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IC-2730A/IC-2730E EXMENU items and CI-V information

This document describes the IC-2730A/E's EXMENU items and CI-V information.

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# Selecting the EXMENU item

The EXMENU is one of the MENU items.

In the EXMENU, you can set detail settings of the transceiver, and customize transceiver operations to suit your preference and operating style.

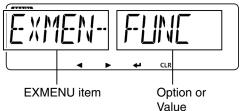
#### For your reference:

The MENU system is constructed in a tree structure. You can go to the next tree level, or go back a level, depending on the selected item.

#### ♦ EXMENU screen

The EXMENU item is displayed on the left side of the display.

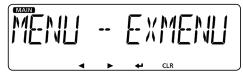
The item's option or value is displayed on the right side.



### Changing the EXMENU item's options

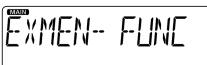
Example: Set the microphone gain level to '3.'

- ① Push [MENU **--O**]C.
- Enters the MENU mode.
- 2 Rotate [DIAL]S to select the "EXMENU."



③ Push [↓]D.

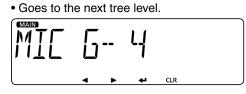
- Goes to the next tree level.
- Pushing  $[\blacktriangleright]D$  also goes to the next tree level.
- ④ Rotate [DIAL] S to select the "FUNC" (Function items).



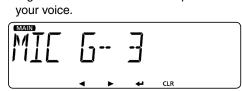
- ⑤ Push [↓]D.
- Goes to the next tree level.
- 6 Rotate [DIAL]S to select the "MIC G" (MIC gain).



⑦Push [🎝]D.



- 8 Rotate [DIAL]S to select '3.'
  - Selectable values: 1 (minimum)~4 (maximum) • Higher values make the microphone more sensitive to



- ⑨ Push [↓]D.
  - Sets the selected value, and goes back to the previous tree level.
  - Pushing [CLR]D or []D also goes back to the previous tree level.
- 10 Push [MAIN BAND]S.
  - Exits the MENU mode.
  - Pushing [V/MHz SCAN]S or [MR CALL]S also exits the MENU mode.

#### To return to the default setting:

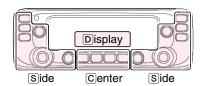
Hold down [MR CALL]S after doing step  $\mathcal{D}$ .

#### For your reference:

You can make the following items' setting on either the left or right band.

- Mode and Tuning step items:
- MODE, TS • DUP/TONE items: TONE, OFFSET, R TONE,
- C TONE, CODE, DTCS-P
- Scan items: PRIO, PAUSE, RESUME, TEMP, P-SKIP, B-LINK

To change these item settings, select the Main band by pushing [MAIN BAND] (S) on the band that you want to set to, before entering the MENU mode.



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

# **EXMENU** construction

#### For your reference:

You can go to the next tree level, or go back a level by pushing [CLR]D,  $[\checkmark]D$ ,  $[\blacktriangleleft]D$  or  $[\triangleright]D$ . (p. 2)

XMENU	
MOD.TS	
MODE	
	5.0~50.0/AUTO
15	5.0~50.0/A010
DUP.T	
	OFF/TONE/TSQL((+))/TSQL/DTCS((+))/
	DTCS/TSQL-R/DTCS-R/DTC.OFF/
	TON.DTC/DTC.TSQ/TON.TSQ
OFFSET	0.000~59.995
- R TONE	67.0~254.1
C TONE	
TBURST	
CODE	023~754
DTCS-P	BOTH N/TN-RR/TR-RN/BOTH R
D105-P	
SCAN	
-PRIO	OFF/ON/BELL
PAUSE	-2~20SEC/HOLD
RESUME	OSEC/1~5SEC/HOLD
	5MIN/10MIN/15MIN
WX-ALT*	OFF/ON
-P-SKIP	
B-LINK	
P-EDGE	PROG00~24 NAME/FREQ L/FREQ H/
P-LINK	PLINK0~9 LINK/NAME/ADD/CLEAR
FUNC	
SQLTYP	OFF/S SQL/ATT
	-SHORT/LONG
-FAN	-SLOW/MID/FAST/AUTO
DIAL S	OFF/ON
AUTORP*	OFF/ON (KOR version)
	OFF/DUP/DUP.TON (USA version)
RMTMIC	$\square RX/TX \square F-1/F-2$
	-RX/TX - UP/DN
PTT	PUSH/HOLD
	OFF/ON
	OFF/ON
TOT	OFF/ON OFF/1~30MIN
ACTIVE	SINGLE/ALL/HAM
MIC G	1~4
AP OFF	OFF/30~120MIN
CI-V	
HCIVADR	-01~DF
CIVADI	4800~19200/AUTO
CIVERO	OFF/ON
	OFF/ON
	011/01
DISP	
	-1~4
AT-DIM	OFF/AT-OFF/AT-1~3
	-5SEC/10SEC
CONT	1 10

\*This item may not be displayed, depending on the transceiver's version.

CONT OPN.MSG NAME

AIR\*

.....

1~10

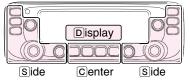
OFF/ON OFF/ON CH ID/FREQ

EXMENU (Continu	ed)
SOUNDS BEEPLV KEY B HOME B EDGE B STOP B SUBMUT	0~9 OFF/ON OFF/ON OFF/ON OFF/ON OFF/MUTE/BEEP/MUT.BP
HOMECH	SET.FRQ SET CH/CLEAR
BT SET BT AT CON CONNEC (DISCON	OFF/ON OFF/ON
	AF OUT HS/HS+SP HSFUNC NORMAL/MIC/P-AMAN /P-ACON VOX VOX OFF/ON
	-VOX LV OFF/1~10 -VOX.DLY 0.5~3.0 -VOX.TOT OFF/1~15MIN -VOX.TOT OFF/ON -POSAVE OFF/ON -PTT PUSH/HOLD -PTT B OFF/ON -CUST B OFF/ON -CUST B OFF/ON
	YES/NO
	VOLT/VER CLONE NO/YES MASTER NO/YES PART NO/YES ALL NO/YES

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display

See page 2 'Changing the EXMENU item's options' for details of the key operations.



3

#### Mode and Tuning step items EXMEN- MOIITS

You can set these items for each operating band.

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

MENU-EXMENU > EXMEN-MOD.TS > MOD.TS-MODE

The transceiver has a total of four operating modes, FM, FM-N, AM and AM-N.

The operating mode you select determines the modulation of the radio signal.

- 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.
- See page 14 for the selectable operating mode in the AIR band.

- In the AIR band, the default mode is AM.
  While in the FM-N mode, the TX modulation is automatically set to narrow (approximately 2.5 kHz) tomatically set to narrow (approximately 2.5 kHz)

Tuning step MDIITS- TS (Default: 5.0)

MENU-EXMENU > EXMEN-MOD.TS > MOD.TS-TS

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):

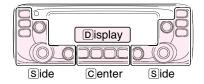
• In the 144 and 430 MHz bands:

5, 6.25, 10, 12.5, 15, 20, 25, 30, or 50 In the AIR band: 8.33, 25, or AUTO

The default settings may differ, depending on your transceiver's version.

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# DUP/TONE items EXMEN- JUPT

You can set these items for each operating band, except for the AIR band.

Tone IUPT - TONE

(Default: OFF)

MENU-EXMENU > EXMEN-DUP.T > DUP.T-TONE

Select a desired channel tone type.

- OFF: The function is OFF.
- TONE: The subaudible tone is superimposed on your normal signal.
- Subaudible tone setting: "R TONE"
  TSQL ("(1)") appears):
  - Enables the tone squelch with the pocket beep function.
- TSQL: Enables the tone squelch function. When you transmit, the tone frequency is superimposed on your normal signal. The tone squelch opens only when you receive a signal that includes a matching tone frequency. (Audio is heard)
   Tone frequency setting: "C TONE"
- DTCS ("(•••)" appears): Enables the DTCS squelch with the pocket beep function.
- DTCS: Enables the DTCS squelch function. When you transmit, the DTCS code is superimposed on your normal signal. The DTCS squelch opens only when you receive a signal that includes a matching DTCS code and polarity. (Audio is heard)
   DTCS code setting: "CODE"
  - DTCS polarity setting: "DTCS-P"
- •TSQL-R: Enables the reverse tone squelch function.

