ICOM

BASIC MANUAL

DUAL BAND TRANSCEIVER

IC-2730A
IC-2730E

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Icom Inc.

FOREWORD

Thank you for choosing this fine Icom product. The IC-2730A and IC-2730E VHF/UHF TRANSCEIVER are designed and build with Icom's superior technology and craftsmanship combining traditional analog technologies.
With proper care, this product should provide you with years of trouble-free operation.
We thank you for making your IC-2730A or IC-2730E your transceiver of choice, and hope you agree with Icom's philosophy of "technology first." Many hours or research and development went into the design of your IC-2730A or IC-2730E.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ DANGER!	Personal death, serious injury or an explosion may occur.
⚠ WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	Recommended for optimum use. No risk of personal injury, fire or electric shock.

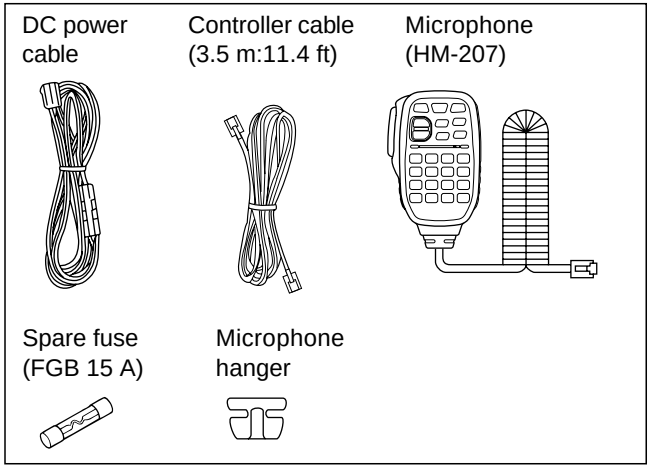
IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL— This instruction manual contains basic operating instructions for the IC-2730A or IC-2730E.

SUPPLIED ACCESSORIES

The following accessories are supplied with the transceiver.



PRECAUTIONS

⚠ **DANGER HIGH VOLTAGE! NEVER** touch an antenna connector during transmission. This may result in an electrical shock or burn.

⚠ **WARNING RF EXPOSURE!** This transceiver emits Radio Frequency (RF) energy. Extreme caution should be observed when operating this transceiver. If you have any questions regarding RF exposure and safety standards please refer to the Federal Communications Commission Office of Engineering and Technology's report on Evaluating Compliance with FCC Guidelines for Human Radio Frequency Electromagnetic Fields (OET Bulletin 65).

⚠ **WARNING! NEVER** operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

⚠ **WARNING! NEVER** operate the transceiver with an earphone or other audio accessories at high volume levels. Continuous high volume operation may cause a ringing in your ears. If you experience ringing, reduce the volume level or discontinue use.

⚠ **WARNING! NEVER** connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

⚠ **WARNING! NEVER** connect the transceiver to a power source of more than 16 V DC such as a 24 V DC. This could cause a fire or damage the transceiver.

⚠ **WARNING! NEVER** reverse the DC power cable polarity when connecting to a power source. This could damage the transceiver.

⚠ **WARNING! NEVER** cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the transceiver may be damaged.

⚠ **WARNING! NEVER** let metal, wire or other objects touch any internal part or connectors on the rear panel of the transceiver. This may result in an electric shock or this could cause a fire or damage the transceiver.

⚠ **WARNING! NEVER** operate or touch the transceiver with wet hands. This may result in an electric shock or may damage the transceiver.

⚠ **WARNING!** Immediately turn OFF the transceiver power and remove the power cable if it emits an abnormal odor, sound or smoke. Contact your Icom dealer or distributor for advice.

CAUTION: NEVER expose the transceiver to rain, snow or any liquids.

PRECAUTIONS (Continued)

CAUTION: NEVER change the internal settings of the transceiver. This may reduce transceiver performance and/or damage to the transceiver.

CAUTION: NEVER place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury.

DO NOT operate the transceiver near unshielded electrical blasting caps or in an explosive atmosphere.

DO NOT push the PTT when not actually desiring to transmit.

DO NOT use harsh solvents such as benzine or alcohol to clean the transceiver, as they will damage the transceiver's surfaces. If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth.

DO NOT use or place the transceiver in areas with temperatures below –10°C (+14°F) or above +60°C (+140°F). Be aware that temperatures on a vehicle's dashboard can exceed +80°C (+176°F) in direct sunlight, resulting in permanent damage to the transceiver if left there for extended periods.

DO NOT place the transceiver in excessively dusty environments or in direct sunlight.

DO NOT place the transceiver against walls or putting anything on top of the transceiver. This will obstruct heat dissipation.

Place the transceiver in a secure place to avoid inadvertent use by children.

During mobile operation, **NEVER** place the transceiver where air bag deployment may be obstructed.

During mobile operation, **DO NOT** place the transceiver where hot or cold air blows directly onto it.

During mobile operation, **DO NOT** operate the transceiver without running the vehicle's engine. When the transceiver's power is ON and your vehicle's engine is OFF, the vehicle's battery will soon become exhausted.

Make sure the transceiver power is OFF before starting the vehicle engine. This will avoid possible damage to the transceiver by ignition voltage spikes.

During maritime mobile operation, keep the transceiver and microphone as far away as possible from the magnetic navigation compass to prevent erroneous indications.

BE CAREFUL! The rear panel will become hot when operating the transceiver continuously for long periods of time.

Use Icom microphones only (supplied or optional). Other manufacturer's microphones have different pin assignments, and may damage the transceiver.

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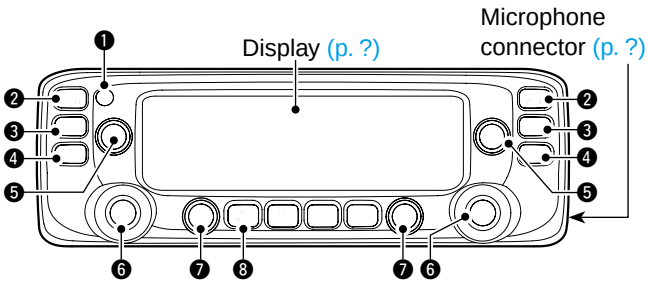
■ Controller — Front panel



For your reference:
The key-touch beep tones on the left band are different than the tones on the right band. The different tones will let you know which band you are operating.

❶ POWER KEY [⏻](🔇)
- ➥ Hold down for 1 second to turn power ON or OFF. (p. ??)
- ➥ Push to mute the audio. (p. ??)

❷ MAIN•BAND KEY [MAIN BAND]
Push to select the MAIN band. (p. ??)

In the VFO mode
Hold down for 1 second to enter the Operating band select mode. (p. ??)

In the Memory mode
Hold down for 1 second to enter the Memory bank select mode. (p. ??)

❸ VFO/MHz TUNING•SCAN KEY [V/MHz SCAN]
- ➥ Push to select the VFO mode.
- ➥ In the VFO mode, push to select 1 MHz tuning. (p. ??)
- ➥ Hold down for 1 second to enter the Scan type select mode. (p. ??)

❹ MEMORY•CALL KEY [MR CALL]
- ➥ Push to select the Memory mode. (p. ??)
- ➥ In the VFO mode, push to select the Weather channel mode.* (p. ??)
  *Weather channels available for USA versions only.
- ➥ Hold down for 1 second to select the Call channel mode. (p. ??)

❺ VOLUME CONTROL (p. ??)

❻ TUNING DIAL [DIAL]

In the VFO mode
Rotate to select the operating frequency. (p. ??)

In the Memory mode
Rotate to select Memory channel. (p. ??)

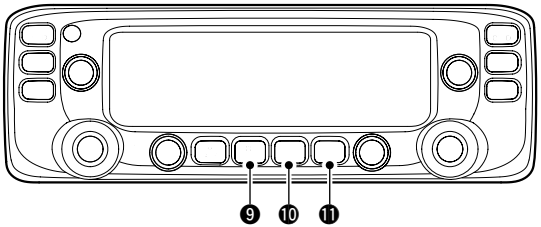
While scanning
Rotate to change the scanning direction. (p. ??)

In the MENU mode
Rotate to select a desired option or value. (p. ??)

❼ SQUELCH CONTROL (p. ??)
Rotate to adjust the squelch level.

❽ MONITOR•DUPLEX KEY [DUP MONI]
- ➥ Push to turn the Monitor function ON and OFF. (p. ??)
- ➥ Push and hold for 1 second to select DUP–, DUP+, or simplex operation. (p. ??)

■ Controller — Display (Continued)



❾ OUTPUT POWER•DTMF KEY [LOW DTMF]

➥ Push to select the transmit output power level. (p. ??)

➥ Hold down for 1 second to turn DTMF memory encoder ON and OFF. (p. ??)

❿ MEMORY WRITE KEY [MW]

In the VFO mode

➥ Push to display the Memory write screen. (p. ??)

➥ Hold down for 1 second to store the operating frequency into a blank Memory channel.

In the Memory mode

➥ Push to display the Memory channel entry screen. (p. ??)

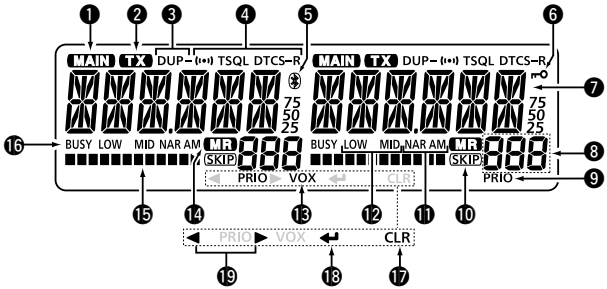
➥ Hold down for 1 second to display the Memory channel setting screen. (p. ??)

⓫ MENU LOCK KEY [MENU ⊶]

➥ Push to enter the MENU mode.

➥ Hold down for 1 second to turn the Lock function ON or OFF.

■ Controller — Display



❶ MAIN ICON

Displayed on the MAIN band. (p. ??)

- You can transmit only on the MAIN band.
- The MENU mode settings are for the MAIN band.

❷ TX ICON (p. ??)

❸ DUPLEX ICON (p. ??)

Displayed while in the duplex mode.

❹ TONE ICONS (p. ??)

❺ Bluetooth® ICON (p. ??)

Displayed when you make a Bluetooth® connection between your transceiver* and a Bluetooth® device.

*Requires an optional UT-133 Bluetooth® UNIT installed.

❻ KEY LOCK ICON (p. ??)

Displayed when a key or controller is locked.

❼ **FREQUENCY READOUT** (p. ??)

❽ **MEMORY CHANNEL NUMBER** (p. ??)
Displays the selected Memory channel number, Memory Bank number, Call channel number, or Menu item name.

❾ **PRIORITY ICON** (p. ??)
Displayed when the Priority watch is turned ON.

❿ **SKIP ICON** (p. ??)
Appears when the displayed Memory channel is specified as a skip channel.

⓫ **MODE ICON** (p. ??)

⓬ **POWER ICON** (p. ??)

⓭ **VOX ICON** (p. ??)
Displayed when the transceiver is connected to the optional VS-3 Bluetooth® HEADSET, and the VOX function is ON.

⓮ **MEMORY MODE ICON** (p. ??)

⓯ **S/RF METER**
- ➥ Displays the relative signal strength of the receive signal. (p. ??)
- ➥ Displays the output power level of the transmit signal. (p. ??)

⓰ **BUSY ICON**
- ➥ Displayed while a signal is being received or the squelch is open. (p. ??)
- ➥ Blinks while the Monitor function is activated. (p. ??)

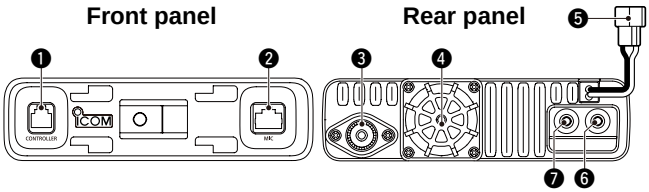
⓱ **CLEAR KEY [CLR]**
In the MENU mode
Push [MENU ⊶] to return to the previous screen. (p. ??)

