

INTEK®

KT-355EE

VHF FM HANDHELD'TRANSCEIVER

RICETRASMETTITORE VHF FM
PORTATILE

INSTRUCTION M A N U A L
MANUALE DI ISTRUZIONI
(versione lingua inglese)

Contents

Before Using the Unit	2
Setup	3 ~ 6
Functions and Operation	7 ~ 10
Operation and Functions of Parts	11 ~ 15
Repeater Operation	16 ~ 20
Paging Operation	21 ~ 26
Code Squelch Operation	27
Tone Squelch Operation	28
Memory Operation	29 ~ 33
Scan Operation	34 ~ 39
Call Operation	40
Dual Watch Operation	41, 42
DTMF Operation	43, 44
Additional Functions	45 ~ 55
Functions Accessed by Holding Down the FUNC Key and Pressing Another Key	45 ~ 47
Functions Accessed by Pressing Numeric Keys in the Set Mode	48 ~ 50
Functions Accessed in the Set Mode by Holding Down the FUNC Key and Pressing Another Key	51 ~ 53
Extra Mode	54 ~ 55
How to use charging battery	55
Specifications	56

Before Using the Unit (Observe the Following Precautions)



Avoid wet or humid places



Avoid exposing the unit to excessive vibrations



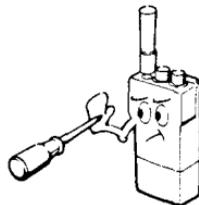
Avoid very dusty places



Avoid hot places and locations exposed to direct sunlight

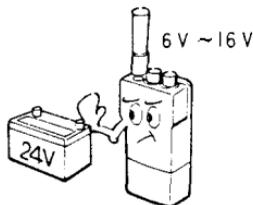
Do not disassemble the unit.

- Never touch the unit's cores or trimmers
They are already adjusted for optimum Performance



The unit will not operate on a 24 V power supply.

- The unit's operating voltage range is 6.0 ~ 16.0V
Never connect the unit to an external power supply outside of this range
Doing so could cause permanent damage to the unit

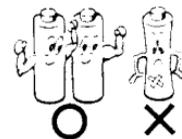


Batteries

- Make sure the (+) and (-) ends of the batteries are oriented correctly



- Never use new and old batteries together



- Never expose old batteries to an open flame



Suitable batteries

- SUM-3 magnesium batteries
- Alkaline batteries
- Nickel-cadmium batteries
(Some types are not compatible)

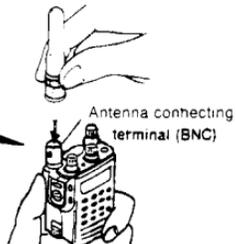
Setup

1 Attaching the antenna

- Attach the included antenna to the antenna terminal.

Align the groove in the bottom of the antenna (the part that attaches to the body) with the pin protruding from the antenna terminal (the place where the antenna attaches to the body).

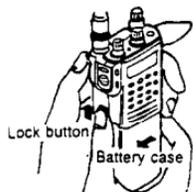
Included (helical) antenna



Grip the bottom (metal portion) of the antenna firmly and turn it clockwise until you hear a click

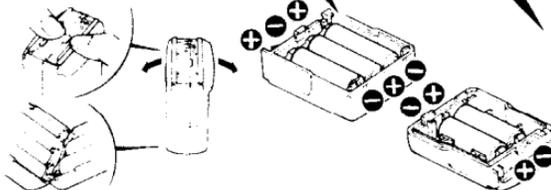


2 Battery insertion

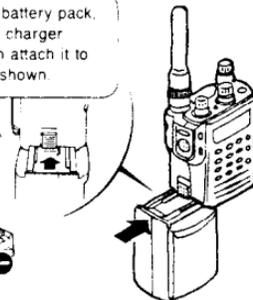


Pull the lock button downward with your thumb to unlock the battery case and pull it slowly towards you until it comes off

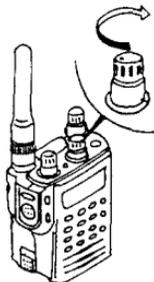
Remove the battery case from the body and insert five AA batteries



To use a rechargeable battery pack, first charge it using the charger designed for it and then attach it to the body of the unit as shown.



3 Switching power on and adjusting the volume



Turn the volume knob clockwise until it clicks to switch power on.



Turn the *volume* knob further clockwise to increase the volume

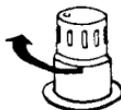


4 Squelch adjustment

- How to eliminate background



Turn the squelch knob clockwise until background hiss is no longer audible



NOTE

Stop turning the knob as soon as background hiss is inaudible



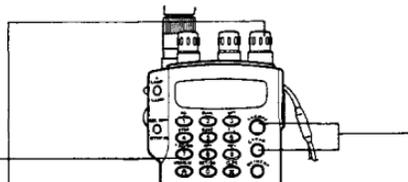
It may be difficult to receive weak signals if the squelch knob is turned too far clockwise

5 Setting the frequency

- There are three ways to set the frequency

ADVICE

The transceiver continues to operate at the old frequency setting while the new one is being input.

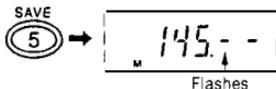


Setting the frequency using the numeric keys

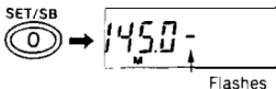
Setting the frequency to 145.06 MHz

PROCEDURE

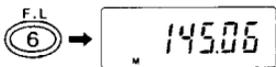
- 1) Press the [5] key to input the 1 MHz column



- 2) Press the [0] key to input the 100 kHz column



- 3) Press the [6] key to input the 10 kHz column

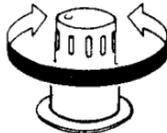


When setting is complete, a long high pitched beep (peep) sounds

Setting the frequency using the rotary channel selector

Turning the rotary channel selector causes the frequency to rise or fall in tuning steps of the preset size
See page 46 for an explanation of tuning steps

Frequency rises Frequency falls



Rotary channel selector

ADVICE

Turning the rotary channel selector with the FUNC key held down causes the frequency to rise or fall in 100 kHz tuning steps

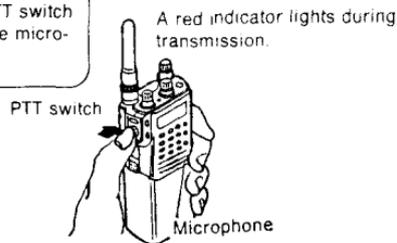
Setting the frequency using the ▲/▼ keys

Press the ▲ key to raise the frequency setting and the ▼ key to lower it. The amount the frequency setting changes with each press depends on the tuning step setting

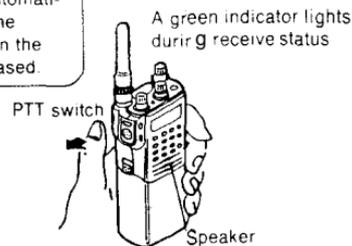
6 Transmitting

After setting the frequency and making sure that no other stations are broadcasting on it, press the PTT switch to transmit

Hold down the PTT switch and speak into the microphone.



