

# KENWOOD

## NEXEDGE

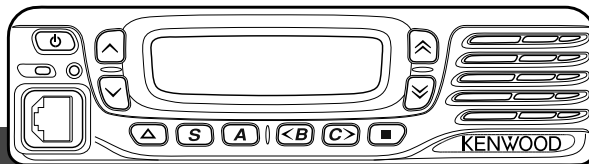
# NX-720

# NX-820

VHF DIGITAL TRANSCEIVER

UHF DIGITAL TRANSCEIVER

## INSTRUCTION MANUAL



JVCKENWOOD Corporation

B62-2448-10 (C)





# THANK YOU

We are grateful you have chosen **KENWOOD** for your personal mobile applications.

This instruction manual covers only the basic operations of your mobile radio. Ask your dealer for information on any customized features they may have added to your radio.

## NOTICES TO THE USER

- ◆ Government law prohibits the operation of unlicensed transmitters within the territories under government control.
- ◆ Illegal operation is punishable by fine and/or imprisonment.
- ◆ Refer service to qualified technicians only.

**SAFETY:** It is important that the operator is aware of, and understands, hazards common to the operation of any transceiver.



### WARNING

- ◆ **EXPLOSIVE ATMOSPHERES (GASES, DUST, FUMES, etc.)**  
Turn OFF your transceiver while taking on fuel or while parked in gasoline service stations. Do not carry spare fuel containers in the trunk of your vehicle if your transceiver is mounted in the trunk area.
- ◆ **INJURY FROM RADIO FREQUENCY TRANSMISSIONS**  
Do not operate your transceiver when somebody is either standing near to or touching the antenna, to avoid the possibility of radio frequency burns or related physical injury.
- ◆ **DYNAMITE BLASTING CAPS**  
Operating the transceiver within 500 feet (150 m) of dynamite blasting caps may cause them to explode. Turn OFF your transceiver when in an area where blasting is in progress, or where "TURN OFF TWO-WAY RADIO" signs have been posted. If you are transporting blasting caps in your vehicle, make sure they are carried in a closed metal box with a padded interior. Do not transmit while the caps are being placed into or removed from the container.

The AMBE+2™ voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to extract, remove, decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form. U.S. Patent Nos. #6,199,037, #6,912,495, #8,200,497, #7,970,606, and #8,359,197.

### Firmware Copyrights

The title to and ownership of copyrights for firmware embedded in KENWOOD product memories are reserved for JVC KENWOOD Corporation.

# PRECAUTIONS

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

- Do not attempt to configure the transceiver while driving; it is too dangerous.
- Do not disassemble or modify the transceiver for any reason.
- Do not expose the transceiver to long periods of direct sunlight, nor place it near heating appliances.
- If an abnormal odor or smoke is detected coming from the transceiver, switch the transceiver power off immediately, and contact your **KENWOOD** dealer.
- Use of the transceiver while you are driving may be against traffic laws. Please check and observe the vehicle regulations in your area.
- Do not use options not specified by **KENWOOD**.



## CAUTION

- ◆ The transceiver operates in 12 V negative ground systems only! Check the battery polarity and voltage of the vehicle before installing the transceiver.
- ◆ Use only the supplied DC power cable or a **KENWOOD** optional DC power cable.
- ◆ Do not cut and/or remove the fuse holder on the DC power cable.



## WARNING

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

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# GETTING STARTED

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

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## SUPPLIED ACCESSORIES

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

DC power cable (with fuses) . . . . .	1
• 15 A fuse . . . . .	2
Mounting Bracket . . . . .	1
Screw set	
• 5 x 16 mm self-tapping screw . . . . .	4
• M4 x 6 mm hex-headed screw with washer . . . . .	4
• Spring washer . . . . .	4
• Flat washer . . . . .	4
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## PREPARATION



### WARNING

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

### ■ Power Cable Connection



### CAUTION

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

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

## ■ Installing the Transceiver



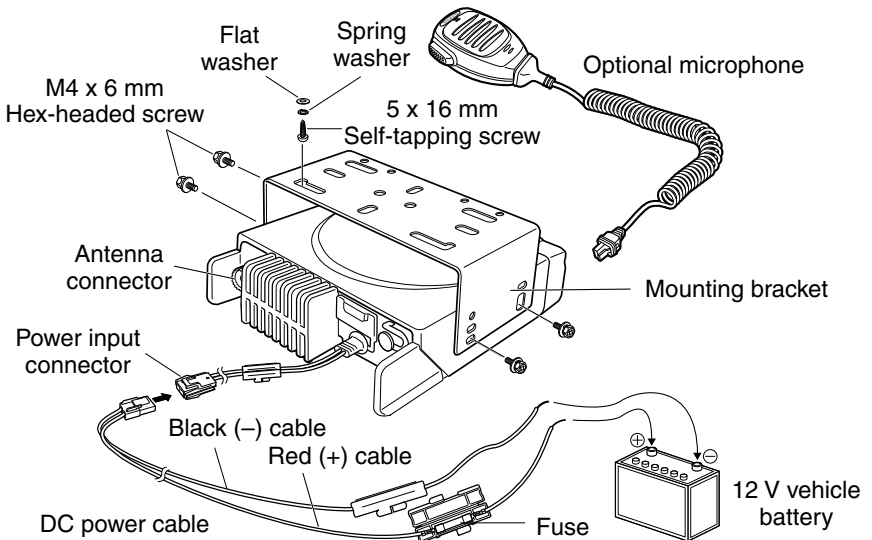
For passenger safety, install the transceiver securely using the supplied mounting bracket and screw set, so the transceiver will not break loose in the event of a collision.

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

- 1 Mark the position of the holes in the dash, using the mounting bracket as a template. Using a 4.2 mm drill bit, drill the holes, then attach the mounting bracket using the supplied screws.
  - Mount the transceiver within easy reach of the user and where there is sufficient space at the rear of the transceiver for cable connections.
- 2 Connect the antenna and the supplied power cable to the transceiver.
- 3 Slide the transceiver into the mounting bracket and secure it using the supplied hex-headed screws.
- 4 Mount the microphone hanger in a location where it will be within easy reach of the user.
  - The microphone and microphone cable should be mounted in a place where they will not interfere with the safe operation of the vehicle.



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



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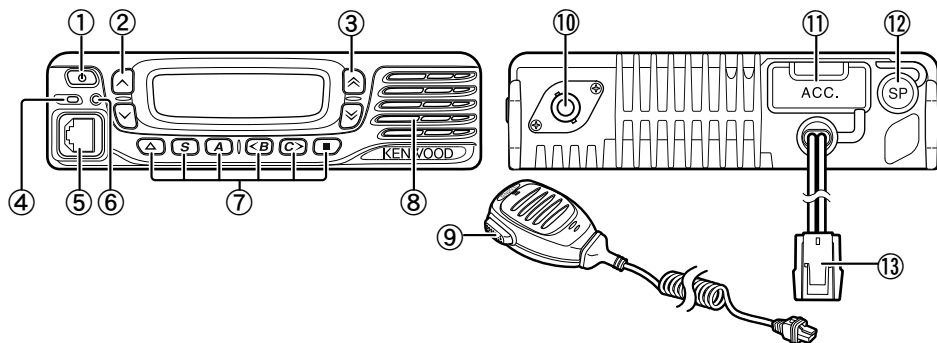
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## GETTING ACQUAINTED

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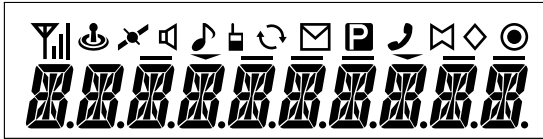
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### FRONT AND REAR VIEWS



- ① **⏻ (Power) switch**  
Press to switch the transceiver ON or OFF.
- ② **^ / v keys**  
Press to activate their programmable functions {page 5}.
- ③ **⤴ / ⤵ keys**  
Press to activate their programmable functions {page 5}.
- ④ **TX/RX Indicator**  
Lights red while transmitting and green while receiving a signal. Flashes orange when receiving an optional signaling call.
- ⑤ **Microphone jack**  
Insert the microphone plug into this jack.
- ⑥ **Status Indicator**  
Lights blue during a specified mode, based on dealer programming.
- ⑦ **▲ / S / A / <B / C> / ■ keys**  
Press to activate their programmable functions {page 5}.
- ⑧ **Speaker**  
Internal speaker.
- ⑨ **PTT switch**  
Press this switch, then speak into the microphone to call a station.
- ⑩ **RF antenna connector**  
Connect the RF antenna to this connector.
- ⑪ **ACC connector**  
Connect the ACC to this connector, via the KCT-60.
- ⑫ **External speaker jack**  
Connect an external speaker to this jack.
- ⑬ **Power input connector**  
Connect the DC Power Cable to this connector.

