

■ General description

The transceiver has 1050 memory channels, and 2 call channels. Memory channels include 50 scan edge memory channels (25 pairs) for storage of often-used frequencies.

And a total of 26 memory banks, A to Z, are available in each band for storing groups of frequencies, etc. Up to 100 channels can be assigned into a bank.

◇ Memory channel contents

The following information can be programmed into memory channels:

- Operating frequency (p. ??)
- Operating mode (p. ??)
- Duplex direction (+DUP or -DUP) with an offset frequency (p. ??)
- Subaudible tone encoder (p. ??), tone squelch or DTCS squelch ON/OFF (p. ??)
- Subaudible tone frequency (p. ??), tone squelch frequency or DTCS code with polarity (pgs. ??, ??)
- Scan skip information (p. ??)
- Memory bank (p. ??)
- Memory name (p. ??)
- Tuning step (p. ??)
- Call sign squelch or Digital code squelch* (p. ??)
- Station call sign* (p. ??)
- RPT1/RPT2 call sign* (p. ??)

*Available for DV mode operation only.

NOTE:

Memory data can be erased by static electricity, electric transients, etc.

In addition, they can be erased by malfunction and during repairs.

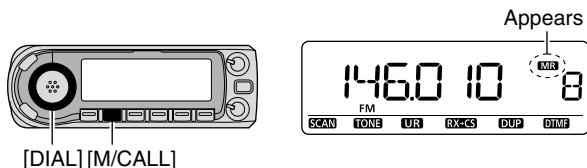
Therefore, we recommend that memory data be written down or be saved to a PC using the optional CS-80/880

CLONING SOFTWARE.

■ Selecting a memory channel

◇ Using the tuning dial

- ① Push **[M/CALL]** several times to select memory mode.
 - “**MR**” indicator appears.
- ② Rotate **[DIAL]** to select the desired memory channel.
 - Programmed memory channels only can be selected.



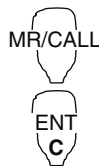
◇ Using the [▲]/[▼] keys

- ① Push **[MR/CALL]** to select memory mode.
- ② Push **[▲]** or **[▼]** to select and set the desired memory channel.
 - Pushing and holding **[▲]/[▼]** for 1 sec. activates a scan.
 - If scan is activated, push **[▲]/[▼]** again or push **[CLR A(MW)]** to stop it.



◇ Using the keypad

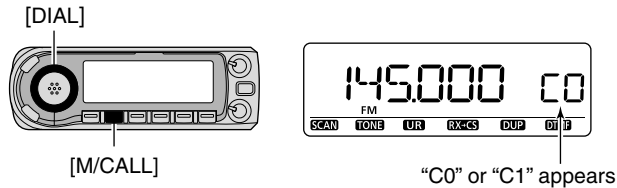
- ① Push **[MR/CALL]** to select memory mode.
- ② Push **[ENT C(T-OFF)]** to activate the keypad for numeral input.
- ③ Push 3 appropriate digit keys to input a channel number.
 - Blank channel can be selected.
 - Push only 1 appropriate digit key, **[VOL▲ 0(TONE-2)]** to **[SIMP 9(16-KEY-L)]** then push **[*(TONE-1)]** or **[SQL▼ #(16KEY-L)]** to select scan edge channels. “*” and “#” can be used for “A” and “B” respectively.



■ Selecting a call channel

Call channel is a pre-programmed memory channel that can be accessed by simply pushing call channel button.

- ➔ Push **[M/CALL]** several times to select the call channel mode, then rotate **[DIAL]** to select the desired call channel.
 - “C0” or “C1” appears instead of memory channel number.



- ➔ Push and hold **[MR/CALL]** for 1 sec. to select the call channel mode then push **[▲]/[▼]** to select the desired call channel in the main band.
 - Push **[MR/CALL]** to select memory mode, or push **[VFO/LOCK]** to select VFO mode.

