### Receiving

- 1 When receiving the second channel, Second Channel Tone will sound if “Second Channel Tone” is enabled.
- 2 Press the button programmed as **[Second PTT]** to move to second channel.
  - Subsequent operations are the same as “Transmitting”.

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#### Note:

- ◆ It is recommended to set different QT/DQT (Analogue) or Common ID (Digital) for the normal selected channel and the second channel respectively.
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## BACKGROUND OPERATIONS

### TIME-OUT TIMER (TOT)

The Time-out Timer prevent callers from using a channel for an extended duration. If you continuously transmit for the duration programmed by your dealer (default is 60 seconds), transmission will stop and an alert tone will sound. To stop the tone, release the **PTT** switch.

### BATTERY SAVER

When activated by your dealer, the Battery Saver function decreases the amount of power used after no signal is present and no operations are being performed for specific time periods. When a signal is received or an operation is performed, Battery Saver turns off.

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**Note:**

- ◆ The timing of starting Battery Saver is different between Analogue and Digital Mode.
  - ◆ While the Battery Saver is operating, the LED may flash green when receiving a QT/DQT/Common ID signal which does not match the QT/DQT/Common ID set up in your transceiver.
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### LOW BATTERY WARNING

While operating the transceiver, the Low Battery Warning sounds an alert tone every 30 seconds and the LED indicator blinks red when the battery needs recharged or replaced.

### BUSY CHANNEL LOCKOUT (BCL)

When activated by your dealer, BCL prevents you from interfering on a channel that is already in use. Pressing the **PTT** switch will cause a warning tone to sound and the transceiver will not transmit. Release the **PTT** switch to stop the tone.

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**Note:**

- ◆ The transceiver transmits according to the configuration in Busy Channel Lockout by your dealer.
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### VOICE ANNOUNCEMENT

An audio voice will be announced as below by dealer setting.

- When changing the zone and/or channel, the new zone and channel number are announced.
- When changing the function on/ off, the new setting is announced.
  - Scrambler
  - Button lock
  - Scan

## ALL RESET MODE

At some point in time, you may desire to reset the transceiver settings to their default values. This function will reset all channels to their default frequencies and Common ID (Digital)/ QT/DQT (Analogue), the VOX function to its default status, and all buttons to their default functions.

- 1 With the transceiver power OFF, press and hold the **PTT** switch, the **Side 1** button, and the **Side 2** button while turning the transceiver power ON.
  - Continue to hold the buttons, until the LED lights yellow.
- 2 Release the buttons.
  - The transceiver beep sounds and returns to normal operation.
  - If the buttons are released before the LED lights yellow, All Reset Mode will cancel.

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### Note:

- ◆ Once the transceiver is programmed by your dealer, the dealer's settings are default instead of the factory's settings at shipment.
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## TROUBLESHOOTING GUIDE

Problem	Solution
Cannot turn the transceiver power ON.	<ul style="list-style-type: none"> <li>The battery pack may be dead. Recharge or replace the battery pack.</li> <li>The battery pack may not be installed correctly. Remove the battery pack and install it again.</li> </ul>
Battery power dies shortly after charging.	<ul style="list-style-type: none"> <li>The battery pack life is finished. The battery pack may need replacing.</li> </ul>
Cannot talk to or hear other members in your group.	<ul style="list-style-type: none"> <li>Make sure you are using the same frequency and QT/DQT or Common ID setting as the other group members.</li> <li>Other group members may be using Privacy Talk. Turn on your transceiver's Privacy Talk.</li> <li>Other group members may be too far away. Make sure you are within range of the other transceivers.</li> </ul>
Other voices (besides group members) are present on the channel.	<ul style="list-style-type: none"> <li>Change the QT/DQT or Common ID settings. Make sure all group members change the settings on their transceivers to match the new QT/DQT or Common ID setting.</li> </ul>
The transceiver is malfunctioning for no apparent reason.	<ul style="list-style-type: none"> <li>Reset the transceiver as described on {p.28}.</li> </ul>
Cannot enter to setup mode.	<ul style="list-style-type: none"> <li>These operations may not be available depending on dealer settings. Consult your dealer.</li> </ul>

## SPECIFICATIONS

RF Output Power	0.5 W e.r.p.			
Audio Output Power	1 W (internal speaker) / 500 mW (external output)			
Frequency Stability	± 0.5 ppm			
Operating Voltage	7.5 V DC ±20 %			
Operating Temperature Range	-30°C - +60°C			
Dimensions (W x H x D) (Projections not included with KNB-45L)	54 × 123 × 33.5 mm			
Weight (with KNB-45L)	282 g			
Battery Life *1 (Approximate operating time)	KNB-45L	Analogue	Battery Save On	18 hours
			Battery Save Off	15 hours
		Digital	Battery Save On	16 hours
			Battery Save Off	15 hours
	KNB-69L *2	Analogue	Battery Save On	24 hours
			Battery Save Off	19 hours
		Digital	Battery Save On	22 hours
			Battery Save Off	19 hours
Communication Distances *3	Open locations (no obstructions)		Up to 9.0 km	
	Residential areas (near buildings)		Up to 2.7 km	

\*1: Calculated using 5% transmit time, 5% receive time, and 90% standby time.

\*2: Optional battery.

\*3: The above range is based on field testing and may vary with your operating conditions.

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The device complies with RF exposure requirement.

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