# DISPLAY



Icon	Description
	Displays the signal strength.
	Not used.
	Appears when the GPS position is determined.
	Appears when Monitor or Squelch Off is activated.
	Blinks when an incoming call matches your Optional Signaling.
	Appears when the Talk Around function is on.
	Lights while scanning or while paused on a channel. Blinks when scan is temporarily stopped.
	Lights when a caller message is in the stack memory. Blinks when the new message is in the stack memory.
	The selected channel is the Priority channel.
	Appears when the selected group is programmed as telephone IDs. Blinks during Auto Telephone search.
	The Horn Alert function is on.
	The Scrambler/ Encryption function is on.
	The Public Address function is on.
	Not used.
	The current zone is added to the scan sequence.
	The External Speaker function is on.
	The AUX A function is on.
	The AUX B function is on.
	The current Channel/Group ID is added to the scan sequence.
	The Operator Selectable Tone function is on.
	Not used.



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## PROGRAMMABLE FUNCTIONS

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The **^**, **v**, **^**, **v**, **▲**, **S**, **A**, **<B**, **C>**, and **■** keys can be programmed with the functions listed below. Ask your dealer for details on these functions.

- None
- 2-tone <sup>1</sup>
- Auto Telephone <sup>2</sup>
- Autodial
- Autodial Programming
- AUX A
- AUX B
- Broadcast <sup>3</sup>
- Call 1 ~ 6
- CH/GID Down
- CH/GID Recall
- CH/GID Up
- Channel Entry
- CW Message <sup>4</sup>
- Direct CH/GID 1 ~ 5
- Display Format
- Emergency <sup>5</sup>
- External Speaker
- Fixed Volume
- Forced Search <sup>3</sup>
- Function
- GPS Position Display
- Group ID/Channel Entry
- Group <sup>6</sup>
- Group + Short Message <sup>6</sup>
- Group + Status <sup>6</sup>
- Home CH/GID
- Horn Alert
- Individual <sup>6</sup>
- Individual + Short Message <sup>6</sup>
- Individual + Status <sup>6</sup>
- LCD Brightness
- Lone Worker
- Maintenance
- Monitor <sup>7</sup>
- Monitor Momentary <sup>7</sup>
- Operator Selectable Tone <sup>1</sup>
- Priority-channel Select <sup>8</sup>
- Public Address
- Scan
- Scan Delete/Add
- Scrambler/ Encryption
- Scrambler/ Encryption Code
- Selcall <sup>9</sup>
- Selcall + Short Message <sup>9</sup>
- Selcall + Status <sup>9</sup>
- Send the GPS data
- Short Message
- Site Down <sup>3</sup>
- Site Lock <sup>3</sup>
- Site Up <sup>3</sup>
- Squelch Level <sup>1</sup>
- Squelch Off <sup>1</sup>
- Squelch Off Momentary <sup>1</sup>
- Stack
- Status
- Talk Around <sup>7</sup>
- Telephone Disconnect <sup>2</sup>
- Transceiver Password
- Volume Down
- Volume Up
- Zone Delete/Add
- Zone Down
- Zone Up

<sup>1</sup> Available only for Analog Conventional operation.

<sup>2</sup> Available only for Analog Trunking operation.

<sup>3</sup> Available only for NXDN Trunking operation.

<sup>4</sup> Available only for NXDN Conventional operation.

<sup>5</sup> Emergency can be programmed only on the **▲** key. When assigned, the dealer must set the key assignment hold to "Enable" and second function as "Emergency".

<sup>6</sup> Available only for NXDN Conventional operation and NXDN Trunking operation.

<sup>7</sup> Available only for Analog Conventional, Analog Trunking, and NXDN Conventional operation.

<sup>8</sup> Available only for Analog Conventional and NXDN Conventional operation.

<sup>9</sup> Available only for Analog Conventional and Analog Trunking operation.

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## BASIC OPERATIONS

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### SWITCHING POWER ON/ OFF

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

- A beep sounds and the display illuminates.
- If the Transceiver Password function is programmed, "PASSWORD" will appear on the display.

Press **⏻** again to switch the transceiver OFF.

### ■ Transceiver Password

To enter the password:

- 1 Press the **↕** key to select a digit.
  - When using a microphone DTMF keypad, simply enter the password digits and proceed to step 4.
- 2 Press the **S** or **\***  key to accept the entry and move to the next digit.
  - Press the **A** or **#** key to delete an incorrect digit.
  - Press the **C>** key to delete all.
- 3 Repeat steps 1 and 2 to enter the entire password.
  - The password can contain a maximum of 6 digits.
- 4 Press the **S** or **\***  key to confirm the entered password.
  - If you enter an incorrect password, an error tone sounds and the transceiver remains locked.

### ADJUSTING THE VOLUME

Press the **[Volume Up]** key to increase the volume. Press the **[Volume Down]** key to decrease the volume.

If Squelch Off has been programmed onto a key, you can use that function to listen to background noise while adjusting the volume level.

### SELECTING A ZONE AND CHANNEL/GROUP ID

Select the desired zone and channel/group ID using the keys programmed as **[Zone Up]/ [Zone Down]** and **[CH/GID Up]/ [CH/GID Down]**.

- You can program names for zones and channels/group IDs with up to 10 characters.
- If the Voice Announce function has been set up by your dealer, an audio voice will announce the new zone, channel and group number when changing the zone, channel, and/or group.

### TRANSMITTING

- 1 Select the desired zone and channel/group ID.

- 2 Press the key programmed as **[Monitor]** or **[Squelch Off]** to check whether or not the channel is free.
  - If the channel is busy, wait until it becomes free.
- 3 Press the **PTT** switch and speak into the microphone. Release the **PTT** switch to receive.
  - For best sound quality, hold the transceiver approximately 1.5 inches (3 ~ 4 cm) from your mouth.

### ■ Making Group Calls (Digital)

If a key has been programmed as **[Group]**, you can select a group ID from the list to make a call to those parties on a Conventional channel.

To select a group ID:

- 1 Press the key programmed as **[Group]**.
- 2 Press the  $\wedge/\simeq$  key to select a group ID/name from the list.
- 3 Press and hold the **PTT** switch to make the call.
  - Speak into the transceiver as you would during a normal transmission.

### ■ Making Individual Calls (Digital)

If a key has been programmed with **[Individual]**, you can make calls to specific persons.

- 1 Press the key programmed as **[Individual]**.
- 2 Press the  $\wedge/\simeq$  key to select a unit ID from the list.
  - When using a microphone DTMF keypad, you can enter a unit ID directly.
- 3 Press and hold the **PTT** switch to make the call.
  - Speak into the transceiver as you would during a normal transmission.

## RECEIVING

Select the desired zone and channel. If signaling has been programmed on the selected channel, you will hear a call only if the received signal matches your transceiver settings.

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**Note:** Signaling allows your transceiver to code your calls. This will prevent you from listening to unwanted calls. Refer to "SIGNALING" on page 15 for details.

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### ■ Receiving Group Calls (Digital)

When you receive a group call on a Conventional channel and the received group ID matches the ID set up on your transceiver, you can hear the caller's voice.

When you receive a group call on a Trunking channel, the transceiver automatically switches to the communications channel to receive the call.

### ■ Receiving Individual Calls (Digital)

When you receive an individual call, a ringing tone will sound and the caller's ID will appear on the display. To respond to the call, press and hold the **PTT** switch and speak into the transceiver as you would during a normal transmission.

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## SCAN

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Scan monitors for signals on the transceiver channels. While scanning, the transceiver checks for a signal on each channel and only stops if a signal is present.

To begin scanning, press the key programmed as [**Scan**].

- The ↻ indicator appears.
- When a signal is detected on a channel, Scan pauses at that channel. The transceiver will remain on the busy channel until the signal is no longer present, at which time Scan resumes.

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

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**Note:** To use Scan, there must be at least 2 channels in the scan sequence.

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## TEMPORARY CHANNEL LOCKOUT

During scan, you can temporarily remove specific channels from the scanning sequence by selecting them and pressing the key programmed as [**Scan Delete/Add**].

- The channel is no longer scanned. However, when scanning is ended and restarted, the channels are reset and deleted channels will again be in the scanning sequence.

## PRIORITY SCAN

If a Priority channel has been programmed, the transceiver will automatically change to the Priority channel when a call is received on that channel, even if a call is being received on a normal channel.

- The  indicator appears when the selected channel is the Priority channel (depending on dealer setting).