The transceiver automatically switches to the receive mode when the PTT switch is released.



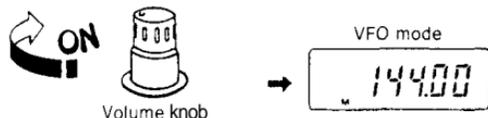
- A wide range of accessories is available to enable you to enjoy the unit in many different ways.

Functions and Operation

1. Terminology

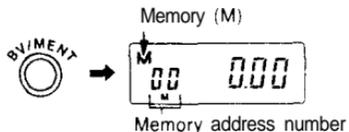
1 VFO mode

In the VFO mode the frequency setting is displayed and the M, C and DUAL indications are not displayed
The VFO mode is active when the unit is first turned on (the factory setting)



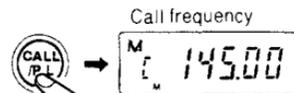
2 Memory mode

In the memory mode the frequency setting and the memory address number are displayed.
In the VFO mode, press the B V/M ENT key to switch to the memory mode. (See pages 29-33)



3 Call mode

In the call mode the C indication is displayed
(See page 40)



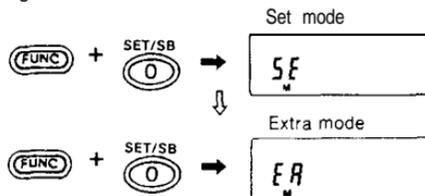
4 Set mode

In the set mode the SE indication is displayed
(See pages 10 and 48-50 .)



5 Extra mode

In the extra mode the EA indication is displayed
(See pages 54-55)



6 Paging mode

In the paging mode the PAG indication is displayed
(See pages 21-26 .)



2. basic functions

1) Functions accessed by pushing keys directly



Functions printed in ivory

Key	Function	See page
O - Q	Numeric input	5
LAMP	Display illumination ON/OFF	-
SQL OFF	Squelch control ON/OFF	-
VIM	VFO/memory mode toggle	31
▼	Frequency or address number down	5
▲	Frequency or address number up	5
# CL PS	Cancel mode	-
MS	Memory scan ON/OFF	36
CALL	Call up call frequency	40

2) Functions accessed by holding down the FUNC key and pressing another key

※ F + means "with the FUNC key held down"
(See pages 45-47)



Functions printed in light blue

Key	Function	See page
F + PO	Switch transmit power level	45
F + DUAL	Dual watch ON/OFF	41
F + SFT	Memory shift mode ON/OFF	33
F + STEP	Tuning step setting	46
F + SAVE	Save ON/OFF	46
F + F L	Frequency lock ON/OFF	4 7
F + T SQ/DM	Tone squelch/tone encoder toggle	28
F + PRT	Repeater mode ON/OFF	17
F + REV/HSC	Invert transmit and receive frequencies in repeater mode	18
F + SET/SB	Switch to set mode	10
F + L LAMP	Turn lamp on	-
F + ENT	Switch memory record mode	29
F + PAG	Paging/code squelch ON/OFF	27
F + CODE	Code setting mode	22
F + MS M	MS M setting/MS M operation	37
F + PS	Scan ON/OFF	35
F + CALL P L	PIT switch lock ON OFF	4 7
F + DTMF M	DTMF memory mode	43

3) Functions accessed by pressing numeric keys in the set mode.

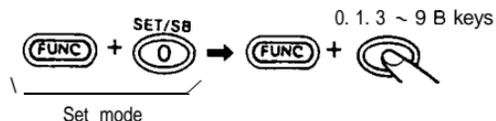
The following functions are accessed by switching to the set mode and pressing the keys indicated
(See pages 48-50)

- ※ SE → means "press the following key while in the set mode"
- While holding down the FUNC key, press the 0 SET/SB key
The frequency indication disappears from the display
The [SE] (SET MODE) indication is displayed, showing that the set mode is active



Key	Function	See page
SE → 0	Beep ON/OFF	48
SE → 1	Length of paging beep 1/5 toggle	48
SE → 2	1 kHz column input from numeric keys enable/disable toggle	48
SE → 3	Repeater + PAG transmission delay time	49
SE → 4	Squelch pop noise reduction	49
SE → 5	APO (Auto Power Off) ON/OFF	49
SE → 6	Enable encoder even in frequency lock status	50
SE → 7	CTCSS frequency setting mode (CTN160 tone frequency selection)	19
SE → 8	Repeater offset frequency setting	19
SE → 9	(Display indications appear normally, but no tones are produced internally)	

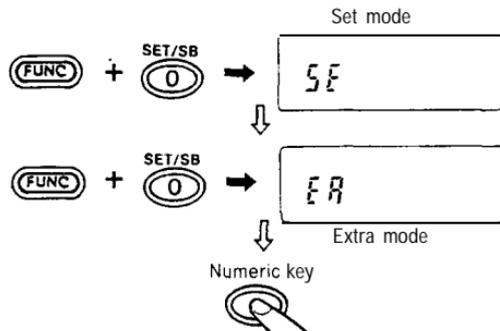
4) Functions accessed in the set mode by holding down the FUNC key and pressing another key.
(See pages 51-53 .)



Key	Function	See page
SE → F + 1	All reset (restores factory settings)	51
SE → F + 2	Long medium pitched beep (boo) (no function)	-
SE → F + 3	All reset enable/prohibit toggle	51
SE → F + 4	Switch to protect mode	51
SE → F + 5	Squelch audio during paging even if code matches	52
SE → F + 6	Toggle tuning steps when rotary channel selector is turned with the FUNC key held down between 100 kHz and 1 MHz.	52
SE → F + 7	Clone mode	53
SE → F + 8	Long medium pitched beep (boo) (no function)	-
SE → F + B	Delete memory frequency	33
SE → F + 0	Switch to extra mode	10