While entering text
- ➥ Push [MENU ⊶] to delete the selected character, symbol or number. (p. ??)
- ➥ Hold down [MENU ⊶] for 1 second to delete the selected character, symbol or number, and all characters that are located to the right of the cursor. (p. ??)

⓲ **ENTER KEY [↵]**
Push [MW] to go to the next tree level or to set the option or value in the MENU mode. (p. ??)

⓳ **LEFT/RIGHT KEYS [◀]/[▶]**
In the MENU mode
[◀]: Push [MONI DUP] to go back the previous tree level. (p. ??)
[▶]: Push [LOW DTMF] to go to the next tree level. (p. ??)

■ Main unit



❶ CONTROLLER CONNECTOR [CONTROLLER] (p. ??)
Connects to the Controller using the supplied control cable.

❷ MICROPHONE CONNECTOR [MIC]
Plug in the supplied HM-207 microphone or the optional HM-154 microphone.

❸ ANTENNA CONNECTOR (p. ??)
Connect a 50 Ω impedance antenna with a PL-259 connector.
The transceiver has a built-in duplexer, so you can use a 144 and 430 MHz dual-band antenna without needing an external duplexer.

❹ COOLING FAN
The cooling fan for heat dissipation.
You can select the Fan control option in the Menu screen, to automatically start rotating when you begin transmitting, or continuously rotate from power ON. (p. ??)

❺ DC POWER SOCKET [DC 13.8V]
Connect a 13.8 V DC power source through the supplied DC power cable.

❻ EXTERNAL SPEAKER JACK 2 [SP2]
❼ EXTERNAL SPEAKER JACK 1 [SP1]
Connect an 8 ohm external speaker.
- See the following list for the speaker connection and audio output details.

Ex. speaker connection status	Audio output		
	External speaker		Internal speaker
	SP-1	SP-2	
SP-1 and SP-2	Left band	Right band	–
SP-1 only	Both bands	–	–
SP-2 only	–	Right band	Left band

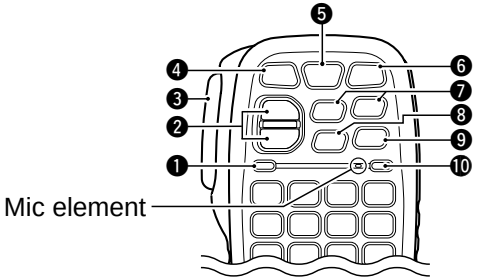
◇ Microphone connector information

Front panel view

1	8 V	+8 V DC output Maximum 10 mA
2	MIC U/D	Frequency Up/Down UP: Ground DN: Ground through 470 Ω
3	M8V SW	HM-207 connection Grounds when the HM-207 is connected.
4	PTT	PTT input Ground for transmission
5	MIC E	Microphone ground
6	MIC	Microphone input
7	GND	PTT ground
8	DATA IN	Inputs HM-207 data when the HM-207 is connected.

■ About the HM-207 microphone

With the HM-207, you can input numbers for frequency or Memory channel settings, and adjust the audio volume and squelch level.



❶ LED 1
Lights red while transmitting by pushing [PTT].

❷ [▲]/[▼] (UP/DOWN) KEYS
- ➥ Push to change the operating frequency or Memory channel.
- ➥ Hold down to continuously change the frequency or Memory channel.

❸ [PTT] SWITCH
Hold down to transmit, release to receive.

❹ [VFO/MR ⊶] KEY
- ➥ Push to toggle between the VFO and Memory modes.
- ➥ Hold down for 1 second to turn the Lock function ON or OFF. (p. ??)

❺ [HOME CALL] KEY
- ➥ Push to select the Home channel.
- ➥ Hold down for 1 second to turn the Call channel mode ON or OFF.

❻ [MAIN DUAL] KEY
Push to toggle between the MAIN and SUB bands.

❼ [F-1] KEY
Push to activate the preset function of the [F-1] key.
(Default: During RX/Standby: [BAND/BANK]
During TX: [T-CALL])

[F-2] KEY
Push to activate the preset function of the [F-2] key.
(Default: During RX/Standby: [Monitor]
During TX: [---])

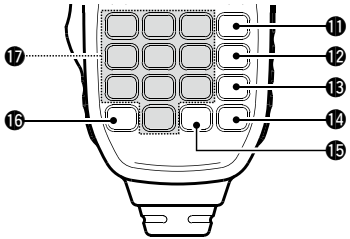
You can assign a desired function in the MENU mode. (p. ??, ??)

❽ [CLR] KEY
In the Menu screen or Quick Menu window, push to return to the standby screen.

❾ [ENT] KEY
After entering a VFO frequency or memory channel number, push to set.

❿ LED 2
Lights green when transceiver's power is ON.

■ Microphone (HM-207) (Continued)



⓫ [VOL▲ A] KEY
- ➥ Push to increase the audio output level.
- ➥ When entering a DTMF code, push to input ‘A.’

⓬ [VOL▼ B] KEY
- ➥ Push to decrease the audio output level.
- ➥ When entering a DTMF code, push to input ‘B.’

⓭ [SQL▲ C] KEY
- ➥ Push to increase the squelch level.
- ➥ When entering a DTMF code, push to input ‘C.’

⓮ [SQL▼ D] KEY
- ➥ Push to decrease the squelch level.
- ➥ When entering a DTMF code, push to input ‘D.’

⓯ [# CE] KEY
- ➥ In the frequency entry screen, push to delete a number.
- ➥ When entering a DTMF code, push to input ‘#.’

⓰ [∗ .] KEY
- ➥ In the frequency entry screen, push to input a ‘.’ (decimal point).
- ➥ When entering a DTMF code, push to input ‘∗.’

⓱ [0] to [9] KEYS
In the frequency entry window or while entering a DTMF code, push to input ‘0’ through ‘9.’

◇ Setting frequency and Memory channel

[Example for setting the frequency]
First, push [VFO/MR ⊶] to select the VFO mode.

To enter 435.680 MHz:
➥ Push [4], [3], [5], [6], [8], [0], then [ENT].

To change 435.680 MHz to 435.540 MHz:
➥ Push [•], [5], [4], [0], then [ENT].

To enter 433.000 MHz:
➥ Push [4], [3], [3], then [ENT].

[Example for setting the Memory channel]
To select the Memory channel ‘5’:
First, push [VFO/MR ⊶] to select the Memory mode, and then push [5] then [ENT].

[Example for setting the Call channel]
To select the ‘0’ or ‘1’ Call channel:
First, hold down [HOME CALL] for 1 second to select the Call channel mode, and then push [▲] or [▼].

The following functions can be set to [F-1] and [F-2] to use during receive or in stand-by, or during TX.

During RX/Standby:

Function	Description
---	No function
Monitor ([F2] key: Default)	Push to open or close the squelch.
MR (000 CH)	In the Memory mode, push to select Memory channel 000.
MR (001 CH)	In the Memory mode, push to select Memory channel 001.
BAND/BANK ([F1] key: Default)	Push to select an operating band. In the VFO mode, push to change the operating band, and in the Memory Bank mode, push to select Bank A to J, or OFF. • Only the programmed bank appears.
SCAN	Push to start a scan. While scanning, push to stop the scan.
Temporary Skip	Push to set the frequency to be skipped during scanning. The selected frequencies are temporarily skipped for faster scanning.
MODE	Push to change the operating mode.
LOW	Push to change the transmit power level.
DUP	Push to turn the Duplex mode ON or OFF, and the shift direction to DUP+ or DUP–.
PRIO	Push to turn the Priority watch ON or OFF.
TONE/DSQL	Push to toggle between tone types.
MW	In the VFO mode, hold down for 1 second to save the frequency displayed in the MAIN band into a Memory channel. • The frequency is automatically saved in a blank channel.
MUTE	Push to turn the Mute function ON or OFF.
DTMF DIRECT TX	Push to display the DTMF code direct entry mode screen.
T-CALL	Push to transmit a 1750 Hz tone.

During TX:

Function	Description
--- ([F2] key: Default)	No function
LOW	Push to change the transmit power level.
Voice TX	Push to transmit the voice audio recorded on the SD card once. Hold down for 1 second to repeatedly transmit the voice audio. • To make a repeat transmission, [PTT] must be released.
T-CALL ([F1] key: Default)	Push to transmit a 1750 Hz tone.

2 MENU MODE

The Menu mode is used to program infrequently changed values or function settings.
The Menu mode items are activated on the Main band.
In addition to this page, see pages ?? through ?? for details of each item's options and their default value.

For your reference: The Menu system is constructed in a tree structure. You may go to the next tree level, or go back a level, depending on the selected item.

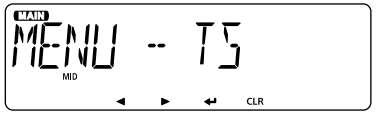
■ Selecting the Menu item

Example: Set the tuning step

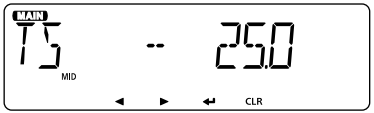
① Push [MAIN BAND]Ⓢ of the band that the tuning step is set.
- Selects the Main band.

② Push [MENU 🔑]Ⓒ.
- Enters the Menu mode.

③ Rotate [DIAL]Ⓢ to select the "MENU-TS" (Tuning step) item.



④ Push [↵]Ⓓ.
- Goes to the next tree level.



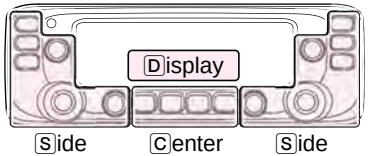
- Pushing [▶]Ⓓ also goes to the next tree level.

⑤ Rotate [DIAL]Ⓢ to select the desired value.
Selectable values:
5 kHz, 6.25 kHz, 8.33 kHz*, 10 kHz, 12.5 kHz, 15 kHz, 20 kHz, 25 kHz, 30 kHz, 50 kHz or Auto*.
*Appears only when the AIR band is selected.

⑥ Push [↵]Ⓓ.
- Sets the selected value, and goes back to the previous tree level.
- Pushing [◀]Ⓓ also goes back to the previous tree level.

⑦ Push [MAIN BAND]Ⓢ.
- Exits the Menu mode.
- Pushing [V/MHz SCAN]Ⓢ or [MR CALL]Ⓢ also exits the Menu mode.

To return to the default setting:
Hold down [MR CALL] after step ④ operation.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

■ Setting items

◇ Menu mode

See pages ?? to ?? for details of the Menu mode items.

Tone Sets a channel tone type.	MENU - TONE
Offset Freq Sets the frequency offset for duplex (repeater) operation.	MENU - OFFSET
Repeater Tone Sets a tone frequency used to access the repeaters.	MENU - R TONE
TSQL Freq Sets a tone frequency for the Tone squelch function used in the FM mode.	MENU - C TONE
DTCS Code Sets a DTCS (both encoder/decoder) code for DTCS squelch function used in the FM mode.	MENU - CODE
DTCS Polarity Sets the DTCS polarity for the DTCS squelch function.	MENU - DTCS-P
Tuning step Sets the tuning step to change the frequency by rotating [DIAL] in the selected step.	MENU - TS
LCD Backlight Sets the backlight brightness level.	MENU - LIGHT
Priority scan Starts or stops the Priority scan.	MENU - PRIO
Pause Timer Sets the scan pause time. When receiving signals, the scan pauses according to the scan pause timer.	MENU - PAUSE
Resume Timer Sets the scan resume time from a pause after the received signal disappears.	MENU - RESUME
Weather alert Sets to sound a beep when a weather alert signal is detected on a preset weather channel.	MENU - WX-ALT
Operating mode Sets the operating mode.	MENU - MODE
Home CH Sets the often-used frequency as the Home channel in the VFO mode or Memory mode.	MENU - HOMECH
EX Menu mode Enters the EX Menu mode.	MENU - EXMENU

◇ EX Menu mode

See the Icom website for details of the EX Menu mode items.