## SCAN REVERT

The Scan Revert channel is the channel selected when you press the **PTT** switch to transmit during scan. Your dealer can program one of the following types of Scan Revert channels:

- **Selected:** The last channel selected before scan.
- **Selected + Talkback:** Same as “Selected”, plus you can respond to calls on the channel at which scan is paused.
- **Priority:** The Priority channel.
- **Priority + Talkback:** Same as “Priority”, plus you can respond to calls on the channel at which scan is paused.
- **Last Called + Selected:** The last channel on which you receive a call.

## SCAN DELETE/ADD

You can add and remove zones and/or channels/group IDs to and from your scan list.

- 1 Select your desired zone and/or channel/group ID.
- 2 Press the key programmed as **[Zone Delete/Add]** (to add/remove zones) or **[Scan Delete/Add]** (to add/remove channels/group IDs).
  - You can also press and hold the key programmed as **[Scan Delete/Add]** to add/remove zones.
  - When a channel/Group ID is added to scan, the  icon appears on the display.
  - When a zone is added to scan, the  icon appears on the display.

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# FleetSync: ALPHANUMERIC 2-WAY PAGING FUNCTION

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FleetSync is an Alphanumeric 2-way Paging Function, and is a protocol owned by JVC KENWOOD Corporation.

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**Note:** This function is available only in analog operation.

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## SELCALL (SELECTIVE CALLING)

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

### ■ Transmitting

- 1 Select your desired zone and channel.
- 2 Press the key programmed as **[Selcall]** to enter Selcall mode.
- 3 Press the  $\wedge/\simeq$  key to select the station you want to call.
- 4 Press the **PTT** switch and begin your conversation.

### ■ Receiving

An alert tone will sound and the transceiver will enter Selcall mode. The calling station's ID will appear when a Selcall is received. You can respond to the call by pressing the **PTT** switch and speaking into the microphone.

### ■ Identification Codes

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

- Enter a Fleet number (100 ~ 349) to make a group call.
- Enter an ID number (1000 ~ 4999) to make an individual call in your fleet.
- Enter a Fleet number to make a call to all units in the selected fleet (Fleet call).

## STATUS MESSAGE

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

A maximum of 15 received messages (combined status messages and short messages) can be stored in the stack memory of your transceiver.

### ■ Transmitting

- 1 Select your desired zone and channel.
- 2 Press the key programmed as **[Status]** to enter Status mode (proceed to step 5) or **[Selcall + Status]** to enter Selcall mode (proceed to step 3).
- 3 Press the  $\wedge/\simeq$  key to select the station you want to call.
  - If Manual Dialing is enabled, you can enter a station ID by using the microphone DTMF keypad by pressing and holding the **S** or **✳** key. Repeat this process until the entire ID is entered.
- 4 Press the **S** or **✳** key to enter Status mode.

- 5 Press the  $\wedge/\vee$  key to select the status you want to transmit.
  - If Manual Dialing is enabled, you can enter a station ID by using the microphone DTMF keypad (refer to step 3, above).
- 6 Press the **PTT** switch to initiate the call.
  - “COMPLETE” appears on the display when the status has been successfully transmitted.

## ■ Receiving

A calling ID or text message will appear when a Status call is received. Press any key to return to normal operation.

## ■ Reviewing Messages in the Stack Memory

- 1 Press the key programmed as **[Stack]**, or press and hold the key programmed as **[Selcall]**, **[Status]**, or **[Selcall + Status]** to enter Stack mode.
  - The last received message is displayed.
- 2 Press the  $\wedge/\vee$  key to select the desired message.
  - Message types are identified as follows:  
ID: Caller ID, ST: Status Message, ME: Short Message
  - Press and hold the **S** or **\*** key for 1 second to cycle the display information as follows:  
ID Name > Status/Short Message > CH/GID
- 3 Press the **▲** key to return to normal operation.
  - To delete the selected message, press the **A** or **#** key.
  - To delete all messages, press and hold the **A** or **#** key for 1 second.

## SHORT MESSAGES

This transceiver can receive short data messages which contain a maximum of 48 characters.

- Received short messages are displayed the same as Status messages. A maximum of 15 received messages (combined status messages and short messages) can be stored in the stack memory of your transceiver.

## GPS REPORT

To send your location data, you must first connect a GPS unit to the transceiver. GPS data can be manually transmitted by pressing the key programmed as **[Send the GPS data]**. If set up by your dealer, GPS data may be automatically transmitted at a preset time interval.

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## TRUNKING CALLS (ANALOG)

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### PLACING A DISPATCH CALL

- 1 Select the desired zone and channel/group ID.
- 2 Press and hold the **PTT** switch.
- 3 If the “PTT Proceed” tone sounds, communication is possible; start speaking into the microphone. Release the **PTT** switch to receive.
  - For best sound quality at the receiving station, hold the microphone approximately 1.5 inches (3 ~ 4 cm) from your mouth.
  - Your dealer can deactivate the Proceed PTT tone, if necessary. Ask your dealer for details.

### RECEIVING A DISPATCH CALL

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

### PLACING A TELEPHONE CALL

- 1 Select the desired zone and channel/group ID.
- 2 Press and hold the **PTT** switch for approximately 1 second to ensure a connection.
  - Confirm that there is a dial tone after releasing the **PTT** switch.
- 3 Alternatively, press the key programmed as [**Auto Telephone**] to automatically search for a Telephone Repeater.
  - “AUTO TEL” appears on the display and the  icon blinks.
  - When the transceiver connects to a telephone line, a dial tone sounds, the  icon appears on the display, and the transceiver enters the Off Hook state.
- 4 Place the call, following the instructions for making a DTMF call, starting on page 9.
- 5 When the called party responds, press the **PTT** switch and speak into the microphone. Release the **PTT** switch to receive.
  - Only one person can speak at a time.

### RECEIVING A TELEPHONE CALL

- 1 When a telephone call is received, the transceiver will automatically change to the correct group ID and you will hear the call.
  - A ringer tone will sound when a call is received.
- 2 Press and hold the **PTT** switch to speak, and release it to receive.
  - Only one person can speak at a time.

### DISCONNECT WITH TELEPHONE

To end the call, press the # key or the key programmed as [**Telephone Disconnect**] while communicating.



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# DTMF (DUAL TONE MULTI FREQUENCY) CALLS

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## MANUAL DIALING

- 1 Press and hold the **PTT** switch.
- 2 Enter the desired digits using the microphone DTMF keypad.
  - If you release the **PTT** switch, transmit mode will end even if the complete number has not been sent.
  - If the Keypad Auto **PTT** function has been enabled by your dealer, you do not need to press the **PTT** switch to transmit; you can make the call simply by pressing the microphone DTMF keys.

### ■ Store & Send

- 1 Press the key programmed as [**Autodial**].
- 2 Enter up to 30 digits using the microphone DTMF keypad.
- 3 Press the **PTT** switch to make the call.

## AUTODIAL

Autodial allows you to quickly call DTMF numbers that have been programmed onto your transceiver.

- 1 Press the key programmed as [**Autodial**].
  - The first entry in the Autodial list appears on the display.
- 2 Press the  $\wedge/\surd$  key to select an autodial list number.
  - You can also enter a number from 01 ~ 32 directly using the microphone DTMF keypad.
- 3 Press the **PTT** switch to make the call.

### ■ Storing an Autodial Entry

- 1 Press the key programmed as [**Autodial Programming**].
- 2 Press the  $\wedge/\surd$  key to select a memory location number.
- 3 Press the **S** or  $\times$  key to enter a name for the list number.
- 4 Press the  $\wedge/\surd$  key to select a digit.
- 5 Press the **C>** key to accept the entered digit and move the cursor to the right.
  - Press the **A** or **#** key to delete an incorrect digit. Press and hold the **A** or **#** key to delete all digits.
- 6 Repeat steps 4 and 5 to enter the entire name.
- 7 Press the **S** or  $\times$  key to accept the name and enter a number.
- 8 Press the  $\wedge/\surd$  key to select a digit.
  - You can also enter digits directly using the microphone DTMF keypad.
- 9 Press the **S** or  $\times$  key to accept the entered digit.
  - Press the **A** or **#** key to delete an incorrect digit. Press and hold the **A** or **#** key to delete all digits.
- 10 Repeat steps 8 and 9 to enter the entire number.
- 11 Press the **S** or  $\times$  key to accept the number and store the entry.

## ■ Removing an Autodial Entry

- 1 Press the key programmed as [**Autodial Programming**].
- 2 Press the  $\wedge/\vee$  key to select a memory location number.
- 3 Press the **A** or # key.
  - “DELETE” appears on the display.
  - Additionally, you can press and hold the **A** or # key to delete all entries.
- 4 Press the **S** or ✕ key to confirm the deletion.