5) Functions accessed by pressing keys in the extra mode

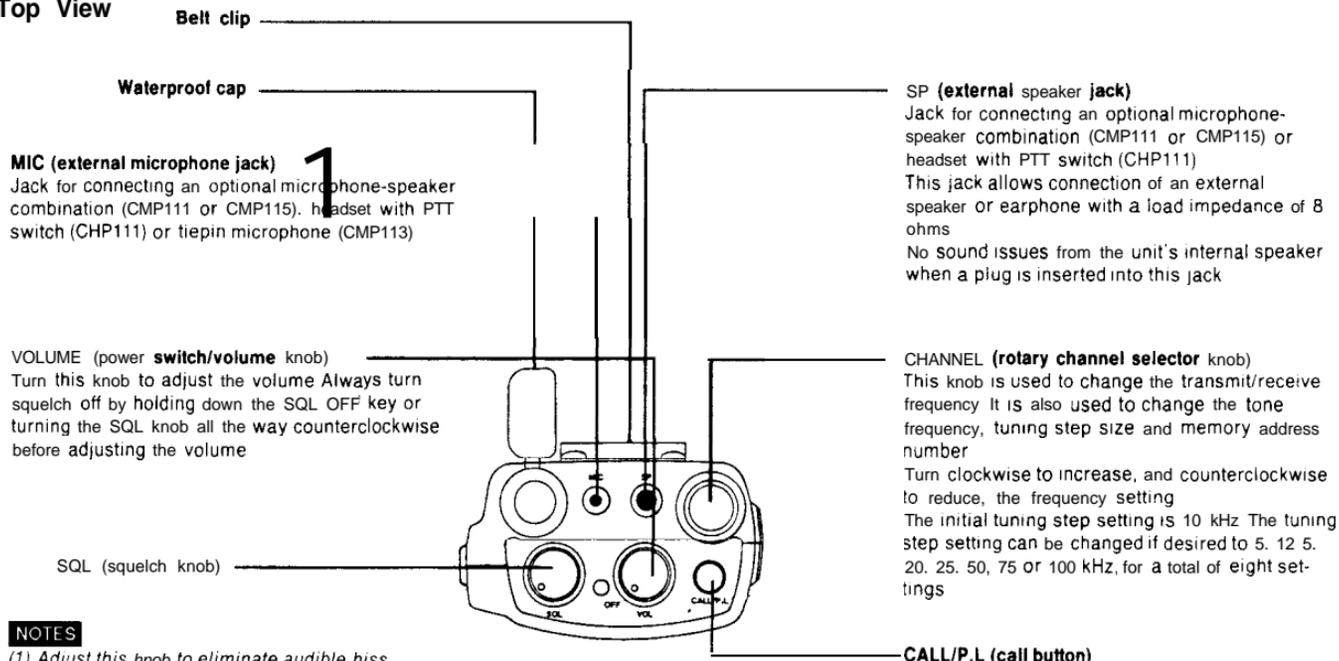
※ EA → means "press the following key **while** in the extra mode." (See pages 54-55 .)



Key	Function	See page
EA → 1	High speed scan ON/OFF	
EA → 2	High speed dual watch ON/OFF	-
EA → 3	Change LAMP key to REV key	20
EA → 4	Select interval for save function	54
EA → 5	Reduce DTMF transmission speed	54
EA → 6	Long medium pitched beep (boo) (no function)	-
EA → 7	Long medium pitched beep (boo) (no function)	-
EA → 8	Enable frequency Input from 100 MHz column	55
EA → 9	Long medium pitched beep (boo) (no function)	-
EA → 0	Long medium pitched beep (boo) (no function)	-

Operation and Functions of Parts

Top View



Belt clip

Waterproof cap

MIC (external microphone jack)

Jack for connecting an optional microphone-speaker combination (CMP111 or CMP115), headset with PTT switch (CHP111) or tiepin microphone (CMP113)

1

VOLUME (power switch/volume knob)

Turn this knob to adjust the volume. Always turn squelch off by holding down the SQL OFF key or turning the SQL knob all the way counterclockwise before adjusting the volume.

SQL (squelch knob)

SP (external speaker jack)

Jack for connecting an optional microphone-speaker combination (CMP111 or CMP115) or headset with PTT switch (CHP111)

This jack allows connection of an external speaker or earphone with a load impedance of 8 ohms

No sound issues from the unit's internal speaker when a plug is inserted into this jack

CHANNEL (rotary channel selector knob)

This knob is used to change the transmit/receive frequency. It is also used to change the tone frequency, tuning step size, and memory address number.

Turn clockwise to increase, and counterclockwise to reduce, the frequency setting. The initial tuning step setting is 10 kHz. The tuning step setting can be changed if desired to 5, 12.5, 20, 25, 50, 75, or 100 kHz, for a total of eight settings.

CALL/P.L. (call button)

This button is used for priority call-up of the call frequency.

Pressing it while the FUNC button is held down toggles the PTT lock function on and off.

NOTES

- (1) Adjust this knob to eliminate audible hiss during scan, dual watch, save, paging, or code squelch operation.
- (2) Tune to an unused channel before adjusting the squelch.

Front View

FUNCTION (function)

A variety of special functions can be accessed by holding down this key and pressing another key

PTT switch
Switches between transmitting and receiving

SQL OFF (squelch off button)
Squelch is disabled for as long as this button is held down, regardless of the setting of the squelch knob. It has the same effect as turning the squelch knob all the way counterclockwise.
Pressing the SQL OFF button while the PTT switch is held down causes a DTMF signal to be transmitted.

Front control panel (keys)

2 DUAL

A LAMP L.LMP

SQL OFF/DTMF.M

1 PO

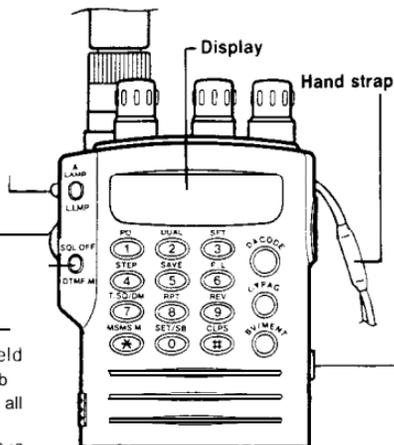
4 STEP

7 T.SQ/DM

5 SAVE

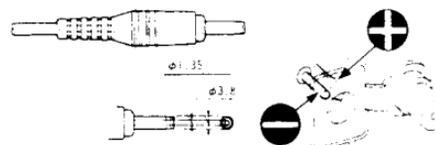
8 RPT

* MS MS.M



DC IN (external power supply connector jack)

Plug the (optional) power supply cord into this jack. The unit switches automatically from the battery pack to the external power supply when the plug is inserted.



Center pin is negative

NOTE

Always turn the power switch off before unplugging the power supply cable. The unit is operating voltage range is 6.0, 16.0 V. Never connect it to an external power supply outside of this range.