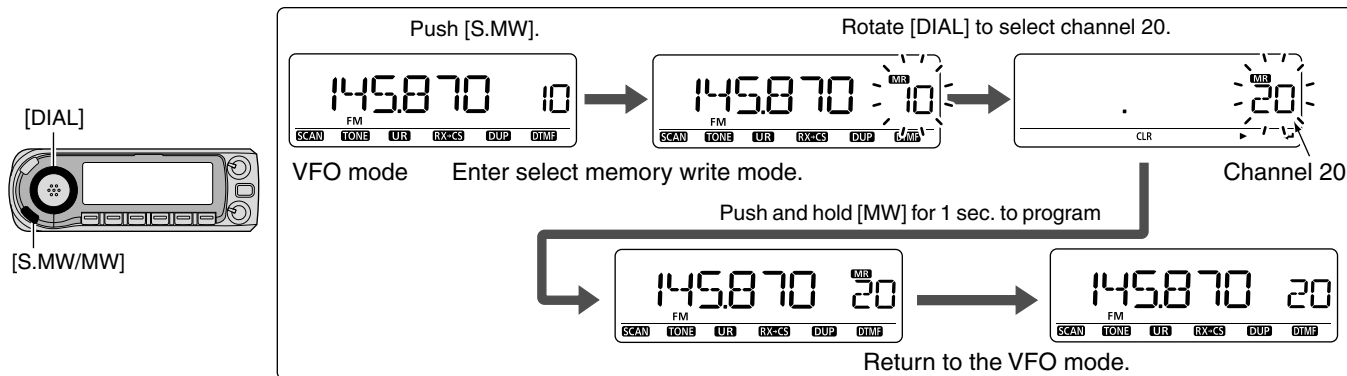
Memory channel programming

- ① Push **[VFO/MHz]** to select VFO mode.
- ② Set the desired frequency:
 - Select the desired band with **[BAND]**.
 - Set the desired frequency with **[DIAL]**.
 - Set other data (e.g. offset frequency, duplex direction, tone squelch, current call signs, etc.), if desired.
- ③ Push **[S.MW]**(MW) to enter select memory write mode.
 - “**MIR**” indicator and the memory channel number blink.
- ④ Rotate **[DIAL]** to select the desired channel.
 - Call channels (C0, C1), VFO and scan edge channels (0A/0B to 24A/24B), as well as regular memory channels, can be programmed in this way.
- ⑤ Push and hold **[MW]**(S.MW) for 1 sec. to program.
 - 3 beeps sound.
 - Memory channel number automatically increases when continuing to push **[MW]**(S.MW) after programming.

✓ FOR YOUR CONVENIENCE

Memory programming can be performed in various ways e.g. memory channel to the same (or different) memory channel, memory channel to the call channel, etc.

[EXAMPLE]: Programming 145.870 MHz into memory channel 20 (blank channel).



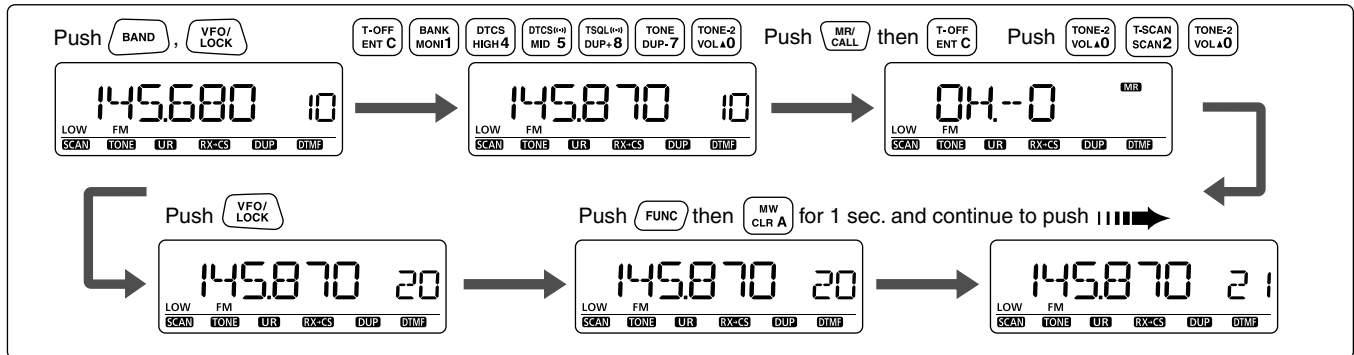
◇ Programming a memory channel via the microphone



The microphone can also be used to program memory channels.

- 1 Set the desired frequency in VFO mode.
 - ➔ Push [VFO/LOCK] to select VFO mode.
 - ➔ Push [ENT C(T-OFF)], then set the frequency using the keypad.
 - ➔ Set other data (e.g. offset frequency, duplex direction, tone squelch, current call signs, etc.), if desired.
- 2 Push [MR/CALL] to enter memory mode.
- 3 Push [ENT C(T-OFF)], then set the desired memory channel using the keypad.
- 4 Push [VFO/LOCK] to select VFO mode.
- 5 Push [FUNC] then push and hold [CLR A(MW)] for 1 sec. to program.
 - ➔ 3 beeps may sound and the VFO contents (including the subaudible tone frequency, etc.) are programmed.
 - ➔ Memory channel number increases when continuing to push [CLR A(MW)] after programming.

[EXAMPLE]: Programming 145.870 MHz into memory channel 20 (blank channel).

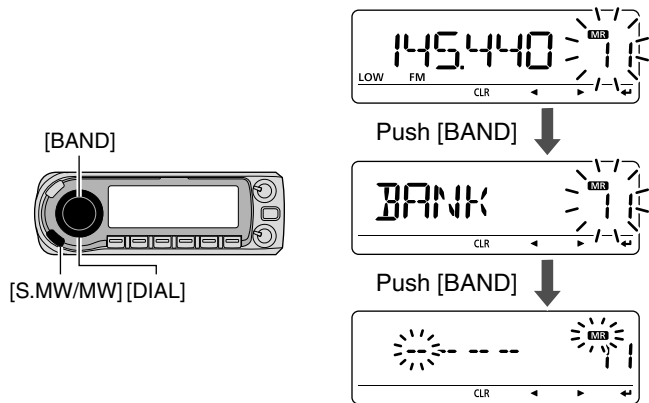


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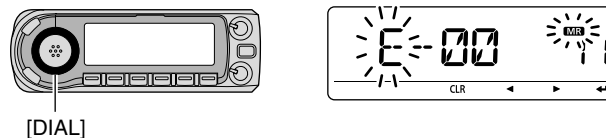
Memory bank setting

The ID-880H has a total of 26 banks (A to Z). Regular memory channels, 0 to 999, are assigned to the desired bank for easy memory management.