## REDIALING

- 1 Press the key programmed as [**Autodial**].
- 2 Press the ✕ key, then press the **0** key.
  - If there is no data in the redial memory, an error tone will sound.
- 3 Press the **PTT** switch to make the call.

## STUN

This function is used when a transceiver is stolen or lost. When the transceiver receives a call containing a stun code, the transceiver becomes disabled. The stun code is cancelled when the transceiver receives a call with a revive code.

- “STUN” appears on the display while the transceiver is stunned.

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## ADVANCED OPERATIONS

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### EMERGENCY CALLS

If your transceiver has been programmed with the Emergency function, you can make emergency calls.

- 1 Press and hold the key programmed as **[Emergency]**.
  - Ask your dealer for the length of time necessary to hold this key before the transceiver enters Emergency mode.
  - When the transceiver enters Emergency mode, it will change to the Emergency channel and begin transmitting based on how it is set up by your dealer.
- 2 To exit Emergency mode, press the **[Emergency]** key again.
  - If the Emergency mode completes a preset number of cycles, Emergency mode will automatically end and the transceiver will return to the zone and channel that was in use before Emergency mode was entered.

---


#### Note:

- ◆ Your dealer can set the transceiver to emit a tone when transmitting in Emergency mode.
  - ◆ Your dealer can set the transceiver to emit tones and received signals as normal, or mute the speaker during Emergency operation.
- 


### SCRAMBLER (ANALOG) / ENCRYPTION (DIGITAL)

#### ■ Secure (Encrypted) Transmission

Press the key programmed as **[Scrambler/ Encryption]** to switch the transceiver to secure (encrypted) transmission.

- The  icon appears on the display.
- Pressing the **PTT** switch after the Scrambler or Encryption function has been turned ON encrypts the transmitted signal.

#### ■ Selecting the Scrambler Code or Encryption Key

- 1 Press the key programmed as **[Scrambler/ Encryption Code]** to enter Code or Key Selection mode.
- 2 Press the  key to increase or decrease the code or key.
  - There are 16 available Scrambler codes or Encryption keys (1 ~ 16).

### SIGNALING

#### ■ Quiet Talk (QT)/ Digital Quiet Talk (DQT)

Your dealer may have programmed QT or DQT signaling on your transceiver channels. A QT tone/ DQT code is a sub-audible tone/code which allows you to ignore (not hear) calls from other parties who are using the same channel.

#### Operator Selectable Tone (OST)

If a key has been programmed with **[OST]**, you can reprogram the QT/DQT settings on each of your channels.

- 1 Select your desired channel.
- 2 Press and hold the key programmed as **[OST]** for 1 second.
- 3 Press the  $\wedge/\simeq$  key to select your desired tone or code.
  - Your dealer can set up to 40 tones/codes.
- 4 When you have finished operating using OST, press the **[OST]** key again to turn the OST function OFF.

## ■ Radio Access Number (RAN)

RAN is a new signaling system designed for digital radio communications.

When a channel is set up with a RAN, squelch will only open when a call containing a matching RAN is received. If a call containing a different RAN is made on the same channel you are using, you will not hear the call. This allows you to ignore (not hear) calls from other parties who are using the same channel.

## ■ Optional Signaling

Your dealer may also program several types of optional signaling for your transceiver channels.

**2-tone Signaling:** 2-tone Signaling opens the squelch only when your transceiver receives a call containing matching 2 tones.


**DTMF Signaling:** DTMF Signaling opens the squelch only when the transceiver receives a call containing a matching DTMF code.

**FleetSync Signaling:** Refer to “SELDCALL (SELECTIVE CALLING)” on page 10.

**NXDN ID Signaling:** NXDN ID is an optional signaling system available only for digital communications.

## MONITOR/ SQUELCH OFF

You can use the key programmed as **[Monitor]** or **[Squelch Off]** to listen to weak signals that you cannot hear during normal operation and to adjust the volume when no signals are present on your selected channel.

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



Your dealer can program a key with one of four Monitor/Squelch Off functions:

- **Monitor:** Press to deactivate QT, DQT, DTMF, 2-tone, or FleetSync Signaling. Press again to return to normal operation.
- **Monitor Momentary:** Press and hold to deactivate QT, DQT, DTMF, 2-tone or FleetSync Signaling. Release to return to normal operation.
- **Squelch Off:** Press to hear background noise. Press again to return to normal operation.
- **Squelch Off Momentary:** Press and hold to hear background noise. Release to return to normal operation.

## ■ Squelch Level

If a key has been programmed as **[Squelch Level]**, you can readjust your transceiver's squelch level:

- 1 Press the key programmed as **[Squelch Level]**.
  - The current squelch level appears on the display.

- 2 Press the  key to select your desired squelch level from 0 to 9.
- 3 Press the **S** or  key to store the new setting.

## SIGNAL STRENGTH INDICATOR

The signal strength indicator displays the strength of received calls. No icon appears when no signal is available.



Strong



Sufficient



Weak




Very weak

 flashes when out of range (NXDN Trunking only).

## PUBLIC ADDRESS (PA)


The PA system can only be used with an external speaker.

- 1 Press the key programmed as [**Public Address**] to activate the Public Address function.
  - The  icon appears on the display.
- 2 Press and hold the **PTT** switch, then speak into the microphone to make your address through the external speaker.
- 3 Press the [**Public Address**] key again to exit Public Address.

## HORN ALERT

When a call is received that matches the optional signaling set up on your transceiver, Horn Alert causes the vehicle horn or some other external alert to sound. This function notifies you of a received call when you are away from your vehicle.

To toggle Horn Alert ON and OFF, press the key programmed as [**Horn Alert**].

- The  icon momentarily appears on the display when Horn Alert is active.

## EXTERNAL SPEAKER

When attaching an external speaker to the transceiver via the KCT-60, press the key programmed as [**External Speaker**] to output all received signals through the external speaker.

- The  icon appears on the display.

Press the [**External Speaker**] key again to output all received signals only through the built-in speaker.

## DISPLAY BRIGHTNESS

You can cycle the display brightness between high, low, and off by pressing the key programmed as [**LCD Brightness**].

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## BACKGROUND OPERATIONS

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### TIME-OUT TIMER (TOT)

The Time-out Timer prevents you from using a channel for an extended duration. If you continuously transmit for a preset time, the transceiver will stop transmitting and an alert tone will sound. Release the **PTT** switch.

### AUXILIARY PORT

Press the key programmed as **[AUX A]** or **[AUX B]** to activate the auxiliary port. The auxiliary port is used with external devices.

- The  icon appears on the display when the auxiliary A port is active.
- The  icon appears on the display when the auxiliary B port is active.

### BUSY CHANNEL LOCKOUT (BCL)

If BCL is set up by your dealer, you will be unable to transmit if the channel is already in use.

- “BUSY” appears on the display when you press the **PTT** switch. Use a different channel or wait until the channel becomes free.

If your dealer has programmed BCL Override for your transceiver, you can override the BCL by pressing the **PTT** switch again, immediately after releasing it, when the channel is busy.

### CONTROL CHANNEL HUNT

On digital Trunking channels, the transceiver automatically searches for a control channel.

- While searching for a control channel, the antenna icon will flash and no signals can be received.

### PTT ID

PTT ID is the transceiver unique ID code which is sent each time the **PTT** switch is pressed and/or released. (PTT ID can be made only in analog operation.)

### COMPANDER

If programmed by your dealer for a channel, the compander will remove excessive noise from transmitted signals, providing higher clarity of signals. (The compander is used only in analog operation.)

- Your dealer must set the compander for both the transmit side and the receive side in order for the compander to operate.

### TRANSMIT POWER

Your dealer has programmed a transmit power level for each channel. Power levels can be high or low.