Mode and Tuning step items Sets the operating mode and the tuning step.	EXMEN- MODTS
Operating mode* Sets the operating mode.	MODTS- MODE
Tuning step* Sets the tuning step to change the frequency in the selected step when rotating [DIAL].	MODTS- TS

■ Setting items
◇ EX Menu mode (Continued)

DUP/TONE items EXMEN-- DUPT

Settings to access repeaters.

Tone* DUPT -- TONE
Sets a channel tone type.

Offset Freq* DUPT -- OFFSET
Sets the frequency offset for duplex (repeater) operation.

Repeater Tone* DUPT -- R TONE
Sets a tone frequency used to access the repeaters.

TSQL Freq* DUPT -- C TONE
Sets a tone frequency for the Tone squelch function used in the FM mode.

Tone Burst DUPT -- TBURST
Turns the Tone Burst function ON or OFF.
This function is used to suppress the squelch tail noise heard from the transceiver's speaker.

DTCS Code* DUPT -- CODE
Sets a DTCS (both encoder/decoder) code for DTCS squelch function used in the FM mode.

DTCS Polarity* DUPT -- DTCS--P
Sets the DTCS polarity for the DTCS squelch function.

Scan items EXMEN-- SCAN

Set scan options.

Priority scan* SCAN -- PRIO
Starts or stops the Priority scan.

Pause Timer* SCAN -- PAUSE
Selects the scan pause time. When receiving signals, the scan pauses according to the scan pause timer.

Resume Timer* SCAN -- RESUME
Selects the scan resume time from a pause after the received signal disappears.

Temporary Skip Timer SCAN -- TEMP
Selects the Temporary Skip Time. When the time is set, specified frequencies are skipped for this period during a scan.

Weather alert SCAN -- WX--ALT
Sets to sound a beep when a weather alert signal is detected on a preset weather channel.

Program Skip SCAN -- P--SKIP
Turns the Program Skip Scan function ON or OFF for a VFO mode scan.

Bank Link SCAN -- B--LINK
Selects banks to be scanned during a Bank Link Scan.

Program Scan Edge SCAN -- P--EDGE
Sets the frequency ranges for the program scan.

Program Scan Edge PEDGE-- PROG00
Sets the frequency range for the program scan.

Name P00 -- NAME
Enters a name into each Program scan edge.

Freq Low P00 -- FREQ L
Set the lower edge frequency for the Program scan edge.

Freq High P00 -- FREQ H
Set the higher edge frequency for the Program scan edge.

Program Link SCAN - P-LINK
Sets the link function for the program scan edge channels.

Program Scan Link channels PLINK- HAM
Displays a maximum of 10 Program Scan Link channels.

Link LINK0- LINK
Displays the Program Scan channels that are scanned during the Program Link scan.

Name LINK0- NAME
Enters a name into each Program Scan channel.

Add LINK0- ADD
Adds the Program Scan channel that is scanned during the Program Link scan.

Clear LINK0- CLEAR
Deletes the Program Scan channel that is scanned during the Program Link scan.

Function items EXMEN- FUNC

Sets various function's options.

Squelch/ATT Select FUNC - SQLTYP
Sets to use the S-Meter Squelch or the Attenuator function for the [SQL] control.

Squelch Delay FUNC - SQL-DL
Sets the squelch delay to short or long until the squelch opens.

Fan Control FUNC - FAN
Sets the cooling fan control condition.

Dial Speed-UP FUNC - DIAL S
Sets to automatically speeds up the tuning dial speed when rapidly rotating [DIAL].

Auto Repeater* FUNC - AUTORP
Turns the Auto Repeater function ON or OFF.

Remote MIC Key FUNC - RMTMIC
Selects the key function for [F-1] or [F-2] on the supplied HM-207 remote-control microphone.

During RX/Standby RMMIC- RX
Selects the key function to be used while receiving or in the standby mode.

During TX RMMIC- TX
Selects the key function to be used while transmitting.

Up/Down MIC Key FUNC - UDMIC
Selects the key function for [UP] or [DN] on the optional HM-154 hand microphone.

During RX/Standby UDMIC- RX
Selects the key function to be used while receiving or in the standby mode.

During TX UDMIC- TX
Selects the key function to be used while transmitting.

One-Touch PTT FUNC - PTT
Turns the One-Touch PTT function ON or OFF.

PTT Lock FUNC - PTT LK
Turns the PTT Lock function ON or OFF.

Busy Lockout FUNC - LK OUT
Turns the Busy Lockout function ON or OFF.

Time-Out Timer FUNC - TOT
Selects the Time-Out Timer time options.

Active Band FUNC - ACTIVE
Allows continuous frequency selection across all bands by rotating [DIAL].

■ Setting items
◇ EX Menu mode

Function items (Continued) EXMEN- BT SET

MIC Gain FUNC - MIC G
Sets the microphone sensitivity to suit your preference.

Auto Power OFF FUNC - AP OFF
Sets to automatically turn OFF the transceiver after a preset time period of inactivity.

CI-V FUNC - CI-V

CI-V Address CI-V - CIVADR
Sets the transceiver's unique CI-V hexadecimal address code.

CI-V Baud Rate CI-V - CIVBAU
Sets the CI-V code transfer speed.

CI-V Transceive CI-V - CIVTRN
Turns the CI-V Transceive function ON or OFF.

IF Exchange FUNC - IF-EXC
Sets to exchange the Intermediate Frequency to prevent interference.

Display items EXMEN- DISP

Sets the Display options.

LCD Backlight* DISP - LIGHT
Sets the backlight brightness level.

Auto Dimmer DISP - AT-DIM
Sets the Auto dimmer function, and the dimmer level.

Auto Dimmer Timer DISP - DIM TM
Sets the backlight lighting time period.

LCD Contrast DISP - CONT
Sets the contrast level of the LCD.

Opening Message DISP - OPNMSG
Sets whether or not to display "ICOM" and power source voltage at power ON.

Memory Name DISP - NAME
Sets to display either the operating frequency or the channel name for the Memory mode.

AIR Band Display DISP - AIR
Sets the display type of the VHF AIR band frequency.

Sound items EXMEN- SOUND5

Sets the Sound options.

Beep Level SOUND- BEEPLV
Sets the beep output level.

Key-Touch Beep SOUND- KEY B
Sets to sound a beep when you push a key.
• The beep tones are different between on the left band and the right band.

Home CH Beep SOUND- HOME B
Sets to sound a beep when you select the Home CH.

Band Edge Beep SOUND- EDGE B
Sets to sound a beep when you tune into or out of the AIR, VHF and UHF band's frequency range by rotating [DIAL].

Scan Stop Beep SOUND- STOP B
Sets to sound a beep when a scan stops by receiving a signal.

Sub Band Mute SOUND- SUBMUT
Sets to mute the SUB band audio signal while receiving on the MAIN band.

Home CH items* EXMEN- HOMECH

Sets the often-used frequency as the Home channel in the VFO mode or Memory mode.

Setting HOME - SETFRQ / HOME - SET MR

Sets a displayed frequency as a Home channel.

Clear HOME - CLEAR

Cancels the current Home channel.
This item does not appear when no Home channel is set.

Bluetooth® items EXMEN- BT SET

Sets the Bluetooth® options.

Bluetooth® BTSET- BT

Turns the Bluetooth® function ON or OFF.

Auto Connect BTSET- AT CON

Sets to automatically connect to the paired Bluetooth® device when its device is ON.

Bluetooth® connection BTSET- CONNEC

Displays the connected Bluetooth® device.

Bluetooth® disconnection BTSET- DISCON

Disconnects from the connected Bluetooth® device without cancelling the pairing.

Paring/Connect BTSET- PAIR

Searches for the Bluetooth® device to connect, or view the paired Bluetooth® devices in the list.

Headset Set BTSET- HS SET

AF Output HSSET- AF OUT

Selects the AF output option for when you use the Bluetooth® headset.

VOX HSSET- VOX

VOX VOX - VOX

Sets the VOX (Voice Operated Transmission) function for when you use the Bluetooth® headset.

VOX Level VOX - VOX LV

Set the VOX gain level.
Higher values make the VOX function more sensitive to your voice.

VOX Delay VOX - VOXDLY

Sets the VOX Delay time for the transmitter stays ON after you stop speaking before the VOX switches to receive.

VOX Time-Out Timer VOX - VOXTOT

Sets the VOX Time-Out Timer to prevent an accidental prolonged transmission.

Icom Headset HSSET- ICOMHS

Sets to use the optional Icom Bluetooth® headset (VS-3).

Power Save ICOMH- PoSAVE

Sets the Power save function to prolong the headset battery.

One-Touch PTT ICOMH- PTT

Sets the One-Touch PTT function to toggle between transmission and reception by pushing [PTT].

PTT Beep ICOMH- PTT B

Sets to sound a beep when you push [PTT].

Custom Key Beep ICOMH- CUST B

Sets to sound a beep when you push the custom key ([PLAY]/[FWD]/[RWD]).

Custom Key ICOMH- CUST K

Sets the key function of the custom key ([PLAY]/[FWD]/[RWD]).

Initialize Bluetooth Device BTSET- INITBT

Selects to reset the optional UT-133 Bluetooth® unit.

■ Setting items
◇ EX Menu mode (Continued)

Other items	EXMEN- MOIITS
Set other options.	
INFORMATION	OTHER- INFO
Voltage	INFO - VOLT
Displays the voltage of the external DC power source.	
Version	INFO - VER
Displays the transceiver's firmware version number. • The Bluetooth unit version is also displayed when the optional UT-133 Bluetooth® unit is installed.	
CLONE	OTHER- CLONE
Sets the clone mode.	
Clone Mode	CLONE- CLONE
Sets the transceiver as a Sub transceiver to receive data from a Master transceiver.	
Clone Master Mode	CLONE- MASTER
Sets the transceiver as a Master transceiver to send data to a Sub transceiver.	
Reset	OTHER- RESET
Partial Reset	RESET- PART
Returns all settings to their defaults, without clearing the memory contents.	
All Reset	RESET- ALL
Clears all programming and memories, and return all settings to their defaults.	

■ Menu items

Tone MENU - TONE **(Default: OFF)**

Select a desired channel tone type.

- OFF: The function is OFF.
- TONE: The selected subaudible tone is superimposed on your normal signal.
  Subaudible tone setting: "MENU-R TONE"
- TSQL ("((•))" appears):
  Enables the tone squelch with the pocket beep function.
- TSQL: Enables the tone squelch function.
  When you transmit, the selected tone frequency is superimposed on your normal signal.
  The tone squelch opens only when you receive a signal that includes a matching tone frequency.
  Tone frequency setting: "MENU-C TONE"
- DTCS ("((•))" appears):
  Enables the DTCS squelch with the pocket beep function.
- DTCS: Enables the DTCS squelch function.
  When you transmit, the selected DTCS code is superimposed on your normal signal.
  The DTCS squelch opens only when you receive a signal that includes a matching DTCS code.
  DTCS code setting: "MENU-CODE"
  "MENU-DTCS-P"

- TSQL-R: Enables the reverse tone squelch function.
  When you transmit, the selected CTCSS tone is not superimposed on your normal signal.
  The tone squelch opens only when you receive a signal that includes a non-matching subaudible tone.
- DTCS-R: Enables the reverse DTCS squelch function.
  When you transmit, the selected DTCS code is not superimposed on your normal signal.
  The DTCS squelch opens only when you receive a signal that includes a non-matching DTCS code.
  DTCS code setting: “MENU-CODE”
  “MENU-DTCS-P”
- DTCS(T): When you transmit, the selected DTCS code is superimposed on your normal signal.
  When you receive, the function is OFF.
  DTCS code setting: “MENU-CODE”
  “MENU-DTCS-P”
- TONE(T)/DTCS(R):
  When you transmit, the selected subaudible tone is superimposed on your normal signal.
  When you receive, the DTCS squelch opens only for a signal that includes a matching DTCS code.
  Subaudible tone setting: “MENU-R TONE”
  DTCS code setting: “MENU-CODE”
  “MENU-DTCS-P”
- DTCS(T)/TSQL(R):
  When you transmit, the selected DTCS code is superimposed on your normal signal.
  The tone squelch opens only when you receive a signal that includes a matching tone frequency.
  DTCS code setting: “MENU-CODE”
  “MENU-DTCS-P”
  Tone frequency setting: “MENU-C TONE”
- TONE(T)/TSQL(R):
  When you transmit, the selected subaudible tone is superimposed on your normal signal.
  The tone squelch opens only when you receive a signal that includes a matching tone frequency.
  Subaudible tone setting: “MENU-R TONE”
  Tone frequency setting: “MENU-C TONE”

Offset frequency MENU - OFFSET **(Default: 0.600.00*)**

Set the frequency offset for duplex (repeater) operation to between 0 and 59.99500 MHz.