The tone squelch does not open only when you receive a signal that includes a matching tone frequency. (Audio is not heard) You can mute a specified station's audio. • Tone frequency setting: "C TONE"

• DTCS-R: Enables the reverse DTCS squelch function.

The DTCS squelch does not open only when you receive a signal that includes a matching DTCS code and polarity. (Audio is not heard)

You can mute a specified station's audio. • DTCS code setting: "CODE"

- DTCS polarity setting: "DTCS-P"
- DTC.OFF: When you transmit, the selected DTCS code is superimposed on your normal signal.

When you receive, the function is OFF.

- DTCS code setting: "CODE"
- DTCS polarity setting: "DTCS-P"

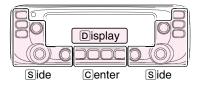
• TON.DTC: When you transmit, the selected subaudible tone is superimposed on your normal signal.

The DTCS squelch opens only when you receive a signal that includes a matching DTCS code and polarity. (Audio is heard).

- Subaudible tone setting: "R TONE"
- DTCS code setting: "CODE"
- DTCS polarity setting: "DTCS-P"
- DTC.TSQ: When you transmit, the DTCS code is superimposed on your normal signal. The tone squelch opens only when you receive a signal that includes a matching tone frequency. (Audio is heard)
   DTCS code setting: "CODE"
  - DTCS polarity setting: "DTCS-P"
  - Tone frequency setting: "C TONE"
- TON.TSQ: When you transmit, the subaudible tone is superimposed on your normal signal. The tone squelch opens only when you receive a signal that includes a matching tone frequency. (Audio is heard)
  - Subaudible tone setting: "R TONE"
  - Tone frequency setting: "C TONE"

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#### DUP/TONE items (Continued)

#### Offset frequency IUPT - OFFSET

(Default: 0.600\*)

#### MENU-EXMENU > EXMEN-DUP.T > DUP.T-OFFSET

Set the frequency offset for duplex (repeater) operation to between 0 and 59.995 MHz.

• To set the duplex shift direction (DUP–/DUP), hold down [MONI DUP]C for 1 second in the VFO mode, and then rotate [DIAL]S.

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

#### **Repeater Tone IUPT** - **R TONE** (Default: 88.5)

#### MENU-EXMENU > EXMEN-DUP.T > DUP.T-R TONE

Select a CTCSS tone frequency for repeater or other tone squelch access.

50 tone frequencies (67.0~254.1 Hz) are selectable.

## TSQL Freq IUPT - [ TONE (Default: 88.5)

MENU-EXMENU > EXMEN-DUP.T > DUP.T-C TONE

Select a CTCSS tone frequency for the tone squelch or the Pocket beep function.

50 tone frequencies (67.0~254.1 Hz) are selectable.

#### • Tone 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	

#### Tone Burst JUPT - TBURST (Default: OFF)

#### MENU-EXMENU > EXMEN-DUP.T > DUP.T-TBURST

Turn the Tone Burst function ON or OFF in the FM or FM-N mode when using tone squelch.

- OFF: When you transmit a signal that contains a CTCSS tone, the other station may hear a short burst of noise from their receiver, just after you stop transmitting.
- ON: When you transmit a signal that contains a CTC-SS tone, the function mutes the noise from being heard in the other station's receiver.

#### DTCS Code ]]UPT - [[]]E (Default: 023)

MENU-EXMENU > EXMEN-DUP.T > DUP.T-CODE

Select a DTCS (both encoder/decoder) code for the DTCS squelch.

A total of 104 codes (023~754) are selectable.

#### DTCS codes

023	3 054	125	165	245	274	356	445	506	627	732
025	5 065	131	172	246	306	364	446	516	631	734
026	6 071	132	174	251	311	365	452	523	632	743
03	072	134	205	252	315	371	454	526	654	754
032	2 073	143	212	255	325	411	455	532	662	
036	6 074	145	223	261	331	412	462	546	664	
043	3 114	152	225	263	332	413	464	565	703	
047	7 115	155	226	265	343	423	465	606	712	
05	1116	156	243	266	346	431	466	612	723	
053	3 122	162	244	271	351	432	503	624	731	

## DTCS Polarity IUPT - IT[5-P

#### (Default: BOTH N)

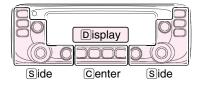
#### MENU-EXMENU > EXMEN-DUP.T > DUP.T-DTCS-P

Select the DTCS polarity to use for transmitting and receiving.

- BOTH N: TX and RX polarity are Normal.
- TN-RR: TX polarity is Normal, RX polarity is Reverse.
- TR-RN: TX polarity is Reverse, RX polarity is Normal.
- BOTH R: TX and RX polarity are Reverse.

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# Scan items EXMEN- SEAN

Priority scan ∑[RN - PRI[] (Default: OFF)

#### MENU-EXMENU > EXMEN-SCAN > SCAN-PRIO

Starts or stops the Priority scan.

- OFF: Stops the Priority scan.
- ON: Starts the Priority scan. When a signal is received on the Priority channel, the channel is automatically selected.
- BELL: Starts the Priority scan. When a signal is received on the Priority channel, beeps sound, and the "(•••)" icon blinks on the display.

### Pause Timer SERN - PRUSE (Default: 10SEC)

#### MENU-EXMENU > EXMEN-SCAN > SCAN-PAUSE

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** SEAN - RESUME

(Default: 2SEC)

#### MENU-EXMENU > EXMEN-SCAN > SCAN-RESUME

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

# Temporary Skip Timer SEAN - TEMP

(Default: 5MIN)

#### MENU-EXMENU > EXMEN-SCAN > SCAN-TEMP

Set the Temporary Skip Timer to 5, 10 or 15 minutes. When the time is set, unwanted frequencies are skipped for this set period during a scan.

This timer activates for the VFO scan or Memory scan.

# Weather alert SERN - WX-ALT (Default: OFF)

#### MENU-EXMENU > EXMEN-SCAN > SCAN-WX-ALT

(Appears only on the USA version transceivers.)

Turn the Weather Alert function ON or OFF. NOAA (National Oceanographic and Atmospheric Administration) broadcast stations transmit 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.

# Program Skip SERN - P-SKIP (Default: ON)

#### MENU-EXMENU > EXMEN-SCAN > SCAN-P-SKIP

Turn the Program Skip Scan function ON or OFF for a VFO mode scan.

This function enables the transceiver to skip unwanted frequencies or channels that inconveniently stop scanning.

Set unwanted frequencies or channels to "PSKIP" in the Memory Channel screen.

• OFF: The transceiver scans all frequencies.

• ON: The transceiver does not scan frequencies set as "PSKIP" frequencies.

## Bank Link SERN - B-LINK (Default: ON)

#### MENU-EXMENU > EXMEN-SCAN > SCAN-B-LINK

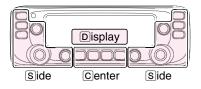
Set the link setting to a bank (A~J).

Banks set to ON are linked during a Bank Link Scan.

- OFF: The bank is not scanned during a Bank Link Scan.
- ON: The bank is scanned during a Bank Link Scan. All banks set to ON are linked during a Bank Link Scan.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

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#### Scan items (Continued)

## Program Scan Edge SERN - P-EIGE

#### MENU-EXMENU > EXMEN-SCAN > SCAN-P-EDGE

You can delete, copy or edit the lower and higher frequencies for Program scan edge channels (PROG00~PROG24).

A total of up to 25 frequency ranges can be programmed.

You can set the scan name, tuning step and the receive mode for each edge channel.

The default setting differs, depending on the transceiver's version.