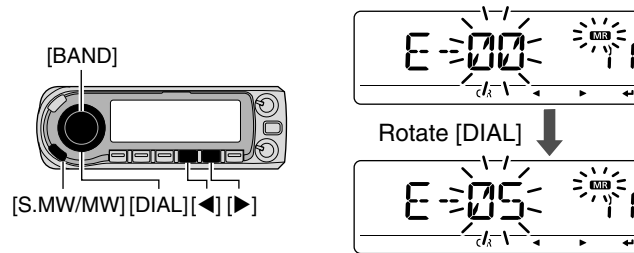
- ① Push **[S.MW]**(MW) to enter select memory write mode.
 - “MR” indicator and the memory channel number blink.
- ② Rotate **[DIAL]** to select the desired memory channel.
- ③ Push **[↵]**(MONI) to select “BANK” setting.
- ④ Push **[↵]**(MONI) again.
 - Bank group and channel number is displayed if the selected memory channel has already been previously assigned to a bank.



- ⑤ Rotate **[DIAL]** to select the bank group.



- ⑥ Push **[▶]**(Low) to select the bank channel digit, then rotate **[DIAL]** to select the bank channel number from “00” to “99.”
 - Push **[◀]**(CS) to return to the bank group selection, if desired.



- ⑦ After editing, push **[BAND]** to select “BANK” setting.
- ⑧ Push **[MW]**(S.MW) for 1 sec. to assign the channel to the bank.
 - Return to the previous indication before entering select memory write mode.

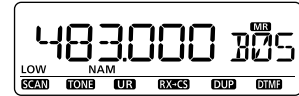
■ Memory bank selection

- ① Push **[M/CALL]** several times to select memory mode.
- ② Push **[BAND]** to enter the bank selection state.
- ③ Rotate **[DIAL]** to select the desired memory bank group, then push **[BAND]** again.
 - Only programmed banks are displayed.
 - Also regular memory channel can be selected.

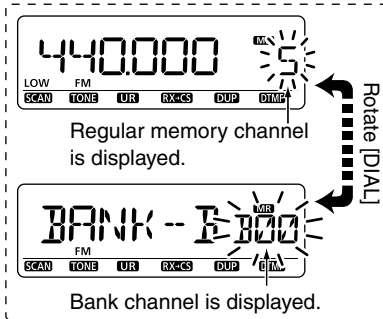
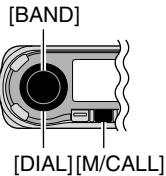
- ④ Rotate **[DIAL]** to select the bank channel.
 - Only programmed banks are displayed.



[DIAL]



Push [BAND]



Push [BAND]



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■ Programming memory/bank/scan name

Each memory channel can be programmed with an alphanumeric channel name for easy recognition and can be indicated independently by channel. Memory and scan names can be a maximum of 8 characters, and bank name can be a maximum of 6 characters.

NOTE: Scan name indication can be turned ON or OFF in DISP set mode (SET). (p. ??)

- ① Push **[M/CALL]** to select memory mode.
 - To program a call channel name, push **[M/CALL]** to select call channel mode.
- ② Rotate **[DIAL]** to select the desired memory channel.
 - Select scan edge channels (0A/0B to 24A/24B) to program a scan name.
- ③ Push **[S.MW]**(MW) to enter select memory write mode.
 - “**[MW]**” indicator and the memory channel number blink.
- ④ Push **[↵]**(MONI).
- ⑤ Rotate **[DIAL]** to select “B NAME,” “M NAME” or “S NAME” when programming the bank name, the memory name or the scan name, respectively.
- ⑥ Push **[↵]**(MONI).
 - A cursor blinks for the first character.
- ⑦ Rotate **[DIAL]** to select the desired character.
 - The selected character blinks.
 - Push **[▶]**(LOW) to move the cursor right; push **[◀]**(CS) to move the cursor left.
 - Push **[CLR]**(DR) to erase the selected character, or push and hold **[CLR]**(DR) for 1 sec. to erase all characters following the cursor.

- ⑧ Repeat step ⑦ until the desired channel name is programmed.
- ⑨ Push **[↵]**(MONI).
- ⑤ Push and hold **[S.MW]**(MW) for 1 sec. to set the name and exit channel name programming state.
 - 3 beeps sound.

NOTE: Only one bank name can be programmed into each bank. Therefore, the previously programmed bank name will be displayed when bank name indication is selected. Also, the programmed bank name is assigned for the other bank channels automatically.