# KENWOOD

## NEXEDGE

# NX-720

# NX-820

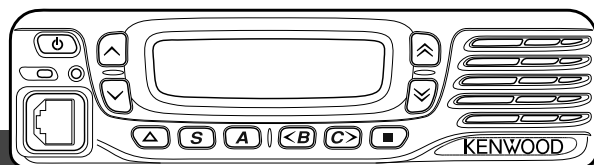
VHF 数字模拟双模车载对讲机

UHF 数字模拟双模车载对讲机

## 使用说明书

使用之前请阅读以下信息：

使用产品前请仔细阅读本使用说明书，并请妥善保管。



JVCKENWOOD Corporation

产品中有毒有害物质或元素的名称及含量

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
框架	×	○	○	×	○	○
安装基板	×	○	○	○	○	○
电缆	○	○	○	○	○	○
扬声器	○	○	○	×	○	○
其他(附件)	○	○	○	×	○	○

本表格依据 SJ/T 11364 的规定编制

○：表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。

×：表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。



环保使用期限

此图标表示了中国《电子信息产品污染控制管理办法》规定的环保使用期限。只要用户在使用本产品时遵守注意事项中的各项规定，从制造日期开始到此图图标出的期限为止（环保使用期限）既不会污染环境也不会产生对人体有害的物质。

附件和消耗性零件的环保使用期限如下所示：

电缆：10 年

出版日：2015 年 10 月 1 日

JVC 建伍株式会社



## 鸣谢

感谢您选择KENWOOD产品用于您的个人移动通信应用。

本使用说明书仅包含该无线电设备的基本操作。对于设备上可能添加的定制化功能，请咨询经销商。

## 用户注意事项

- ◆ 政府法律禁止在政府控制的区域内使用未经当局许可的无线电发射机。
- ◆ 非法操作将会受到罚款及 / 或者监禁处罚。
- ◆ 只能由具备资格的技术人员进行维修。

**安全性：**操作人员应该知道并了解通信机操作的一般危险。



- ◆ **易爆环境（气体、粉尘以及烟雾等）**

在加油或者停车于加油站时，请关闭通信机。如果通信机安装在汽车的行李箱部位，请勿将备用油箱放在行李箱内。

- ◆ **射频辐射伤害**

当有人站立于天线附近或触摸天线时，请勿操作通信机，以免造成射频辐射灼伤或相关人体伤害。

- ◆ **炸药起爆雷管**

在距离炸药起爆雷管150米的范围以内操作通信机可能引起雷管的爆炸。当位于爆破现场或标有“关掉双向无线电”标志的区域内时，请关闭通信机电源。如您正在使用车辆运输雷管，务必确保将雷管装在内有衬垫的封闭式金属箱中。将雷管放入箱内或从箱中取出时，请勿进行发射操作。

本产品所包含的AMBE+2™ 语音编码技术受Digital Voice System, Inc. 知识产权（包括专利权、版权和贸易机密）的保护。

该语音编码技术仅许可用于本通信设备。该技术的使用人员明确禁止尝试提取、移除、破译、反向编译或拆除目标代码，或以其他方式将目标代码转换为人类可读形式。美国专利编号 #6, 199, 037, #6, 912, 495, #8, 200, 497, #7, 970, 606, 以及 #8, 359, 197.

## 固件版权

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## 注意事项

请遵照以下注意事项，以防止火灾、人身伤害和通信机损坏。

- 开车时请勿尝试配置通信机；这样做非常危险。
- 无论何种原因请勿拆卸或改装通信机。
- 请勿将本机长时间暴晒于阳光下，也不可靠近热源。
- 如发现本机发出异味或冒烟，请立即关闭通信机电源，并与您的KENWOOD经销商联系。
- 开车时使用通信机可能会违反交通法规。请查阅并遵守当地的交通法规。
- 请勿使用非KENWOOD指定的选件。



### 注意

- ◆ 本通信机仅能在12V的负极接地系统中工作！安装通信机前请检查车辆的电池极性 & 电压。
- ◆ 只能使用随带的直流电源线或选购的KENWOOD直流电源线。
- ◆ 请勿切断和 / 或移除直流电源线上的保险丝管座。



### 警告

为了乘客安全起见，请使用随带的安装支架和螺丝组将通信机安装牢固，以防在发生车辆碰撞时通信机松脱。

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# 开始

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注：以下说明供KENWOOD经销商、经授权的KENWOOD服务机构或工厂使用。

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## 随机附件

小心拆开通信机的包装。在丢弃包装材料前，建议您先验明下表所列的物品。如果有物品缺失或在运输过程中损坏，请立即向承运人提出书面要求。

直流电源线（带保险丝） .....	1
• 15 A 保险丝 .....	4
安装支架 .....	1
螺丝组	
• 5 × 16 mm 自攻螺丝 .....	4
• M4 × 6 mm 六角螺丝 + 垫圈 .....	4
• 弹簧垫 .....	4
• 平垫 .....	4
使用说明书 .....	1

## 准备工作



您车上的各种电子设备如未得到妥善保护，发射时产生的射频能量可能导致其出现故障。典型设备包括电子燃油喷射、防抱死制动及巡航控制系统。如果您的汽车装有这些设备，请咨询经销商车辆的制造信息。为了确定这些系统在发射时能否正常工作，应考虑经销商的建议。

### ■ 电源线连接



本通信机仅能在12V的负极接地系统中工作！安装通信机前请检查车辆的电池极性 & 电压。

- 1 查找预留于隔热板上的电源线可以穿过的小孔。
  - 如果没有，请使用圆形剪钻一个孔，然后安装橡皮环。
- 2 使电源线穿过隔热板进入发动机室。
- 3 将红色引线连接到蓄电池的正极(+)端子，将黑色引线连接到蓄电池的负极(-)端子。
  - 使保险丝位于尽可能靠近蓄电池的位置。
- 4 用定位带将多余电线绕成盘状并固定好。
  - 确保电线留有足够余量，以便在拆下通信机进行维修时可以继续为其供电。

## ■ 安装通信机



### 警告

为了乘客安全起见，请使用随带的安装支架和螺丝组将通信机安装牢固，以防在发生车辆碰撞时通信机松脱。

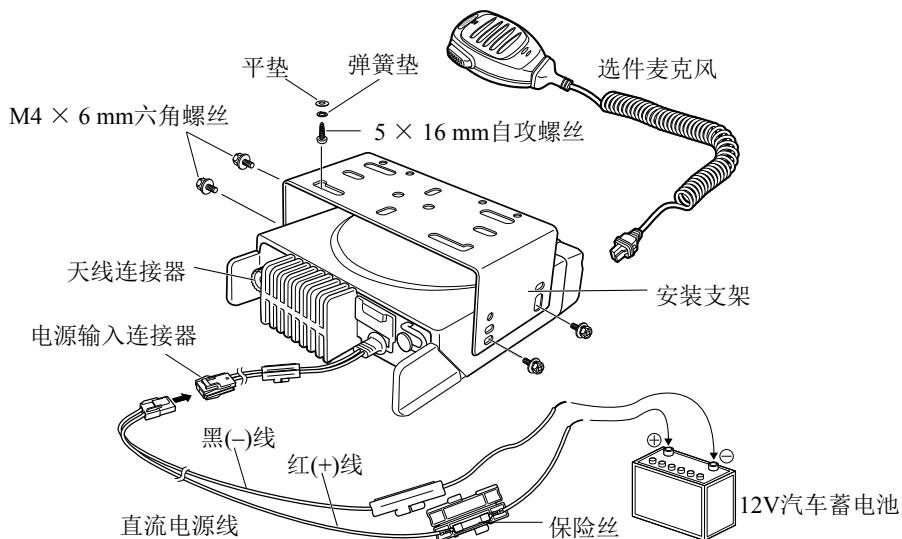
注：安装通信机前，请检查安装螺丝会探出安装表面下多少。钻安装孔时要小心，不要破坏汽车的布线或零件。

- 1 以安装支架为样板，大致标出安装孔的位置。用4.2 mm的钻头钻孔，然后利用随带的螺丝安装好固定支架。
  - 在用户伸手可得的范围内安装通信机，并确保后面留有足够的空间用于电缆连接。
- 2 将天线和附带的电源线连接到通信机上。
- 3 将通信机滑进安装支架，并用附带的六角螺丝固定。
- 4 在用户伸手可得的范围内安装麦克风挂钩选件。
  - 选购的麦克风和麦克风电缆应安装在不妨碍车辆安全操作的位置。