- The duplex shift direction (DUP–/DUP+) is set in the duplex setting screen that is displayed when you hold down [MONI DUP] for 1 second in the VFO mode. (p. ??)

*The default value may differ, depending on the frequency band (selected as the Main band before entering the Menu mode) and the transceiver version.

■ Menu items (Continued)

Repeater Tone MENU - R TONE **(Default: 88.5)**

Select a CTCSS tone frequency for repeater access and other functions. 50 tone frequencies (67.0~254.1 Hz) are selectable.

TSQL Freq MENU - C TONE **(Default: 88.5)**

Select a CTCSS tone frequency for the tone squelch or the Pocket beep function.
50 frequencies (67.0~254.1 Hz) are selectable.

• Selectable repeater tone/tone squelch frequencies
(Unit: Hz)

67.0	85.4	107.2	136.5	165.5	186.2	210.7	254.1
69.3	88.5	110.9	141.3	167.9	189.9	218.1	
71.9	91.5	114.8	146.2	171.3	192.8	225.7	
74.4	94.8	118.8	151.4	173.8	196.6	229.1	
77.0	97.4	123.0	156.7	177.3	199.5	233.6	
79.7	100.0	127.3	159.8	179.9	203.5	241.8	
82.5	103.5	131.8	162.2	183.5	206.5	250.3	

DTCS Code MENU - CODE **(Default: 023)**

Select a DTCS (both encoder/decoder) code for the DTCS squelch. A total of 104 codes (023~754) are selectable.

• Selectable DTCS codes

023	054	125	165	245	274	356	445	506	627	732
025	065	131	172	246	306	364	446	516	631	734
026	071	132	174	251	311	365	452	523	632	743
031	072	134	205	252	315	371	454	526	654	754
032	073	143	212	255	325	411	455	532	662	
036	074	145	223	261	331	412	462	546	664	
043	114	152	225	263	332	413	464	565	703	
047	115	155	226	265	343	423	465	606	712	
051	116	156	243	266	346	431	466	612	723	
053	122	162	244	271	351	432	503	624	731	

DTCS Polarity MENU - DTCS-P **(Default: BOTH N)**

Select the DTCS polarity to use for transmitting and receiving.
• BOTH N: Normal polarity is used for both TX and RX.
• TN-RR: Normal polarity is used for TX.
Reverse polarity is used for RX.
• TR-RN: Reverse polarity is used for TX
Normal polarity is used for RX.
• BOTH R: Reverse polarity is used for both TX and RX.

Tuning step MENU - TS **(Default: 25.0)**

When you rotate [DIAL] in the VFO mode, the frequency changes in the selected tuning step.
The selected tuning step is also used for a VFO mode scan.

Tuning steps (kHz):
5, 6.25, 8.33*, 10, 12.5, 15, 20, 25, 30, 50 and Auto*
*Appears only when the AIR band is selected.

In the AIR band, you can select only “8.33k”, “25k” and “Auto.”

LCD Backlight MENU - LIGHT **(Default: 4)**

Set the backlight brightness level to between 1 (Dark) and 4 (Bright).

Priority scan MENU - PRIO **(Default: OFF)**

Starts or stops the Priority scan.
- OFF: Stops the Priority scan.
- ON: Starts the Priority scan.
- BELL: Starts the Priority scan.
  When a signal is received on the priority channel, the “((•))” icon is displayed on the screen.

Pause Timer MENU - PAUSE **(Default: 10SEC)**

Select the Scan Pause time.
- 2SEC to 20SEC: When a signal is received, the scan pauses for 2 to 20 seconds (set in 2 second steps).
- HOLD: The scan pauses on a received signal until the signal disappears.

Resume Timer MENU - RESUME **(Default: 2SEC)**

Select the Scan Resume time.
When a received signal disappears, the scan resumes according to this setting.
- 0SEC: The scan resumes immediately after the signal disappears.
- 1SEC to 5SEC: The scan resumes 1 to 5 seconds after the signal disappears.
- HOLD: The scan remains paused for the “Pause Timer” setting, even if the signal disappears.

NOTE:
- Rotate [DIAL] to resume the scan.
- The Resume Timer must be set shorter than the Pause Timer, otherwise this timer does not work properly.

■ Menu items (Continued)

Weather alert MENU - WX-ALT **(Default: OFF)**

(Appears only for the U.S.A. version.)
Turn the Weather Alert function ON or OFF.
A NOAA (National Oceanographic and Atmospheric Administration) broadcast station transmits a weather alert tone before any important weather information.
This function detects the weather alert tone on weather channels.

- OFF: The function is OFF.
- ON: Monitors the selected weather channel every 5 seconds.

Operating mode MENU - MODE **(Default: FM)**

The transceiver has a total of five operating modes; FM, FM-N, AM and AM-N.
Operating modes are determined by the modulation of the radio signals.

- In the 144 and 430 MHz bands, select FM or FM-N.
- In the AIR band (118.000 MHz to 136.99166 MHz), select AM or AM-N.

While in the FM-N mode, the TX modulation is automatically set to narrow (approximately ±2.5 kHz)

Home CH HOME - SETFRQ, HOME - SET MR

When you set the often-used frequency as the Home channel in the transceiver's VFO or Memory mode, that frequency is selected by pushing [HOME CALL] of the supplied microphone in each mode.

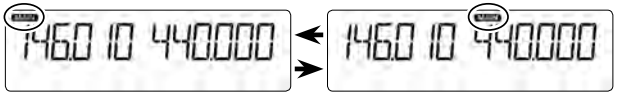
- SET.FREQ: Set the selected VFO frequency as the Home channel.
- SET MR: Set the selected Memory channel frequency as the Home channel.

EX Menu mode MENU - EXMENU

Enters the EX Menu mode.
See pages ?? to ?? for the items that you can set in the EX Menu mode.
See the Icom website for details of the EX Menu mode items.

■ Selecting the MAIN band

➥ Push [MAIN BAND]Ⓢ on the desired frequency band to set it as the MAIN band.



- "MAIN" appears on the MAIN band.
- You can transmit on only the MAIN band.

■ Selecting the Mode

- **You can select on either the left or right band, regardless of the MAIN band.**

◇ VFO mode

The VFO mode is used to set the operating frequency.

➥ Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.
- Rotate [DIAL]Ⓢ to select an operating frequency.

◇ Memory mode

The Memory mode is used to operate on Memory channels.

➥ Push [MR CALL]Ⓢ.
- Selects the Memory mode.
- Rotate [DIAL]Ⓢ to select a Memory channel.

◇ Call channel mode

The Call channel mode is used to operate on the Call channels.

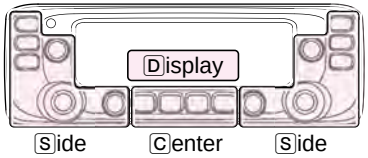
➥ Hold down [MR CALL]Ⓢ for 1 second.
- Selects the Call channel mode.
- Rotating [DIAL]Ⓢ selects a Call channel.

◇ Weather channel mode

(Selectable in only the U.S.A. version transceivers)

The Weather channel mode is used to hear weather broadcasts from the NOAA (National Oceanographic and Atmospheric Administration).

➥ In the Memory mode, push [MR CALL]Ⓢ.
- Selects the Weather channel mode.
- Rotating [DIAL]Ⓢ selects a Weather channel.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

■ Selecting the operating band

The transceiver can receive the AIR, 144 MHz or 430 MHz bands.
You can transmit on only the 144 MHz and 430 MHz bands.

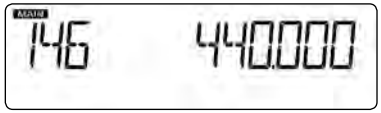
Operating band	Frequency range
AIR	118.000 MHz to 136.99166 MHz
144 MHz	137.000 MHz to 174.000 MHz
430 MHz	375.000 MHz to 550.000 MHz

The ranges may differ, depending on the transceiver's version.

- **You can select on either the left or right band, regardless of the MAIN band setting.**
- **This section describes the MAIN band operation.**

① Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.

② Hold down [MAIN BAND]Ⓢ for 1 second.
- Enters the Operating band select mode.



③ Rotate [DIAL]Ⓢ to select the desired operating band.
④ Push [MAIN BAND]Ⓢ.
- Returns to the stand-by mode.

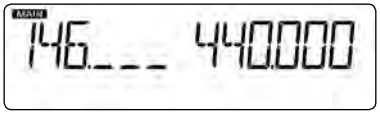
■ Setting a frequency

◇ Selecting the 1 MHz tuning

- **You can select on either the left or right band, regardless of the MAIN band setting.**
- **This section describes the MAIN band operation.**

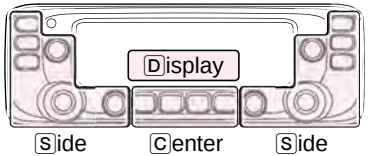
① Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.

② Push [V/MHz SCAN]Ⓢ.
- Selects the 1 MHz tuning.



③ Rotate [DIAL]Ⓢ.
- The frequency changes in 1 MHz steps.

④ Push [V/MHz SCAN]Ⓢ.
- Cancels the 1 MHz tuning.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

◇ Selecting a tuning step

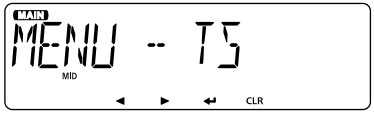
Rotating [DIAL]Ⓢ changes the frequency in the selected tuning steps.
The VFO scan uses this step to search for a signal. (p. ??)

① Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.

② Push [MAIN BAND]Ⓢ on the band that the tuning step is set to.

③ Push [MENU ⊶]Ⓒ.
- Enters the MENU mode.

④ Rotate [DIAL]Ⓢ to select "TS" (Tuning step).



⑤ Push [↵]Ⓓ.
- Goes to the next tree level.

⑥ Rotate [DIAL]Ⓢ to select the desired value.
Selectable values:
5 kHz, 6.25 kHz, 8.33 kHz*, 10 kHz, 12.5 kHz, 15 kHz, 20 kHz, 25 kHz, 30 kHz, 50 kHz or Auto*.
*Appears only when the AIR band is selected.

⑦ Push [↵]Ⓓ.
- Sets the selected value, and goes back to the previous tree level.

⑧ Push [MAIN BAND]Ⓢ.
- Exits the MENU mode.

■ Setting audio volume and squelch level

- **You can set on either the left or right band, regardless of the MAIN band setting.**

① Rotate [VOL]Ⓢ to adjust the audio level.
- You can change the beep level in the "BEEPLV" (Beep Level) item of the MENU mode. (p. ??)
(MENU-EXMENU > EXMEN-SOUNDS > **SOUND-BEEPLV**)

② Rotate [SQL]Ⓢ until the noise and the "BUSY" icon just disappear.
- Rotating [SQL]Ⓢ clockwise makes the squelch tight. Tight squelch is for strong signals.
- When rotating [SQL]Ⓢ clockwise beyond the center position, [SQL]Ⓢ can be used as 'S-meter Squelch' or 'Attenuator.' Select the [SQL]Ⓢ option in the MENU mode. (p. ??)

■ Lock function

You can use the Lock function to prevent accidental frequency changes and unnecessary function access.