◇ Available characters

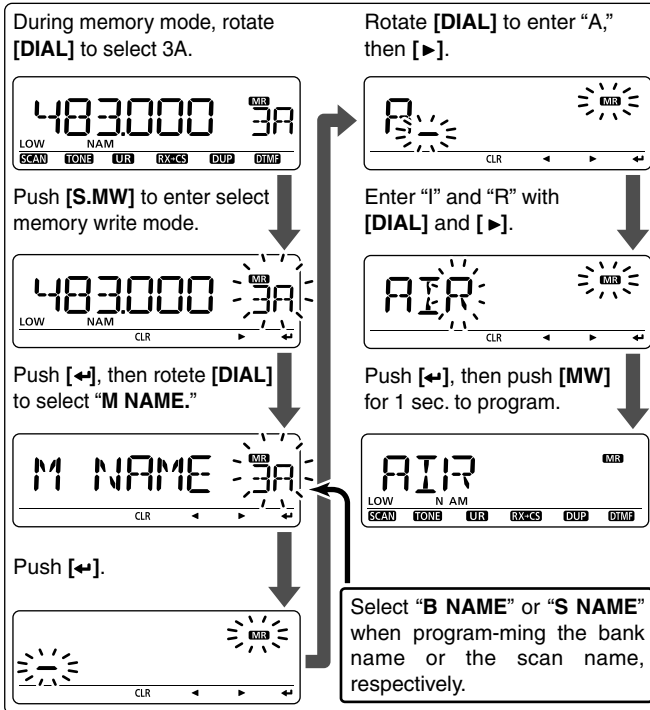
A	B	C	D	E	F	G	H	I	J	K	L	M
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)	(Z)
0	1	2	3	4	5	6	7	8	9	"	#	
(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(!)	(")	(#)
\$	%	&	'	()	*	+	,	-	.	/	:
(\$)	(%)	(&)	(')	(())	(*)	(+)	(,)	(-)	(.)	(/)	(:)
!	<	=	>	?	@	[\]	^	_		
(!)	(<)	(=)	(>)	(?)	(@)	([(\)	(])	(^)	(_)	(Space)	

[EXAMPLE]:

Programming the memory name
"AIR" into the scan edge channel 3A.




[S.MW/MW][DIAL] [▶][◀]



■ Selecting memory/bank name indication

During memory mode operation, either the programmed memory name or bank name can be displayed.


- 1 Enter "NAME" in DISP menu.


MENU ⇄ SET ⇄ DISP ⇄ **NAME** (p. ??)
(Push [MENU ]), (Rotate [DIAL], then push [BAND].)

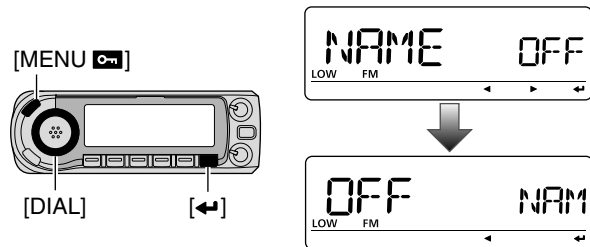
- 2 Rotate [DIAL] to select the memory display type.

- OFF : Displays the frequency.
- MEMORY : Displays the memory name.
- BANK : Displays the bank name.

- 3 Push [◀] (MONI) to DISP menu.

- 4 Push [MENU ] to return to the previous indication before entering DISP menu.

 **NOTE:** The programmed scan name is displayed during the programmed scan selection.



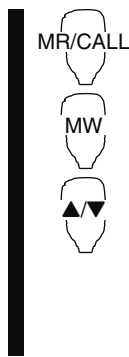
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■ Copying memory/call contents

This function copies a memory channel's contents to VFO (or another memory/call channel). This is useful when searching for signals around a memory channel frequency and for recalling the offset frequency, subaudible tone frequency etc.

◇ Memory/call ⇄ VFO


- ① Select the memory (call) channel to be copied.
 - ➔ Push **[M/CALL]** several times to select memory mode or call channel mode, then rotate **[DIAL]** to select the desired channel.
- ② Push and hold **[MW]**(S.MW) for 2 sec. write the selected channel contents to VFO mode.
 - Returns to VFO mode automatically.

- 
- ① Push **[BAND]** to select the desired band as the main band, if necessary.
 - ② Select the memory/call channel to be copied.
 - ➔ Push **[MR/CALL]** to select memory mode, then select the desired memory channel via **[▲]/[▼]** or keypad.
 - ➔ Push and hold **[MR/CALL]** for 1 sec. then push **[▲]/[▼]** to select the call channel.
 - ③ Push **[FUNC]**, then push and hold **[CLR A(MW)]** for 1 sec. to copy the selected memory/call channel contents to the VFO.
 - VFO mode is selected automatically.

[EXAMPLE]: Copying memory channel 11 to VFO.



Front panel operation:
 Push **[M/CALL]** to select memory mode. Rotate **[DIAL]** for selecting memory channel. Push and hold **[MW]** for 2 sec.

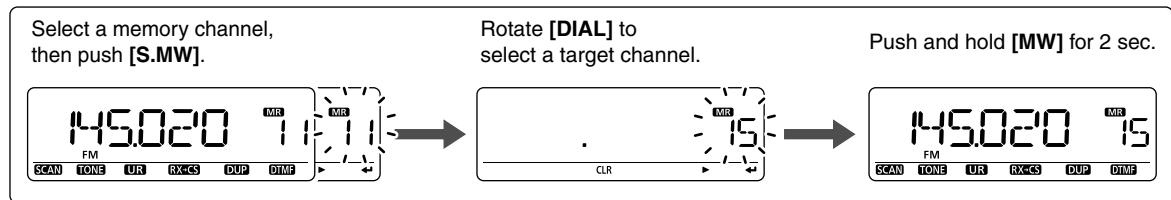


HM-133 operation:
 Push **[MR/CALL]** to select memory mode. Select memory channel. Push **[FUNC]** then push and hold **[MW CLR A]** for 1 sec.

◇ Memory/call↔call/memory

- ① Select the memory (call) channel to be copied.
 - ➔ Push **[M/CALL]** several times to select memory mode or call channel mode, then rotate **[DIAL]** to select the desired channel.
- ② Push **[S.MW]**(MW) to enter select memory write mode.
 - “**MR**” indicator and the memory channel number blink.
 - Do not hold **[S.MW]**(MW) for more than 2 sec., otherwise the memory contents will be copied to VFO.
- ③ Rotate **[DIAL]** to select the target memory (call) channel.
 - Scan edge channels, 0A/0B to 24A/24B can also be selected.
- ④ Push and hold **[MW]**(S.MW) for 1 sec. to write the selected channel contents to the target channel.
 - The targeted memory and copied contents are indicated.


[EXAMPLE]: Copying memory channel 11 contents to channel 15.



Memory clearing

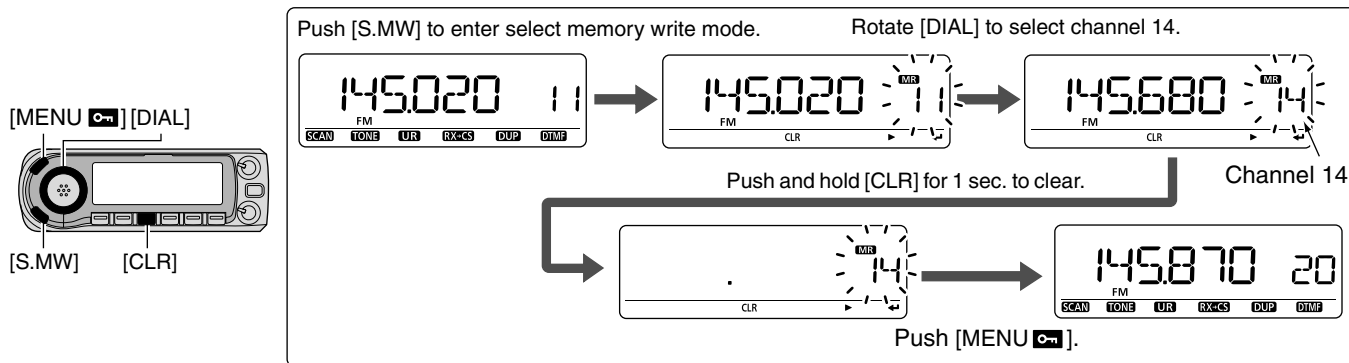
Contents of programmed memories can be cleared (erased), if desired.

- ① Push **[S.MW]**(MW) to enter select memory write mode.
 - “**MR**” indicator and the memory channel number blink.
 - Do not hold **[S.MW]**(MW) for more than 2 sec. otherwise the memory contents will be copied to VFO.
- ② Rotate **[DIAL]** to select the desired memory channel to be cleared.
- ③ Push and hold **[CLR]**(DR) for 1 sec. to clear the contents.
 - 3 beeps sound, then the frequency is cleared.
 - “**MR**” indicator and the memory channel number blink continuously.

- ④ Push **[MENU **] to the previous indication before entering select memory write mode.

NOTE: Be careful!— the contents of cleared memories **CANNOT** be recalled.

[EXAMPLE]: Clearing memory channel 14.

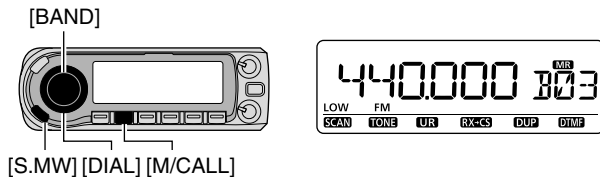


■ Erasing/transferring bank contents

The bank contents of programmed memory channels can be cleared or reassigned to another memory bank.

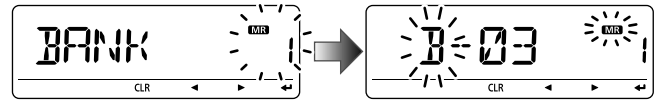
INFORMATION: Even if the memory bank contents are cleared, the memory channel contents still remain programmed.

- ① Select the desired bank contents to be transferred or erased from the bank. (p. ??)
 - ➔ Push **[M/CALL]** several times to select memory mode.
 - ➔ Push **[BAND]**, then rotate **[DIAL]** to select the desired memory bank group, then push **[BAND]** again.
 - ➔ Rotate **[DIAL]** to select the bank channel.
 - Bank initial and bank channel stops blinking.



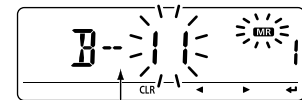
- ② Push **[S.MW]**(MW) to enter select memory write mode.
 - Displays the original memory channel number automatically, and then “**MB**” indicator and the memory channel number blink.
 - Do not hold **[S.MW]**(MW) for more than 2 sec., otherwise the memory contents will be copied to VFO.

- ③ Push **[BAND]** to select “**BANK**” setting, then push **[BAND]** again.



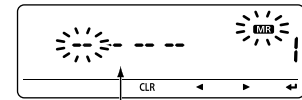
- ④ Push **[▶]**(Low) to select the bank channels selection, or push **[◀]**(CS) to select the bank group selection to be transferred.
- ⑤ Rotate **[DIAL]** to select the desired bank group or channel.
 - Select “---” indication when erasing the contents from the bank.

To transfer the bank contents to channel 11 in Bank B.



Bank channel is displayed.

To erase.



“---” is displayed.

- ⑥ After editing, push **[BAND]** to select “**BANK**” setting.
- ⑦ Push **[MW]**(S.MW) for 1 sec. to erase/transfer the bank contents.

■ General

MENU screen is used for programming infrequently changed values or conditions of functions.

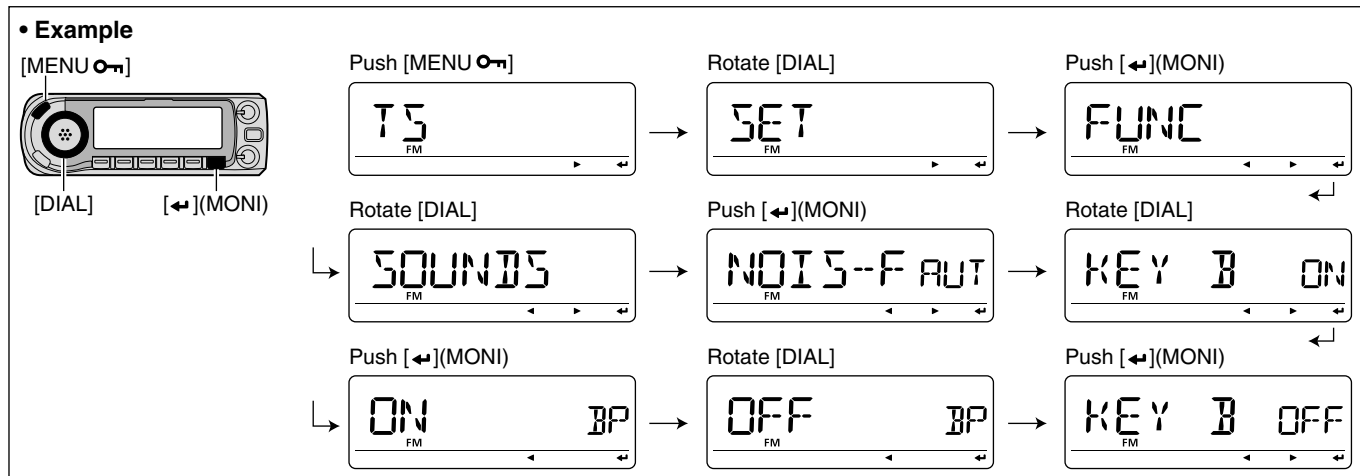
◇ Entering MENU screen and operation

e.g.) Set "KEY B (Key-touch beep)" to OFF.

- ① Push [MENU] to enter MENU screen.
 - One of "TS," "DUP.T," "SCAN," "SET," "DV SET," "CALL-S," "RX CAL," "MESSAG," "RPT-L" or "GPS" appears.
- ② Rotate [DIAL] to select "SET," then push [↵](MONI)*.
 - Push [↵](CS) to select the previous indication.

- ③ Rotate [DIAL] to select "SOUNDS," then push [↵] (MONI)*.
 - Push [↵](CS) to select the previous indication.
- ④ Rotate [DIAL] to select "KEY B," then push [↵] (MONI)*.
 - Push [↵](CS) to select the previous indication.
- ⑤ Rotate [DIAL] to select "OFF," then push [↵] (MONI)*.
- ⑥ Push [MENU] to return to the indication before entering MENU screen.

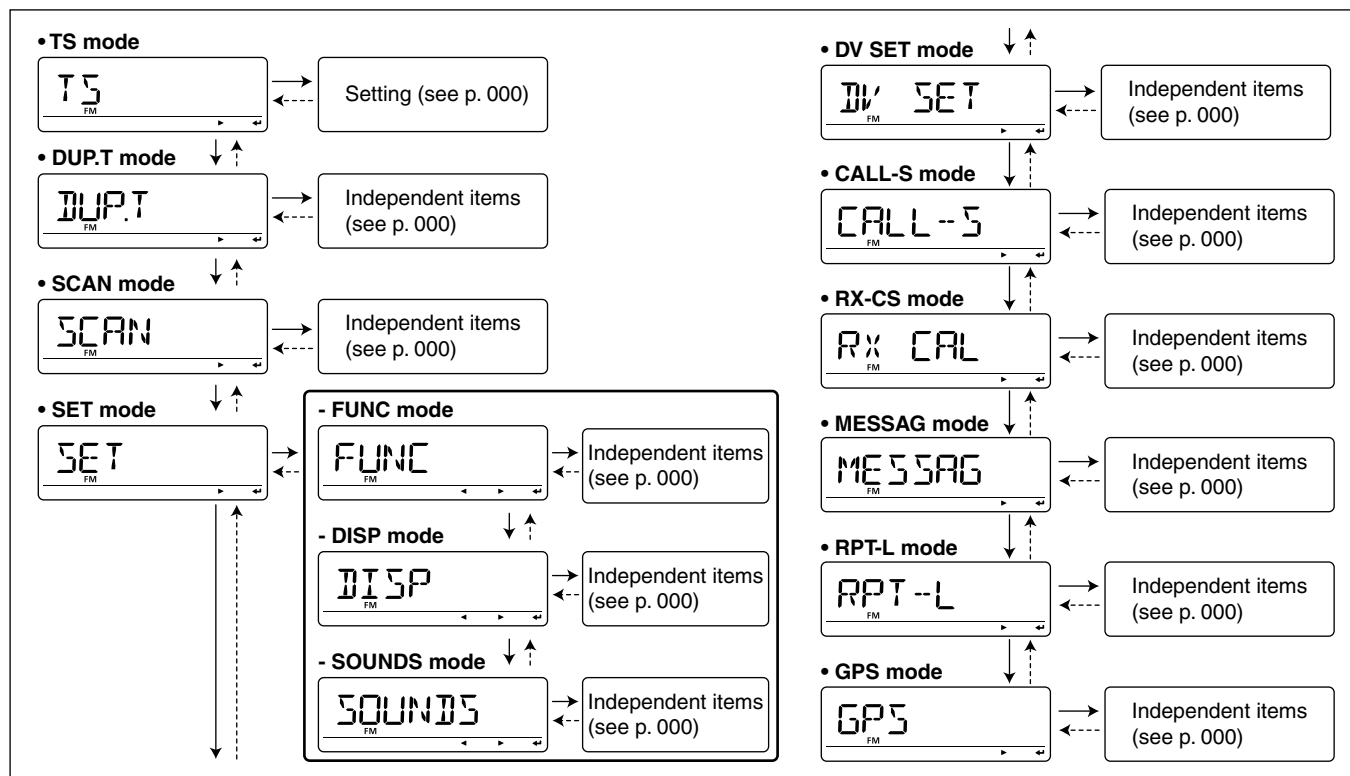
*[↵] (MONI) ↔ [BAND MODE]/[▶](LOW)



12 MENU SCREEN OPERATION

■ MENU screen indication and arrangement

MENU screen shows one of the following indication.



■ Items list

◇ TS mode

See page 000 for details.

◇ DUP.T mode

Item indication	Ref.	Item indication	Ref.
OFFSET	p. 000	DTC5-P	p. 000
R TONE	p. 000	D CODE	p. 000
C TONE	p. 000	DTMF-S	p. 000
CODE	p. 000		

◇ SCAN mode

Item indication	Ref.	Item indication	Ref.
PRI0	p. 000	P-SKIP	p. 000
PAUSE	p. 000	B-LINK	p. 000
RESUME	p. 000	P-LINK	p. 000

◇ SET mode

- FUNC mode

Item indication	Ref.	Item indication	Ref.
SQL-DL	p. 000	FAN	p. 000
AT-ATT	p. 000	ACTIVE	p. 000
MIC-S	p. 000	MIC-UP	p. 000
ALC	p. 000	MIC-DN	p. 000
PTT LK	p. 000	PACKET	p. 000
LK OUT	p. 000	SPEED	p. 000
TOT	p. 000	AP OFF	p. 000
AUTORP	p. 000		

- DISP mode

Item indication	Ref.	Item indication	Ref.
DIMMER	p. 000	NAME	p. 000
AT-DIM	p. 000	SCAN N	p. 000
COLOR	p. 000	OPNMSG	p. 000
CONT	p. 000		

- SOUNDS mode

Item indication	Ref.	Item indication	Ref.
NOIS-F	p. 000	STOP B	p. 000
RF-FIL	p. 000	STBY B	p. 000
BEEPLV	p. 000	EDGE B	p. 000
KEY B	p. 000		

12 MENU SCREEN OPERATION

◇ DV SET mode

Item indication	Ref.	Item indication	Ref.
REPLY	p. 000	GW SET	p. 000
DATATX	p. 000	RX CS	p. 000
D MONI	p. 000	TX CS	p. 000
D RPT	p. 000	RX MSG	p. 000
CALL W	p. 000	SCROLL	p. 000
RPT W	p. 000	BK	p. 000
DV DET	p. 000	EMR	p. 000
EDIT R	p. 000		

◇ CALL-S mode

Item indication	Ref.	Item indication	Ref.
UR	p. 000	RPT2	p. 000
RPT 1	p. 000	MY	p. 000

◇ RX CAL mode

See p. 000 for details.

◇ MESSAG mode

See p. 000 for details.

◇ RPT-L mode

See p. 000 for details

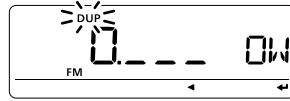
◇ GPS mode

Item indication	Ref.	Item indication	Ref.
GPSSET	p. 000	ALM 1	p. 000
GPSPOS	p. 000	ALM2	p. 000
D/F	p. 000	GPS-TX	p. 000
GPSMEM	p. 000	GPSATX	p. 000
ALM-CH	p. 000		

■ DUP.T mode items

◇ Offset frequency OFFSET

Sets the offset frequency for duplex (repeater) operation within a 0 to 159.995 MHz range.



During 1 MHz step setting

- ➔ Push **[VFO/MHz]** each time to selecting the 10 MHz, 1 MHz step and the setting with the tuning step, selected in VFO mode, in sequence.
 - The default value may differ according to the selected frequency band (before accessing DUP.T mode) and transceiver version.

The selected tuning step in VFO mode is used when setting the offset frequency.

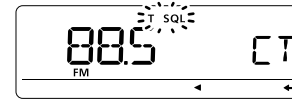
◇ Repeater tone frequency R TONE

Selects subaudible tone frequency for accessing a repeater, etc. 50 tone frequencies (67.0–254.1 Hz) are available.
(default: 88.5)



◇ TSQL frequency CT TONE

Selects tone frequency for tone squelch or pocket beep operation from one of 50 available frequencies (67.0–254.1 Hz).
(default: 88.5)



• Available subaudible tone frequencies

67.0	79.7	94.8	110.9	131.8	156.7	171.3	186.2	203.5	229.1
69.3	82.5	97.4	114.8	136.5	158.8	173.8	189.9	206.5	233.6
71.9	85.4	100.0	118.8	141.3	162.2	177.3	192.8	210.7	241.8
74.4	88.5	103.5	123.0	146.2	165.5	179.8	196.6	215.1	250.3
77.0	91.5	107.2	127.3	151.4	167.9	183.5	199.5	225.7	254.1

The transceiver has 50 tone frequencies and consequently their spacing is narrow compared with units having 38 tones. Therefore, some tone frequencies may receive interference from adjacent tone frequencies.

12 MENU SCREEN OPERATION

◇ DTCS code

CODE

Selects DTCS (both encoder/decoder) code for DTCS squelch operation. Total of 104 codes (023–754) are available.

(default: 023)



• Available DTCS codes

023	054	125	165	245	274	355	445	506	627	752
025	066	131	172	246	306	364	446	516	631	754
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	654	
043	114	152	225	263	332	413	464	555	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

DTCS--P

Sets DTCS polarity from “BOTH N” (TX/RX: normal), “TN-RR” (TX: normal, RX: reverse), “TR-RN” (TX: reverse, RX: normal) and “BOTH R” (TX/RX: reverse). (default: BOTH N)

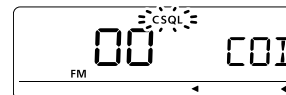
Transmitting or receiving DTCS code’s polarity is sets by this item at transmitting side and receiving side respectively.



◇ Digital code

D CODE

Sets the desired digital code for digital code squelch operation. Total of 100 codes (00–99) are available. (default: 00)



◇ DTMF speed

DTMF--S

Select the desired DTMF transmission speed from 100 msec, 200 msec, 300 msec, 500 msec.

- 100 : 100 msec. interval; 5.0 characters per second (default)
- 200 : 200 msec. interval; 2.5 characters per second
- 300 : 300 msec. interval; 1.6 characters per second
- 500 : 500 msec. interval; 1.0 character per second



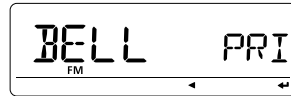
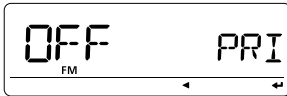
■ Scan mode items

◇ Priority watch

PRIO

Activates priority watch or priority watch with alert (Bell).

- OFF : The priority watch is turned OFF. (default)
- ON : The transceiver checks the memory channel frequency every 5 sec.
- BELL : The transceiver checks the memory channel frequency every 5 sec. You can be alerted with beeps and blinking “((·)).”

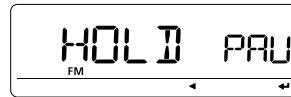


◇ Scan pause timer

PAUSE

Selects the scan pause time. When receiving signals, the scan pauses according to the scan pause time.

- 2-20SEC: Scan pauses for 2-20 sec. on a received signal in 2 sec. steps. (default: 10 sec.)
- HOLD : Scan pauses on a received signal until it disappears. Rotate [DIAL] to resume manually.

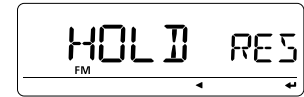
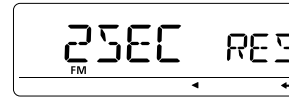


◇ Scan resume timer

RESUME

Selects the scan resume time from a pause after the received signal disappears.

- 0SEC : Scan resumes when a received signal disappears.
- 1-5SEC : Scan pauses 1-5 sec. after a received signal disappears. (default: 2 sec.)
- HOLD : Scan remains paused on the received signal even if it disappears. Rotate [DIAL][†] to resume manually.



▨ Scan resume timer must be set shorter than scan pause timer (previous item), otherwise this timer does not activate.

◇ Program skip scan

P-SKIP

Sets programmed skip scan setting from ON (default) and OFF for full scan or programmed scan operation