CALL/P.L

3 SFT

D ▲ CODE

C ▼ PAG

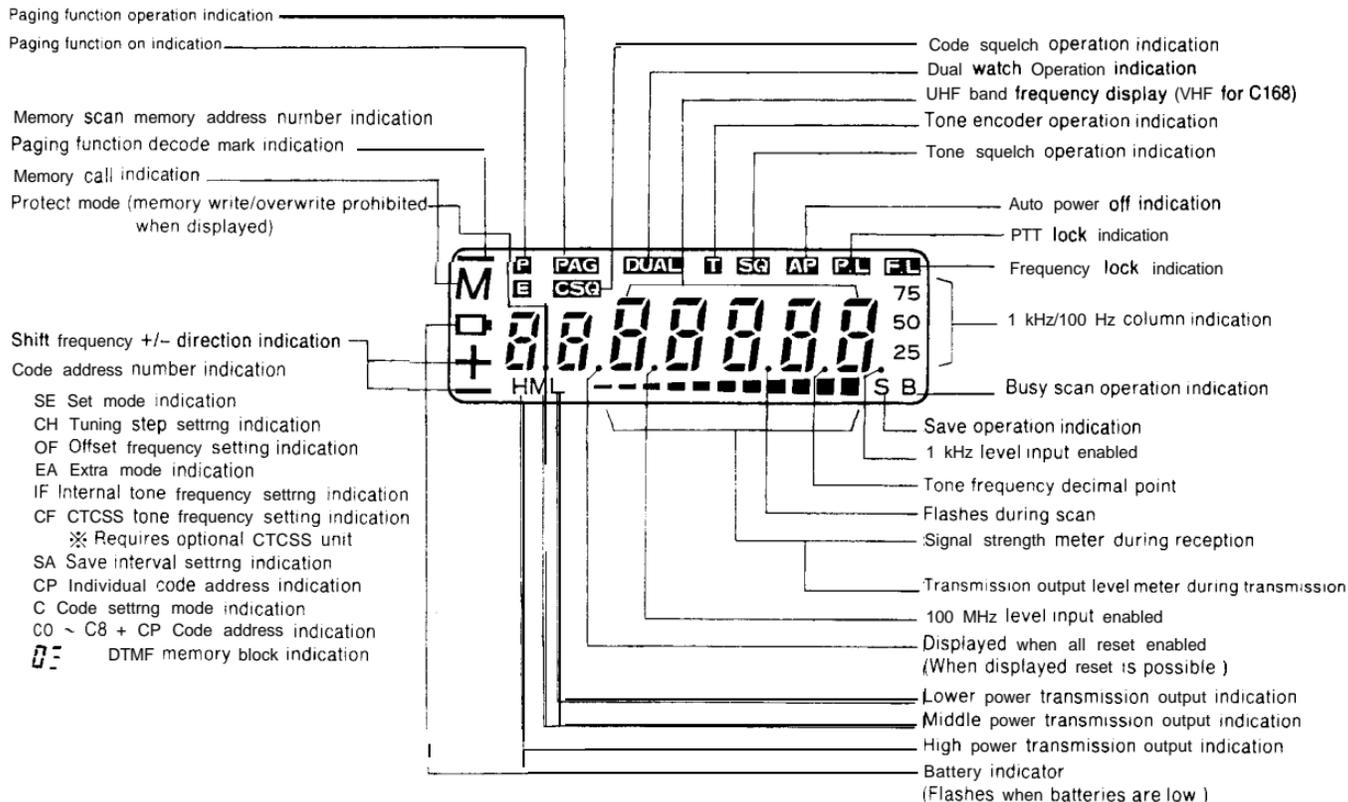
6 F.L

B V/M ENT

0 SET/SB

CL PS

9 REV/HSC



- On this and the pages which follow, the functions of each key are described in the following order

1) Key pressed directly

Function printed in ivory



2) Key pressed with FUNC key held down

Function printed in light blue



+



3) Key pressed in set mode



+



Other key

4) Key pressed in set mode with FUNC key held down (except for 0 SET/SB)



+



+



Other key except for 0 SET/SB

Set mode

5) Key pressed in extra mode

Extra mode

Set mode



+



+



Other key

6) Numeric, A, B, C, D, * or # key pressed with PTT switch held down



+

Numeric, A, B, C, D, * or # key



1 PO

- Inputs the numeral 1
- Switches transmission output
- Sets length of paging beep (one or five times.)
- All reset. (restores factory settings)
- High speed scan on/off
- Transmits DTMF signal 1

Beep indications

When you press the control buttons of the unit, beeps inform you of the status of the Operation being performed. The pitch and duration of the beeps differs as described below.

Pip

(Short high pitched beep)

Operation button pressed registered correctly

Peep

(Long high pitched beep)

Operation successfully completed.
(Example: Frequency successfully entered in memory)

Boo

(Long medium pitched beep)

Operation button pressed not registered correctly or invalid button pressed.

Pip-pip-pip-pip

(Repeated high pitched beeps)

Indicates auto power off operation or a transmission received in the paging mode

Pilala-pilala-pilala

(Repeated trilled beeps)

Transmission sent in the paging mode

Puff

Wor_{low}
(pitched beep)

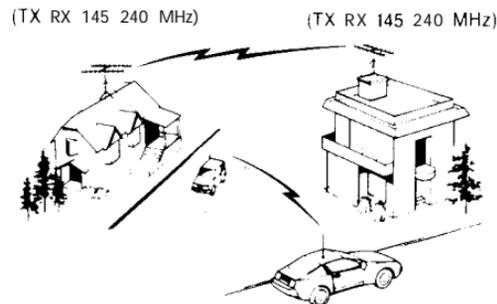
Function canceled or initial settings restored

Repeater Operation

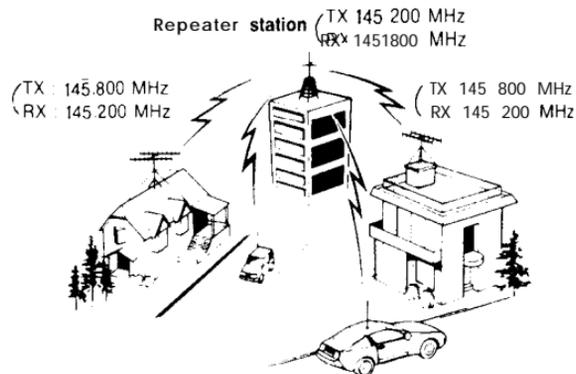
■ About repeater Operation

- This term refers to radio communication via a "repeater station" (a relay station)
- Since a repeater station is required, the repeater function is generally only used to communicate with locations too far away to communicate with directly
- Transmitting and receiving via the repeater station takes place on different frequencies
(The sending frequency is 600 KHz (VHF), lower than the receiving frequency)
- This unit automatically sets the sending frequency 600KHz (VHF), lower than the receiving frequency when the repeater function is turned on.