➥ Hold down [MENU ⊶]Ⓒ for 1 second.
- "⊶" appears.
- Hold down [MENU ⊶]Ⓒ again to cancel the function.
- You can still use [⏻], [MONI DUP]Ⓒ, [PTT], [MAIN BAND]Ⓢ (only the MAIN band selection), [MENU ⊶]Ⓢ (only the Lock function canceling), [SQL]Ⓢ, and [VOL]Ⓢ while the Lock function is ON.

■ Transmitting

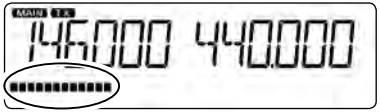
Before transmitting, monitor the operating frequency to see if other stations are on the frequency.

CAUTION: Transmitting without an antenna may damage the transceiver.

- **You can transmit on only the 144 MHz and 430 MHz bands, and on the MAIN band.**
- **The transmit output power level can be individually set for the left and right bands, when it is selected as the MAIN band.**

① Push [LOW DTMF]Ⓒ to select the output power level.
Selectable levels: Low, Mid, and High
- Lower output power during short-range communications may reduce the possibility of interference to other stations, and will conserve battery power.
- The power icon disappears when high power is selected.

② Hold down [PTT] to transmit, and speak at your normal voice level.
- The S/RF meter displays the output power level.



③ Release [PTT] to receive.

■ Selecting the operating mode

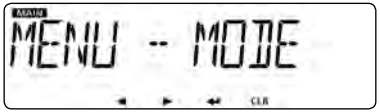
The transceiver has a total of four operating modes, AM, AM-N, FM and FM-N.
The FM mode is set as a default.

- **You can select on either the left or right band, regardless of the MAIN band setting.**
- **The setting is for the MAIN band.**

① Push [MAIN BAND]Ⓢ of the band that the operating mode is set to.

② Push [MENU ⊶]Ⓒ.
- Enters the MENU mode.

③ Rotate [DIAL]Ⓢ to select "MENU-MODE" (Operating mode).



④ Push [↵]Ⓓ.
- Goes to the next tree level.

⑤ Rotate [DIAL]Ⓢ to select the desired operating mode.
Selectable options:
In the 144 or 430 MHz band: FM or FM-N
In the AIR band: AM or AM-N
- While in the FM-N mode, the TX modulation is automatically set to approximately ±2.5 kHz.

⑥ Push [↵]Ⓓ.
- Sets the selected option, and goes back to the previous tree level.

⑦ Push [MAIN BAND]Ⓢ.
- Exits the MENU mode.

■ Audio mute function

This function temporarily mutes the audio without disturbing the volume setting.
This function is for both the MAIN and SUB bands.

➥ Push [⏻](🔇) to mute audio signals.
- "MUTE" appear on the left and right bands.
- Push [⏻](🔇) (or any other key) to cancel the function.

■ Monitor function

This function is used to listen to weak signals without disturbing the squelch setting.
This function is for the MAIN band.

➥ Push [MONI DUP]Ⓒ to open the squelch.
- "BUSY" blinks when the squelch is open.
- Push [MONI DUP]Ⓒ again to cancel the function.

While monitoring

■ Setting the microphone gain level

Set the microphone gain level in the MENU mode.
- **You can set on either the left or right band, regardless of the MAIN band setting.**
- **This section describes the MAIN band operation.**

① Push [MENU 🔑]Ⓒ.
- Enters the MENU mode.

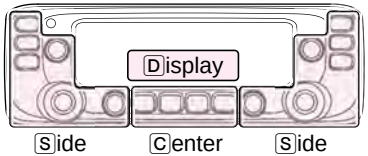
② Rotate [DIAL]Ⓢ to select "MIC G" (MIC Gain).
(MENU-EXMENU > EXMEN-FUNC > **FUNC-MIC G**)

③ Push [↵]Ⓓ.
- Goes to the next tree level.

④ Rotate [DIAL]Ⓢ to adjust the microphone gain level.
- Set higher values to make the microphone more sensitive to your voice.

⑤ Push [↵]Ⓓ.
- Sets the selected value, and goes back to the previous tree level.

⑥ Push [MAIN BAND]Ⓢ.
- Exits the MENU mode.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

4 MEMORY OPERATION

■ General description

The transceiver has a total of 1000 Memory channels (100 channels in each of 10 memory banks, A to J) and two Call channels (C0/C1) for the 144 and 430 MHz bands.
The Memory mode is useful to quickly select often-used frequencies.

◇ The number of the Memory channel

Memory Channels	Descriptions
000–999	Total of 1000 regular Memory channels Memory channels are selectable on either the left or right band, and usable for any operating band.
C0/C1	Two Call channels (C0: 144 MHz, C1: 430 MHz) Instantly recalls a specified frequency.

◇ Memory channel content

The following information can be entered into the Memory channels:

- Operating frequency
- Duplex direction (DUP+ or DUP–) and frequency offset
- Memory name
- Scan skip setting
- Tuning step
- Operating mode
- Subaudible tone encoder, tone squelch or DTCS squelch ON/OFF
- Subaudible tone frequency, tone squelch frequency or DTCS code with polarity
- Memory bank

■ Selecting a Memory or Call channel

◇ Selecting a Memory channel

You can select the Memory channels by rotating [DIAL]Ⓢ in the Memory mode.

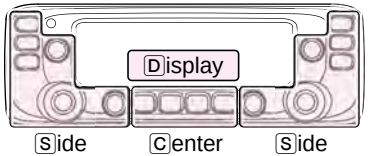
• Selectable on either the left or right band.

① Push [MR CALL]Ⓢ.
- Selects the Memory mode.

② Rotate [DIAL]Ⓢ to select a Memory channel.
- Blank channels are not selected.

Appears

For your reference:
Using the HM-207 microphone (p. ??)
① Push [VFO/MR 🔑] to select the Memory mode.
② Enter the Memory channel number, and then push [ENT].



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

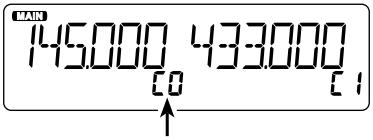
◇ Selecting a Call channel

You can select the Call channels (C0/C1) by rotating [DIAL]Ⓢ in the Call channel mode.
Factory default frequencies and operating modes are entered into the Call channels.
Change these to suit your operating needs.

• Selectable on either the left or right band.

① Hold down [MR CALL]Ⓢ for 1 second.
- Selects the Call channel mode.

② Rotate [DIAL]Ⓢ to select a Call channel.



Displays the Call channel number

For your reference:
Using the HM-207 microphone (p. ??)
① Hold down [HOME CALL] for 1 second to select the Call channel mode.
② Push [▲] or [▼] to select a Call channel.

■ Writing into a Memory or Call channel

After setting a frequency in the VFO mode, you can write it into your desired channel or an automatically selected blank channel.
Memory channels 002 to 999 are blank as the default.
Memory channels are selectable on either the left or right band, and usable for any operating band.

- **You can write on either the left or right band, regardless of the MAIN band setting.**
- **This section describes the MAIN band operation.**

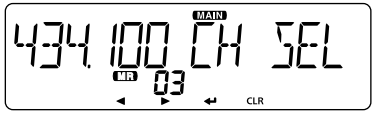
◇ Writing into the selected channel

Example: Writing 434.100 MHz into Memory channel “11.”

① Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.

② Set the operating frequency to 434.100 MHz.

③ Push [MW]Ⓒ to display the Memory Entry screen.

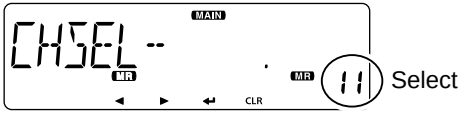


④ Push [↵]Ⓓ.
- Displays the Channel Select screen.
- Push [◀]Ⓓ to go back to the previous tree level.

⑤ Rotate [DIAL]Ⓢ to select channel “11.”

NOTE: If you select a pre-entered channel, the previous channel content will be overwritten.

- You can also select Call channels.



⑥ Push [↵]Ⓓ.

⑦ Rotate [DIAL]Ⓢ to select “WRITE.”

⑧ Push [↵]Ⓓ.
- Displays “WRITE?.”

⑨ Rotate [DIAL]Ⓢ to select “YES.”

⑩ Push [↵]Ⓓ.
- Beeps sound.
- Writes into the selected channel, and returns to the VFO mode.

◇ Writing into a blank channel

Example: Writing 434.100 MHz into a blank channel.

① Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.

② Set the operating frequency to 434.100 MHz.

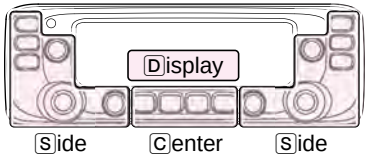
③ Hold down [MW]Ⓒ for 1 second.
- Automatically writes into a blank, and returns to the VFO mode.

◇ Copying Memory content to the VFO

This is convenient when you want to change the frequency beginning near the Memory or Call channel frequency.

① Select a desired Memory channel to be copied. (p. ??)
② Push [MW]Ⓒ to display the Memory Edit screen.
③ Rotate [DIAL]Ⓢ to select “TO VFO.”

④ Push [↵]Ⓓ.
- Beeps sound.
- Writes the selected Memory content to the VFO, and returns to the VFO mode.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

◇ Copying Memory content to another Memory channel

You can copy the memory content to another Memory channel.

① Select the desired Memory channel to be copied. (p. ??)
② Push [MW]Ⓒ to display the Memory Edit screen.
③ Rotate [DIAL]Ⓢ to select “COPY.”

④ Push [↵]Ⓓ.
⑤ Rotate [DIAL]Ⓢ to select a target channel.
- If you select a pre-entered channel, the previous channel content is displayed.

Select

⑥ Push [↵]Ⓓ.
- Beeps sound.
- Copies to the destination channel.
- When you select a pre-entered channel, “OVERW?” is displayed. Rotate [DIAL]Ⓢ to select “YES,” and then push [↵]Ⓓ to overwrite it.

■ Setting a Memory bank

The transceiver has a total of 10 banks (A to J).
You can assign regular Memory channels 0 to 999 to any desired bank for easy memory management.
You can assign up to 100 channels to a bank.
It is convenient that you categorize the Memory bank, according to the Memory channel category or your purpose.
You can use the Memory bank scan to scan the memory channels in the selected bank. (p. ??)

- **You can set the Memory banks on either the left or right band, regardless of the MAIN band setting.**
- **This section describes the MAIN band operation.**

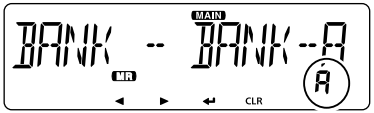
NOTE: The memory banks are only used to hold memory channels. Thus if the original memory channel content has been changed, the memory bank content is also changed at the same time.

For your reference: To cancel your entry
① After entering, push [◀]Ⓓ or [CLR]Ⓓ.
- Displays the "CANCEL?."

② Rotate [DIAL]Ⓢ to select "YES."
③ Push [↵]Ⓓ.

◇ Assigning a memory channel to a memory bank

① Select the Memory channel to be assigned to a bank. (p. ??)
② Push [MW]Ⓒ to display the Memory Edit screen.
③ Rotate [DIAL]Ⓢ to select "EDIT."
④ Push [↵]Ⓓ.
⑤ Rotate [DIAL]Ⓢ to select "BANK."
⑥ Push [↵]Ⓓ.
⑦ Rotate [DIAL]Ⓢ to select a desired bank group, "A" to "J."



Select

⑧ Push [↵]Ⓓ.
⑨ Rotate [DIAL]Ⓢ to select "WRITE."
⑩ Push [↵]Ⓓ.
- Displays the "OVERW?."

⑪ Rotate [DIAL]Ⓢ to select "YES."
⑫ Push [↵]Ⓓ.
- Beeps sound.
- Assigns the selected memory channel to the bank.

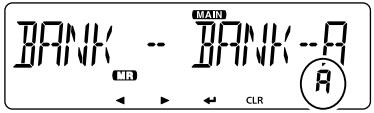
◇ Directly entering into a memory bank

You can also enter the memory content directly into a memory bank channel. This way is a short cut to creating a memory channel, and then assigning it to a bank.
In that case, the transceiver automatically selects the lowest blank memory channel, to enter content into.