#### Program Link SEAN - P-LINK

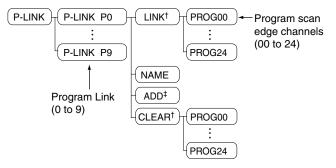
#### MENU-EXMENU > EXMEN-SCAN > SCAN-P-LINK

This function sequentially scans two or more Program scan edge channels (PROG00~PROG24) during the Program Link scan.

The Link function scans all frequencies in the scan range.

You can set the link name, and add a scan edge channel to or delete it from each program link.

#### **Program link construction**



- <sup>†</sup> You cannot operate "LINK" and "CLEAR" when no scan edge channel is entered.
- <sup>‡</sup> You cannot operate "ADD" when no scan edge channel is left to add to the link channel.

The following scan edge channels and name are entered in the P-LINK "P0" by default.
PROG01\*
PROG02\*
NAME: "HAM"
\* The default scan edge frequency may differ, depending on the transceiver's version.

- Displays the linked program scan edges. • LINK:
- NAME: Entering the program link name.
- ADD: Adding a program scan edge to the Program link
- CLEAR: Deleting the linked program scan edge

#### Entering a scan link name

- ① Rotate [DIAL] S to select a Program Link number between 0 and 9.
- 2 Push [4]D.
- 3 Rotate [DIAL] S to select "NAME."

④ Push [4] D.

5 Rotate [DIAL]S to select a desired character or svmbol.

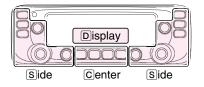
· Selectable characters and symbols:

								-				
<b>A</b> [A]	]] [B]		]] [D]	E [E]	<b>۲</b> - (F]	[G]	Н	I [1]	Ц [J]	[K]	L [L]	М [M]
N [N]	[] [0]	р [Р]	[] [Q]	R [R]	رً [S]	Т [т]		¦∕ [∨]	W [W]	)/ [X]	Ϋ́ [Y]	7 1 [Z]
[0]	 [1]	2	-] [3]	Ч [4]	5	6 [6]	<b>7</b> [7]	8	9 [9]	 [!]	וו ["]	<b>⊭</b> [#]
[] [\$]	/ /  [%]	2 [&]	′ [']	( [(]	) [)]	<b>∦</b> [*]	<b>†</b> [+]	/ [,]	 [-]	۱ [.]	/ [/]	 [:]
/ [;]	Ĺ [<]	 [=]	[>]	٦ <sub>[?]</sub>	<u>ต</u> [@]	[ [[]	\ [\]	] []]	// [^]	[Spac	e]	

- Push [CLR] D to delete a selected character or symbol.
- When no character or symbol is selected, push [▶](D) to enter a space.
- 6 Push [4] D to move the cursor backwards, or push ▶ D to move the cursor forwards.
- (7) Repeat steps (5) and (6) to enter a name of up to 6 characters, including spaces.
- ⑧ Push [↓]D.
- 9 Push [MAIN BAND]S.
  - Exits the MENU mode.

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#### Scan items (Continued)

#### Adding a Scan Edge channel to the Program Link

- ①Rotate [DIAL]S to select a Program Link number between 0 and 9.
- ② Push [↓]D.
- 3 Rotate [DIAL]S to select "ADD."
- . ④ Push [ب] D.
- 5 Rotate [DIAL]S to select a programmed scan edge channel you wish to assign to the selected link channel.

6 Push [ ] D.

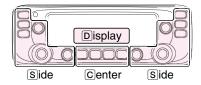
- 7 Push [MAIN BAND]S.
- Exits the MENU mode.

#### Deleting the link channel

- ① Rotate [DIAL]S to select a Program Link number between 0 and 9.
- 2 Push [ J]D.
- 3 Rotate [DIAL]S to select "CLEAR."
- ④ Push [↓]D.
- (5) Rotate [DIAL] (S) to select a programmed scan edge channel you wish to delete.
- 6 Push [↓]D.
- 7 Push [MAIN BAND]S.
- Exits the MENU mode.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

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# Function items EXMEN- FUNE

Squeich/ATT Select FUNE - SOLTYP

(Default: S SQL)

#### $\mathsf{MENU}\text{-}\mathsf{EXMENU} > \mathsf{EXMEN}\text{-}\mathsf{FUNC} > \mathsf{FUNC}\text{-}\mathsf{SQLTYP}$

#### Select the S-Meter Squelch or Attenuator.

- OFF: Both the S-Meter Squelch and Attenuator are disabled.
- S SQL: The S-Meter Squelch is enabled and you can adjust the squelch level when [SQL]S is set between 12 o'clock and the fully clockwise position.
- ATT: The Attenuator is enabled and you can adjust the attenuator level when [SQL]S is set between 12 o'clock and the fully clockwise position.

# Squeich Delay FUNE - SQL-DL

(Default: SHORT)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-SQL-DL

Set the Squelch Delay from short and long to prevent repeated opening and closing of the squelch while receiving the same signal.

• SHORT: Decreases the time before the squelch opens.

• LONG: Increases the time before the squelch opens.

# Fan Control FUNE FRN (Default: AUTO)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-FAN

Select the cooling fan control between Slow, Mid, Fast and Auto.

- SLOW: The fan rotates slowly.
- MID: The fan rotates at mid speed.
- FAST: The fan rotates fast.
- AUTO: The fan automatically rotates during transmission, or when the internal temperature of the transceiver exceeds the preset value, until the temperature drops below that value.

# Dial Speed-UP FUNE - DIAL 5 (Default: ON)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-DIAL S

Turn the dial speed acceleration ON or OFF. The acceleration automatically speeds up the tuning dial speed when you rapidly rotate [DIAL]S.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

# Auto Repeater FUNE - RUTORP

#### MENU-EXMENU > EXMEN-FUNC > FUNC-AUTORP

This item appears in only the Korean and U.S.A. version transceivers.

The Auto Repeater function automatically turns the duplex operation and tone encoder ON or OFF while in the FM or FM-N mode. The offset and repeater tone are not changed by the Auto Repeater function. Reset these setting values, if necessary.

#### For the U.S.A. version transceivers

- OFF: Turns OFF the function.
- DUP: Turns ON only the duplex operation. (Default)
- DUP.TON: Turns ON the duplex operation and tone encoder.

#### For the Korean version transceivers

- OFF: Turns OFF the function.
- ON: Turns ON the duplex operation and tone encoder. (Default)

# Remote MIC Key FUNE - RMTMIE

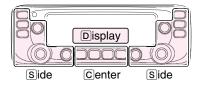
#### MENU-EXMENU > EXMEN-FUNC > FUNC-RMTMIC

You can change the function assignments for the [F-1] and [F-2] keys on the supplied HM-207 REMOTE-CON-TROL MICROPHONE. See page 21 for details.

- RX: The assigned key function is enabled while receiving or in standby.
- TX: The assigned key function is enabled during transmission.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



#### Function items (Continued)

### Up/Down MIC Key FUNE - UIMIE

#### MENU-EXMENU > EXMEN-FUNC > FUNC-UDMIC

You can change the function assignments for the [UP] and [DN] keys on the optional HM-154 HAND MICRO-PHONE. See page 22 for details.

- RX: The assigned key function is enabled during receiving or standby.
- •TX: The assigned key function is enabled during transmission.

#### One-Touch PTT (Remote MIC) FUNE - PTT (Default: PUSH)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-PTT

Set the One-Touch PTT function for the HM-207 RE-MOTE-CONTROL MICROPHONE.

The function enables you to communicate by sequentially pushing the [PTT] button.

- PUSH: Push [PTT] to transmit and release to receive.
- HOLD: Push [PTT] to transmit and push again to receive.

#### PTT Lock FUNE - PTT LK (Default: OFF)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-PTT LK

Turn the PTT Lock function ON or OFF.

To prevent accidental transmissions, this function disables [PTT].

- OFF: Turns OFF the function.
- ON: Turns ON the function.

# Busy Lockout FLINE - LK OUT (Default: OFF)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-LK OUT

Turn the Busy Lockout function ON or OFF. This function inhibits transmission while receiving a

signal, or when the squelch is open.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

#### Time-Out Timer FUNE - TOT (Default: OFF)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-TOT

Set the Time-Out Timer to 1, 3, 5, 10, 15, or 30 minutes to prevent an accidental prolonged transmission. To disable the function, set it to OFF.