■ Conventional Operation



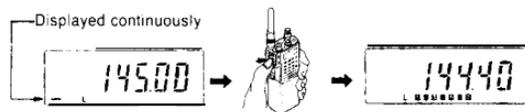
■ Repeater Operation



Repeater Operation

PROCEDURE

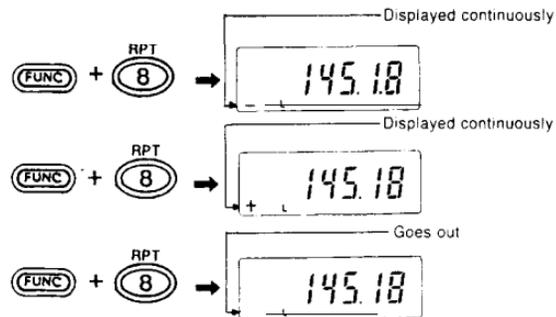
- 1) Set the frequency to match that of the repeater station
- 2) Hold down the FUNC key and press the 6 RPT key
When you press the PTT switch the signal is transmitted at a frequency -600 KHz lower than the frequency shown on the display (+600 KHz offset).
(To transmit with a -600 KHz offset, hold down the FUNC key and press the 8 RPT key again.)
- 3) While transmitting, press CALL/P.L key to access the repeater Station. (The 1.750 KHz burst signal is transmitted only while the CALL/P.L key is depressed.)



Canceling the repeater function

PROCEDURE

- 1) Hold down the FUNC key and press the 8 RPT key.
A [-] appears on the display, indicating -600 KHz offset status.
- 2) Hold down the FUNC key and press the 8 RPT key once again. A [+] appears on the display, indicating +600 KHz offset status.
- 3) Hold down the FUNC key and press the 8 RPT key a third time. The [+] indication disappears from the display and the repeater mode is canceled.

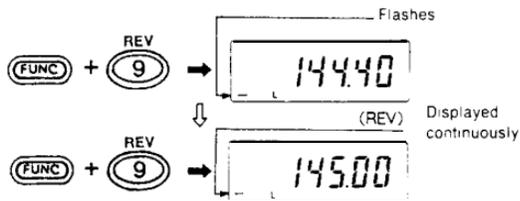


Reversing the repeater **send/receive** frequencies

- This function allows you to communicate directly with another station (without using the repeater station) It is called reverse (REV) operation.

PROCEDURE

- 1) Hold down the FUNC key and press the 9 REV/HSC key
The [-] or [+] indication on the display flashes on and off to indicate that the sending and receiving frequencies have been reversed
- 2) To cancel this function, hold down the FUNC key and press the 9 REV/HSC key again



ADVICE

- (1) If, after step 1) above is performed, you succeed in communicating with the other station, you may be able to continue to communicate without using the repeater function at all. If direct contact has been established, try communicating without using the repeater function (simplex Operation)
- (2) Using simplex Operation means that more other people can use the repeater station. It is therefore desirable to use simplex operation whenever possible (as a courtesy to other users of the repeater station)

Setting the CTCSS tone frequency

- This function is available if the optional CTCSS unit (tone squelch) has been installed. There are 38 tone squelch frequencies to choose from.

PROCEDURE

- Switch to the set mode.
- Press the 7 T.SQ/DM key.
The current CTCSS tone frequency setting appears on the display.
The CF indication also appears, showing that the unit is in the CTCSS tone frequency setting mode.
(CF stands for CTCSS FREQUENCY)



- Select the tone frequency of your choice using the ∇ / \blacktriangle keys or the rotary channel selector
During frequency setting, a puff (short low pitched beep) sounds at 88.5 Hz.
- After setting the desired frequency, press the # CL PS key

Changing the offset frequency

- The factory setting for the offset frequency is 600 KHz.
Follow the procedure below to set a new offset frequency

PROCEDURE

- Switch to the set mode
- Press the 8 RPT key
The current offset frequency setting appears on the display. The [OF] indication also appears, showing that the unit is in the offset frequency setting mode
(OF stands for OFFSET FREQUENCY)



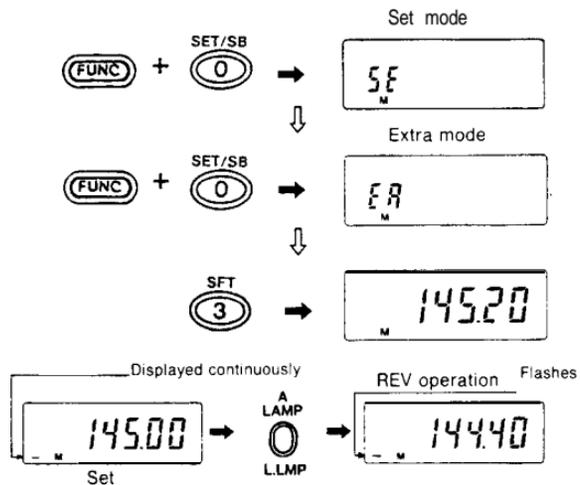
- Set the new offset frequency using the 0 ~ 9 keys, the \blacktriangle / ∇ keys, or the rotary channel selector
- After setting the desired frequency, press the # CL PS key

Assigning the LAMP key to the REV function

PROCEDURE

- 1) Switch to the extra mode.
- 2) Press the 3 SFT key.

A pip (short high pitched beep) sounds, indicating that the LAMP key has been assigned to the REV function.



- 3) To assign the LAMP key back to the LAMP function, switch back to the extra mode and press the 3 SFT key again. A puff (short low pitched beep) sounds, indicating that the LAMP key has been assigned back to the LAMP function.

Paging Operation

- This function can be used to page individual stations (personal pagtng) or a specific group of stations (group pag-ing).

NOTE

(1) *The paging function requires that the sending and receiving ends use matching personal or group paging codes. The same group code must be used by every member of the group*

Preparations for paging

- You must perform the following steps before you can use the paging function

PROCEDURE

- 1) Decide on your own personal code and record it in memory at code address number 0
- 2) Decide on the other codes you will use (personal codes of other stations or group codes) and record them in memory at code address numbers 1 ~ 8
- 3) Indicate the code address numbers between 1 ~ 8 which you wish to use as group code address numbers during reception with the **■** (decode mark) symbol (See the section describing the method for designating code address numbers as group codes for receiving)

■ Code address numbers and their functions

Memory address number	Paging function (the code setting and your personal code setting are broadcast)
P	The personal code of the station called is automatically recorded at this address The personal code of the other station is automatically recorded in memory and appears on the display if you press the PTT button at this point, the code being displayed is transmitted
0	This is the memory address for your personal code When you are called with your personal code, the personal code of the other station (memory address 0) appears on the display If you press the PTT button at this point, the code being displayed is transmitted
1	These memory addresses are for the personal codes of other stations and group codes Group codes designated with the ■ mark can be used for receiving The ■ mark is the decode mark The ■ mark can be assigned to more than one memory address
2	
3	
4	
5	
6	
7	
8	

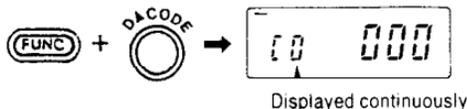
1) Setting your personal code

- Codes consist of three numerals.
Perform the steps below to set your personal code

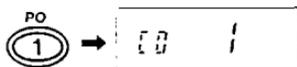
Example Setting the personal code to 1,1,1

PROCEDURE

- Hold down the FUNC key and press the D ▲ CODE key
The code address number which was used last is displayed.
(This is set to 0 when the unit is shipped from the factory.)



- Select code address number 0 using the ▲ /▼ keys or the rotary channel selector.
A puff (short low pitched beep) sounds when code address number 0 is selected
- Input your personal code.
Use the numeric keys to input 1,1,1
Three 1s appear one after another on the display. When the last digit is entered, a peep (long high pitched beep) sounds to indicate that the code has been set.



ADVICE

- The personal code transmitted to you from the other station is stored at memory code address number P. Code address number P can be used in the same way as address numbers 1 ~ 8, but it is automatically overwritten with the personal code of the other station when a paging transmission is received
- The station code of the station you are communicating with is displayed as code address number P

Setting example

Memory address number	Decode mark	Station A	Station B	Station C
Your personal code 0		111	222	333
Code 1		222	111	111
Code 2	-	050	050	050
Code 3		333	333	222

2) Setting personal codes of other stations

PROCEDURE

- 1) Hold down the FUNC key and press the D ▲ CODE key
- 2) Select the code address number of your choice using the ▲ /▼ keys or the rotary channel selector
- 3) Input the personal code using the numeric keys.
To record more than one code in memory, repeat steps 2) and 3) above as many times as necessary.

ADVICE

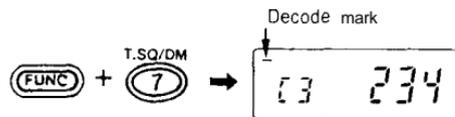
- (1) Input the group codes you wish to use for receiving as well as those you will use for transmitting.

3) Designating group codes for receiving

- After the codes have been recorded in memory, designate which group codes you wish to use for receiving.

PROCEDURE

- 1) Call up the code address of the code (1 ~ 8) you wish to designate as a group code for receiving
- 2) Hold down the FUNC key and press the 7 T.SQ/DM key. A **■** appears in the upper left of the display indicating that the currently displayed code address has been designated as a group code for receiving. The **■** indication is referred to as the decode mark.



ADVICE

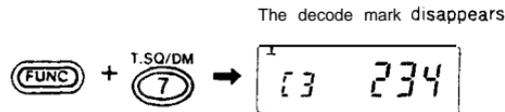
- (1) More than one code address can be designated with the decode mark. To designate more than one group code, repeat steps 1) and 2) above as many times as necessary.

4) Canceling group codes

- The group code status of a code address is canceled by removing the decode mark.

PROCEDURE

- 1) Hold down the FUNC key and press the D ▲ CODE key
- 2) Call up the code address of the group code you wish to cancel.
- 3) Hold down the FUNC key and press the 7 T.SQ/DM key. A puff (short low pitched beep) sounds and the **■** indication disappears. The group code status of the code address is canceled.



NOTE

- (1) The **■** mark cannot be canceled for code address number 0

Paging Operation

- Paging operation is described separately below for the transmitting (you) and receiving (other) sides
- Both the transmitting and receiving side must use the same frequency

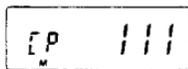
■ Transmitting side (you)

PROCEDURE

- 1) Select the code address corresponding to the personal code of the station you wish to page. If the desired code is not in the unit's memory, enter it
- 2) Press the # CL PS key
- 3) Hold down the FUNC key and press the C ▼ PAG key. PAG P appears on the display
- 4) Press the PTT switch
The code (DTMF signal) is transmitted and pilala-pilala-pilala (repeated trilled beeps) is heard. The code transmitted is $\times \times \times * \triangle \triangle \triangle$
- 5) When a signal is received from the other station, the paging mode is canceled and normal communication is possible

Code which appears on display

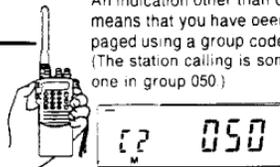
The CP indication means that you have been paged by your individual code (The code of the station calling is 111.)



The unit's microprocessor automatically determines whether the code is a private or group code

The code recorded at code address 0

An indication other than CP means that you have been paged using a group code (The station calling is some one in group 050.)



■ Receiving (other) side

PROCEDURE

- 1) Hold down the FUNC key and press the C ▼ PAG key. PAG P appears on the display
- 2) If the received code and the code recorded at code address 0 match:
 - a Five pips (high pitched beeps) sound.
 - b PAG flashes on and off on the display
 - c The personal code of the calling station appears on the display and is recorded in memory at code address P.
- 3) If the received code and one of the codes with a = designation match:
 - a. Five pips (high pitched beeps) sound
 - b PAG flashes on and off on the display.
 - c The matching group code appears on the display
- 4) When the PTT switch is pressed, the displayed code and the personal code (of the calling side) are transmitted. This means that you can send your code to the other (receiving) station.
- 5) The paging mode is canceled and normal communication is possible

NOTE

$\times \times \times$: Code selected from the available code addresses

$\triangle \triangle \triangle$: Your personal code

Operation example | Asstgn codes to code address numbers.

ADVICE

- During paging Operation, the code shown on the display is transmitted.

Station A: Code address assignments

0 111 – personal code for station A

1 : 222 – personal code for Station B

2 050 – group code

(Add the decode mark to each address number.)

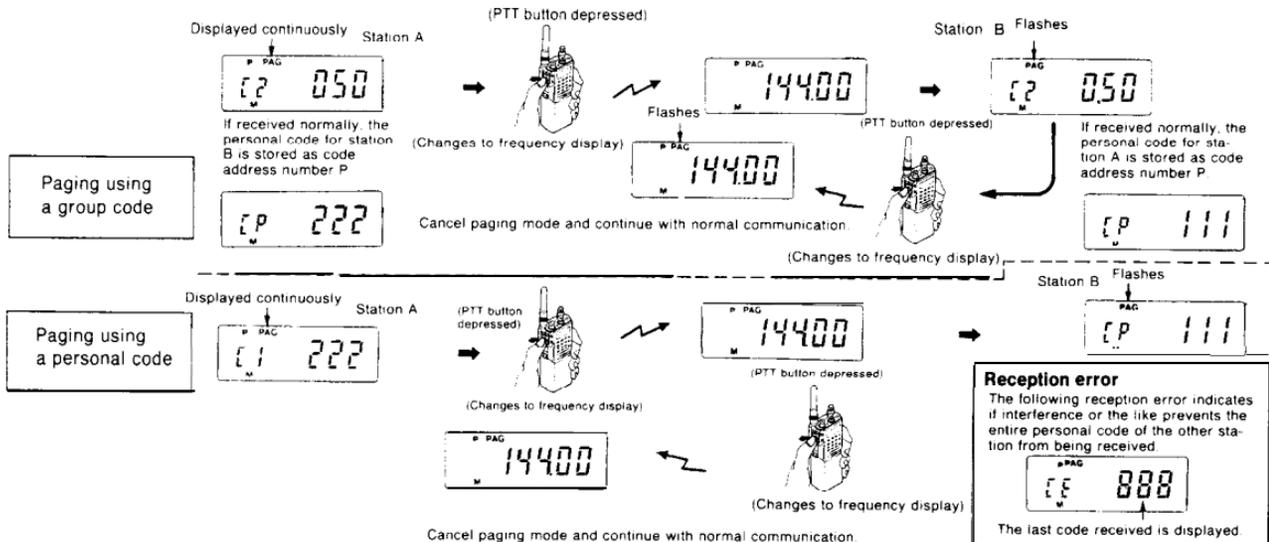
Station B: Code address assignments

0 222 – personal code for station B

1 111 – personal code for station A

2 : 050 – group code

(Add the decode mark to each address number)



ADVICE

- (1) If the codes match, the unit displays the contents of code address P, indicating that you have been paged using your personal code. If something other than code address P appears, you have been paged using a group code.
 - (2) The personal code of the calling station is recorded at code address P even if you are paged using a group code. By checking code address P you can determine which member of the group is calling.
- 3) Communicating after codes match
- If the codes match, switch the PAG function off and communicate normally.

PROCEDURE

- 1) Hold down the FUNC key and press the C ▼ PAG key twice.
The display indication changes from PAG P to CSQ to nothing. This indicates that the PAG function is off. Continue with normal communication.

ADVICE

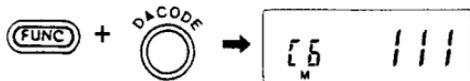
- (1) If the C ▼ PAG key is pressed with the FUNC key held down while the PAG indication is flashing, PAG disappears and the indication P remains.
This means that the PAG function is temporarily suspended.
- (2) Normal communication is possible when the P indication is displayed, just as if step 1) at left had been performed. However, in this status the microprocessor still considers the paging function to be on. So if you turn the power off and then on, or change the frequency, PAG will reappear on the display.

Code Squelch Operation

- As with the paging function, code squelch permits communication only after matching a 3-digit code. It operates similarly to the tone squelch function.

PROCEDURE

- Hold down the FUNC key and press the D ▲ CODE key.



- Select the code you wish to use
- Press the # CL PS key



- Hold down the FUNC key and press the C ▼ PAG key twice. The CSQ indication appears on the display.

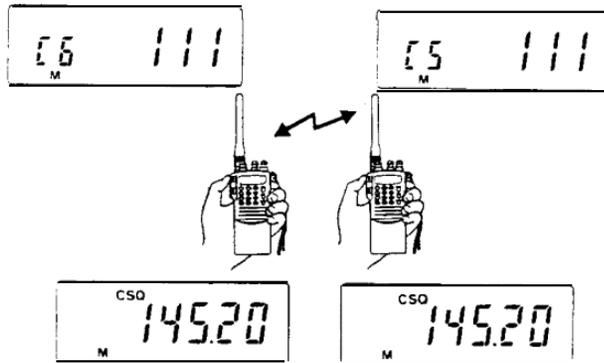


- Begin code squelch operation using the code you have selected.

NOTES

- Communication is not possible if the code selected does not match that of the other Station. Decide on the code to be used beforehand.
- Any code address number can be used for this function.

Code squelch

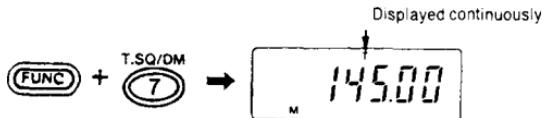


Tone Squelch Operation

- The tone squelch function requires that the optional CTCSS unit be installed.

PROCEDURE

- 1) Hold down the FUNC key and press the 7 T.SQ/DM key once.
A "T" appears on the display to indicate that the tone encode mode is active.



- 2) Hold down the FUNC key and press the 7 T.SQ/DM key once again
TSQ appears on the display to indicate that tone squelch Operation is possible.



- 3) To cancel the tone squelch mode, hold down the FUNC key and press the 7 T.SQ/DM key
The TSQ indication disappears on the display, and tone squelch is deactivated

NOTES

- (1) If the CTCSS is not installed, the TSQ indication appears after the 7 T.SQ/DM key is pressed once to indicate that the required CTCSS unit has not been connected.
- (2) It is necessary that the tone frequency match that of the other station.

Memory Operation

■ Memory function

The unit use a memory unit to implement the memory function.

Memory operation is therefore possible only if the memory unit has been installed.

Installation of the memory unit is highly recommended (The unit will operate without it, but only in the VFO mode.)

The unit are shipped from the factory with the 40-channel memory unit already installed.

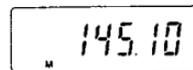
- The memory function allows you to store frequently used frequencies for use when needed
- Up to 40 separate frequencies can be stored in memory
- The locations where frequencies are stored are called "memory address numbers"
- The memory address numbers range from M00 through M39.

■ Storing frequencies in memory

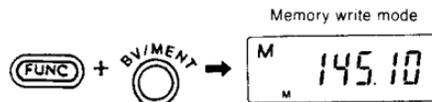
Example Entering 145.10 MHz in memory as M26

PROCEDURE

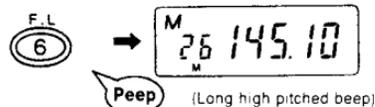
- 1) In the VFO mode, select the frequency 145.10 MHz so that it appears on the display.



- 2) Hold down the FUNC key and press the B V/M ENT key. The M indication appears on the display.



- 3) Press the 2 DUAL key. A 2 appears on the display below the M.
- 4) Press the 6 F L key. A peep (long high pitched beep) sounds to indicate that the frequency has been stored in memory. This status is referred to as the memory mode.



NOTE

- To store a frequency as M01, you would press the 0 key followed by the 1 key.

Storing tone frequencies, etc. in memory

- In addition to transmitting and receiving frequencies, the following settings can also be stored in memory by the unit.

- CTCSS tone frequency (Page 28)
- Tone encode mode (Page 28)
- Tone squelch mode (Page 28)
- Paging mode (Page 21)
- Code squelch mode (Page 27)
- Paging/code squelch transmission code address (Pages 21, 27)
- Repeater mode (Page 17)
- Offset frequency (Page 19)

The above settings can be stored in the unit's memory by performing the appropriate operations while in the memory call mode. See the page numbers printed in parentheses for detailed descriptions of the necessary steps

Calling up memory frequencies

- Memory (number) frequencies can be called up using any of the following three methods.

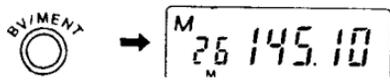
- Inputting the memory address directly using the numeric keys
- Calling up a frequency using the rotary channel selector
- Calling up a frequency using the ▲/▼ keys

- Inputting the memory address directly using the numeric keys

Example Calling up MO7

PROCEDURE

- In the VFO mode, press the B V/M ENT key.
The memory mode is activated and the memory address which was used last appears on the display.
(When the memory mode is activated for the first time, MO0 is displayed)



- Press the 0 SET/SB key
MO is displayed.



- Press the 7 T SQL/DM key.

A peep (long high pitched beep) sounds to indicate that memory address number 7 has been called up



Example To call up M26, you would press the 2 DUAL key followed by the 6 F.L key

ADVICE

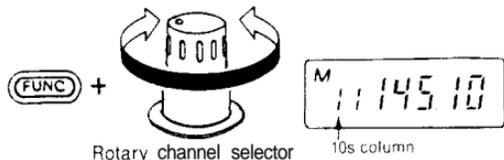
- The M indication may start to flash on and off when you call up a memory address number.
This indicates that no frequency is currently assigned to the memory address number you have selected (in the following pages, memory address numbers to which no frequencies have been assigned are referred to as "free memory address numbers.")
- If a free memory address number is called up, the VFO frequency is displayed.

(2) Calling up a frequency using the rotary channel selector

- You can select a memory address number by turning the rotary channel selector after activating the memory mode

ADVICE

- (1) You can change the 10's column of the memory address number display by turning the rotary channel selector with the FUNC key held down



(3) Calling up a frequency using the ▲/▼ keys

- You can select a memory address number using the ▲/▼ keys after activating the memory mode

ADVICE

- (1) If the ▲/▼ keys are held down for 0.5 seconds or more, the memory address setting changes slowly and continuously in the direction indicated until the key is released



Hold down for 0.5 seconds or more

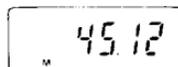
Changing a memory frequency

- Select the new frequency so that it appears on the display and punch in the memory address number you wish to change

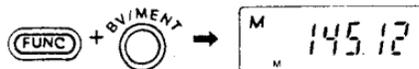
Example Changing MO7 from 145.50 MHz to 145.12 MHz

PROCEDURE

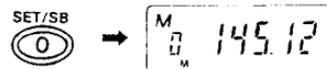
- 1) In the VFO mode, select the frequency 145.12 MHz so that it appears on the display



- 2) Hold down the FUNC key and press the B V/M ENT key

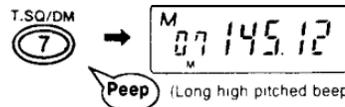


- 3) Press the 0 SET/SB key.



- 4) Press the 7 T SQ/DM key

A peep (long high pitched beep) sounds to indicate that the new frequency has been stored in memory in place of the old one

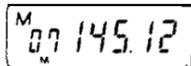


Deleting a memory frequency

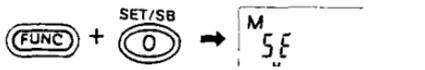
Example Deleting the frequency 145.12 MHz from MO7

PROCEDURE

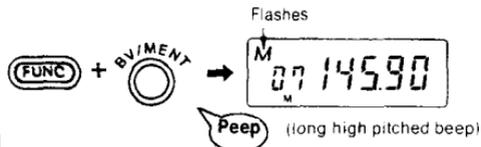
- 1) In the memory mode, call up the memory address whose contents you wish to delete so that it appears on the display



- 2) Hold down the FUNC key and press the 0 SET/SB key to activate the set mode



- 3) Hold down the FUNC key and press the B V/M ENT key
A peep (long high pitched beep) sounds to indicate that the memory frequency has been deleted (MO7 becomes a free memory address number and the M indication begins to flash on and off.)



ADVICE

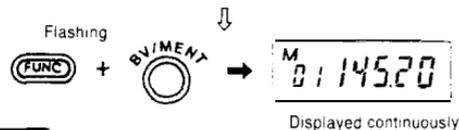
- After a memory frequency is deleted, the memory address number to which it was assigned returns to its factory status.

Changing frequencies in the memory mode (memory shift mode)

- The operations of the VFO mode are also accessible from the memory call mode. The status in which such operations are possible is referred to as the memory shift mode.

PROCEDURE

- 1) Switch to the memory mode
- 2) Hold down the FUNC key and press the 3 SFT key. The memory address number on the display flashes on and off.
- 3) Select the desired frequency. As in the VFO mode, you can select the frequency using the and $\blacktriangle/\blacktriangledown$ keys, the rotary channel selector or the numeric keys.
- 4) Hold down the FUNC key and press the B V/M ENT key. (The current memory frequency is overwritten and the memory address number stops flashing and is displayed continuously.)



ADVICE

- To cancel the memory shift mode, either hold down the FUNC key and press the 3 SFT key or press the # CL PS key directly. The previous memory frequency will reappear on the display.

Scan Operation

Scan types

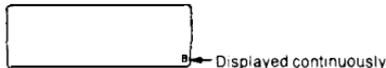
- There are three scan types to choose from pause scan, busy scan and hold scan
Independent of the above three scan types, the microprocessor automatically determines the scan speed (intelligent scan function) based on factors such as the amount of frequency variation whether T SQ is on or off. etc

(1) Pause scan

Scan pauses when a signal is received Five seconds later, scan Operation recommences even if a signal is still being received (If the signal is lost in less than five seconds, scan recommences immediately)

(2) Busy scan

Scan is paused for as long as a signal is being received. Scan operation recommences two seconds after the signal is lost.



(3) Hold scan

Scan is temporarily suspended when a signal is received. Pressing the ▲ /▼ keys causes scan operation to recommence.



ADVICE

- The scan type can be changed even while a scan is in progress. (See page 38 for details.)

Scan functions

(1) VFO scan

- Scanning the 1 MHz range of your choice [1 MHz scan]
- Scanning an entire band [Full band scan]
- Scanning a range of frequencies specified by you [Program scan]

(2) Memory scan

- Scanning all memory addresses stored in memory [Memory scan]
- Scanning a memory address block specified by you [Block memory scan]
- Scanning memory addresses specified by you [Memory scan memory]

NOTES

- If the save function is on, save memory scan Operation will result
- If the save function is on and a scan type other than memory scan is initiated, the save function is suspended.

(3) Tone frequency scan

- Scans the tone frequencies
The optional CTCSS unit is required

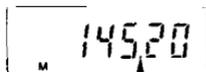
Using the scan functions

(1) Using VFO scan

(1) 1 MHz scan

In the VFO mode, hold down the FUNC key and press the # CLPS key.

The decimal point on the display flashes on and off to indicate scan operation



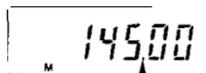
Flashes

(2) Full band scan

1) