STANDARD

C500E

VHF/UHF FM
W–BAND TRANSCEIVER

OWNER'S MANUAL

INTRODUCTION

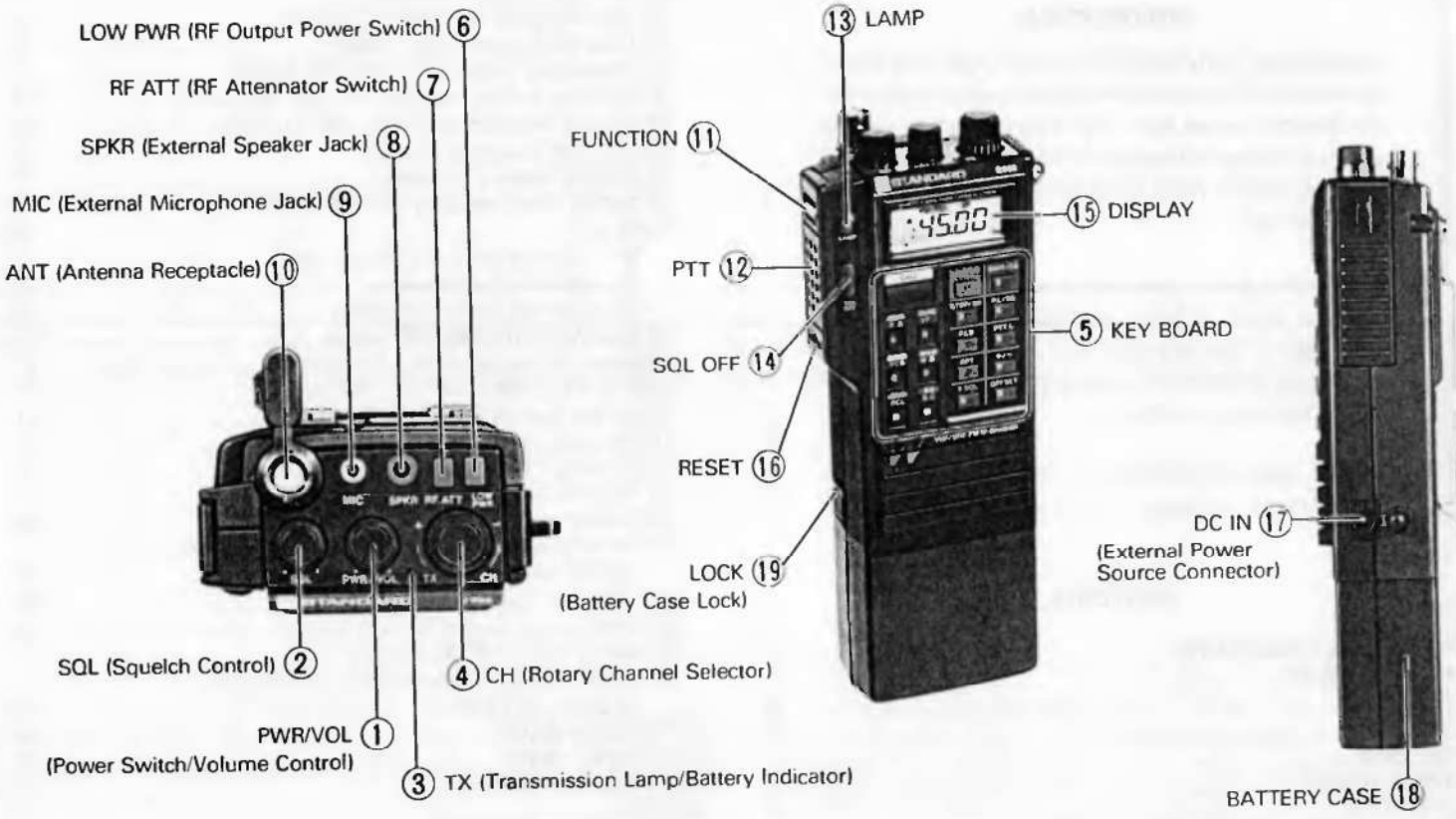
Congratulations! The Model C500 VHF/UHF Handy Transceiver is engineered and manufactured with highest quality of state-of-the-arttechnology. You will find superb features, performance and reliability which the C500 provides. We are confident that you will be entirely satisfied with a lot of features which increase your radio enjoyment.

Our very strict quality control and inspection ensure that each transceiver unit left the factory in perfect condition. If your transceiver does not operate properly or if you feel any difficulty in operating the transceiver, immediately contact the dealer where you purchased your transceiver unit.

To obtain maximum performance and extended service life from the Handy Transceiver, read these instructions carefully.

CONTENTS

CONTROLS & CONNECTIONS

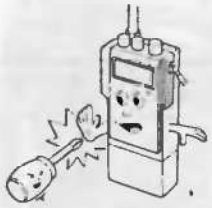


• Refer to p. 48 as to their operation.

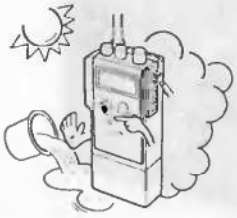
PRIOR TO USAGE Prevent me from followings.

1 Be careful not to mistake the polarity

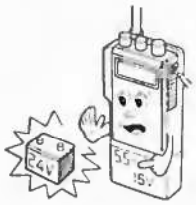
2 Do not touch cores or trimmers. They are aligned at best condition.



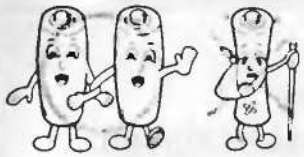
3 Keep out of humidity and dust.



4 Do not use 24V batteries.

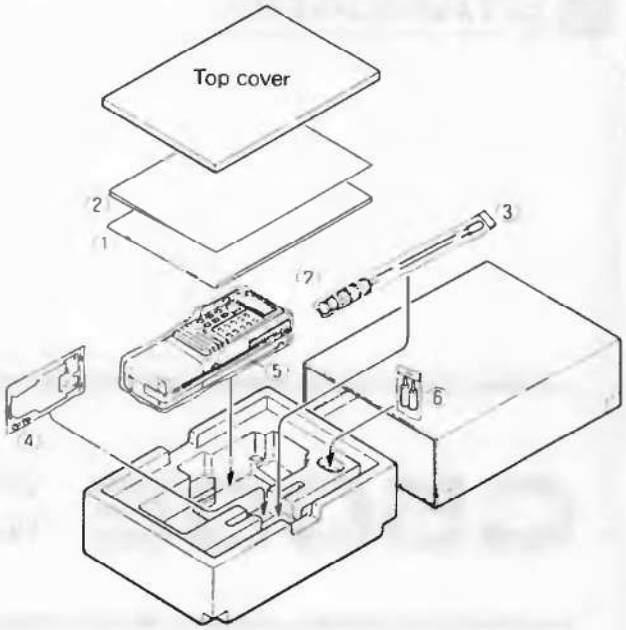


5 Supply only fresh batteries of SUM-3, or Nickel-Cadmium battery.



6 Do not dispose of batteries in fire.

PACKING Confirm that followings are included.



Accessory

① Owner's Manual ② Schematic ③ Whip Antenna
④ Belt clip (with two screws) ⑤ Hand Strap (Installed)
⑥ Plugs at 2.5ø and 3.5ø ⑦ Water resist cap (Installed)

OPTIONS

Rich variety of options to luxuriate C500 are prepared. Apply these options, reading each instruction manuals.

CNB111	: Re-chargeable Battery Pack
CNB120	: High Power Re-chargeable Battery Pack (for 5W)
CNB121	: Long Life Re-chargeable Battery Pack
CSA111	: Desk Top Charger (Rapid)
CWC120	: AC Charger (with CNB120 installed)
C10/230–1	: AC Charger (with CNB111 or CNB121 installed)
CMC01	: Moble Charger (with CNB111 or CNB121 installed)
CAD111	: Charge Adapter
CAW120B	: Power Cable for Mobile station
CMP111	: Microphone & Speaker
CHP111	: Head Set with PTT
CMB111	: Mobile Bracket
CLC500	: Soft Case (with CNB111 installed)
CLC501	: Long size Soft Case (with CNB120 or CNB121 installed)
CTD500	: Touch Tone Unit
CTN500	: Tone Squelch Unit

FEATURES

☆ Key Board and Rotary Channel Selector capable of frequency setting.

☆ The output power of 5W
The output power of 5W or more is available at 146MHz and 430MHz band when supplied from High Power Re-chargeable Battery Pack or external power source of 13.8V.

☆ The power source in a car is available
Since the input voltage is 5.5V to 16V, the power source in a car is directly available.

☆ Auto Power OFF
Even if power switch is left turning on, the Auto Power Off regulates the current drain approximately 4mA.

☆ Battery Save feature during RX Stand By
One of save feature out of nine steps can be selected.

☆ The vacant channels are automatically searched.
VCS (Vacant Channel Search) feature capable of easy QSY is attained.

☆ Internal dual watch

① Dial frequency and one of the following frequencies can be watched.

- Frequency of Memory address number 1
- Any memory frequency

② Dial frequency and one of the memory frequencies can be watched, shifting memory frequency in turn.

☆ Two; A and B internal VFOs

☆ Memories up to twenty channels

Ten channels can be memorized in both A and B VFO. Each memory can be memorized at either 146MHz or 430MHz band. Additionally, ON/OFF of repeater operation can be separately memorized. At repeater operation, offset frequency and tone frequency can be additionally memorized at address number 1 in both A and B-VFO.

☆ Duplex feature is adopted

Semi-duplex QSO is available using A and B-VFO or memory frequencies. Furthermore, full duplex QSO is available using 146MHz and 430MHz bands, providing transmission during reception as telephone.

☆ 100kHz channel step by Rotary Channel Selector is available when operated with FUNCTION button.

☆ Scan Variety

Either Pause or Busy scan can be selected.

① Scans at dial frequency are:

- 1MHz scan
- All scan
- Program scan

② Scans at memory frequency are:
- A-VFO memory scan
- B-VFO memory scan
- All memory scan
- MSM memory scan

☆ Tone Squelch Unit capable of frequency selectiong by Rotary Channel Selector can be internally installed.

☆ Squlech Off feature to pause squelch operation by one touch.

☆ Frequency Lock feature to prevent frequency from changing by accident.

☆ PTT lock feature to prevent the unit from transmitting by accident

☆ Compactest and lightest in this Handy Transceiver Class
size: 173mm (height) × 60mm (width) × 34mm (depth)
(without knobs and antenna)
weight: 490g

☆ High sensitivity designed, applying 12dB SINAD.
VHF-16dBμ (complies with JAIA measurement)
UHF-16dBμ (complies with JAIA measurement)

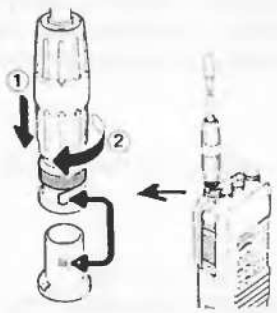
☆ RF attenuator is internally installed.

☆ Options with rich variety
(compatible with Standard Handy series)

☆ DTMF unit can be internally installed to accomodate remote control of repeater.

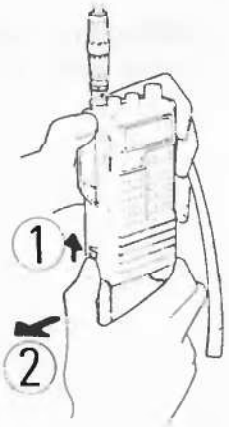
INSTALLATION

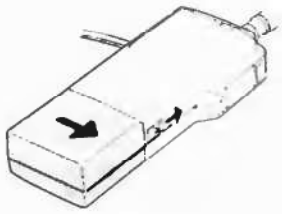
1 Install the antenna included.



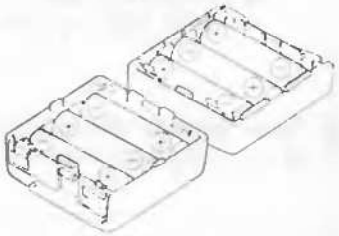
2 Remove battery case from the main unit.

Ⓐ Put your thumb on Lock button, and hold battery case as shown.
Ⓑ While presseing Lock button upwards, push battery case in indicated direction slightly. Lock is now released.
Ⓒ Remove battery case, sliding it gradually.

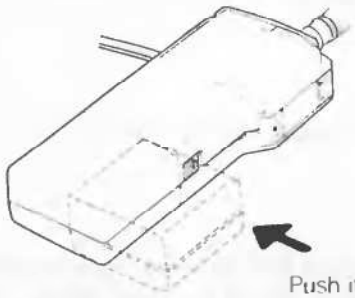




3 Insert SUM-3 batteries into battery case. Be careful not to mistake their polarity.

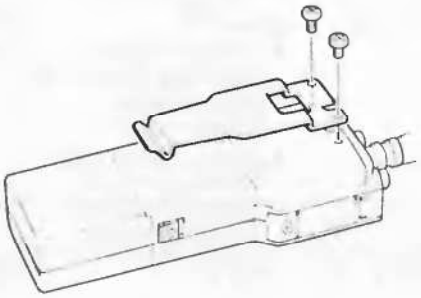


4 Install battery case into C500

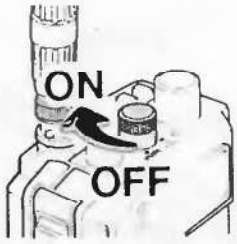


Push it until it clamps tightly.

5 Install belt clip to C500.
Note: Do not use screws except for included.

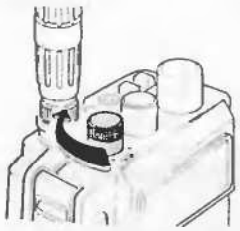


6 Turn the Power Switch on and adjust sound volume.

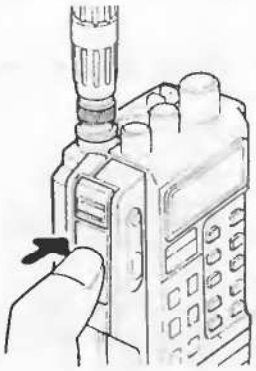


7 Rotate SQL gradually until background noise just disappears.

Note: Do not rotate beyond this point or receiver sensitivity will be degraded.



8 Transmitting mode is obtained by depressing PTT button, and receiving mode is obtained by releasing it.



OPERATION

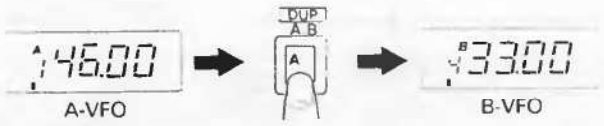
Function of the buttons on the front panel

Each functions are manipulated by key board. Proper operation is noticed by long beep, while unproper operation is noticed by short beep.

Button	Independent	with FUNCTION button
CALL	—	—
A/[DUP]A.B	Switching A and B-VFO	ON/OFF of Duplex feature
B/[DUAL]VFO	Recalling VFO Frequency	ON/OFF of Dual Wach feature
C/[BAND]VCS	VCS Operation	Switching VFO Frequency band (146MHz & 433MHz band)
D/[MSM]M.S	ON/OFF of Memory Scan	Setting MSM of memory frequency Setting MSM Scan
*/[ENT]RCL	Recalling Memory Freq.	Setting memory frequency
#/[BZ]S.C	Scan & Clear	ON/OFF of buzzer
1/APO/S▼	Entry of 1 (During scanning, it scans downwards)(Except for Memory scans)	ON/OFF of Auto Power Off
2/SAVE/S▲	Entry of 2 (During scanning, it scans upwards)	ON/OFF of SAVE
3/STEP/SB	Entry of 3 (Switches Pause and Busy scans during scanning)	Setting frequency step
4/F.L/SS	Entry of 4 • During VFO scan: Switching 1MHz scan and all scan or program scan • During memory scan: Switching A or B memory scan and all memory scan	ON/OFF of Frequency Lock
5/REV	Entry of 5	Exchanging transmission and reception frequency during
6/PTT L	Entry of 6	ON/OFF of transmission disablement
7/RPT	Entry of 7	ON/OFF of repeater operation
8/+/−	Entry of 8	Setting + or − of offset frequency during repeater operation
9/T SQL	Entry of 9	Switching Tone Encorder and Tone Squelch
0/OFFSET	Entry of 0	Setting offset frequency

1 Switching VFO [A/ DUP A.B button]

C500 contains two VFOs; A and B internally. Initial setting of A-VFO and B-VFO are 146.00MHz and 433.00MHz respectively. By depressing A/ DUP A.B button, VFO is switched to A, and B next, per each depress. "A" or "B" selected is indicated on display.



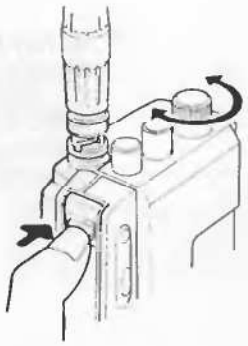
Advices

- Depressing A/ DUP A.B button during receiving or memory frequency, its VFO is switched.
- By depressing A/ DUP A.B button while FUNCTION button is held depressed, Duplex mode is obtained. (See page 30.)

It is recommended to allocate A-VFO to 146MHz band and B-VFO to 430MHz band. Hereafter A-VFO and B-VFO in this manual should be corresponded to 146 MHz band and 430MHz band respectively.

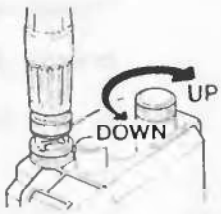
2 Setting transmission frequency

① **By Rotary Channel Selector**
Frequency can be set by rotating rotary channel selector. Frequency is changed at 5kHz step. 100kHz step is also available by depressing rotary channel selector while FUNCTION button is held depressed.



Procedures

Frequency is changed upwards by rotating rotary channel selector clockwise (↻) and downwards by rotating it counterclockwise (↺).



Advices

C500 provides channel step varieties: 5kHz, 10kHz, 12.5kHz, 20kHz, 25kHz and 50kHz. Initial setting is 5kHz. Refer to page 33 to change channel step.

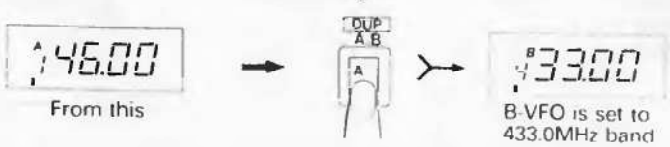
② By Key Board

Select a band by depressing C/ [BAND] VCS button while FUNCTION is held depressed. Additionally, depress numerical buttons (0 to 9) to set desired frequency.

Procedures

Example: 432.80MHz

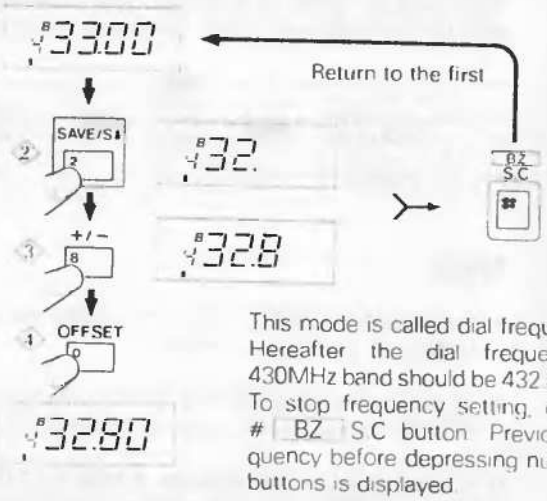
◇1 Band: Select B-VFO



◇2 1MHz segment ..... Depress "2". 432. is displayed.

◇3 100kHz segment ..... Depress "8". 432.8 is displayed.

◇4 10kHz segment ..... Depress "0". 432.80 is displayed. After three numerical buttons are depressed, long beep is sounded noticing the frequency setting is completed.



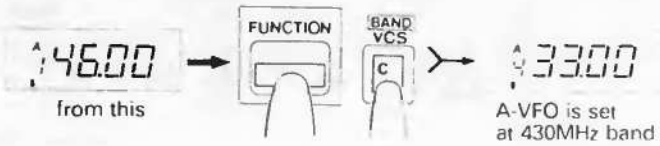
This mode is called dial frequency. Hereafter the dial frequency at 430MHz band should be 432.80MHz. To stop frequency setting, depress # [BZ S.C button. Previous frequency before depressing numerical buttons is displayed.

Advices

When band setting is not required, follow from procedure ◇2.

3 Selecting band [C/ BAND VCS button]

Allows shifting band to 146MHz or 430MHz in the same VFO. Depress C/ BAND VCS button while FUNCTION is held depressed. If the frequency is in the range from 144.00 to 147.99MHz, the band is shifted to 433.00MHz. In case of the range from 430.00 to 439.99MHz, the band is shifted to 146.00MHz. This feature is available with VFO mode only.



from this

A-VFO is set at 430MHz band

Advices

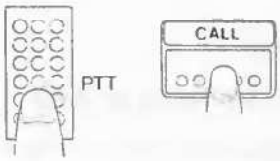
It is recommended to set A-VFO to 146MHz band and B-VFO to 430MHz band.

4 CALL the Repeater [CALL button]

With PTT ON, pressing the CALL button transmits the tone signal (1750 Hz) as long as the button is held.
With PTT OFF, the CALL button input is ignored and a beep sound is heard to indicate it.

Procedures

While pressing the PTT button, press the CALL button.



5 Memorizing frequency [*/ ENT RCL button]

C500 contains memory circuit which can memorize twenty frequencies. Moreover, recalling, changing, scanning of memory frequency are accomodated. Memory areas are numbered, as Memory Address numbers. The memory address number in A-VFO starts at "A-M0" including "A-M1" to "A-M9". In the same manner, the address numbers in B-VFO are ten, starting from "B-M0" to B-M9". Besides the frequencies, ON/OFF and shifting direction of repeater operation can be also memorized.

Procedures

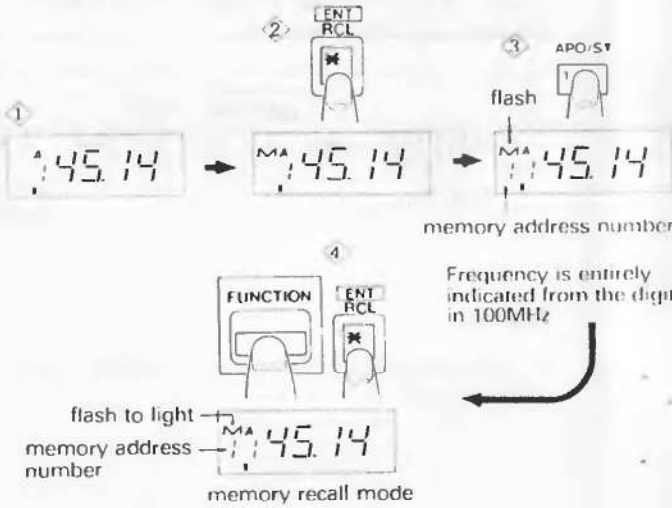
Example: 145.14MHz in "A-M1"

① Set desired frequency of 145.14MHz with A-VFO.

② Depress */ ENT RCL button. "M" is indicated on display.

③ Depress "1" to recall memory address "A-M1". "M" is now flashed, and memory address number is displayed.

④ Depress */ ENT RCL button while FUNCTION is held depressed. Memorization is completed with long beep. Now, flashing "M" is lit, providing memory recall mode.



6 Recalling memory frequency [*/ ENT RCL button]

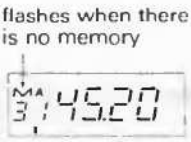
Procedures

Example: Recalling "A-M1"

① Set C500 to A-VFO mode and depress */ ENT RCL button. "M" is indicated on display.
② Depress "1" to recall memory address number "A-M1". The memory address number and its frequency of 145.14MHz is displayed.

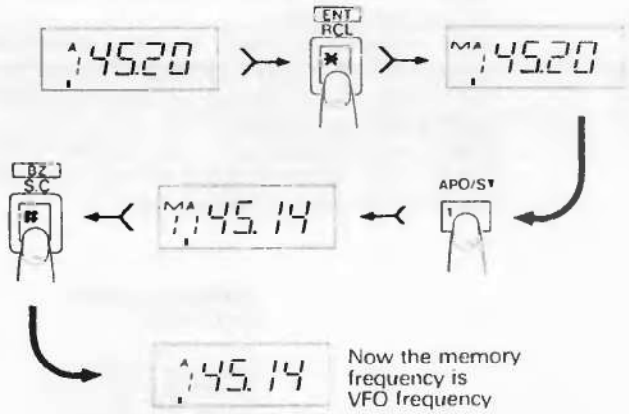
Advices

1. When you recall another memory frequency consecutively, depress numeral button of memory address number with memory recall mode.
2. During memory recall mode, the rotary channel selector is also available to shift memory address number in turn. In this way, all the memory address in A and B-VFO can be recalled one after another.
3. When specified address has no memory, "M" on display is flashed to indicate nothing is in the memory address. Now, the frequency displayed is dial frequency.



7 Loading memory frequency to VFO [#/ BZ S.C. button]

By depressing #/ BZ S.C button with memory recall mode, the recalled frequency will be dial frequency (memory shift).



Advices

Besides memory shift, dial frequency mode can also be set by releasing memory recall mode, depressing B/ DUAL VFO button.

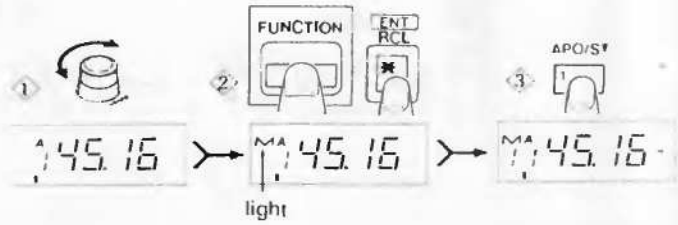
8 Changing memory frequency

By rememorizing new frequency, previous one is deleted.

Procedures

Example: Memorize 145.16MHz in "A-M1" without recalling present frequency of 145.14MHz.

① Set new frequency of 145.16MHz by rotary channel selector or numeral buttons with dial frequency mode.
② Depress */ ENT RCL button while FUNCTION button is held depressed. "M" is indicated on display.
③ Specify memory address number 1, by depressing numeral button of "1". Memorization of new frequency is completed with long beep, providing memory recall mode.



9 Deleting memory frequency

Memory frequencies are deleted as following procedures.

Procedures

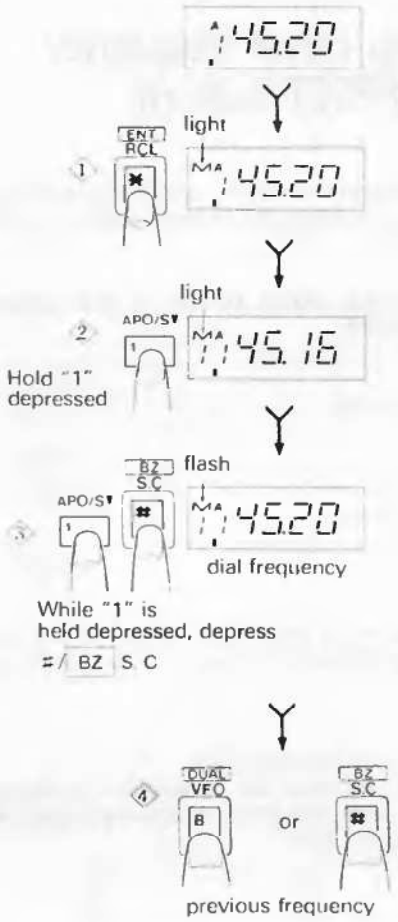
Example: Deleting memory frequency in "A-M1"

① Depress */ ENT RCL button. "M" is indicated on display.

② While numeral button of "1" is held depressed, depress # BZ S.C button. "M" on the display is flashed with long beep and deletion is completed.

③ Now the frequency displayed is the dial frequency.

④ Depress B/ DUAL VFO or #/ BZ S.C button. The previous dial frequency mode is recalled.



10 Setting offset frequency [0/OFFSET button]

C500 is capable of repeater operation, changing offset frequency. One of four different offset frequencies corresponding to following four groups can be set.

The offset frequencies should be set in the range from 0.000MHz to 39.995MHz.

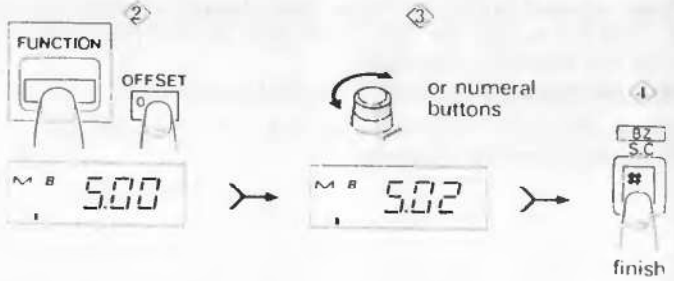
A-VFO, A-MO, A-M2.....A-M9	group 1
A-M1	group 2
B-VFO, B-MO, B-M2.....B-M9	group 3
B-M1	group 4

Set desired VFO or memory recall mode. When no memory is in A-M1 or B-M1, offset frequency of group 1 or 3 is renewed.

Procedures

① Select mode to set offset frequency.
Note: If there is no memory in specified address with memory mode, the offset frequency relative to the dial frequency is set.

② Depress 0/OFFSET while FUNCTION is held depressed. Latest memory frequency is displayed. Initial setting of A and B VFO are 0.60MHz and 5.00MHz respectively.
③ Set new frequency by rotary channel selector or numeral buttons. Offset frequency is set by just key entry.
④ Depress # / BZ S.C button to be previous mode.



Advices

1 When you set the offset frequency by numeral button, depress digit in MHz at first. Setting is completed when three digits are entered.

11 Scanning

C500 provides following scan features.

Scan system
Either Pause scan or Busy scan system can be selected.

- **Pause scan**
  Pauses scanning by receiving a signal. Scanning starts again five seconds later since pausing or when the receiving signal is disappeared.
- **Busy scan**
  Pauses scanning during receiving a signal. Scanning starts again 1.5 seconds later since the signal is disappeared.
  As initial setting, Pause scan is selected.

1. Scanning dial frequency

1) 1MHz scan: allows scanning within 1MHz band of specified frequency.
2) All scan: allows scanning within the band throughly (VHF: 4MHz, UHF: 10MHz).
3) Program scan: allows scanning within or without the specified frequency.

2. Scanning memory frequency

All memory scan ┐
A memory scan ├ Normal memory scan
B memory scan ┘ MSM memory scan

<During SAVE operation, save memory scan is operated. (available to all the memory scan mode)>

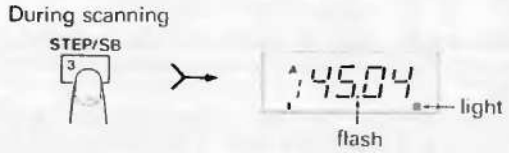
By depressing #/ BZ SC button with dial frequency mode, 1MHz scan is started. (decimal point on display is flashed during scanning.)

C500 applys two scanning system. Busy scan pauses scanning during receiving a signal and starts it again when the signal is disappeared. The other one is called Pause scan which pauses scanning by receiving a signal, however, it starts scanning five seconds later since the scanning paused. The program scan which scans at the frequency memorized in "B-M8" to "B-M9" repeatedly is also available.

■ Switching Busy and Pause scans [3/STEP/SB button]

Procedures

By depressing 3/STEP/SB button during scanning, B is indicated on display, providing Busy scan. Depress 3/STEP/SB button again to be Pause scan. B on display disappeares.



Note: B is indicated during scanning only.

Advices

1. By depressing 1/APO/S ▼ or 2/SAVE/S ▲ button during scanning or pausing scanning, the frequency is changed downwards or upwards one step per one depress.
2. In addition, either button is held depressed for more than 0.5 second, the frequency is changed continuously in rapid speed.
3. By depressing #/ BZ S.C or B/ DUAL VFO button during scanning, scanning operation is released and the frequency when the button is depressed is displayed.

① Scanning dial frequency

1) 1MHz scan

By depressing #/ BZ S.C button with dial frequency mode, scanning is started at the frequency displayed. Scanning is repeated within 1MHz of displayed frequency and dicimal point on display is flashed during scanning.

2) All scan within amateur band (VHF: 4MHz, UHF: 10MHz)

Unless otherwise the frequency in the same band are memorized in "B-M8" and "B-M9", or either/both address have memory, All scan is available.

Procedures

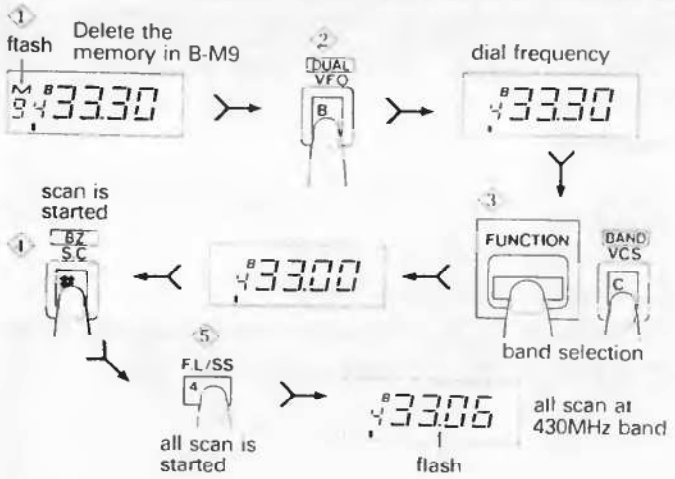
① Delete the memories in "B-M8" and "B-M9". Refer to page 16 to delete them.

② Depress B/ DUAL VFO button to be dial frequency mode.

③ To set the band you wish all scan, depress C/ BAND VCS button while FUNCTION is held depressed.

④ Depress # BZ S.C button to start 1MHz scan.

⑤ To start all scan, depress 4/F.L/SS button. Scanning is started at the frequency where the button is held depressed.



Advices

1. By depressing 4/F.L/SS button again during all scan, 1MHz scan is started at the frequency displayed when the button is depressed.
2. No distinction is indicated for 1MHz and all scan, use 1/APO/S ▼ or 2/SAVE/S ▲ button to confirm them.
3. When the scanning is started again by depressing # BZ SC button after releasing scanning (it is not released by turning the Power off), 1MHz scan is always started.

3) Program scan which scans within or without the specified frequency

Program scan starts at the next frequency of memory address number "B-M8" to "B-M9" repeatedly.

■ **Scanning within the specified frequency**

Lower frequency as starting frequency should be memorized in "B-M8" and higher frequency as ending frequency should be memorized in "B-M9". "B-M8" and "B-M9" should be in the same band.

Procedures

Example: program scan with 433.30MHz in "B-M8" and 433.80MHz in "B-M9"

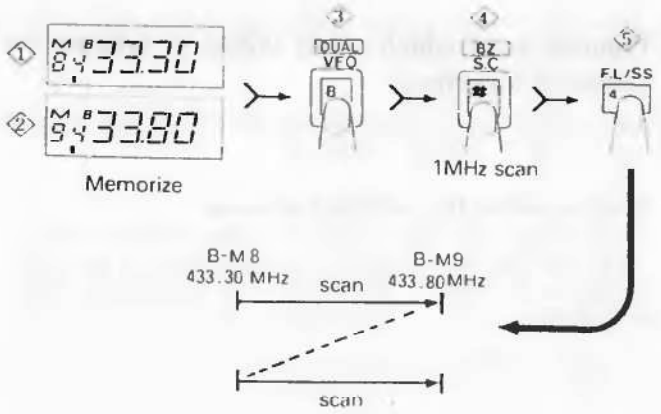
① Memorize 433.30MHz in "B-M8"

② Memorize 433.80MHz in "B-M9"

③ Depress B/ DUAL VFO button to be dial frequency mode

④ Depress #/ BZ S.C button to start 1MHz scan.

⑤ To start program scan, depress 4/F.L/SS during 1MHz scan.



Advices

Program scan is performed with the frequencies in "B-M8" and "B-M9", even if 1MHz scanning is performed in A-VFO.

To release program scan, depress 4/F.L/SS button. Now, 1MHz scan is started from the frequency where the button is held depressed.

■ Scanning without the specified frequency

Higher frequency should be memorized as starting frequency in "B-M8", and lower frequency as ending frequency should be memorized in "B-M9". "B-M8" and "B-M9" should be in the same band.

Procedures

Example: scanning without the range from 433.30MHz to 433.80MHz

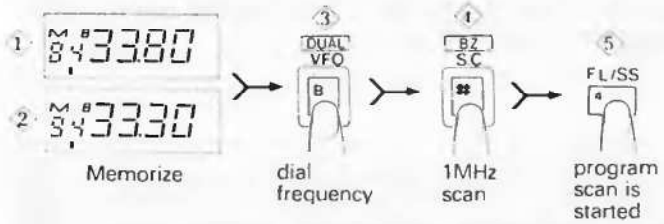
① Memorize 433.80MHz in "B-M8"

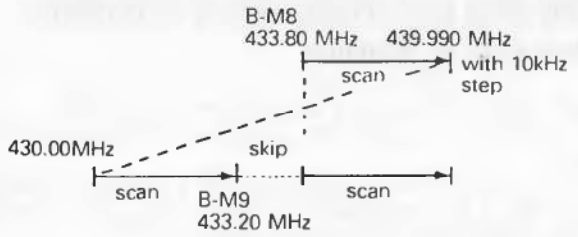
② Memorize 433.30MHz in "B-M9"

③ Depress B/ DUAL VFO button to be dial frequency mode.

④ Depress #/ BZ S.C button to start 1MHz scan.

⑤ Program scan is started by depressing 4/F L/SS button during 1MHz scan. Even if the button is depressed during 1MHz scan in A-VFO, program scan is performed with frequencies in "B-M8" and "B-M9".





② Scanning memory frequency

C500 has rich variety of memory scan features. Moreover, the save memory scan is available during Save operation and memories are intermittently received in turn according to the save timer. (period)

1) Normal memory scan

Memory scan mode is set by depressing D/ [MSM] M.S button. Only address number memorized are scanned, shifting memory address upwards.

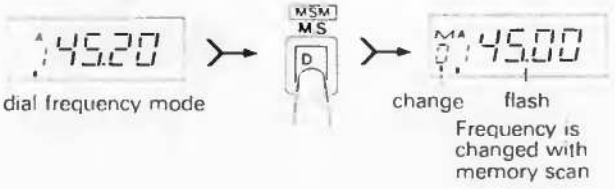
■ **A memory scan (or B memory scan)**

Procedures

① A and B-VFO are switched by depressing A/ [DUP] A.B button.
"A" or "B" selected is indicated on display. Select desired VFO for memory scan.

② A (or B) VFO memory scan is started by depressing D/ [MSM] M.S button and decimal point (scan indicator) on display is flashed.

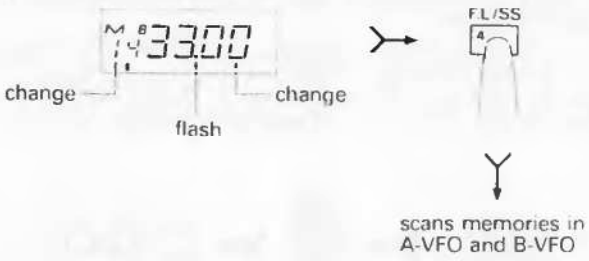
③ To release memory scan, depress D/ [MSM] M.S button again. Memory recall mode is set with the memory where the button is depressed. By depressing D/ [MSM] M.S button again, memory scan is started again from the next frequency.



■ **All memory scan**
It scans all the memory frequency in A and B VFO

Procedures

① All memory scan is started by depressing 4/F.L/SS button during memory scan. Twenty memories at most can be watched.
② By depressing the button again, A (or B) VFO memory scan is started from the frequency where the button is depressed.



Advices

1 A-VFO or B-VFO memory scan is always started after releasing scanning.
2 By depressing 2/SAVE/S ▲ button, memory address is changed one step upwards, however, it is not changed downwards by depressing 1/APO/S ▼ button.

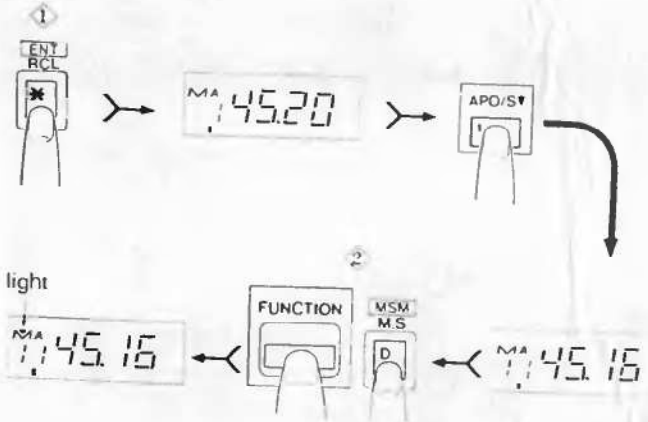
2) Preferential scan among memory frequencies (Memory Scan Memory)

Specified memory frequencies are preferentially scanned.
- "▼" above "M" is indicated on display, indicating MSM frequency.
- When it is not memory recall mode, "▼" is indicated, expressing MSM scan is prepared. For MSM scan specify MSM in each memory address number in advance.

Setting MSM frequency

Procedures

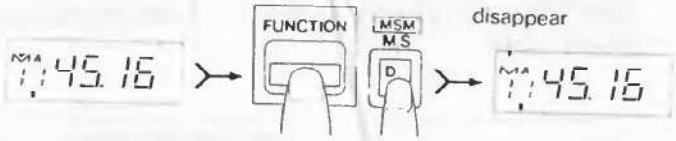
① Depress */ ENT RCL button. Depress numeral button to recall memory frequency you wish to set MSM.
② Depress D/ MSM M.S button while FUNCTION button is held depressed.
③ "▼" above "M" is indicated and the memory frequency is set as the MSM frequency.
④ Set next memory frequency as MSM in the same manner.



Deleting MSM frequency

Procedures

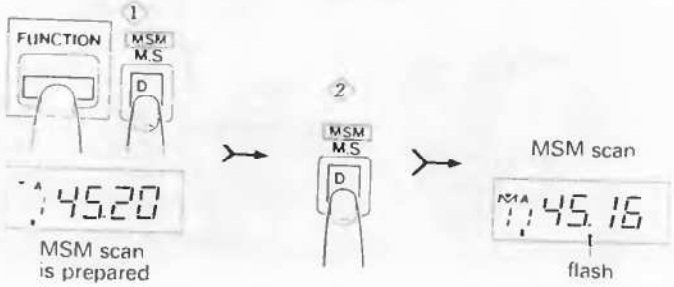
Recall MSM frequency you wish to delete. Depress D/ MSM M.S button while FUNCTION button is held depressed. "▼" above "M" disappears from display.



1 MSM scan I

Procedures

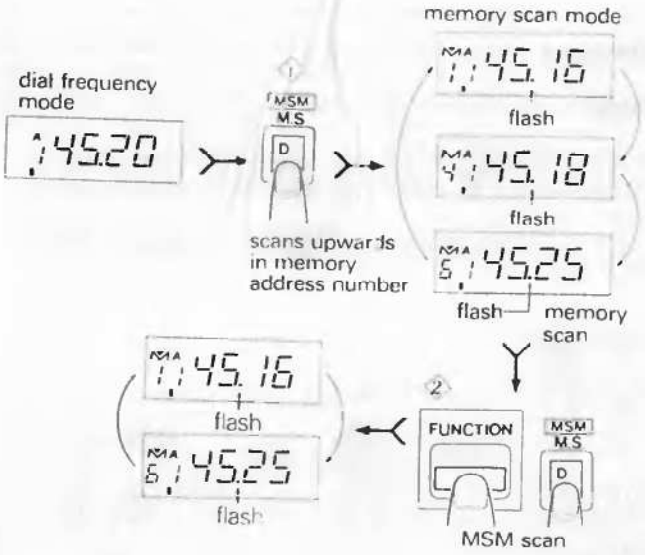
① Depress D/ MSM M.S button while FUNCTION button is held depressed. "▼" is indicated and MSM scan mode is prepared.
② To start MSM scan, depress D/ MSM M.S button with MSM scan mode.



[2] MSM scan II

Procedures

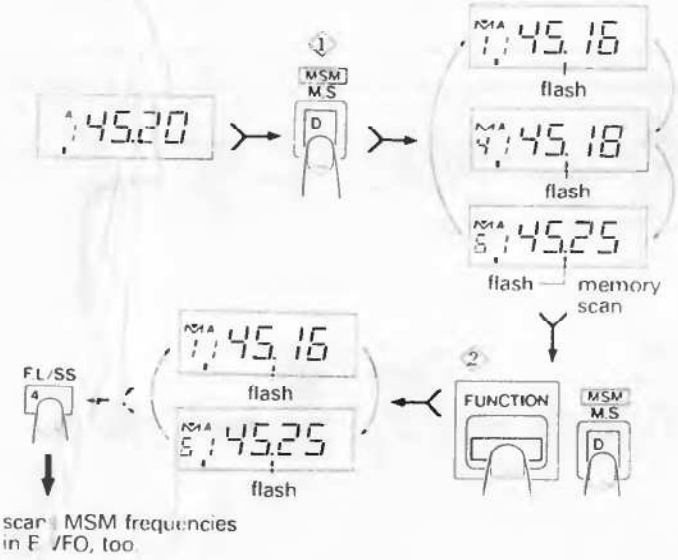
① Depress D/[MSM] M.S button to start memory scan mode.
② To start MSM scan, depress D/[MSM] M.S button while FUNCTION button is held depressed during memory scan.
③ To release it, depress D/[MSM] M.S button again, while FUNCTION button is held depressed. Now scanning operated is memory scan.



Note: During memory scan, it is scanned upwards in memory address number in turn.

[3] All MSM scan

By depressing 4/F.L/SS button during MSM scan, all the MSM memories in A and B-VFO are scanned in turn. By depressing 4/F.L/SS button again, A (or B) memory scan is started from the memory of which the button is held depressed.



12 Dual Watch [B/ DUAL VFO button]

C500 provides following Dual Watch operation.

1. Dial frequency and memory frequency "A-M1" or "B-M1".
2. Dial frequency and one of memory frequencies except for "A-M1" and "B-M1".
3. Dial frequency and Memory scan frequencies (or MSM scan frequencies)

Advices

1. "DUAL" is indicated on display during dual watch operation.
2. Dial frequency can be changed even if dual watch is operated.
3. During dual watch operation, C500 receives memory frequency once for each three seconds (instant) and displays its frequency instantaneously on reception.
4. When the memory frequency is received, dual watch operation is paused during receiving.
5. The signal received as dial frequency during dual watch operation may be heard with some noise, however, it is not a defective.
6. Dual watch operation in memory frequency may be paused, by rotating SQL control fully counterclockwise.

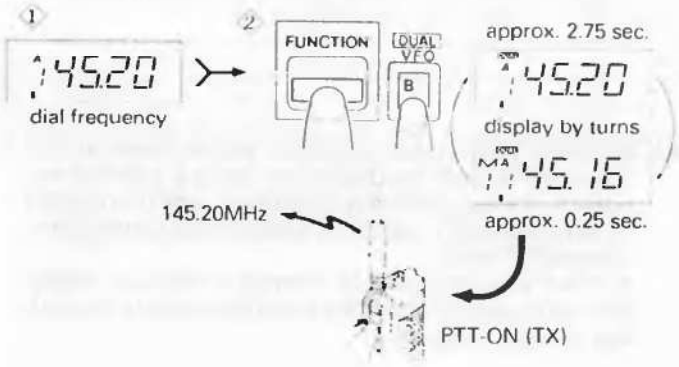
Note: **• During dual watch operation, transmission at dial frequency is available. During receiving a memory frequency, the dial frequency is displayed and transmitted by depressing PTT switch. To operate dual watch again, release PTT switch.**

• When you are called at memory frequency, release dual watch operation at first and communicate by recalling memory address.

① **Dual watch with memory address "A-M1" or "B-M1"**
Dual watch operation for dial frequency and "A-M1" or "B-M1" is available by following procedures.

Procedures

◇1 Set dial frequency mode.
◇2 Depress B/ DUAL VFO button while FUNCTION button is held depressed. "DUAL" is indicated on display is, operating dual watch.

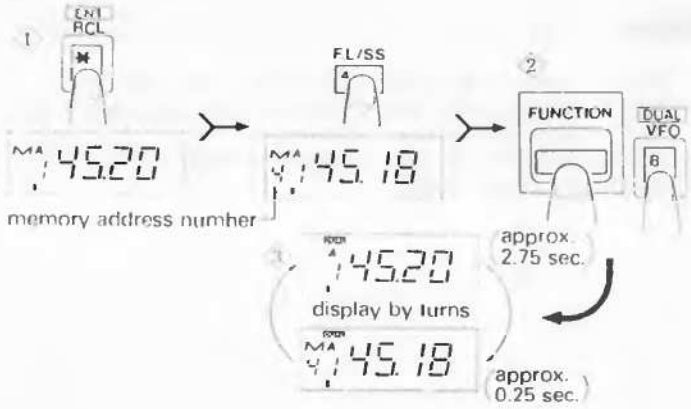


Note: If no memory is in "A-M1" or "B-M1", depressing D/ DUAL VFO button results in disablement with short beep.

② **Dual watch with one of memory frequencies**
Dual watch operation for dial frequency and one of memory frequencies except for "A-M1" and "B-M1", is available by following procedures.

Procedures

◇1 Recall a memory frequency to do dual watch.
◇2 Depress B/ DUAL VFO while FUNCTION button is held depressed. "DUAL" is indicated, providing dual watch operation.
◇3 Dial frequency and the memory frequency is displayed by turns.



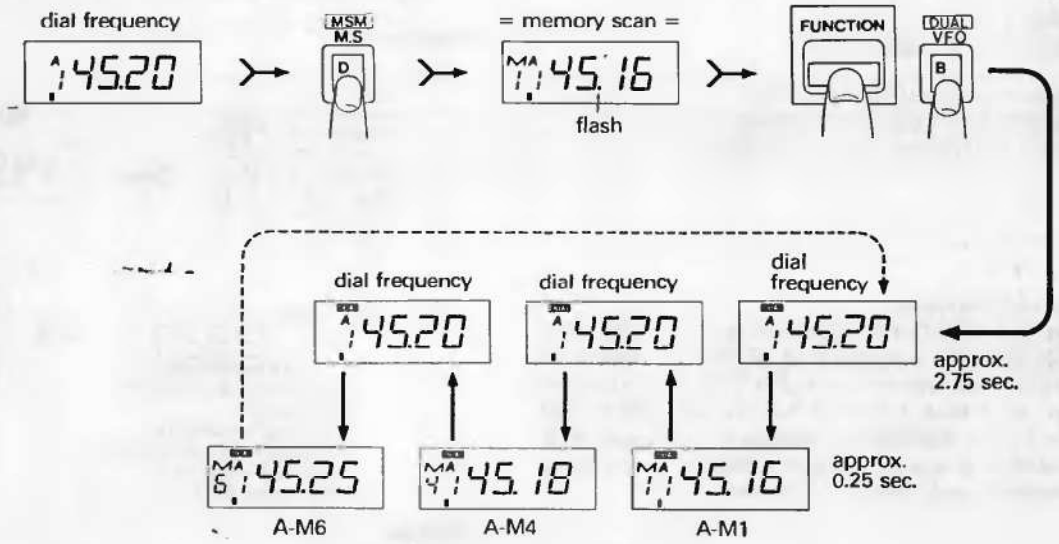
③ Dual Watch with memory scan frequencies

Dual watch operation for dial frequency and memory scanning frequencies or MSM scan frequencies are available. In this case, one of memory frequencies in A or B-VFO memory scan in turn can be dually watched with dial frequency. Dual watch with dial frequency and ten memory frequencies at most is available.

Procedures

① Set memory scan mode. (**Dual watch with all memory scan is not available.**)

② Depress B/[DUAL] VFO button while FUNCTION is held depressed. "DUAL" is indicated on display and dual watch with dial frequency and one of memory frequency in turn is operated.



(Example for dual watch when there are memories in A-M1, A-M4 and A-M6.)

13 Duplex feature [A/ DUP A.B button]

C500 is available of Duplex feature applying two frequencies. If their bands are different (as VHF and UHF), transmission during reception is available like telephone.

① A-VFO and B-VFO
Example: 145.20MHz and 433.20MHz

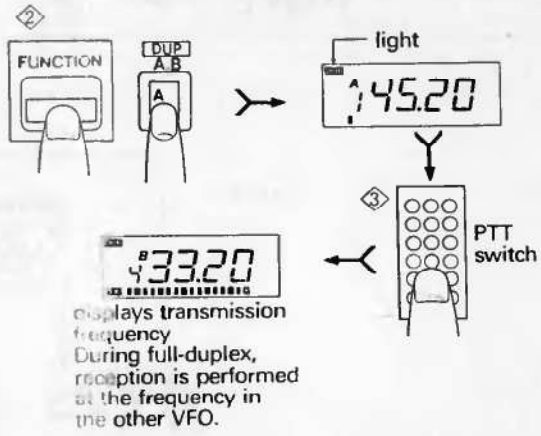
② Memory frequencies of A-VFO and B-VFO
(Duplex feature between the same address numbers)
Example: A-M1: 145.16MHz, B-M1: 433.20MHz

Note: Attention to followings
If frequency of A-VFO (transmission) is set in VFO band, do not allocate the frequency of B-VFO (reception) to the approximately three times of A-VFO. For instance, in the case of that A-VFO is set to 145.02MHz and B-VFO is set to 435.06MHz, howling is caused. It is recommended to use ear phone or head phone during duplex operations (protection of howling).

Procedures

① Set receiving frequency during duplex operation.
② Depress A/ DUP A.B button while FUNCTION is held depressed.
"DUP" is indicated on display, indicationg duplex communication is available.
③ By depressing PTT switch, couple frequency is displayed as transmission frequency. ("TX" is indicated on the display and LED on C500 is lit during transmission.)

Example in ①



Advices

A/ DUP A.B button is available to exchange transmitting and receiving frequency.

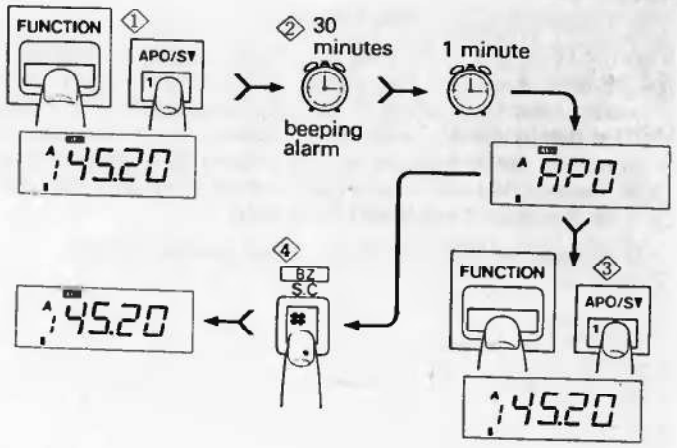
14 Auto Power off [1/APO/S▼ button]

C500 contains Auto Power off to conserve the Power.
Auto Power off is operated 30 minutes of inactivity of keyboard, PTT switch, or Squelch ON/OFF. At first, it alarms to draw an attention. C500 automatically turns itself off after one minute of inactivity since beeping alarm.
It conserves the power consumption to approximately 4mA (**sleep stand by**). Frequency display is disappeared and "APO" is indicated instead.

Note: 1. When "APO" is indicated instead of frequency display, neither transmission or reception operation is not available as their circuits are not worked.
2. The power consumption is conserved to the least with Auto Power off, however, turn the power off, whenever you stop to use the transceiver.

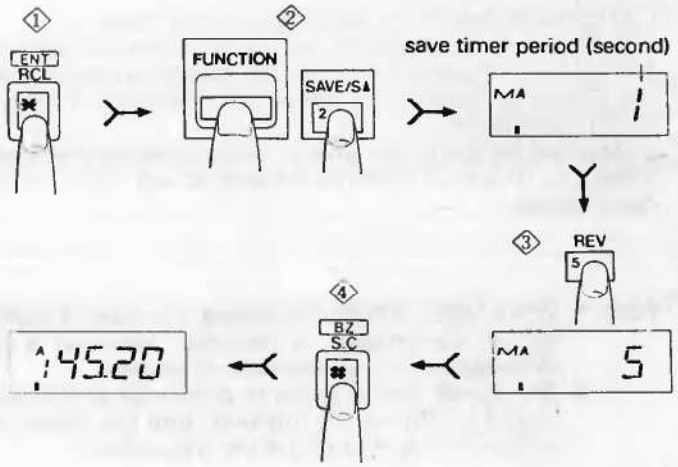
Procedures

① Depress 1/APO S▼ button while FUNCTION is held depressed.
"APO" is indicated on display, providing Auto Power off.
② After 30 minutes of inactivity, beeping alarms is sounded.
Additionally, after one minute of inactivity, "APO" is displayed instead of frequency display.
③ By depressing 1/APO/S▼ button while FUNCTION button is held depressed, both the auto power off feature and sleep stand by are released.
④ By depressing #/ BZ S.C button when "APO" is displayed, only sleep stand by is released. (Auto Power off feature is continued.)



15 Battery Save [2/SAVE/S▲ button]

Controls reception stand by according to the save timer period to converve power consumption. One out of nine save timer period can be selected.



Setting Save Timer

Procedures

① Depress */[ENT] RCL button.

② 2/SAVE/S▲ button while FUNCTION is held depressed. Frequency display is disappeared and digit is indicated instead. This digit corresponds to the save timer period. For instance displayed digit of 5 means that the period is the save timer is 5; namely, C500 prepares to receive once for each 5 seconds.

③ Depress desired numeral button of the save timer period (1 to 9). Setting is completed by key entry.

④ Depress #/[BZ] S.C button to set previous mode.

Operating Battery Save

Procedures

① Depress 2/SAVE/S▲ button while FUNCTION button is held depressed. "SAVE" is indicated on display, operating Battery Save.

② To release it, depress 2/SAVE S▲ button again while FUNCTION button is held depressed.

Advices

Battery Save is disabled during VFO scanning and VCS operation, however, "SAVE" is kept indicating.

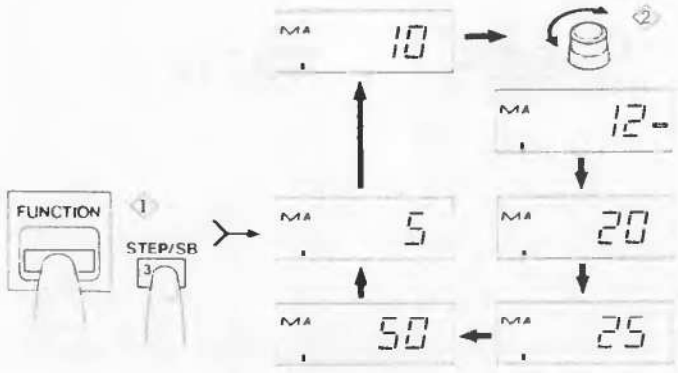
16 Changing channel step [3/STEP/SB button]

Channel step available are: 5kHz, 10kHz, 12.5kHz, 25kHz and 50kHz. Select according to your usage.

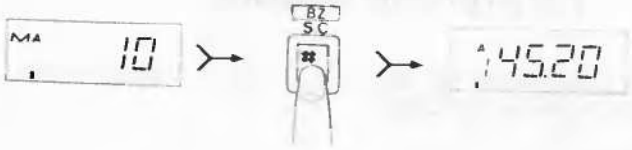
Procedures

① Depress 3/STEP/SB button while FUNCTION button is held depressed. Frequency display is disappeared and channel step is displayed.

② By rotating rotary channel selector, channel step is displayed in turn.



③ After setting channel step, depress # / BZ S C button to set previous mode.



Advices

When the channel step is 12.5kHz, digit in kHz is indicated right coner of the display.

17 PTT Lock [6/PTT.L button]

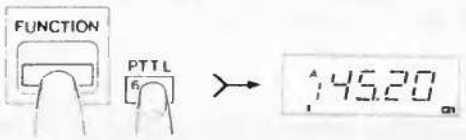
For disabling PTT operation. Transmission is not available even if "PTT" switch is depressed.

Procedures

① Depress 6/PTT.L button while FUNCTION button is held depressed. "P.L" is indicated on display. Now PTT switch is disabled, and transmission is not available even if PTT switch is depressed.

② To release it, depress 6/PTT.L button again while FUNCTION button is held depressed.

PTT lock is available, regardless of every key manipulations.



18 Repeater operation [7/RPT button]

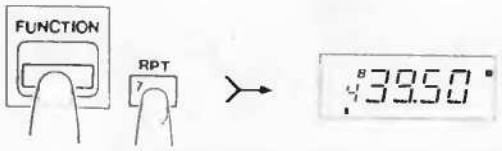
For switching repeater operation and normal (simplex) operation.

Procedures

① Tune frequency of C500 to that of repeater.

②Depress 7/RPT button while FUNCTION is held depressed. "⊟" or "⊞" is indicated on display, providing repeater operation.

③ By depressing 7/RPT button again while FUNCTION is held depressed, "⊟" or "⊞" is disappeared and normal operation is set.



Advices

- Initial setting of transmitting offset frequency during repeater operation are 600kHz at A-VFO, and 5MHz at B-VFO.
- Setting of repeater operation can be set for A-VFO and B-VFO respectively.

Note: **Transmitting frequency of C500 is given by adding or reducing shifted width from reception frequency. If transmission frequency is outside the anateur band, "OFF" is displayed, disabling transmission. Set it within the anateur band.**

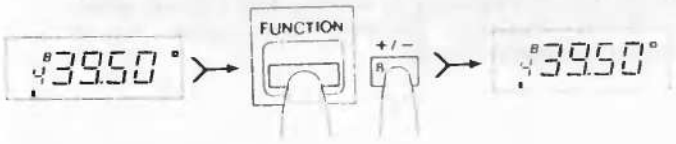
19 Switching [+] / [−] shift [8/+/− button]

This is capable of switching shifting direction, [+] or [−].

Procedures

① Set C500 repeater operation.

② Depress 8/+/− button while FUNCTION is held depressed. [+] or [−] is indicated in turn by depressing it. Set [−] at normal operation.



Note: This feature is disabled with short beep, except that repeater operation.

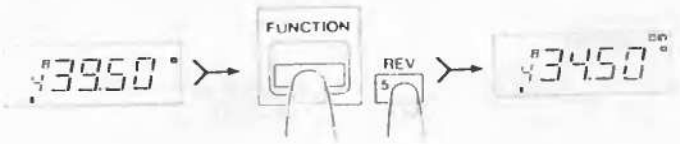
20 Exchanging transmission and reception frequency during repeater operation [5/REV button]

To check direct signal received, exchanging transmission and reception frequency during repeater operation.

Procedures

① Set C500 to repeater operation mode.

② Depress 5/REV while FUNCTION button is held depressed. "REV" is indicated on display. Transmission frequency and reception frequency are exchanged.



③ Depress 5/REV button again while FUNCTION button is held depressed. "REV" is disappeared and previous frequency is displayed.

Note: This feature is disabled with short beep, except that repeater operation or "OFF" is displayed with transmitting operation mode.

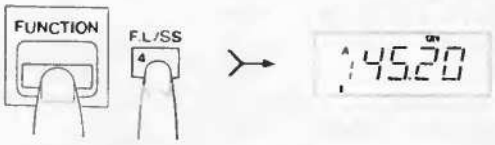
21 Frequency Lock [4/F.L/SS button]

To lock frequency or operation mode so that they are not changed by accident. It is also available during scanning and dual watch operation to protect unproper mainpulation.

Procedures

① Depress 4/F.L/SS button while FUNCTION is held depressed. "F.L." is indicated, expressing locking.

② To release it, depress 4/F.L/SS again, while function button is held depressed.



22 Tone Squelch Control [9/T.SQL button]

☆ **Normal operation**

Tone Squelch (CTCSS) is available by installing optional Tone Squelch unit (CTN500).

Note: • Communication among stations having same tone is available. Memorize tone frequency prior to tone squelch operation.

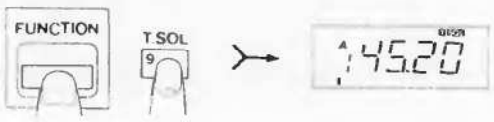
• C500 is capable of installing one tone squelch unit only. In full duplex communication, tone squelch is available in transmission side.

① Switching tone squelch operation (when repeater operation is not available)

Procedures

① Depress 9/T.SQL button while FUNCTION button is held depressed. "T.SQL" is indicated on display, operationg tone squelch.

② To release it, depress 9/T.SQL button again while FUNCTION button is held depressed. "T.SQL" is disappeared and tone squelch is now released.



Advices
It can be set in A and B VFO respectively.
☆ **In repeater operation**
It switches tone encorder and tone squelch operation during repeater operation.

② Switching Tone encorder and Tone Squelch

Procedures

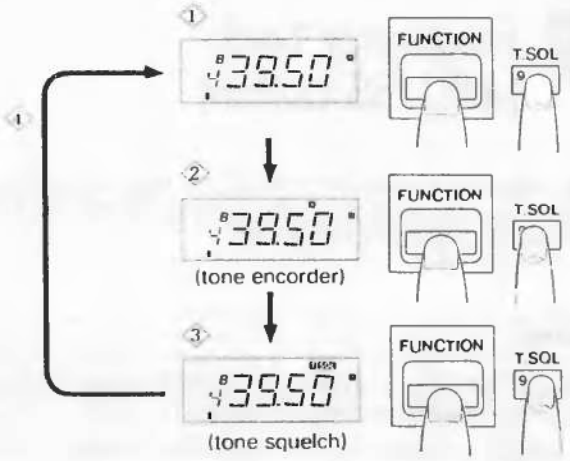
① Set C500 repeater operation mode.

② Depress 9/T SQL button while FUNCTION is held depressed. "T" is indicated on display, providing tone encorder operation.

③ By depressing 9/T SQL button again while FUNCTION button is held depressed, "SQL" is also indicated, providing tone squelch (CTCSS) operation.

④ By depressing 9/T SQL button once again while FUNCTION is held depressed, "T" and "SQL" are disappeared, operating without tone.

Advices
Repeater operation mode can be set in A and B-VFO respecitively. In addition, repeater operation mode can be indepently set in A-M1 and B-M1. Tone frequency can be set in four groups as following table.



Group	Operation mode	normal operation	repeater operation
①	A-VFO, A-CALL, A-MO, A-M2...A-M9	① group tone memory	① group tone memory
②	A-M1	① group tone memory	② group tone memory (independent)
③	B-VFO, B-CALL, B-MO, B-M2...B-M9	③ group tone memory	③ group tone memory
④	B-M1	③ group tone memory	④ group tone memory (independent)

① and ③ tone memory group can be set when repeater operation is not operated. All the tone memory group can be set during repeater operation.
Note: T and SQL are indicated on display even if CTN500 is not installed.

③ Frequency setting of Tone Encorder/Tone Squelch

Select one of memories among 37 memorized in micro-computer in advance. Memorize it in memory circuit.

Tone Frequency List (unit Hz)

67.0	100.0	141.3	203.5
71.9	103.5	146.2	210.7
74.4	107.2	151.4	218.1
77.0	110.9	156.7	225.7
79.7	114.8	162.2	233.6
82.5	118.8	167.9	241.8
85.4	123.0	173.8	250.3
88.5	127.3	179.9	
91.5	131.8	186.2	
94.8	136.5	192.8	

Procedures

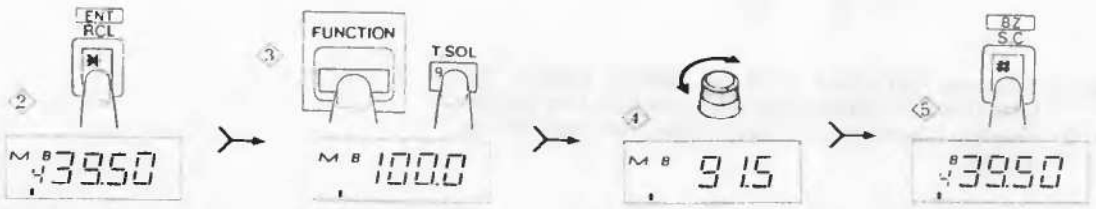
① Set VFO memory or Recall mode to set tone frequency. Set repeater operation if required. (Refer to Tone Memory Group Table set forth before.)
When no memory is in A-M1 and B-M1, A-VFO group (① group tone memory) and B-VFO group (③ group tone memory) is renewed.

② Depress */ ENT RCL button. "M" is indicated.

③ Depress 9/T SQL button while FUNCTION is held depressed. Frequency display is disappeared, and tone frequency of "100.0" is displayed. (It is initially set to 100.0Hz.)

④ Set tone frequency by rotating rotary channel selector. Renewing of tone frequency memory is completed with frequency entry.

⑤ Set previous mode by depressing #/ BZ S.C button.



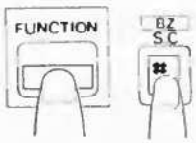
23 Muting buzzer [#/ BZ SC button]

Long beep ..... proper operation
Beeping alarm ..... when Auto Power off is operated
Short beep ..... unproper operation
Pi ..... proper key stroke

Procedures

① To mute buzzer, depress #/ BZ S.C button while FUNCTION is held depressed.

② To release it, depress #/ BZ S.C button again while FUNCTION is held depressed.



Note: 1. Since no indication is lit on display, confirm the buzzer is not sounded, by depressing certain button.
2. Beeping alarm during Auto Power off can not be muted.

24 VCS feature to search vacant channels automatically [C/ BAND VCS button]

Accomodate easy QSY from channel search which is frequently used.

When operation mode is changed from dial frequency (or memory recalling) mode to VCS operation, it searches unused frequency (vacant channel) automatically and displays it. Communication in the frequency before C/ BAND VCS button is depressed, or unused frequency is available. Unused frequency should be vacant channel hereafter.

Indications during VCS means:

VC S ..... can operate with new frequency

VC ..... can operate with previous frequency

VC S (flash) ..... operating and displaying frequencies are different

VC S (flash) ..... searching vacant channels

Advices

1. #/ BZ S.C button during VCS
   By depressing #/ BZ S.C button during searching vacant channels, previous mode before VCS operation is set. VCS is released by dipressing #/ BZ S.C button during VCS operation. (except for vacant channel search)
2. New frequency can be set during VCS operation by numeral buttons, however, previous frequency can not be changed.

Example for changing frequency at 144.80MHz to another

A station

[1] 144.80MHz (dial frequency mode)

[2] By depressing C/ BAND VCS button with dial frequency mode, vacant channel search is started.

[3] Tell B station to QSY to 145.02MHz. (TX/RX frequency is 144.80MHz.

[4] Communication at displayed frequency is available by depressing C/ BAND VCS button.

B station

① 144.80MHz (dial frequency mode)

② Communicate at 144.80MHz. Set frequency to 145.02MHz by rotary channel selector or numeral buttons.

144.80MHz

145.02MHz

145.02MHz

A station

(VFO mode operation at 145.02MHz is available by depressing #/ BZ S.C button with mode in step [4]. VCS operation at 145.02MHz in fundamental is available again.

To change another frequency

[5] Tell B station to return to previous frequency (144.80MHz), and depress C/ BAND VCS button.

[6] Release VCS operation by depressing #/ BZ S.C button. 144.80MHz is displayed. (dial frequency mode)

↓

[7] When VCS operation is set from dial frequency mode, vacant channel search is started automatically, and displays frequency searched. Returns to step [3].

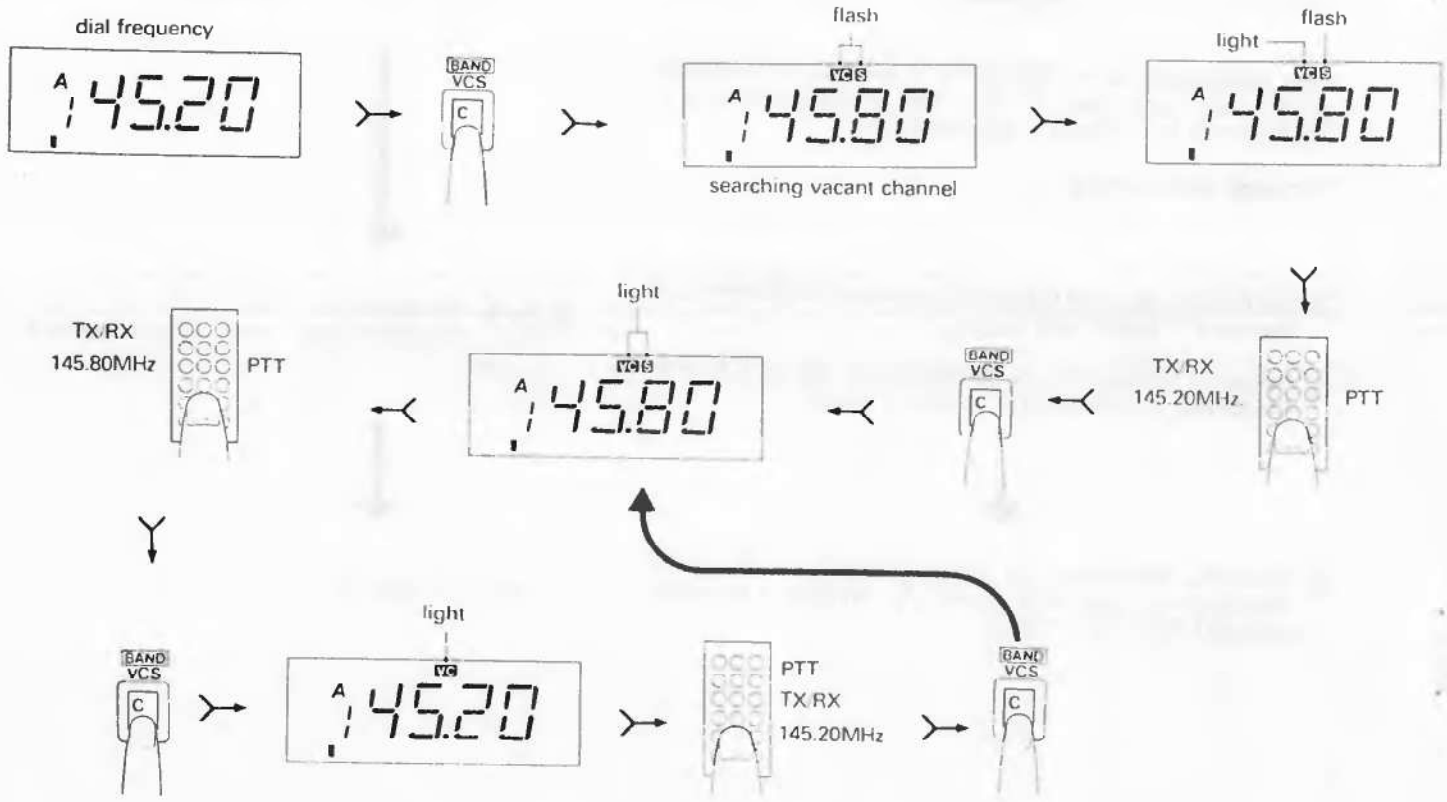
B station

↓

③ Set to 144.80MHz
Set to 144.80MHz by rotary channel selelctor or numeral buttons.

↓

Returns to step ②


dial frequency
A 145.20
BAND VCS
C
flash
VCS
A 145.80
searching vacant channel
flash
light
VCS
A 145.80
TX/RX
145.80MHz
PTT
light
VCS
A 145.80
BAND VCS
C
TX/RX
145.20MHz
PTT
BAND VCS
C
light
VC
A 145.20
PTT
TX/RX
145.20MHz
BAND VCS
C

REPEATER OPERATION

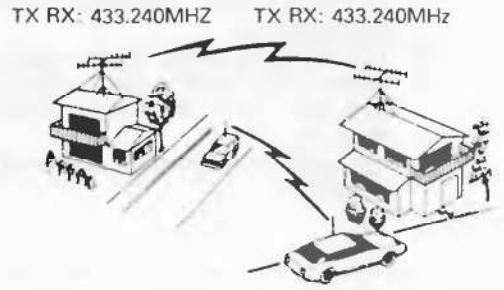
[1] Repeater Operation
Communication through repeater station (radio relay station)

It is available in the area where Repeater is established
Confirm its TX/RX frequency by specialized magagine

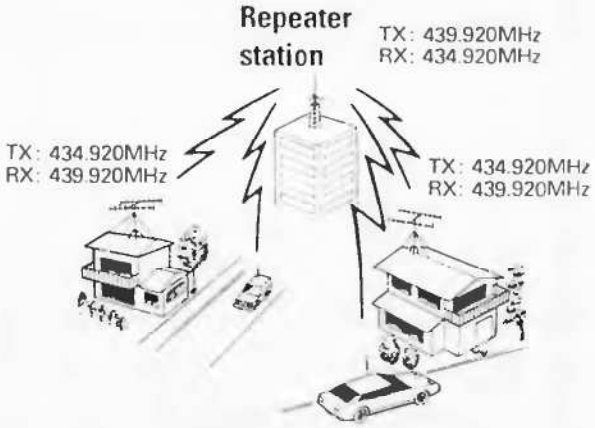
[2] Feature of repeater operation

- Communication is performed applying two different frequencies for transmission and reception. Tranceivers are thus required to have feature which shifts transmitting/receiving frequency. Internal tone encorder to operate repeater station is also required.
- Long distance communication by Low Power Transceivers is atteined through repeater station. For repeater operation, C500 is recommended to use with LOW PWR, since further repeater stations applying same frequency with nearer one are also accessed by high power operation.

Consevative operation in 430MHz band



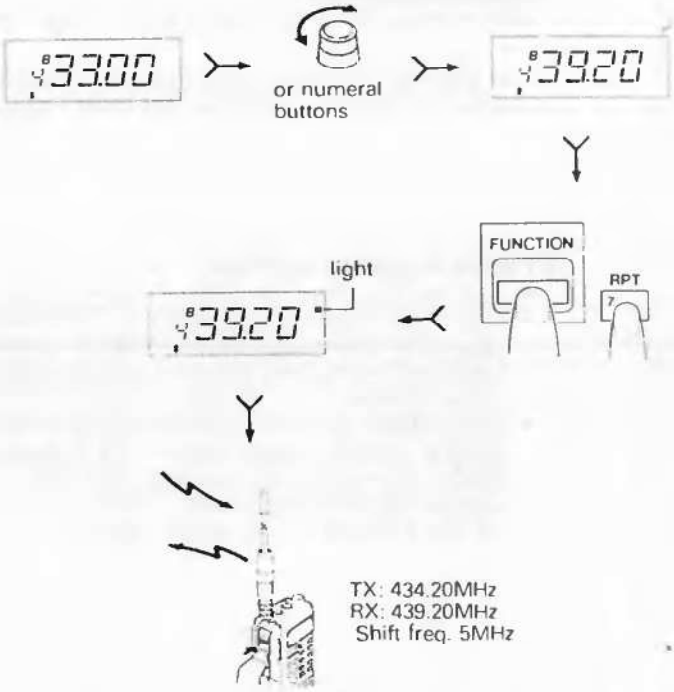
Repeater operation in 430MHz band



Off Set Frequency 5MHz

[3] Repeater operation procedure

1. Set C500 to B-VFO. Install the CTN500 option and set the tone frequency.
2. Tune frequency to that of near repeater station applys.
3. Depress RPT/7 button while FUNCTION button is held depressed. [−] is indicated on display, providing rpeater operation.
4. Now repeater operation is available with and shift frequency of 5MHz.



CONVINIENT USAGE

[1] Rotary channel selector is abailable even if the frequency is locked.

Procedures

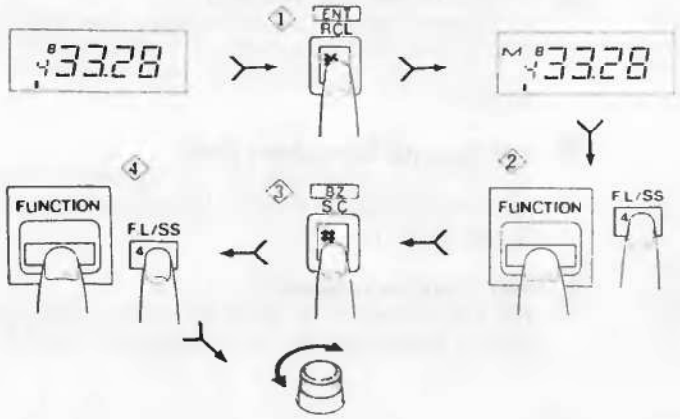
① Depress */[ENT] RCL button. ("M" is indicated on display.)

② Depress 4/F.L/SS button while FUNCTION is held depressed. (Short beep is sounded, however, it is not unproper operation.)

③ Depress #/[BZ] S.C button.

④ Depress 4/F.L/SS button while FUNCTION is held depressed. (Lock the frequency)

Rotary channel selector is now available to change frequency.
To release it, repeat step ① through ③.



[2] Switching semi-duplex and full-duplex
It is initially set to full-duplex mode

Procedures

① Depress 7/RPT button while FUNCTION is held depressed to set for repeater operation mode.

② Depress */[ENT] RCL button.

③ Depress 8/+/− while FUNCTION is held depressed. (It is not unproper operation even if short beep is sounded.)

④ Depress #/[BZ] S.C button.
To release it, repeat step ① through ③.

CONTROLS & OPERATIONS

① **PWR/VOL (Power Switch/Volume Control)**
To turn the power on/off and control the sound volume. Turn clockwise to increase the sound volume. Control the sound volume while "SQL OFF" button is held depressed or turning "SQL" knob fully counterclockwise.

② **SQL (Squelch Control)**
This control minimize unpleasant background noise which is presented when there is no input signal to the receiver input. Turn this control gradually clockwise until background noise is not heard any more when no signal is being received.

Note: Do not turn beyond this point or receivers sensitivity will be degraded.
During scanning, dual watch, and save operation, tune this knob where background noise is not heard.
Perform squelch control at unused frequency.

③ **TX (Transmission Indicator/Battery Indicator)**
The TX indicator (red LED) turns on during transmit mode of operation, however, the LED turns off, if the available battery power is running low, thus indicating that the battery needs replacement.

④ **CH (Rotary Channel Selector)**
To change frequency for both transmission and reception. It can be used to change tone frequency, channel step, and memory address number.
Frequency is changed upwards by rotating it clockwise and downwards by rotating it counterclockwise. The channel step can be selected one of 5kHz, 10kHz, 12.5kHz, 20kHz, 25kHz, and 50kHz.

⑤ **KEY BOARD**
As to functions on the key board on the front panel as described in "Function on the front panel" form page 9.

⑥ **LOW PWR (Switching transmission power)**
Depress this button to transmit with low power (0.4W). For high power transmission, depress it again. It is recommended to set it LOW PWR for the communication in short distance.

⑦ **RF ATT (RF attenuator)**
Depress this button to degrade receivers sensitivity, when using FOX HUNTING. Receivers sensitivity will be degraded approxmately 20dB.
Note: Week signal can not be received when it is depressed.

⑧ **SPKR (External Speaker Jack)**
The external speaker jack is designed to accept the optional MIC/Speaker or Head set with PTT (Model CHP111).
External speaker available are speakers or ear-phones with 8Ω impedance.

⑨ **MIC (External Microphone Jack)**
The external microphone jack is designed to accept the optional MIC/Speaker (Model CMP111) or Head set with PTT (Model CHP111).

⑩ **ANT (Antenna receptacle)**
The BNC connector to install the flexible antenna included. Install it according to the procedures in INSTALLATION [1].

⑪ **FUNCTION**
To perform special functions, depress each button while function button is held depressed.

⑫ **PTT (Press-to-talk switch)**
Pressing this switch puts the transceiver into the transmission mode. Release it to put it into reception mode.
When optional Head set with PTT (Model CHP111) is installed, use PTT switch with it.

⑬ **LAMP**
DISPLAY is illuminated by depressing LAMP button.

⑭ **SQL OFF**
To pause squelch operation, depress the SQL OFF button. The equivalent mode when the squelch control is turned fully counterclockwise is provided.

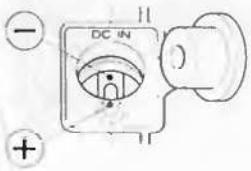
⑮ **DISPLAY**
DISPLAY indicates followings.

The meter on display works as input signal strength meter during reception. It also works as power meter during transmission. All the scale are indicated with high power operation, while indication with low power is between 3 and 5.

⑯ **RESET**
To initialize the microcomputer when it does not work properly or after the battery replacement. Turn the power on and depress reset switch by sharp pointed stick (non-metal).

⑰ **DC IN (External power connector)**
External power is also available, connecting to DC IN with optional power cable Model CAW120B.

Note:
- **Plugging in or out of connecting cable should be performed with turning the transceiver's power off.**
- **Do not supply the power exceeding operational voltage: DC 5.5V to 16V.**
- **Be careful not to mistake polarity.**



⑱ **Battery Case**
For six batteries: SUM-3 manganese (1.5V) or nickel-cadmium rechargeable battery
Note: Install all fresh batteries for replacement.

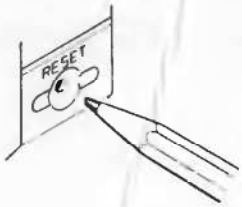
⑲ **Lock button**
To fix the battery case. To remove battery case, push it while the lock button is depressed upwards.

BATTERY

C500 contains Lithium battery to preserve the contents of continuous memory, even if transceiver unit is turned off.
In typical use, new battery will provide 5 years of continuous memory presevation, however, actual lifetime of the battery depends on how often you use the transceiver.

Advices

* Frequency is not displayed correctly, when the transceiver is on signifies that available battery power is running low. In this case, battery needs replacement.
* After the battery replacement, turn C500 on and depress RESET by sharp pointed stick (non-metal).



Note: * **To obtain battery replacement or maintenance service, contact our service center or the dealer where you purchased your transeiver unit.**
* **Do not dispose of battery in fire.**

QUESTIONS & ANSWERS

Q: Frequency display is flashed.
The entire display is flashed when the PLL circuit is unlocked.
A: Replace Lithium batteries.

Q: Frequency display is not correct.
It may happen when the lithium batteries are replaced, or microcomputer does not work proper.
A: Depress RESET button on the side by a non-metal slender stick.
Be sure that the unit is on when you depress RESET button.

Q: Frequency display varies by turning the power ON/OFF.
A: Replace the lithium batteries.

Q: The unit does not accept a signal.
A: Confirm that a sound can be heard from a speaker when SQL OFF button is depressed.
Is'nt the SQL rotated fully clockwise?
A: Rotate the SQL counterclockwise.
Is'nt the tone squelch operated?
A: Release tone squelch operation.
Is'nt VOL rotated fully counterclockwise?
A: Rotate VOL clockwise, controlling sound volume properly.

Q: The unit accepts only strong signals.
Is'nt RF ATT button on the front panel depressed?
A: Depress RF ATT button to release it.
Is the antenna installed properly?
A: Install the antenna properly.
When the SQL is rotated fully clockwise, the unit may not accept week signals.
A: Rotate SQL counterclockwise.

Q: The unit does not transmit.
Is'nt TX indicator (LED) disappeard when PTT switch is depressed?
A: Replace the batteries.
Is "P.L" indicated on display?
A: Depress 6/PTT.L while FUNCTION is held depressed to release PTT lock.

Q: The unit transmit at displayed frequency.
Is "S" flashed on display?
A: Depress C/[BAND]VCS button depressed to light flashing S.

Q: Frequency is not changed.
Is "F.L" indicated on display?
A: Depress 4/F.L/SS button while FUNCTION is held depressed to release the frequency lock.
Is memory recalling mode set?
A: Depress #/[BZ] S.C button.

Q: No buzzer beeps.
Buzzer is muted.
A: Release it by depressing #/[BZ] S.C while FUNCTION button is held depressed.

Q: The frequency is not correctly displayed, in spite of depressing RESET.
Lithium battery which backs up microcomputer is consumed.
A: Obtain battery replacement service at our service center or the dealer where you purchased your transeiver unit.

SPECIFICATIONS

1 GENERAL

Frequency Range	VHF 144 to 147.995MHz UHF 430 to 439.995MHz (with 5kHz step)
Modulation Type	F3
Microphone Impedance	600Ω
Audio Impedance	8Ω
Antena Impedance	50Ω
Power Supply	9V nominal (Six Nickel–cadmium recargeable battery or SUM-3)
Input Voltage	5.5 to 16V DC
Current Drain	
Transmission Hi –	approx. 750mA with 2.5W (VHF) approx. 900mA with 2.5W (UHF) approx. 1000mA with 5.0W (VHF) approx. 1300mA with 5.0W (UHF)
Low –	approx. 350mA (VHF) approx. 400mA (UHF)
Reception	approx. 150mA
With no signal	approx. 35mA (VHF) approx. 40mA (UHF)
Battery Save (3:1)	approx. 10mA (VHF) approx. 12mA (UHF)
Demension	173mm(Height) × 60mm(Width) × 34mm(Depth) (without knob & antenna)
Weight (with antenna & battery)	490g

2. RECEIVER

Receiving System	Double conversion super heterodyne
Medium Frequency	1st IF: 55.05MHz VHF – Upper heterodyne UHF – Lower heterodyne 2nd IF: 455kHz
Sensitivity	−14dB(−16dBμ) with 12dB SINAD 1μV input with a S/N ratio of 30dB at least
Modulation Acceptance Bandwidth	±7kHz (−6dB)
Selectivity	−60dB
Squelch Sensitivity	−14dB(*−20dBμ)
Audio output Power	400mW (at 10% distortion with 8Ω) (*complies with JAIA Rules and Regulations)

3. TRANSMITTER

RF Power Output	Hi – 3.5W (with VHF CNB111) 3.0W (with UHF CNB111) more than 5W (with CNB120) Low – 400mW
Spurious & Harmonics Emissions	more than −60dB
Maximum Frequency Deviation	±5kHz
Modulation	Reactance

- Improvement may result in changes in specifications and design without notice.