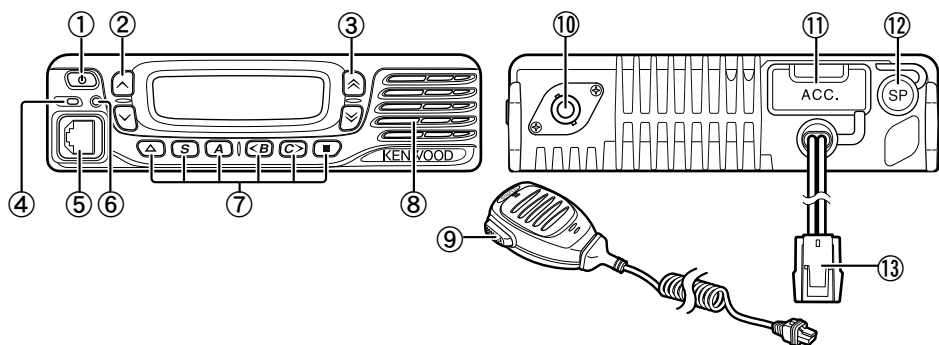
### 注意

替换直流电源线中的保险丝时，确保使用相同电流值的保险丝。切勿换用额定值更高的保险丝。



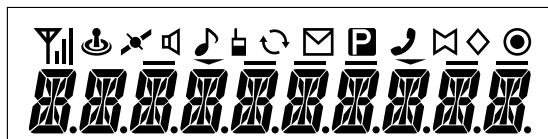
# 熟悉本机

## 前/后视图



- ① **⏻ (电源) 开关**  
按下可开关通信机。
- ② **^ / v 键**  
按下可启动其可编程功能{第5页}。
- ③ **^ / v 键**  
按下可启动其可编程功能{第5页}。
- ④ **发射/接收指示灯**  
发射时亮红色，接收信号时亮绿色。接收可选信令呼叫时闪烁橙色。
- ⑤ **麦克风插孔**  
将麦克风插头插入该插孔。
- ⑥ **状态指示灯**  
根据经销商的编程设置，在指定的模式期间亮蓝色。
- ⑦ **▲ / S / A / <B / C> / ■ 键**  
按下可启动其可编程功能{第5页}。
- ⑧ **扬声器**  
内部扬声器。
- ⑨ **PTT开关**  
按下此开关，然后对着麦克风讲话，可呼叫某个电台。
- ⑩ **RF天线连接器**  
将RF天线连接到该连接器上。
- ⑪ **ACC连接器**  
通过KCT-60将ACC连接到该连接器上。
- ⑫ **外部扬声器插孔**  
将外部扬声器连接到该插孔上。
- ⑬ **电源输入连接器**  
将直流电源电线连接到该连接器上。

# 显示



图标	说明
	显示信号强度。
	未用。
	确定GPS位置时出现。
	启动监听或静噪打开时出现。
	在来电与可选信令匹配时闪烁。
	脱网通信功能开启时出现。
	扫描或暂停于某个信道时点亮。临时停止扫描时闪烁。
	堆栈存储器内有呼叫方信息时点亮。堆栈存储器内有新信息时闪烁。
	所选信道为优先信道。
	所选群组被设置为电话ID时出现。自动电话搜索过程中闪烁。
	喇叭提示功能开启。
	扰频器/加密功能开启。
	扩音功能开启。
	未用。
	当前区域被添加到扫描序列中。
	外部扬声器功能开启。
	AUX A功能开启。
	AUX B功能开启。
	当前信道/组ID被添加到扫描序列中。
	操作者可选亚音功能开启。
	未用。

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## 可编程功能

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∧、∨、⋈、∨、△、S、A、<B、C>及■键可通过编程方式设置为以下所列的功能。有关这些功能的详情，请向经销商咨询。

- 无
- 2-音<sup>1</sup>
- 自动电话<sup>2</sup>
- 自动拨号
- 自动拨号编程
- AUX A
- AUX B
- 广播<sup>3</sup>
- 呼叫1~6
- 信道/组ID下调
- 信道/组ID调出
- 信道/组ID上调
- 信道输入
- CW信息<sup>4</sup>
- 直接信道/组ID 1~5
- 显示格式
- 紧急报警<sup>5</sup>
- 外部扬声器
- 固定音量
- 强制搜索<sup>3</sup>
- 功能
- GPS位置显示
- 组ID/信道输入
- 组呼<sup>6</sup>
- 组呼+短信息<sup>6</sup>
- 组呼+状态<sup>6</sup>
- 归属信道/组ID
- 喇叭提示
- 单呼<sup>6</sup>
- 单呼+短信息<sup>6</sup>
- 单呼+状态<sup>6</sup>
- 液晶显示屏亮度
- 单独工作者
- 维护
- 监听<sup>7</sup>
- 瞬时监听<sup>7</sup>
- 操作者可选亚音<sup>1</sup>
- 优先信道选择<sup>8</sup>
- 扩音
- 扫描
- 扫描删除/添加
- 扰频器/加密
- 扰频器/加密代码
- 选呼<sup>9</sup>
- 选呼+短信息<sup>9</sup>
- 选呼+状态<sup>9</sup>
- 发送GPS数据
- 短信息
- 基站下调<sup>3</sup>
- 基站锁定<sup>3</sup>
- 基站上调<sup>3</sup>
- 静噪级别<sup>1</sup>
- 静噪打开<sup>1</sup>
- 瞬时静噪打开<sup>1</sup>
- 堆栈
- 状态
- 脱网通信<sup>7</sup>
- 电话挂断<sup>2</sup>
- 通信机密码
- 音量下调
- 音量上调
- 区域删除/添加
- 区域下调
- 区域上调

<sup>1</sup> 仅可用于模拟常规操作。

<sup>2</sup> 仅可用于模拟集群操作。

<sup>3</sup> 仅可用于NXDN集群操作。

<sup>4</sup> 仅可用于NXDN常规操作。

<sup>5</sup> 紧急报警只能设置在△键上。分配此功能时，经销商必须将键值设置为“启用”，并将功能设置为“紧急报警”。

<sup>6</sup> 仅可用于NXDN常规操作和NXDN集群操作。

<sup>7</sup> 仅可用于模拟常规操作、模拟集群操作和NXDN常规操作。

<sup>8</sup> 仅可用于模拟常规操作和NXDN常规操作。

<sup>9</sup> 仅可用于模拟常规操作和模拟集群操作。

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## 基本操作


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### 切换电源开/关





按可打开通信机电源。

- 此时发出哔音，同时显示屏亮起。
- 如果设置了通信机密码功能，显示屏上将出现“PASSWORD”字样。

再按一下将关闭通信机电源。

### ■ 通信机密码

要输入密码：

- 1 按/键选择数字。
  - 使用麦克风DTMF键盘时，只需输入密码数字并转到步骤4。
- 2 按S或键，确认输入并移到下一数字。
  - 按A或#键可删除错误的数字。
  - 按C>键可删除所有数字。
- 3 重复步骤1和2，输入完整密码。
  - 密码最多可包含6位数字。
- 4 按S或键，确认输入的密码。
  - 如果您输入不正确的密码，会发出错误音提示，并且通信机保持锁定。

### 音量调节

按[音量上调]键可提高音量。按[音量下调]键可降低音量。

如果已将静噪打开功能设置到某个键上，则在调节音量的过程中可利用该功能来监听背景噪音。

### 选择区域和信道/组ID

请利用设置为[区域上调]/[区域下调]和[信道/组ID上调]/[信道/组ID下调]的键选择所需的区域和信道/组ID。

- 区域和信道/组ID的名称最多可设置为10个字符。
- 如果经销商已设置语音指导功能，当更改区域、信道和/或组时，语音指导功能就会告知新的区域、信道和/或组。

### 发射

- 1 选择想要的区域和信道/组ID。
- 2 按下设置为[监听]或[静噪打开]的键，检查信道是否空闲。
  - 如果信道繁忙，请等待该信道空闲。
- 3 按下PTT开关并对着麦克风讲话。松开PTT开关转换到接收状态。
  - 为获得最佳音质，嘴和麦克风之间应保持约3~4厘米的距离。



## ■ 组呼（数字）

如果某个键设置为[组呼]，则可从列表中选择一個组呼ID，并在常规信道上向它们发出呼叫。

要选择组呼ID：

- 1 按下设置为[组呼]的键。
- 2 按 $\wedge/\vee$ 键，从列表中选择一個组呼ID/名称。
- 3 按住PTT开关进行呼叫。
  - 像在常规发射期间那样对着通信机讲话。

## ■ 单呼（数字）

如果某个键设置为[单呼]，则可向特定的人发出呼叫。

- 1 按下设置为[单呼]的键。
- 2 按 $\wedge/\vee$ 键，从列表中选择一個单呼ID。
  - 使用麦克风DTMF键盘时，可直接输入单呼ID。
- 3 按住PTT开关进行呼叫。
  - 像在常规发射期间那样对着通信机讲话。

## 接收

选择想要的区域和信道。如果在所选信道上设置了信令，只有在接收到符合通信机设置的信令时，您才能听到呼叫。

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注：信令允许通信机对呼叫进行编码。这样可以避免听到不想要的呼叫。详情请参阅第15页上的“信令”。

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## ■ 接收组呼（数字）

在常规信道上接收到组呼且接收到的组ID与通信机设置的ID匹配时，即可听到呼叫者的声音。

在集群信道上接收到组呼时，通信机会自动切换至通信信道来接收呼叫。

## ■ 接收单呼（数字）

接收到单呼时，会响起振铃，呼叫者的ID会出现在显示屏上。要响应呼叫，请按住PTT开关并像在常规发射期间那样对着通信机讲话。

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## 扫描

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扫描功能可监听通信机信道上的信号。扫描时，通信机将检查每个信道的信号，并仅在信号存在的情况下才会停止。

要开始扫描，请按下设置为[扫描]的键。

- 此时将出现  指示。
- 检测到信道上的信号时，扫描就会暂停在该信道上。通信机将处在繁忙信道上，直至信号消失，之后扫描继续。

要停止扫描，请再次按[扫描]键。

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**注：**要使用扫描功能，在扫描序列中至少要有2个信道。

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### 暂时信道删除

在扫描过程中，您可以选择特定的信道并按下设置为[扫描删除/添加]的键，以此将特定的信道从扫描序列中删除。

- 相应的信道将不再予以扫描。但是，当结束扫描并重新开始时，信道将予以重设，删除的信道便会重新进入扫描序列中。

### 优先扫描

如果设置了优先信道，当在优先信道上接收到呼叫时，即使正在一个普通信道上接收呼叫，通信机也将自动切换到此优先信道。

- 当所选信道为优先信道时，将会出现  指示（取决于经销商的设置）。



### 扫描返回

扫描返回信道就是扫描期间按下PTT开关进行发射时所选的信道。经销商能够在以下扫描返回信道类型中设置一种信道：

- **选择：**扫描前所选的最后一个信道。
- **选择+当前通话：**同“选择”，此外还可以在扫描暂停的信道上响应呼叫。
- **优先：**优先信道。
- **优先+当前通话：**同“优先”，此外还可以在扫描暂停的信道上响应呼叫。
- **最后呼叫+选择：**您收到呼叫的最后一个信道。

## 扫描删除/添加

用户可以向扫描列表中增删区域和/或信道/组ID。

- 1 选择一个区域和/或信道/组ID。
- 2 按下设置为[区域删除/添加]（添加/删除区域）或[扫描删除/添加]（添加/移除信道/组ID）的键。
  - 也可以按住设置为[扫描删除/添加]的键来添加/删除区域。
  - 向扫描列表中添加信道/组ID时，显示屏上将出现  图标。
  - 向扫描列表中添加区域时，显示屏上将出现  图标。

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# FleetSync: 数字字母双向寻呼功能

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FleetSync是一种数字字母双向寻呼功能，它是一个所有权归属JVC建伍株式会社的协议。

注：该功能仅可用于模拟操作。

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## 选择呼叫

选择呼叫是对某一无线电台或一组无线电台的语音呼叫。

### ■ 发射

- 1 选择想要的区域和信道。
- 2 按下设置为[选择呼叫]的键，进入选择呼叫模式。
- 3 按 $\wedge/\vee$ 键，选择您希望呼叫的无线电台。
- 4 按下PTT开关并开始对话。

### ■ 接收

此时会响起提示音，通信机将进入选择呼叫模式。当接到选择呼叫时，会显示来电无线电台的ID。要响应呼叫，请按PTT开关并对着麦克风讲话。

### ■ 识别码

识别码是一个由3位队号和4位ID号组成的代码。每台通信机都有自己的ID号。

- 输入队号（100~349）可进行组呼。
- 输入ID号（1000~4999）可在您所在的队中进行单呼。
- 输入队号可对选中的队的所有成员进行呼叫（队呼叫）。

## 状态信息

您可以发射和接收2位的状态信息，该状态信息可在您的通话群组中确定。信息最多可包含16个字母数字字符。状态信息的取值范围为10到79。

通信机的堆栈存储器最多可存储15个收到的信息（包括状态信息和短信息）。

### ■ 发射

- 1 选择想要的区域和信道。
- 2 按下设置为[状态]的键进入状态模式（转到步骤5），或按下设置为[选择呼叫+状态]的键进入选择呼叫模式（转到步骤3）。
- 3 按 $\wedge/\vee$ 键，选择您希望呼叫的无线电台。
  - 如果启用了手动拨号，您可以使用麦克风DTMF键盘，或者按住S或\*键输入无线电台ID。重复上述过程，直至整个ID全部输入。
- 4 按S或\*键，进入状态模式。
- 5 按 $\wedge/\vee$ 键，选择您要发射的状态。
  - 如果启用了手动拨号，您可以使用麦克风DTMF键盘输入无线电台ID（参阅上面的步骤3）。
- 6 按下PTT开关发起呼叫。
  - 状态成功发射后，显示屏上会出现“COMPLETE”字样。

## ■ 接收

当收到状态呼叫时，会出现呼叫ID或文本信息。按任意键将返回正常操作状态。

## ■ 查看堆栈存储器中的信息

- 1 按下设置为[堆栈]的键，或按住设置为[选择呼叫]、[状态]或[选择呼叫+状态]的键，进入堆栈模式。
  - 此时将显示最后收到的信息。
- 2 按 $\wedge/\vee$ 键，选择所需的信息。
  - 信息类型如下：  
ID：呼叫方ID；ST：状态信息；ME：短信息
  - 按住S或\*键并保持1秒钟，滚动查看以下信息：  
ID名>状态/短信息>信道/组ID
- 3 按下 $\blacktriangle$ 键将返回正常操作状态。
  - 要删除所选的信息，请按A或#键。
  - 要删除所有信息，请按住A或#键达1秒钟。

## 短信息

本通信机可以接收最多包含48个字符的短信息。

- 接收到的短信息与状态信息的显示方式相同。通信机的堆栈存储器最多可存储15个收到的信息（包括状态信息和短信息）。

## GPS报告

要发射您的位置数据，首先必须将一部GPS装置连接到通信机上。按下设置为[发送GPS数据]的键，可以手动发射GPS数据。如果经过经销商设置，GPS数据可以以预置的时间间隔自动发射。

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## 集群呼叫（模拟）

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### 进行调度呼叫

- 1 选择想要的区域和信道/组ID。
- 2 按住PTT开关。
- 3 如果发出“PTT Proceed”音，说明可以进行通信。请对着麦克风讲话。松开PTT开关转换到接收状态。
  - 为使接收电台获得最佳的音质，嘴和麦克风之间应保持约3~4厘米的距离。
  - 必要时，经销商可以停用“Proceed PTT”音。详情请向经销商咨询。

### 接收调度呼叫

- 1 收到调度呼叫时，通信机会自动切换到正确的组ID，此时会听到呼叫。
- 2 必要时可重新调整音量。

### 进行电话呼叫

- 1 选择想要的区域和信道/组ID。
- 2 按住PTT开关约1秒钟，确保连接好。
  - 松开PTT开关后，确认有拨号音。
- 3 也可以按下设置为[自动电话]的键，从而自动搜索电话中继站。
  - 显示屏上将出现“AUTO TEL”字样，同时图标闪烁。
  - 当通信机连接至电话线路时，显示屏上出现图标，而通信机进入摘机状态。
- 4 遵照进行DTMF呼叫的有关说明进行呼叫（第9页）。
- 5 当被叫方响应时，请按PTT开关并对着麦克风讲话。松开PTT开关转换到接收状态。
  - 同一时间只能一个人说话。

### 接收电话呼叫

- 1 收到电话呼叫时，通信机会自动切换到正确的组ID，此时会听到呼叫。
  - 收到呼叫时，会响起振铃。
- 2 按住PTT开关讲话，松开开关则接收呼叫。
  - 同一时间只能一个人说话。

### 挂断电话

要结束呼叫，请在通话时按下#键或设置为[电话挂断]的键。

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# DTMF（双音多频）呼叫

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## 手动拨号

- 1 按住PTT开关。
- 2 用麦克风DTMF键盘输入想要的数字。
  - 如果松开PTT开关，即使未发送完数字，发射模式也将终止。
  - 如果经销商已启用键盘自动PTT功能，则无需按PTT开关进行发射；此时只需按下麦克风DTMF键即可进行呼叫。

### ■ 存储并发送

- 1 按下设置为[自动拨号]的键。
- 2 用麦克风DTMF键盘输入最多30个数字。
- 3 按下PTT开关进行呼叫。

## 自动拨号

自动拨号允许您快速呼叫已在通信机上进行编程的DTMF号码。

- 1 按下设置为[自动拨号]的键。
  - 显示屏上将出现自动拨号列表的第一个条目。
- 2 按 $\wedge/\vee$ 键，选择自动拨号列表编号。
  - 也可用麦克风DTMF键盘直接输入一个介于01~32之间的数字。
- 3 按下PTT开关进行呼叫。

### ■ 存储自动拨号条目

- 1 按下设置为[自动拨号编程]的键。
- 2 按 $\wedge/\vee$ 键，选择存储器位置编号。
- 3 按S或✕键，输入列表编号的名称。
- 4 按 $\wedge/\vee$ 键，选择数字。
- 5 按C>键，确认所输入的数字并将光标向右移。
  - 按A或#键可删除错误的数字。按住A或#键可删除所有数字。
- 6 重复步骤4和5，输入完整名称。
- 7 按S或✕键，确认名称并输入编号。
- 8 按 $\wedge/\vee$ 键，选择数字。
  - 也可用麦克风DTMF键盘直接输入数字。
- 9 按S或✕键，确认所输入的数字。
  - 按A或#键可删除错误的数字。按住A或#键可删除所有数字。
- 10 重复步骤8和9，输入完整编号。
- 11 按S或✕键，确认编号并存储条目。

## ■ 删除自动拨号条目

- 1 按下设置为[自动拨号编程]的键。
- 2 按 $\wedge/\vee$ 键，选择存储器位置编号。
- 3 按A或#键。
  - 显示屏上将出现“DELETE”字样。
  - 此外，也可按住A或#键来删除所有条目。
- 4 按S或\*键，确认删除。

## 重拨

- 1 按下设置为[自动拨号]的键。
- 2 按\*键，然后按0键。
  - 如果重拨存储器中没有数据，就会发出错误音提示。
- 3 按下PTT开关进行呼叫。

## 遥毙

本功能用于通信机被盗或丢失时。当通信机接收到包含了遥毙码的呼叫时，通信机即变为不可用。当收到含有恢复码的呼叫时，遥毙才会被取消。

- 通信机被遥毙时，显示屏上将出现“STUN”字样。



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## 高级操作

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### 紧急呼叫

如果通信机对紧急报警功能已进行编程，则可进行紧急呼叫。

- 1 按住设置为[紧急报警]的键。
  - 咨询经销商在通信机进入紧急报警模式前需按住该键的时间长度。
  - 进入紧急报警模式后，通信机将切换到紧急报警信道，并根据经销商的设置情况开始发射。
- 2 要退出紧急报警模式，请再次按[紧急报警]键。
  - 当紧急报警模式完成预设数量的周期后，紧急报警模式会自动终止，通信机将自动返回在进入紧急报警模式之前正在使用的区域和信道。

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注：

- ◆ 经销商可以对通信机进行设置，使其在紧急报警模式下发射时发出某种提示音。
  - ◆ 经销商可以对通信机进行设置，使其在紧急报警操作中像平常一样发出提示音和接收信号，或使扬声器静音。
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### 扰频器（模拟）/加密（数字）

#### ■ 安全（加密）发射

按下设置为[扰频器/加密]的键可以将通信机切换到安全（加密）发射状态。

- 显示屏上将出现  图标。
- 扰频器（语音加密）或加密功能打开后，按下PTT开关可对发出的信号进行加密。

#### ■ 选择扰频器代码或加密密钥

- 1 按下设置为[扰频器/加密代码]的键，进入代码或密钥选择模式。
- 2 按 $\blacktriangle/\blacktriangledown$ 键，增大/减小代码或密钥。
  - 共有16个扰频器代码或加密密钥（1~16）可供选择。

### 信令

#### ■ 亚音频(QT)/数字亚音频(DQT)

经销商可能已将QT或DQT信令预编程在通信机信道上。QT亚音/DQT代码是一种亚音频/代码，使您可以忽略（听不到）来自正在使用同一信道的其他人的呼叫。

#### 操作者可选亚音(OST)

如果某一按键设置为[OST]，则可在各信道上重新对QT/DQT设置进行编程。

- 1 选择想要的信道。
- 2 按住设置为[OST]的键1秒钟。
- 3 按 $\blacktriangle/\blacktriangledown$ 键，选择所需的亚音或代码。
  - 经销商可以设置多达40种亚音/代码。
- 4 利用OST完成操作后，再次按[OST]键关闭OST功能。

## ■ 无线电接入号(RAN)

RAN是一种设计用于数字无线电通信的新信令系统。

当信道设置RAN时，只有在收到包含匹配RAN的呼叫时才会打开静噪。如果在所用的同一信道上进行含有不同RAN的呼叫，则不会听到此呼叫。这样即可忽略（听不到）来自正在使用同一信道的其他人的呼叫。

## ■ 可选信令

经销商也可能为通信机信道编程了若干类型的可选信令。

**2-音信令：**只有当通信机收到包含匹配的2音的呼叫时，2-音信令才会打开静噪。


**DTMF信令：**只有当通信机收到包含匹配的DTMF代码的呼叫时，DTMF信令才会打开静噪。

**FleetSync信令：**请参阅第10页上的“选择呼叫”。

**NXDN ID信令：**NXDN ID是一个可选信令系统，仅可用于数字通信。

## 监听/静噪打开

利用设置为[监听]或[静噪打开]的键可以收听正常操作条件下听不到的微弱信号，以及在所选的信道上没有信号时对音量进行调节。



- 启动监听或静噪打开功能时，显示屏上将出现  图标。

经销商可以将某个键设置为四个监听/静噪打开功能之一：

- **监听：**按下可停用QT、DQT、DTMF、2-音或FleetSync信令。再次按此键将返回正常操作状态。
- **瞬时监听：**按住可停用QT、DQT、DTMF、2-音或FleetSync信令。松开将返回正常操作状态。
- **静噪打开：**按下可监听背景噪音。再次按此键将返回正常操作状态。
- **瞬时静噪打开：**按住可监听背景噪音。松开将返回正常操作状态。

## ■ 静噪级别

如果某个键已被设置为[静噪级别]，则可重新调节通信机的静噪级别：

- 1 按下设置为[静噪级别]的键。
  - 当前的静噪电平出现在显示屏上。
- 2 按  键，选择所需的静噪级别（0~9）。
- 3 按 **S** 或  键，存储新的设置。

## 信号强度指示

信号强度指示显示了接收到的呼叫的强度。无信号时没有图标出现。



强



适中



弱




非常弱

超出服务区域范围时， 会闪烁（仅限NXDN集群）。

## 扩音(PA)


PA系统只能与外部扬声器一起使用。

- 1 按下设置为**[扩音]**的键，启动扩音功能。
    - 显示屏上将出现  图标。
  - 2 按住PTT开关，然后对着麦克风讲话，以便通过外部扬声器发出声音。
- ✓ 再次按**[扩音]**键，退出扩音功能。

## 喇叭提示

当接到与您通信机上设置的可选信令匹配的呼叫时，喇叭提示会引起汽车喇叭或其他外部警报发声。该功能在您离开汽车时可以提醒您接到了呼叫。

要切换喇叭提示的开/关，请按下设置为**[喇叭提示]**的键。

- 启动喇叭提示功能时，显示屏上将出现  图标。

## 外部扬声器

在通过KCT-60向通信机上安装外部扬声器后，按下设置为**[外部扬声器]**的键即可通过外部扬声器输出所有收到的信号。

- 显示屏上将出现  图标。

再次按下**[外部扬声器]**键将仅通过内部扬声器输出所有收到的信号。

## 显示亮度

通过按下设置为**[液晶显示屏亮度]**的键，可以使显示亮度在高、低和关闭之间切换。

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## 后台操作

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### 超时定时器(TOT)

超时定时器可以防止一个用户过久地使用某一信道。如果用户连续发射超过了规定时间，通信机将停止发射并发出警告提示音。此时请松开PTT开关。

### 辅助端口

按下设置为[AUX A]或[AUX B]的键可启动辅助端口。辅助端口用于外部设备。

- 启动AUX A端口时，显示屏上会出现  图标。
- 启动AUX B端口时，显示屏上会出现  图标。

### 繁忙信道锁定(BCL)

在经销商已设置BCL的情况下，如果信道处于使用状态，则无法进行发射。

- 当按下PTT开关时，显示屏上将出现“BUSY”字样。请换用其他信道或者等待该信道空闲。

如果经销商已将通信机设置为“忽略BCL”，则可在信道繁忙时通过先松开随即再次按下PTT开关的方式来忽略BCL。

控制信道搜索 在数字集群信道上，通信机会自动搜索控制信道。

- 搜索控制信道时，天线图标会闪烁，这时不能接收任何信号。

### PTT ID

PTT ID是通信机特有的ID代码，每次按下和/或松开PTT开关时将发送该代码。（PTT ID只能在模拟操作中使用。）

### 压扩器

如果经销商针对某一信道进行了编程，压扩器将从发射的信号中去除多余的噪音，从而提供更清晰的信号。（压扩器仅可用于模拟操作。）

- 为了使压扩器生效，经销商必须同时为发射端和接收端设置压扩器。

### 发射功率

经销商已为每个信道设置了发射功率。发射功率为高或低。