- OFF: Turns OFF the function.
- 1 to 30 min: If a continuous transmission exceeds the set time period, the transmission will be cut off. A warning beep sounds 10 seconds be-

fore and 5 beeps sound again just as the TOT function terminates transmission.

#### Active band FUNE - RETIVE (Default: ALL)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-ACTIVE

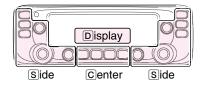
Allows continuous frequency selection of the operating frequency across all bands using [DIAL]S.

- SINGLE: Set the selectable frequencies using [DIAL] S to single band. When you rotate [DIAL] S on the band edge, the other side's band edge is selected.
- ALL: Set the selectable frequencies using [DIAL] S to all bands. When you rotate [DIAL] S on the band edge, the next band is displayed.
- HAM: Set the selectable frequencies using [DIAL] S to VHF and UHF ham bands. When you rotate [DIAL] S on the band edge, the next Ham band is displayed.

- When "SINGLE" is selected, hold down [MAIN
- BANDIS, and then rotate [DIALIS to select an-
- other band.
- When BAND other I When band. This s quenc lected • When "HAM" is selected, you cannot select the AIR
- This setting is for the [DIAL] operation, so all fre-
- quencies will be scanned, even if "SINGLE" is selected.

The C, S, or D in the instructions indicate the area of the controller.

C: Center S: Side D: Display



#### Function items (Continued)

MIC Gain FUNE - MIE 5

MENU-EXMENU > EXMEN-FUNC > FUNC-MIC G

Set the microphone gain to suit your preference. Selectable values: 1 (minimum)~4 (maximum)

Higher values make the microphone more sensitive to your voice.

\*The default settings may differ, depending on your transceiver version.

## Auto Power OFF FUNE - AP OFF

(Default: OFF)

(Default: 2\*)

#### MENU-EXMENU > EXMEN-FUNC > FUNC-AP OFF

The transceiver can be set to automatically turn OFF, and sound a beep, after a specified time period of inactivity.

Approximately 5 seconds before the transceiver turns OFF, "AP OFF" appears on the transceiver's display, and beeps sound. If you operate the transceiver while displaying "AP OFF," the setting will restart.

• OFF: Turns OFF the function.

• 30 to 120 min: Turns OFF the power after the set time period (30, 60, 90 or 120 minutes) of inactivity.

#### CI-V Address [I-1' - [I//A]R (Default: 90)

# MENU-EXMENU > EXMEN-FUNC > FUNC-CI-V > CI-V-CIVADR

To distinguish equipment, each CI-V transceiver has its own Icom standard address in hexadecimal code. The IC-2730A/E's default address is 90.

When 2 or more IC-2730A/Es are simultaneously controlled by a PC, set a different address for each transceiver between 01h and DFh (hexadecimal).

### CI-V Baud Rate [I-1' - [II' IRU

#### (Default: AUTO)

# MENU-EXMENU > EXMEN-FUNC > FUNC-CI-V > CI-V-CIVBAU

Set the CI-V data transfer speed to 4800, 9600, 19200 bps or Auto.

When "AUTO" is selected, the baud rate is automatically set according to the data rate of the controller.

#### CI-V Transceive EI-V - EIVTRN

(Default: OFF)

# MENU-EXMENU > EXMEN-FUNC > FUNC-CI-V > CI-V-CIVTRN

Turn the CI-V Transceive function ON or OFF.

- OFF: Turns OFF the function.
- ON: When you change a setting on one transceiver, the same settings is automatically changed on other connected transceivers or receivers.

IF Exchange	FUNE	- IF-EXE	(Default: OFF)

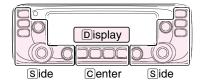
MENU-EXMENU > EXMEN-FUNC > FUNC-IF-EXC

Select whether or not to exchange the Intermediate Frequency to prevent interference.

- OFF: Does not exchange the Intermediate Frequency.
- ON: Exchanges to the higher or lower Intermediate Frequency.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



# Display items EXMEN- IISP

# Backlight DISP - LIGHT (Default: 4)

MENU-EXMENU > EXMEN-DISP > DISP-LIGHT

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

## Auto Dimmer **JISP** - **RT-JIM** (Default: OFF)

#### MENU-EXMENU > EXMEN-DISP > DISP-AT-DIM

This function is used for nighttime operation.

The Auto Dimmer function can be set to OFF, AT-OFF, or AT-1~AT-3.

- OFF: Auto Dimmer function is turned OFF. The backlight is continuously ON while the transceiver is ON.
- AT-OFF: The backlight is automatically turned ON when the controller is operated. The backlight is automatically turned OFF after the Auto Dimmer Timer set time period (5 or 10 seconds) of inactivity.
- AT-1~AT-3: The backlight is automatically turned ON when the controller is operated. The backlight is automatically set to level 1 to 3 after the Auto Dimmer Timer set time period (5 or 10 seconds) of inactivity.

# Auto Dimmer Timer DISP - DIM TM

(Default: 5sec)

#### MENU-EXMENU > EXMEN-DISP > DISP-DIM TM

Set the time period before the backlight turns OFF when the Auto Dimmer is set to AT-OFF or AT-1 to AT-3.

- 5sec: The backlight turns OFF after 5 seconds of inactivity.
- 10sec: The backlight turns OFF after 10 seconds of inactivity.

### LCD Contrast IISP - CONT (Default: 6)

#### MENU-EXMENU > EXMEN-DISP > DISP-CONT

Set the contrast of the transceiver's display. Set the level to between 1 (lowest), and 10 (highest).

# Opening Message DISP - OPNMS6

(Default: ON)

#### MENU-EXMENU > EXMEN-DISP > DISP-OPN.MSG

Select the opening message that is displayed on the transceiver's display at power ON.

- OFF: The opening message is skipped.
- ON: "ICOM" and power source voltage are displayed for about 1 second at power ON.

### Memory Name **II**5P - NRME (Default: OFF)

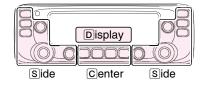
#### MENU-EXMENU > EXMEN-DISP > DISP-NAME

Select to display either the operating frequency or the channel name in the Memory mode.

- OFF: Displays the operating frequency.
- ON: Displays the channel name. When a channel name is not entered, displays the operating frequency.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



#### Display items (Continued)

# AIR Band Display DISP - AIR

(Default: CH ID)

#### MENU-EXMENU > EXMEN-DISP > DISP-AIR

Select the entry/display type of the AIR band frequency.

- CH ID: Entry/display type is set to CH ID.
- FREQ: Entry/display type is set to frequency. \*The transceiver displays only three decimal places on the display.

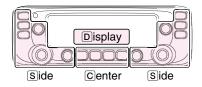
#### About Channel ID:

This list shows the channel IDs that correspond to the AIR band frequencies and the operating modes.

Frequency	Mode	Channel ID
118.000000	AM	118.000
118.000000	AM-N	118.005
118.008333	AM-N	118.010
118.016666	AM-N	118.015
118.025000	AM	118.025
118.025000	AM-N	118.030
118.033333	AM-N	118.035
118.041666	AM-N	118.040
118.050000	AM	118.050
118.050000	AM-N	118.055
118.058333	AM-N	118.060
118.066666	AM-N	118.065
118.075000	AM	118.075
118.075000	AM-N	118.080
118.083333	AM-N	118.085
118.091666	AM-N	118.090
118.100000	AM	118.100
118.100000	AM-N	118.105

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



#### Sounds items EXMEN- SOUNDS

Beep Level SOUND- BEEPLV (Default: 9)

#### MENU-EXMENU > EXMEN-SOUNDS > SOUND-BEEPLV

Set the beep audio output level to between 0 (OFF), 1 (minimum) and 9 (maximum).

## Key-Touch Beep SOUND- KEY B

(Default: ON)

#### MENU-EXMENU > EXMEN-SOUNDS > SOUND-KEY B

Turn the confirmation beep tones ON or OFF. • OFF: No beep sounds.

• ON: When you push a key, a beep sounds.

- The beep tone sounds regardless of this setting when:
  The power is turned ON.
  A matched tone signal is received if the pocket beep is activated.
  The Auto Power OFF function turns OFF the transceiver's power. (The beep sounds before powering OFF.)
  The TOT (Time-Out Timer) function is activated. (Only 10 seconds remain before the Time-Out Timer cuts off transmission.)
  The cloning read or write operation starts or ends.
  A received signal stops the scan. (Scan Stop Beep)
  The Home channel is displayed. (Home CH Beep)

# Home CH Beep SOUND- HOME B (Default: ON)

#### MENU-EXMENU > EXMEN-SOUNDS > SOUND-HOME B

Turn the Home CH Beep ON or OFF.

When you select a Home channel by rotating [DIAL]S, a beep sounds. You will know the Home channel is selected without looking at the display.

In the AIR band, the Home channel beep sounds only when you select the frequency and the operating mode (AM or AM-N) that are the same as the Home channel.

- OFF: No beep sounds.
- ON: Sounds a beep when you select the Home CH by rotating [DIAL]S.

**NOTE:** You can set a Home CH for the VFO mode and the Memory mode.

#### Band Edge Beep SOUND- EDGE B

(Default: OFF)

#### MENU-EXMENU > EXMEN-SOUNDS > SOUND-EDGE B

Turn the Band edge beep ON or OFF.

- OFF: No beep sounds.
- ON: When you tune into or out of the AIR, VHF, and UHF ham band's frequency range, a beep sounds.

Scan Stop Beep SOUND- STOP B

(Default: OFF)

MENU-EXMENU > EXMEN-SOUNDS > SOUND-STOP B

- Turn the scan stop beep ON or OFF.
- OFF: No beep sounds.
- ON: When a received signal stops the scan, a beep sounds.

#### Sub Band Mute 50UND- 503MUT

(Default: OFF)

#### MENU-EXMENU > EXMEN-SOUNDS > SOUND-SUBMUT

Select whether or not to mute the SUB band audio signal while receiving on the MAIN band.

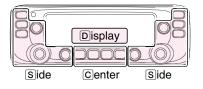
- OFF: The SUB band audio can be heard even while receiving a signal on the MAIN band.
- MUTE: The SUB band audio signal is muted while receiving on the MAIN band.
- BEEP: A beep sounds when a signal disappears on the SUB band. A beep sounds even if no signal is received

on the MAIN band.

- MUT.BP: The SUB band audio signal is muted while receiving on the MAIN band. A beep sounds while receiving on the SUB band and the signal disappears.
  - The beep sounds even if no signal is received on the MAIN band.

The C, S, or D in the instructions indicate the area of the controller.

C: Center S: Side D: Display



# Home channel items EXMEN- HOMECH

Home channel Setting HDME - SETFRD, HDME - SET EH

# MENU-EXMENU > EXMEN-HOMECH > HOME-SET.FRQ/SET CH

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

- SET.FRQ: Set the selected VFO frequency as the Home channel frequency.
- SET CH: Set the selected Memory channel as the Home channel.

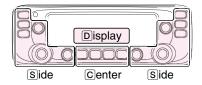
Home channel Clear HOME - ELEAR

MENU-**EXMENU** > EXMEN-**HOMECH** > HOME-**CLEAR** 

Push  $[\mathbf{L}]$  D to delete the Home channel.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



# Bluetooth<sup>®</sup> Set items EXMEN- BI SET

**NOTE:** To use the Bluetooth<sup>®</sup> function the optional UT-133 Bluetooth<sup>®</sup> UNIT is required.

# Bluetooth<sup>®</sup> ITSET- IT (Default: OFF)

MENU-EXMENU > EXMEN-BT SET > BTSET-BT

Turns the Bluetooth® function ON or OFF.

(UT-133 Bluetooth<sup>®</sup> UNIT is required.)

- OFF: Turns OFF the function.
- ON: Turns ON the function.

#### Auto Connect BTSET- AT CON (Default: ON)

# MENU-EXMENU > EXMEN-BT SET > BTSET-AT CON

Sets to automatically connect to the paired Bluetooth<sup>®</sup> headset when the headset is powered ON.

 OFF: Does not automatically connect to the last connected headset.

You should manually connects to the paired headset.

• ON: Automatically connects to the last connected headset.

#### Connection BISET- CONNEC

# MENU-EXMENU > EXMEN-BT SET > BTSET-CONNEC

Push to  $[\mathbf{L}_{\mathbf{J}}]$  to view the paired Bluetooth<sup>®</sup> headset. Rotate [DIAL]S to select a desired headset to connect to, and then push  $[\mathbf{L}_{\mathbf{J}}]$  to connect to it.

#### Disconnection BISET- DISCON

MENU-EXMENU > EXMEN-BT SET > BTSET-DISCON

Push [] D to disconnect the headset.

#### Paring BISET- PRIR

#### MENU-EXMENU > EXMEN-BT SET > BTSET-PAIR

Push [-] D to enter the pairing mode.

### AF Output HSSET- AF OUT

(Default: HS)

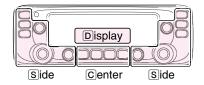
#### MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-AF OUT

Select the AF Output device when a Bluetooth<sup>®</sup> headset is connected.

- HS: Outputs audio to only the headset.
- HS+SP: Outputs audio to both the headset and the transceiver's speaker.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



#### Bluetooth<sup>®</sup> Set items (Continued)

# Headset Function Select H55ET- H5FUNC

(Default: NORMAL)

#### MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-HSFUNC

Select the desired PTT and microphone combination when both a Bluetooth  $^{\circledast}$  headset and the radio microphone are used.

- NORMAL: The audio from the device whose [PTT] is pushed is transmitted.
- MIC: The audio from only the Bluetooth<sup>®</sup> headset is transmitted.

Transmission is made by pushing either the [PTT] on the Bluetooth<sup>®</sup> headset, or the microphone connected to either the transceiver main unit or the controller.

\* The microphone connected to the transceiver main unit or the controller is only used for the PTT control.

• P-AMAN: The transmission is made by pushing the [PTT] on the Bluetooth<sup>®</sup> headset.

The audio from the microphone connected to the transceiver main unit is transmitted. However, if you push the [PTT] of the microphone connected to the transceiver main unit or the controller, the audio from the device whose [PTT] is pushed is transmitted.

• P-ACON: The transmission is made by pushing the [PTT] on the Bluetooth<sup>®</sup> headset.

The audio from the microphone connected to the controller is transmitted. However, if you push the [PTT] of the microphone connected to the transceiver main unit or the controller, the audio from the device whose [PTT] is pushed is transmitted.

#### NOTE:

- When you select either "P-AMAN" or "P-ACON," turn OFF the VOX function.
- Be sure to select "NORMAL" or "MIC," when you use only the Bluetooth<sup>®</sup> headset.

The Bluetooth<sup>®</sup> headset operation for each option is listed below.

Option	TX control	TX audio
NORMAL	Enabled	Enabled
MIC	Enabled	Enabled
P-AMAN	Enabled	Disabled (Audio from the microphone connected to the transceiver main unit is transmitted.)
P-ACON	Enabled	Disabled (Audio from the microphone connected to the controller is transmitted.)

#### **VOX** *V* 0*X* - *V* 0*X*

(Default: OFF)

#### MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-VOX > VOX-VOX

The VOX (Voice Operated Transmission) function starts transmitting without pushing [PTT] when you speak into the microphone, then automatically returns to receive when you stop speaking.

- OFF: Turns OFF the function.
- ON: Turns ON the function.

**NOTE:** To use the function, the optional VS-3 Bluetooth<sup>®</sup> HEADSET is required.

#### **VOX Level** V'''' = V''''' (Default: 5)

MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-VOX > VOX-VOX LV

Set the VOX gain level between OFF, 1 (minimum sensitivity) and 10 (maximum sensitivity).

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

**NOTE:** Before setting the VOX gain level, it is recommended that you set the microphone gain level in the Function items of EXMENU or the Bluetooth<sup>®</sup> headset.

### **VOX Delay** $V \square X = V \square X \square L Y$ (Default: 0.5)

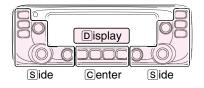
MENU-**EXMENU** > EXMEN-**BT SET** > BTSET-**HS SET** > HSSET-**VOX** > VOX-**VOX.DLY** 

Set the VOX Delay time to 0.5, 1.0, 1.5, 2.0, 2.5, or 3.0 seconds.

The VOX Delay is the amount of time the transmitter stays ON after you stop speaking, before the VOX switches to receive.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



#### Bluetooth<sup>®</sup> Set items (Continued)

#### VOX Time-Out Timer VOX - VOX.TOT

(Default: 3MIN)

# MENU-**EXMENU** > EXMEN-**BT SET** > BTSET-**HS SET** > HSSET-**VOX** > VOX-**VOX.TOT**

Set the VOX Time-Out Timer to 1, 2, 3, 4, 5, 10, or 15 minutes to prevent an accidental prolonged transmission.

If a continuous transmission exceeds the set period, the transmission will be cut off.

To disable the function, set it to "OFF."

- OFF: Turns OFF the function.
- 1MIN~5MIN, 10MIN, or 15MIN:

If a continuous transmission exceeds the set period, transmission will be cut off. A warning beep sounds 10 seconds before, and 5 beeps sound again just as the TOT func-

tion terminates transmission.

• Using the Time-Out Timer, the transmission will be cut OFF after the shorter set time period ends.

#### Power Save ICOMH- PoSAVE (Default: OFF)

#### MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-ICOMHS > ICOMH-PoSAVE

Select whether to operate with the Bluetooth<sup>®</sup> headset's battery saving mode.

When a third-party headset is connected, the power save mode is automatically turned OFF, regardless of this setting.

• OFF: Turns OFF the function.

• ON: The Power Save mode is activated when no communication or operation is performed for 120 seconds.

#### **One-Touch PTT** ICOMH- PTT (Default: PUSH)

MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-ICOMHS > ICOMH-PTT

Set the One-Touch PTT function while the VS-3 headset is connected.

The function enables you to communicate by sequentially pushing the VS-3's [PTT].

When a third-party headset is connected, this function is automatically turned ON, regardless of this setting.

- PUSH: Push [PTT] to transmit and release to receive.
- HOLD: Push [PTT] to transmit and push again to receive.

#### PTT Beep ICOMH- PTT B

(Default: OFF)

MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-ICOMHS > ICOMH-PTT B

Set the beep sound when you push [PTT] on the VS-3 headset.

• OFF: No beep sounds.

• ON: Beep sounds.

### Custom Key Beep ICOMH- CUST B

(Default: OFF)

MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-ICOMHS > ICOMH-CUST B

Set the beep sound when you push the Custom Key ([PLAY]/[FWD]/[RWD]) on the VS-3 headset.

• OFF: No beep sounds.

• ON: Beep sounds.

See page 23 for details.

### Custom Key ICOMH-- CUST K (Default: [PLAY]: ---, [FWD]: UP, [RWD]: DOWN)

MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-ICOMHS > ICOMH-CUST K

You can change the function assignments for the Custom Key ([PLAY]/[FWD]/[RWD]) on the VS-3 headset.

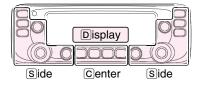
### Initialize Bluetooth® Device BTSET- INITBT

#### MENU-EXMENU > EXMEN-BT SET > BTSET-INITBT

Push  $[\mathbf{U}]$  to initialize the installed Bluetooth<sup>®</sup> unit's pairing information and Bluetooth<sup>®</sup> headset name.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



# Others items EXMEN- DTHERS

#### Voltage INFO - VOLT

# MENU-EXMENU > EXMEN-OTHERS > OTHER-INFO > INFO-VOLT

Push  $[\mathbf{U}]$  to display the voltage of the external power supply.

#### Version INFO - VER

# MENU-**EXMENU** > EXMEN-**OTHERS** > OTHER-**INFO** > INFO-**VER**

Push  $[\mathbf{L}]$  to display the transceiver firmware's version number.

When the UT-133 Bluetooth<sup>®</sup> UNIT is installed, the unit's version number is also displayed.

#### Clone Mode CLONE- CLONE

# MENU-**EXMENU** > EXMEN-**OTHERS** > OTHER-**CLONE** > CLONE-**CLONE**

Push [ $\downarrow$ ] D to enter the clone mode as the sub transceiver to read the cloning data from a connected IC-2730A/E.

# Clone Master Mode ELONE- MASTER

MENU-**EXMENU** > EXMEN-**OTHERS** > OTHER-**CLONE** > CLONE-**MASTER** 

Push [,]D to enter the clone mode as the master transceiver to write the cloning data to a connected IC-2730A/E.

#### Partial Reset RESET- PART

# MENU-**EXMENU** > EXMEN-**OTHERS** > OTHER-**RESET** > RESET-**PART**

Push []] to resets the operating settings to their default values (VFO frequency, VFO settings, MENU contents) without clearing the items below:

- Memory channel contents
- Scan Edge contents
- Call channel contents
- DTMF memory contents

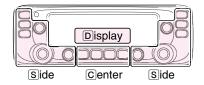
# All Reset RESET- ALL

# MENU-**EXMENU** > EXMEN-**OTHERS** > OTHER-**RESET** > RESET-**ALL**

Push  $[\mathbf{U}]$  to clear all content and return all settings to their factory defaults.

The  $\mathbb{C}$ ,  $\mathbb{S}$ , or  $\mathbb{D}$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



# Changing the microphone key's function assignment

#### ♦ On the supplied HM-207 REMOTE-CONTROL MICROPHONE

You can change the function assignments for the [F-1] and [F-2] keys on the HM-207 REMOTE-CONTROL MICRO-PHONE.

The assignable key functions are listed to the right.

#### <How to assign>

- Example: Assigning "MONI" to [F-1] key on the microphone.
- 1) Push [MENU **FO**]C.
- ② Rotate [DIAL]S to select "RMTMIC" (Remote MIC key).
- (MENU-**EXMENU** > EXMEN-**FUNC** > FUNC-**RMTMIC**) ③ Push [↓]D.
- Goes to the next tree level.
- 4 Rotate [DIAL]S to select "RX."
  - To assign a key function to be used while transmitting, select "TX."
- ⑤ Push [↓]D.
- 6 Rotate [DIAL]S to select "F-1."
- To assign a key function to [F-2] key, select "F-2."
- ⑦ Push [+]D.
- 8 Rotate [DIAL]S to select "MONI."
- 9 Push [ ] D.
- 10 Push [MAIN BAND]S.
  - Exits the MENU mode.

#### **Function items construction**

#### EXMENU

FUNC	
SQLTYP	OFF/S SQL/ATT
SQL-DL	-SHORT/LONG
-FAN	-SLOW/MID/FAST/AUTO
DIAL S	-OFF/ON
-AUTORP	—OFF/ON (KOR version)
	OFF/DUP/DUP.TON (USA version)
RMTMIC	RX/TX F-1/F-2
	-RX/TX -UP/DN
PTT	PUSH/HOLD
	OFF/ON
	OFF/ON
	OFF/1~30MIN
ACTIVE	SINGLE/ALL/HAM
AP OFF	OFF/30~120MIN
<u> </u>	
CIVADR	
CIVBAU	4800~19200/AUTO
	OFF/ON
IF-EXC	OFF/ON

#### • During RX/Standby:

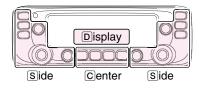
Function	Description					
	No function					
MONI [F2]: Default	fault Push to open or close the squelch.					
MR000	In the Memory mode, push to select Memory channel 000.					
MR001	In the Memory mode, push to select Memory channel 001.					
BND.BNK [F1]: Default	Push to select an operating band. In the 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 or stop a scan.					
T-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	Push to toggle between tone types. (p. 5)					
MW	<ul> <li>In the VFO mode, hold down to save the frequency displayed in the MAIN band into a Memory channel.</li> <li>The frequency is automatically saved in a blank channel.</li> </ul>					
MUTE	Push to turn the Mute function ON or OFF.					
DTMFTX	Push to enter the DTMF Code Entry mode.					
T-CALL	Push to transmit a 1750 Hz tone.					

#### • During TX:

Function	Description			
 [F2]: Default	No function			
LOW	Push to change the transmit power level.			
T-CALL [F1]: Default	Push to transmit a 1750 Hz tone.			

The C, S, or D in the instructions indicate the area of the controller.

C: Center S: Side D: Display



#### Changing the microphone key's function assignment (Continued)

#### On the optional HM-154 HAND MICROPHONE

You can change the function assignments for the [UP] and [DN] keys on the HM-154 HAND MICROPHONE. The assignable key functions are listed to the right.

#### <How to assign>

- Example: Assigning "VOL UP" to [UP] key on the microphone.
- ① Push [MENU **--O**]C.
- ② Rotate [DIAL] S to select "UDMIC" (Up/Down MIC key).
- (MENU-EXMENU > EXMEN-FUNC > FUNC-UDMIC) ③ Push [↓]D.
- Goes to the next tree level.
- 4 Rotate [DIAL]S to select "RX."
- To assign a key function to be used while transmitting, select "TX."
- ⑤ Push [↓]D.
- 6 Rotate [DIAL]S to select "UP."
- To assign a key function to [DN] key, select "DN."
- ⑦ Push [+]D.
- (8) Rotate [DIAL]S to select "VOL UP."
- ⑨ Push [↓]D.
- 10 Push [MAIN BAND]S.
  - Exits the MENU mode.

#### **Function items construction**

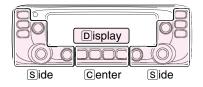
EXMENU

FUNC					
SQLTYP	OFF/S SQL/ATT				
SQL-DL	-SHORT/LONG				
-FAN	SLOW/MID/FAST/	AUTO			
DIAL S	OFF/ON				
AUTORP	OFF/ON (KOR ver	sion)			
	OFF/DUP/DUP.TO	N (USA version)			
RMTMIC	RX/TX -	F-1/F-2			
UDMIC	RX/TX	UP/DN			
-PTT	PUSH/HOLD				
PTT LK	OFF/ON				
LK OUT	OFF/ON				
ТОТ	OFF/1~30MIN				
ACTIVE	SINGLE/ALL/HAM	SINGLE/ALL/HAM			
MIC G	1~4				
AP OFF	OFF/30~120MIN				
CI-V					
CIVADR	-01~DF	01~DF			
CIVBAU	4800~19200/AUTC	4800~19200/AUTO			
CIVTRN	OFF/ON				
IF-EXC	OFF/ON				

The C, S, or D in the instructions indicate the area of the controller.

C: Center S: Side D: Display

See page 2 'Changing the EXMENU item's options' for details of the key operations.



#### • During RX/Standby:

Function	Description				
T unction	No function				
UP	Push to increase the frequency or Memory chan-				
UP [UP]: Default					
DOWN [DN]: Default	Push to decrease the frequency or Memory channel.				
VOL UP	Push to increase the volume level.				
VOL DN	Push to decrease the volume level.				
SQL UP	Push to increase the squelch level.				
SQL DN	Push to decrease the squelch level.				
MONI	Push to open or close the squelch.				
CALL	Push to select a call channel.				
MR000	In the Memory mode, push to select Memory channel 000.				
MR001	In the Memory mode, push to select Memory channel 001.				
VFO/MR	Push to toggle between the VFO mode and the Memory mode.				
HOME	Push to directly select the Home CH that is set to the selected mode (VFO/Memory). While in the CALL CH or weather channel mode, or when no Home CH is set, an error beep sounds.				
BND.BNK	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 or stop a scan.				
T-SKIP	Push to set the frequency to be skipped during scanning. The selected frequencies are temporarily skipped for faster scanning.				
MAIN	Push to select the MAIN Band.				
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	Push to toggle between tone types. (p. 5)				
MW	<ul> <li>In the VFO mode, hold down to save the frequency displayed in the MAIN band into a Memory channel.</li> <li>The frequency is automatically saved in a blank channel.</li> </ul>				
MUTE	Push to turn the Mute function ON or OFF.				
T-CALL	Push to transmit a 1750 Hz tone.				

#### • During TX:

Function	Description					
 [UP]/[DN]: Default	No function					
LOW	Push to change the transmit power level.					
T-CALL	Push to transmit a 1750 Hz tone.					

#### Changing the microphone key's function assignment (Continued)

#### On the optional VS-3 Bluetooth<sup>®</sup> HEADSET

You can change the function assignments for the Custom Key ([PLAY]/[FWD]/[RWD]) on the optional VS-3 Bluetooth  $^{\ensuremath{\$}}$  HEADSET.

The assignable key functions are listed to the right.

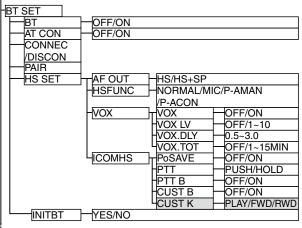
#### <How to assign>

Example: Assigning "UP" to [PLAY] key on the headset. (1) Push [MENU **FO**]C.

- ② Rotate [DIAL]S to select "CUST K" (Custom Key). (MENU-EXMENU > EXMEN-BT SET > BTSET-HS SET > HSSET-ICOMHS > ICOMH-CUST K)
- ③ Push [↓]D.
- Goes to the next tree level.
- 4 Rotate [DIAL]S to select "PLAY."
  - To assign a key function to [FWD] key, select "FWD."
  - To assign a key function to [RWD] key, select "RWD."
- ⑤ Push [↓]D.
- 6 Rotate [DIAL]S to select "UP."
- ⑦Push []]
- 8 Push [MAIN BAND]S.
  - Exits the MENU mode.

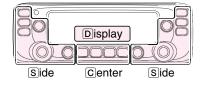
#### Bluetooth® items construction

#### EXMENU



The  $\bigcirc$ ,  $\bigcirc$ , or  $\bigcirc$  in the instructions indicate the area of the controller.

C: Center S: Side D: Display



Function	Description			
	No function			
UP	Push to increase the frequency or Memory			
UP	channel.			
DOWN	Push to decrease the frequency or Memory			
	channel.			
VOL UP	Push to turn up the volume level.			
VOL DN	Push to turn down the volume level.			
SQL UP	Push to turn up the squelch level.			
SQL DN	Push to turn down the squelch level.			
MONI	Push to open or close the squelch.			
CALL	Push to select a call channel.			
MR000	In the Memory mode, push to select Memo-			
	ry channel 000.			
MR001	In the Memory mode, push to select Memo-			
	ry channel 001.			
VFO/MR	Push to toggle between the VFO mode and the Memory mode.			
	Push to directly select the Home CH that is			
	set to the selected mode (VFO/Memory).			
HOME	While in the CALL CH or weather channel			
	mode, or when no Home CH is set, an error			
	beep sounds.			
	Push to select an operating band.			
	In the VFO mode, push to change the oper-			
BND.BNK	ating 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 or stop a scan.				
	Push to set the frequency to be skipped dur- ing scanning.			
T-SKIP	The selected frequencies are temporarily			
	skipped for faster scanning.			
MAIN	Push to select the MAIN Band.			
MODE	Push to change the operating mode.			
LOW	Push to change the transmit power level.			
	Push to turn the Duplex mode ON or OFF,			
DUP	and the shift direction to DUP+ or DUP			
PRIO	Push to turn the Priority watch ON or OFF.			
TONE	Push to toggle between tone types. (p. 5)			
	In the VFO mode, hold down to save the fre-			
	quency displayed in the MAIN band into a			
MW	Memory channel.			
	• The frequency is automatically saved in a			
	blank channel.			
MUTE	Push to turn the Mute function ON or OFF.			
T-CALL	Push to transmit a 1750 Hz tone.			

# **CI-V** information

#### ♦ Setting CI-V data

Before controlling the transceiver using the Icom Communications Interface-V (CI-V), you should set the CI-V address, CI-V baud rate, and CI-V transceive function ON/OFF in EXMENU.

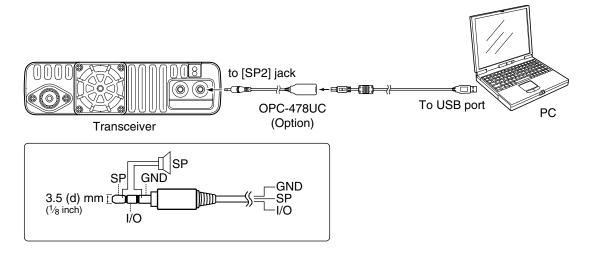
(MENU-EXMENU > EXMEN-FUNC > FUNC-CI-V)

#### ♦ Connecting to a PC

When the transceiver is connected to a PC, the Icom Communications Interface-V (CI-V) controls the transceiver.

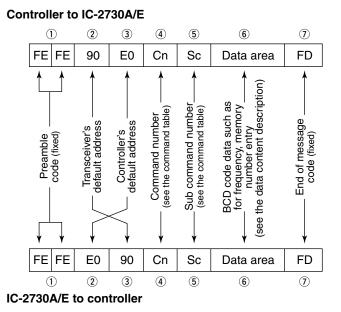
Use the following cables for the connection.

When using the OPC-478UC, you cannot hear the audio received on the right side band.

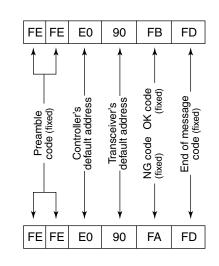


### ♦ Data format

The CI-V system uses the following data formats. Data formats differ depending on command numbers. A data area or sub command is added to some commands.



#### OK message to controller



NG message to controller

# CI-V information (Continued)

# ♦ Command table

Cmd.	Sub cmd.	Data	Description
00		See p.26	Send operating frequency for transceive
01		See p.26	Send operating mode for transceive
03		See p.26	Read operating frequency
04		See p.26	Read operating mode
05		See p.26	Send operating frequency
06		02	Select AM mode
		05	Select FM mode
07	D0		Select A band Set the Main band as the A band
	D1		Select B band
			Set the Main band as the B band
0C		See p.26	Read frequency offset
			(Below 100 Hz is omitted)
0D		See p.26	Send frequency offset
0F			Read duplex setting
	10		(10=simplex, 11=DUP-, 12=DUP+) Set simplex operation
	11		Set DUP- operation
	12		Set DUP+ operation
14	01	0000 to 0255	Send/read audio output level
	01	0000 10 0200	(000=Minimum, 0128=Center, 0255=Max-
			imum)
	03	0000 to 0255	Send/read squelch level
			(000=Minimum, 0128=Center, 0255=Max- imum)
	0A	See p.26	Send/read RF power setting
	0B	See p.26	Send/read external microphone gain
	16	See p.26	Send/read VOX gain
15	01	00	Read noise/S-meter squelch status
	•		(squelch close)
		01	Read noise/S-meter squelch status
	00	0000 to 0055	(squelch open)
	02 05	0000 to 0255 00	Read S-meter level (0000=S0, 0170=S9) Read tone squelch and RF squelch status
	05	00	(squelch close)
		01	Read tone squelch and RF squelch status
			(squelch open)
	11	0000 to 0255	Read RF power meter
10	40		(0026=LOW, 0077=MID, 0255=HIGH)
16	42	00	Send/read Repeater tone OFF Send/read Repeater tone ON
	43	00	Send/read Tone squelch OFF
	43	00	Send/read Tone squeich OFF
		02	Send/read Reversed Tone squelch ON
	46	00	Send/read VOX function OFF
		01	Send/read VOX function ON
	4B	00	Send/read DTCS OFF
		01	Send/read DTCS ON
		02	Send/read Reversed DTCS ON
19	00		Read transceiver ID
1A	00	00 to 09	Send/read Tone setting
			(00=OFF, 01=TONE, 02=TSQL, 03=DTCS,
			04=TSQL-R, 05=DTCS-R, 06=DTCS(T),
			07=TONE(T)/DTCS(R), 08=DTCS(T)/TSQL(R),
			09=TONE(T)/TSQL(R))
			See page 5 for details.
1B	00	See p.26	Send/read Repeater tone frequency
	01	See p.26	Send/read Tone squelch frequency
	02	See p.26	Send/read DTCS code and polarity
1C	00	00	Send/read Transceiver's status (RX)
1		01	Send/read Transceiver's status (TX)

#### CI-V information (Continued)

#### • Receive frequency setting

Con	Command: 00, 03, 05									
	1	(2	)	3	)	(4	)	(5)		
	X 0	Х	Х	Х	Х	Х	Х	0	Х	
	10H zdigit: 0, 3, 5, 6 (according to the 100 Hz digit) 1 Hz digit: 0 (Fixed)		100 Hz digit: 0, 2, 3, 5, 6, 7>	100 kHz digit: 0~9	10 kHz digit: 0~9	10 MHz digit:0~9 ───	1 MHz digit:0~9	1000 MHz digit: 0	100 MHz digit: 1~5	
100 Hz digit						1	10 H	z digi	t	
0							0			
2							5			
2 3 5				3						
				0						
	6	3			6					
7							5			

#### Operating mode

Command: 01, 04, 06

	1	)	2
_			

XX	Х	-	Х		
Operating mo	ode	1	Mod	е	2 Filter setting
AM			02		01
AM-N			02		02

FM	05	01
FM-N	05	02

• Duplex Frequency offset setting Command: 0C, 0D

(1	)		2)	(	3)
Х	Х	Х	Х	Х	Х
kHz digit — <b>→</b>	00 Hz digit →	00 kHz digit →	0 kHz digit —►	0 MHz digit →	MHz digit —

#### • RF power level setting

Command: 14 0A

LOW	MID	HIGH
0000~0084	0085~0170	0171~0255

#### • External microphone gain setting

Command:	14 0B		
1	2	3	4
0000~0063	0064~0127	0128~0191	0192~0255

# • VOX gain setting

Command: 14 16							
OFF	1	2	3	4			
0000~0022	0023~0046	0047~0069	0070~0092	0093~0115			
5	6	7	8	9			
0016~0139	0140~0162	0163~0185	0186~0208	0209~0232			
10							
0233~0255							

#### • Repeater tone/tone squelch frequency setting Command: 1B 00, 1B 01

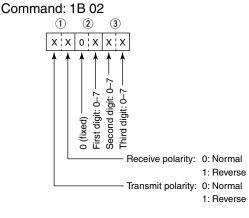
(1	D*		2)	(	3)
0	0	Х	Х	Х	Х
Fixed: 0 —	Fixed: 0 —	100 Hz digit →	10 Hz digit —	1 Hz digit —	0.1 Hz digit —

\*Not necessary when setting a frequency.

#### • Tone 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 and polarity setting



#### 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         34												
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	02	3	054	125	165	245	274	356	445	506	627	732
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	02	5	065	131	172	246	306	364	446	516	631	734
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	02	6	071	132	174	251	311	365	452	523	632	743
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	03	1	072	134	205	252	315	371	454	526	654	754
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	03	2	073	143	212	255	325	411	455	532	662	
047         115         155         226         265         343         423         465         606         712           051         116         156         243         266         346         431         466         612         723	03	6	074	145	223	261	331	412	462	546	664	
051 116 156 243 266 346 431 466 612 723	04	3	114	152	225	263	332	413	464	565	703	
	04	7	115	155	226	265	343	423	465	606	712	
053 122 162 244 271 351 432 503 624 731	05	1	116	156	243	266	346	431	466	612	723	
	05	3	122	162	244	271	351	432	503	624	731	