Example: Writing 434.100 MHz into Bank group “A.”

① Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.

② Set the operating frequency to 434.100 MHz.
③ Push [MW]Ⓒ to display the Memory Entry screen.
④ Rotate [DIAL]Ⓢ to select “BANK.”
⑤ Push [↵]Ⓓ.
⑥ Rotate [DIAL]Ⓢ to select a Bank group “A.”



Select

⑦ Push [↵]Ⓓ.
⑧ Rotate [DIAL]Ⓢ to select “WRITE.”
⑨ Push [↵]Ⓓ.
- Displays the “WRITE?.”

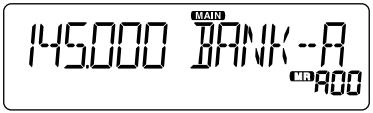
⑩ Rotate [DIAL]Ⓢ to select “YES.”
⑪ Push [↵]Ⓓ.
- Beeps sound.
- Writes the memory content to the bank channel.

◇ Selecting the Memory bank mode

When you select the Memory bank mode, rotating [DIAL]Ⓢ selects only the bank channels assigned to the selected bank.

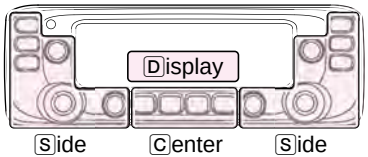
① Push [MR CALL]Ⓢ.
- Selects the Memory mode.

② Hold down [MAIN BAND]Ⓢ for 1 second.
③ Rotate [DIAL]Ⓢ to select the desired Bank group.
- Only Bank groups that have memory channel is assigned to it are displayed.



④ Push [MAIN BAND]Ⓢ.
- Selects the Memory bank mode.

⑤ Rotate [DIAL]Ⓢ to select a desired Bank channel.
- Only assigned bank channels are displayed.
- To return to the Memory channels display, select a Memory channel in step ③.



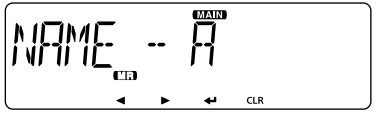
The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

■ Entering a Memory or Bank name

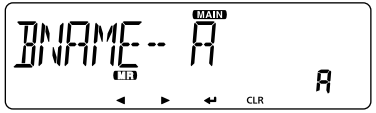
You can enter an alphanumeric name for each Memory channel, Call channel, and Bank.
Names can up to 6 characters.

• You can enter on either the left or right band, regardless of the MAIN band setting.

① Select a Memory channel to enter a name.
  • To enter a Bank name, select a Bank group.
② Push [MW]Ⓒ to display the Memory Edit screen.
③ Rotate [DIAL]Ⓢ to select “EDIT.”
④ Push [↵]Ⓓ.
⑤ Rotate [DIAL]Ⓢ to select “NAME.”
  • To enter a Bank name, select “B NAME.”
⑥ Push [↵]Ⓓ.
⑦ Rotate [DIAL]Ⓢ to select a desired character or symbol. (Example: A)



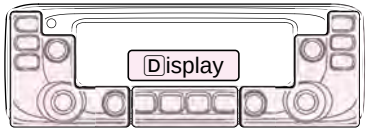
When entering a Memory name



When entering a Bank name

• Selectable characters or symbols:
  A to Z, 0 to 9, and
  Symbols (! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _)
• Push [CLR]Ⓓ to delete the selected character, symbol or number.
• When no character or symbol is selected, push [▶](Ⓓ) to enter a space.

⑧ Push [◀] to move the cursor backwards, or push [▶] to move the cursor forwards.
⑨ Repeat steps ⑦ and ⑧ to enter a name of up to 6 characters, including spaces.
⑩ After entering, push [↵]Ⓓ.
⑪ Rotate [DIAL]Ⓢ to select “WRITE.”
⑫ Push [↵]Ⓓ.
  • Displays “OVERW?.”
⑬ Rotate [DIAL]Ⓢ to select “YES.”
⑭ Push [↵]Ⓓ.
  • Beeps sound.
  • Writes the entered name to the channel.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

■ Clearing a Memory channel

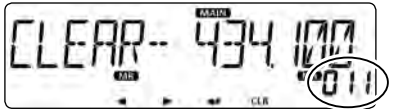
Entered memory content can be cleared (erased), if desired.

NOTE: Once you clear a memory content, it cannot be recovered.

- **You can clear a channel on either the left or right band, regardless of the MAIN band setting.**

① Push [MR CALL]Ⓢ.
- Selects the Memory mode.
- When you clear a Call channel, hold down [MR CALL]Ⓢ for 1 second to select the Call channel mode.

② Push [MW]Ⓒ to display the Memory Edit screen.
③ Rotate [DIAL]Ⓢ to select “CLEAR.”
④ Push [↵]Ⓓ.
⑤ Rotate [DIAL]Ⓢ to select a desired channel to be cleared.
⑥ Push [↵]Ⓓ.
- Displays “CLEAR?.”



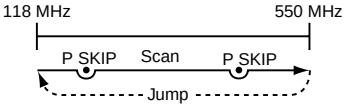
Select

⑦ Rotate [DIAL]Ⓢ to select “YES.”
⑧ Push [↵]Ⓓ.
- Beeps sound.
- Clears the memory content.

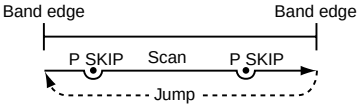
■ About the scan function

◇ VFO scan

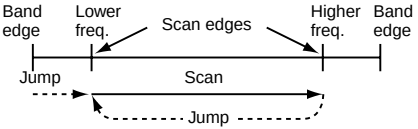
• **ALL** (Full scan) p. ??
Repeatedly scans the entire band.



• **BAND** (Selected band scan) p. ??
Scans all frequencies over the entire selected band.



• **PROG 0–24** (Program scan) p. ??
Scans the program scan edge ranges.



• **P-LINK0–9** (Program link scan) p. ??
Sequentially scans the program scan edge ranges which are set to link in the "P-LINK" (Program Link) item of the EXMENU. (p. ??)

For your reference: The frequencies that are set as "PSKIP" are not scanned. (p. ??)

NOTE: At least one program scan edge range must be programmed to start a program scan. (p. ??)

◇ Memory scan

• **ALL** (Memory full scan) p. ??
Scans all Memory channels.

• **BAND** (Selected band memory scan) p. ??
Scans all Memory channels on the same frequency band as the selected channel.

• **MODE** (Mode memory scan) p. ??
Scans Memory channels which are programmed with the same receiving mode as the currently selected mode.

◇ Memory bank scan

• **ALL** (Full bank scan) p. ??
Scans all banks.

• **BANK-LINK** (Bank link scan) p. ??
Sequentially scans the banks which are set to link in the "BANK LINK" item of the MENU mode.

• **BANK-A–Z** (Bank scan) p. ??
Scans the Memory channels in the selected bank.

For your reference: The frequencies that are set as "PSKIP" or "SKIP" are not scanned. (p. ??)

NOTE: Two or more memory channels must be programmed to start a memory scan.

[Duplex (DUP) scan]
The Duplex scan searches for both TX and RX frequencies which are used in duplex operation. (p. ??)
- The “DUP–” or “DUP+” icon is displayed in the duplex mode.
- A duplex scan will not start when the frequency offset is set to “0.000 MHz.”

[Tone scan]
The tone scan searches for tone frequencies or DTCS codes that are used by stations using the Tone Squelch function.
- You can use a tone scan in any mode: VFO, Memory or Call channel.
- During a tone scan, rotate [DIAL]Ⓢ to switch scan direction.
  Refer to “Tone Squelch function” or “DTCS code Squelch function” for details. (pp. ??, ??)

◇ [DIAL] operation during a scan
- If desired, rotate [DIAL]Ⓢ to switch the scanning direction during a scan.
- When the scan is paused, rotate [DIAL]Ⓢ to resume the scan.

◇ Tuning step for a VFO scan
The selected tuning step is applied to the scan.
For a program scan or program link scan, set the tuning step in the program scan edge ranges.

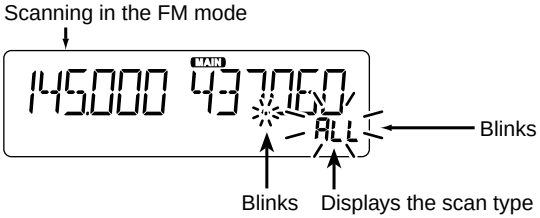
◇ Skip function
The skip function speeds up scanning by not scanning those frequencies set as skip channels. (pp. ??, ??)

For your reference:
When the “P-SKIP” (Program Skip) item is set to OFF, the Scan Skip function cannot be used. (p. ??)

■ About the scan function (Continued)

◇ Receive mode during a scan

- The selected mode is used by the scan.
- During a memory or bank scan, the channel's mode is used by the scan.



◇ When a signal is received

When a signal is received, the scan pauses for approximately 10 seconds (default), then resumes.
The scan resumes approximately 2 seconds (default) after the signal disappears.
To manually resume the scan, rotate [DIAL]Ⓢ.

- These settings can be changed in the "PAUSE" (Pause Timer) item or "RESUME" (Resume Timer) item of the MENU mode. (pp. ??, ??)

◇ Scan name

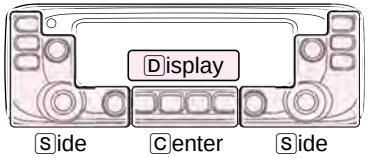
A desired name can be assigned to each Program scan edge or Scan Link. (p. ??)
By selecting the scan name, the scanning frequency range will be set.

◇ Scan Stop Beep function

The Scan Stop Beep function sounds a beep when a signal is received.
The function can be turned ON or OFF in the "STOP B" (Scan Stop Beep) item of the EXMENU. (p. ??)

■ Entering scan edges

You can enter the higher and lower frequency edges to the program scan edge ranges for programmed scans.
Each program scan edge range has its own tuning step and the receive mode.
The default setting is differ, depending on the transceiver's version.
You can enter a total of up to 25 program scan edge ranges.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

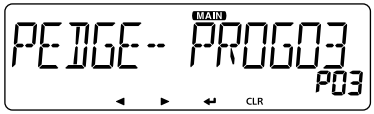
1. Entering a scan name

① Push [MENU 🔑]Ⓒ.
- Enters the MENU mode.

② Rotate [DIAL]Ⓢ to select “P-EDGE” (Program Scan Edge). (MENU-EXMENU > EXMEN-SCAN > **SCAN-P-EDGE**)

③ Push [↵]Ⓓ.
- Goes to the next tree level.

④ Rotate [DIAL]Ⓢ to select a desired scan edge channel. (Example: 3)

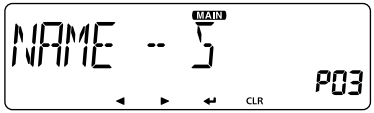


⑤ Push [↵]Ⓓ.
- Goes to the next tree level.

⑥ Rotate [DIAL]Ⓢ to select “NAME.”

⑦ Push [↵]Ⓓ to display the Scan name entry screen.

⑧ Rotate [DIAL]Ⓢ to select a desired character or symbol. (Example: S)



Scan name entry screen

- Selectable characters or symbols:
  A to Z, 0 to 9, and
  Symbols (! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _)
- Push [CLR]Ⓓ to delete the selected character, symbol or number.
- When no character or symbol is selected, push [▶](Ⓓ) to enter a space.

⑨ Push [◀] to move the cursor backwards, or push [▶] to move the cursor forwards.

⑩ Repeat steps ⑦ and ⑧ to enter a name of up to 6 characters, including spaces.

⑪ After entering, push [↵]Ⓓ.

2. Entering a scan frequency

NOTE: You must enter different frequencies in “FREQ L” and “FREQ H,” to specify a scanning frequency range.
If identical frequencies are entered to “FREQ L” and “FREQ H,” the Program scan will not work.

⑫ Rotate [DIAL]Ⓢ to select “FREQ L.”

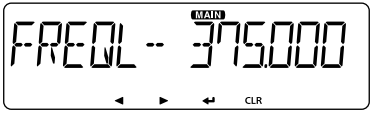
⑬ Push [↵]Ⓓ to display the Lower edge frequency setting screen.

⑭ Rotate [DIAL]Ⓢ to select a desired number.

⑮ Push [◀] to move the cursor backwards, or push [▶] to move the cursor forwards.

⑯ Repeat steps ⑭ and ⑮ to enter a lower edge frequency. (Example: 375.000)

⑰ After entering, push [↵]Ⓓ.



Lower edge frequency setting screen

☞ Continued on the next page

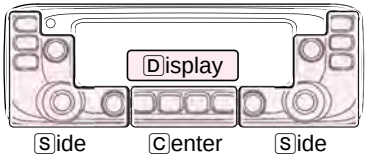
■ Entering scan edges (Continued)

⑱ Rotate [DIAL]Ⓢ to select “FREQ H,” and enter a higher edge frequency with the same way as steps ⑬ and ⑮.
⑲ After entering, push [↵]Ⓓ.

3. Setting a tuning step

NOTE: If the frequencies entered in “FREQ L” and “FREQ H” are on a different band, the Tuning step setting screen does not appear. In this case, the VFO mode’s turning step for each band is used during a scan.

⑳ Rotate [DIAL]Ⓢ to select “TS.”
㉑ Push [↵]Ⓓ to display the Tuning step setting screen.
㉒ Rotate [DIAL]Ⓢ to select a desired tuning step to be used while program scanning.
Selectable value:
5 kHz, 6.25 kHz, 8.33 kHz*, 10 kHz, 12.5 kHz, 15 kHz, 20 kHz, 25 kHz, 30 kHz, 50 kHz or Auto*.
*Appears only when the AIR band is selected.
㉓ After selecting, push [↵]Ⓓ.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

4. Setting a operating mode

NOTE:
- If the frequencies entered in Freq Low and Freq High are on a different band, the Operating mode setting screen does not appear. In this case, the VFO mode’s operating mode for each band is used during a scan.
- When the entered frequencies are in the VHF AIR band, the setting is restricted.

㉔ Rotate [DIAL]Ⓢ to select “MODE.”
㉕ Push [↵]Ⓓ to display the Operating mode setting screen.
㉖ Rotate [DIAL]Ⓢ to select a desired operating mode.
㉗ After selecting, push [↵]Ⓓ.

5. Setting a operating mode

㉘ Rotate [DIAL]Ⓢ to select “WRITE.”
㉙ Push [↵]Ⓓ.
- Displays “WRITE?.”

㉚ Rotate [DIAL]Ⓢ to select “YES.”
㉛ Push [↵]Ⓓ.
- Beeps sound.
- Enters the scan edges, and returns to the Scan edge channel select screen.

■ VFO mode scan

There are 6 scan types: Full scan, Band scan, Program scan, Program link scan, Duplex scan and Tone scan.

NOTE:
- The frequencies that are set as skip channels “PSKIP” are skipped during a scan.
- When the “P-SKIP” (Program Skip) item in the EXMENU is set to OFF, the frequencies that are set as skip channels “PSKIP” are not skipped during a scan.

◇ VFO mode scan

① Push [V/MHz SCAN]Ⓢ.
- Selects the VFO mode.

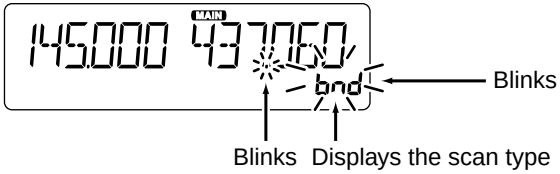
② Hold down [V/MHz SCAN]Ⓢ for 1 second.
- Displays the scan type setting screen.

③ Rotate [DIAL]Ⓢ to select a desired scan type.
- ALL: Full scan
- BAND: Band scan
- P-LINK0–9: Program link scan
- P00–24: Program scan
- DUP: Duplex scan (p. ??)
  (Appears only when duplex is set.)
- TONE: Tone scan
  (For tone squelch scanning)

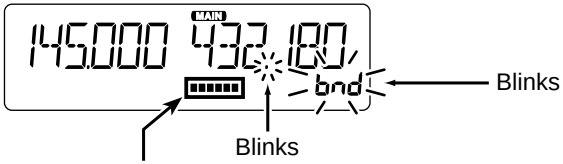
④ Push [V/MHz SCAN]Ⓢ to start the scan.

⑤ To cancel the scan, push [V/MHz SCAN]Ⓢ.

While scanning



When receiving a signal



The S-meter shows the received signal strength.

When a scan name is assigned.

When a scan name is assigned, the scan name is displayed on the scan type setting screen. (Step ③ on this page)
See page ?? to enter the scan name.

When a program link name is assigned.

When a program link name is assigned, the program link name is displayed on the scan type setting screen. (Step ③ on this page)
See page ?? to enter the program link name.

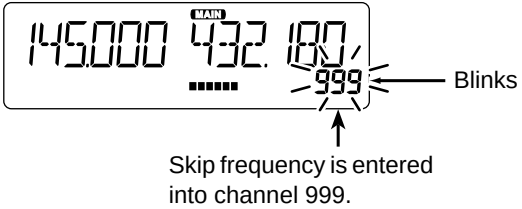
■ Setting and clearing the skip frequencies

◇ Setting the skip frequencies

The frequencies set as “PSKIP” skip channels are not scanned.

① Start the VFO scan. (p. ??)
- When a signal is received, the scan pauses.

② While the scan is paused, and if you want to skip the frequency, hold down [MW]Ⓒ for 1 second (until 3 beeps sound).
- When a signal is received during the scan, the transceiver attempts to enter the frequency as a skip channel into empty memory channel 999.



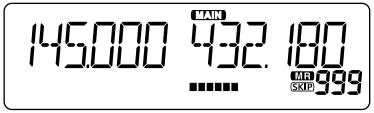
- If channel 999 already has content, the transceiver automatically searches for another blank channel to enter.
  If no blank memory channel is found, a beep sounds, and no skip channel is set.

③ After the skip channel is set, the scan resumes.

◇ Clearing the skip frequencies

① Push [MR CALL]Ⓢ.
- Selects the Memory mode.

② Rotate [DIAL]Ⓢ to select the memory channel you want to clear as the skip channel. (Example: 999)



③ Push [MW]Ⓒ to display the Memory edit screen.
④ Rotate [DIAL]Ⓢ to select “EDIT.”
⑤ Push [↵]Ⓓ.
⑥ Rotate [DIAL]Ⓢ to select “SKIP.”
⑦ Push [↵]Ⓓ.
⑧ Rotate [DIAL]Ⓢ to select “OFF.”
⑨ Push [↵]Ⓓ.
⑩ Rotate [DIAL]Ⓢ to select “WRITE.”
- Displays “OVERW?.”

⑪ Rotate [DIAL]Ⓢ to select “YES.”
⑫ Push [↵]Ⓓ.
- Beeps sound.
- Clears the skip setting.

For your reference:
The skip setting is also cancelled when the memory channel set as skip channel is deleted. (p. ??)

■ Memory scan

There two types of scans in the memory mode; Memory scan and Memory bank scan.

◇ Memory (skip) scan

Repeatedly scans all programmed Memory channels.

- Two or more memory channels, which are not set as skip channels, must be programmed into start a memory scan.

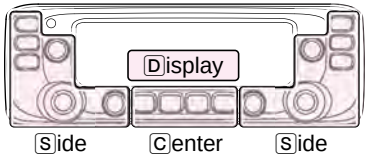
① Push [MR CALL]Ⓢ.
- Selects the Memory mode.

② Hold down [V/MHz SCAN]Ⓢ for 1 second.
- Displays the scan type setting screen.

③ Rotate [DIAL]Ⓢ to select a desired scan type.
- ALL: Full scan
- BAND: Band memory scan
- MODE: Mode memory scan
- DUP: Duplex scan (p. ??)
  (Appears only when duplex is set.)
- TONE: Tone scan (For tone squelch scanning)

④ Push [V/MHz SCAN]Ⓢ to start the scan.

⑤ To cancel the scan, touch [SCAN].



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

◇ Memory bank scan

A memory bank scan searches through the memory channels in the selected bank.

- Two or more memory channels, which are not set as skip channels, must be programmed to start a memory bank scan.

① Push [MR CALL]Ⓢ.
- Selects the Memory mode.

② Hold down [MAIN BAND]Ⓢ for 1 second.

③ Rotate [DIAL]Ⓢ to select the desired Bank group.

④ Push [MAIN BAND]Ⓢ.
- Selects the Memory bank mode.

⑤ Hold down [V/MHz SCAN]Ⓢ for 1 second.
- Displays the scan type setting screen.

⑥ Rotate [DIAL]Ⓢ to select a desired scan type.
- ALL: Full bank scan
- BANK-LINK: Bank link scan
- BANK-A to J: Bank scan
  (Only banks which contain a memory channel are displayed.)
- DUP: Duplex scan (p. ??)
  (Appears only when duplex is set on the channel.)
- TONE: Tone scan (For tone squelch scanning)

⑦ Push [V/MHz SCAN]Ⓢ to start the scan.

⑧ To cancel the scan, touch [SCAN].

When a bank name is assigned.

The name is displayed on the scan type setting screen.
See page ?? to enter the bank name.

■ Setting and clearing the skip channel

The channels set as “SKIP” or “PSKIP” skip channels are skipped (not scanned).

① Push [MR CALL]Ⓢ.
- Selects the Memory mode.

② Rotate [DIAL]Ⓢ to select a memory channel to be set.

③ Hold down [MW]Ⓒ for 1 second to display the Memory edit screen.

④ Push [↵]Ⓓ.

⑤ Rotate [DIAL]Ⓢ to select “SKIP.”

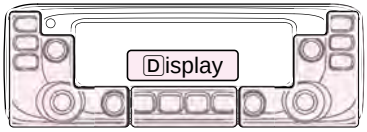
⑥ Push [↵]Ⓓ.

⑦ Rotate [DIAL]Ⓢ to select a desired option.
- OFF: Cancel the skip setting.
- SKIP: Skipped during a memory scan.
- PSKIP: Skipped during both VFO and memory scans.

⑧ Rotate [DIAL]Ⓢ to select “WRITE.”
- Displays “OVERW?.”

⑨ Rotate [DIAL]Ⓢ to select “YES.”

⑩ Push [↵]Ⓓ.
- Beeps sound, and sets the skip setting.
- “SKIP” appears.



The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center
Ⓢ: Side
Ⓓ: Display

■ Setting the temporary skip function

This function temporarily skips up to five unwanted frequencies during a scan, for the set time period, without setting the skip frequency.
This function can be used only when the HM-207 (supplied) or HM-154 (optional) microphone is connected.

① Start the VFO scan. (p. ??)
- When a signal is received, the scan pauses.

② Push the key that the “Temporary Skip” function is assigned.
- The Temporary skip function is set.

③ After setting the temporary skip function, the scan resumes.
- After the Temporary Skip time period passes, or the scan is cancelled, the Temporary Skip is also cancelled.

For your reference:
- Up to five Temporary Skip frequencies or memories can be set.
- During Memory scanning, follow steps ② and ③ to skip the channel for the set time period (Default: 5 minutes).
- The Temporary Skip time period is set to “5 minutes” by default. You can change the setting in the “TEMP” (Temporary Skip Timer) item of EXMENU. (p. ??)

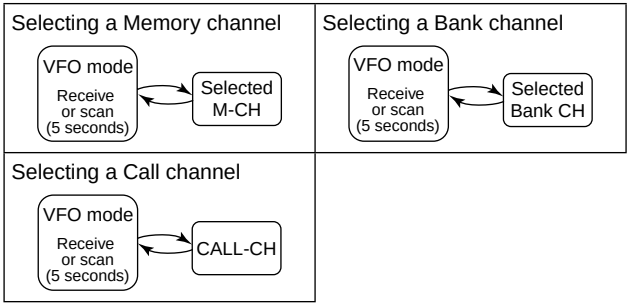
■ Priority watch

While operating on a VFO frequency or while scanning, Priority watch checks for signals on a selected frequency every 5 seconds.

- **You can make a Priority watch on either the left or right band. But start and stop operation can be made on only the MAIN band.**
- **This section describes the MAIN band operation.**

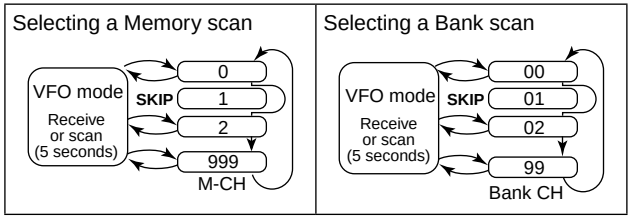
◇ VFO and a priority channel (p. ??)

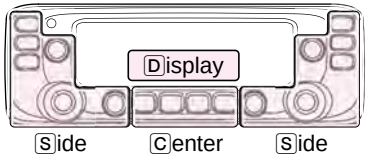
Checks the selected priority channel every 5 seconds, while receiving on a VFO frequency or during a VFO mode scan.
A Memory channel, Bank channel or Call channel can be selected as the priority channel



◇ VFO and a Memory/Bank scan (p. ??)

Sequentially checks the Memory or Bank channels every 5 seconds, while receiving on a VFO frequency or during a VFO mode scan.
A Memory scan or Bank scan can be selected.





The C, S or D in the instructions indicate the part of the controller.
C: Center
S: Side
D: Display

■ VFO and a priority channel

◇ VFO frequency and a priority channel

Checks the selected priority channel every 5 seconds, while receiving on a VFO frequency.

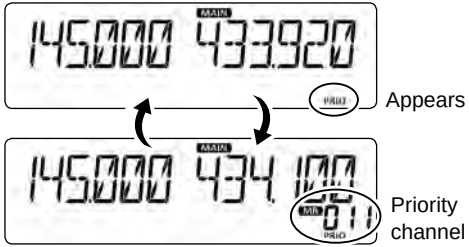
① Set the VFO frequency. (p. ??)
② Set the priority channel. (p. ??)
- Select a Memory channel, Bank channel or Call channel.

③ Push [MENU]Ⓒ.
- Enters the MENU mode.

④ Rotate [DIAL]Ⓢ to select “PRIO” (Priority scan).
⑤ Push [↵]Ⓓ.
⑥ Rotate [DIAL]Ⓢ to select “ON” or “Bell.”
- ON: When a signal is received on the priority channel, the channel is automatically selected.
- Bell: When a signal is received on the priority channel, the “((•))” icon is displayed in the VFO screen.

⑦ Push [↵]Ⓓ.
⑧ Push [MAIN BAND]Ⓢ.
- Exits the MENU mode.
- The “PRIO” icon appears, and the Priority watch starts.
- To cancel the Priority watch, select “OFF” in the step ⑥.

Example: Checks Memory channel “11” while receiving on 433.920 MHz.



Checks the Memory channel every 5 seconds.

◇ VFO scan and a priority channel

Checks the selected priority channel every 5 seconds, during a VFO mode scan.

① Operate steps ① through ⑧ as shown to the left.
- The “PRIO” icon appears, and the Priority watch starts.

② Hold down [V/MHz SCAN]Ⓢ for 1 second.
③ Rotate [DIAL]Ⓢ to select a desired scan type.
④ Push [V/MHz SCAN]Ⓢ.
- The VFO scan starts.

■ VFO and a Memory/Bank scan

◇ VFO frequency and a Memory/Bank scan

Sequentially checks the Memory or Bank channels every 5 seconds, while receiving on a VFO frequency.

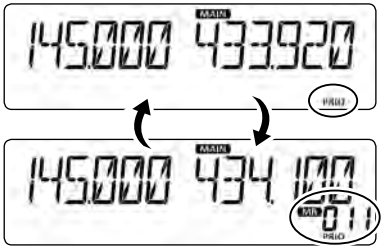
① Set the VFO frequency. (p. ??)
② Selects the Memory mode. (p. ??)
③ Hold down [V/MHz SCAN]Ⓢ for 1 second.
④ Rotate [DIAL]Ⓢ to select a desired scan type.
⑤ Push [V/MHz SCAN]Ⓢ.
- The Memory scan starts.

⑥ Push [MENU ⊶]Ⓒ.
- Enters the MENU mode.

⑦ Rotate [DIAL]Ⓢ to select “PRIO” (Priority scan).
⑧ Push [↵]Ⓓ.
⑨ Rotate [DIAL]Ⓢ to select “ON” or “Bell.”
- ON: When a signal is received on the priority channel, the channel is automatically selected.
- Bell: When a signal is received on the priority channel, the “((•))” icon is displayed in the VFO screen.

⑩ Push [↵]Ⓓ.
⑪ Push [MAIN BAND]Ⓢ.
- Exits the MENU mode.
- The “PRIO” icon appears, and the Priority watch starts.
- To cancel the Priority watch, select “OFF” in the step ①.

Example: Sequentially checks the Memory channels while receiving on 433.920 MHz.



◇ VFO scan and a Memory/Bank scan

Sequentially checks the Memory or Bank channels every 5 seconds during a VFO scan.

① Operate steps ① through ⑪ as shown to the left.
- The “PRIO” icon appears, and the Priority watch starts.

② Hold down [V/MHz SCAN]Ⓢ for 1 second.
③ Rotate [DIAL]Ⓢ to select a desired scan type.
④ Push [V/MHz SCAN]Ⓢ.
- The VFO scan starts.

The Ⓒ, Ⓢ or Ⓓ in the instructions indicate the part of the controller.
Ⓒ: Center, Ⓢ: Side, Ⓓ: Display

12 SPECIFICATIONS

◇ General

• Frequency coverage:

EUR	RX	118–174 MHz*1, 375–550 MHz*2
	TX	144–146 MHz, 430–440 MHz
ITR	RX	118–136.99166 MHz*3, 144–146 MHz, 430–434 MHz, 435–438 MHz
	TX	144–146 MHz, 430–434 MHz, 435–438 MHz
TPE	RX	144–146 MHz, 430–432 MHz
	TX	144–146 MHz, 430–432 MHz
USA	RX	118–174 MHz*4, 375–550 MHz*5
	TX	144–148 MHz, 430–450 MHz*5
KOR	RX	144–146 MHz, 430–440 MHz
	TX	144–146 MHz, 430–440 MHz
EXP	RX	118–174 MHz*4, 375–550 MHz*2
	TX	137–174 MHz*4, 400–470 MHz*2
CHN	RX	118–174 MHz*1, 375–550 MHz*2
	TX	137–174 MHz*1, 400–470 MHz*2

*1 Guaranteed only 144–146 MHz *2 Guaranteed only 430–440 MHz
*3 Not guaranteed *4 Guaranteed only 144–148 MHz
*5 Guaranteed only 430–450 MHz

• Mode: F2D/F3E (FM/FM-N), A3E (AM/AM-N) RX only
• No. of memory channels: 1000 channels
• No. of program scan channels: 25 channels (2 edge frequencies in each channel)
• No. of call channels: 2 channels
• Antenna connector: SO-239
• Antenna impedance: 50 Ω
• Usable temperature range: –10˚C to +60˚C; +14˚F to +140˚F
• Frequency stability: ±2.5 ppm (10˚C to +60˚C; +14˚F to +140˚F)
• Frequency resolution: 5 kHz, 6.25 kHz, 8.33 kHz, 10 kHz, 12.5 kHz, 15 kHz, 20 kHz, 25 kHz, 30 kHz, 50 kHz
The 8.33 kHz step is not selectable, depending on the operating band or mode.
• Power supply: 13.8 V DC ±15% (negative ground)
• Current drain:
Transmit
Maximum current drain: ≤ 10.5 A (TPE version)
≤ 13.0 A (Other versions)
Receive
Standby: ≤ 1.2 A
Maximum audio: ≤ 1.8 A
• Dimensions (projections not included):
Main unit: 150(W) × 40(H) × 151(D) mm; 5.9(W) × 1.6(H) × 5.94(D) inch
Controller: 150(W) × 50(H) × 27.2(D) mm; 5.91(W) × 1.97(H) × 1.07(D) inch
• Weight (approximately):
Main unit: 1.2 kg; 2.6 lb
Controller: 140 g; 4.9 oz

◇ Transmitter

- Modulation system:
  - FM/FM-N: Variable reactance frequency modulation
- Max Deviation:
  - FM: ≤ ±5.0 kHz
  - FM-N: ≤ ±2.5 kHz
- Microphone impedance: 600 Ω
- Spurious emission: ≤ –60 dBc
- Output power: High 25 W, Mid 15 W, Low 5 W (TPE version)
  High 50 W, Mid 15 W, Low 5 W (Other versions)

◇ Receiver

- Receive system: Double superheterodyne system
- IF frequencies:

A band	1st IF	38.85 MHz
	2nd IF	450 kHz
B band	1st IF	46.35 MHz
	2nd IF	450 kHz

- Sensitivity (except spurious points)
  - Amateur bands
    - FM/FM-N (12 dB SINAD)
      ≤ 0.18 µV
  - Except Amateur bands
    - FM/FM-N (12 dB SINAD)
      ≤ 0.32 µV (137.000 to 159.995 MHz)
      ≤ 0.56 µV (160.000 to 174.000 MHz)
      ≤ 0.56 µV (375.000 to 399.995 MHz)
      ≤ 0.32 µV (400.000 to 499.995 MHz)
      ≤ 0.56 µV (500.000 to 550.000 MHz)
    - AM (10 dB S/N)
      ≤ 1 µV (118.000 to 136.99166 MHz)
- Squelch sensitivity: ≤ 0.13 µV (Threshold)
- Selectivity:
  - FM ≥ 60 dB
  - FM-N ≥ 55 dB
- Spurious and image rejection ratio:
  ≥ 60 dB
  ≥ 55 dB (A band UHF)
- AF output power: ≥ 2.0 W
  (at 10% distortion with an 8 Ω load)
- AF output impedance: 8 Ω

COUNTRY CODE LIST

• ISO 3166-1

	Country	Codes		Country	Codes
1	Austria	AT	18	Liechtenstein	LI
2	Belgium	BE	19	Lithuania	LT
3	Bulgaria	BG	20	Luxembourg	LU
4	Croatia	HR	21	Malta	MT
5	Czech Republic	CZ	22	Netherlands	NL
6	Cyprus	CY	23	Norway	NO
7	Denmark	DK	24	Poland	PL
8	Estonia	EE	25	Portugal	PT
9	Finland	FI	26	Romania	RO
10	France	FR	27	Slovakia	SK
11	Germany	DE	28	Slovenia	SI
12	Greece	GR	29	Spain	ES
13	Hungary	HU	30	Sweden	SE
14	Iceland	IS	31	Switzerland	CH
15	Ireland	IE	32	Turkey	TR
16	Italy	IT	33	United Kingdom	GB
17	Latvia	LV			

FCC INFORMATION

• FOR CLASS B UNINTENTIONAL RADIATORS:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

Count on us!

#02 EUR

<Intended Country of Use>

■ AT	■ BE	■ CY	■ CZ	■ DK	■ EE
■ FI	■ FR	■ DE	■ GR	■ HU	■ IE
■ IT	■ LV	■ LT	■ LU	■ MT	■ NL
■ PL	■ PT	■ SK	■ SI	■ ES	■ SE
■ GB	■ IS	■ LI	■ NO	■ CH	■ BG
■ RO	■ TR	■ HR			

#03 ITR

<Intended Country of Use>

□ AT	□ BE	□ CY	□ CZ	□ DK	□ EE
□ FI	□ FR	□ DE	□ GR	□ HU	□ IE
■ IT	□ LV	□ LT	□ LU	□ MT	□ NL
□ PL	□ PT	□ SK	□ SI	□ ES	□ SE
□ GB	□ IS	□ LI	□ NO	□ CH	□ BG
□ RO	□ TR	□ HR			

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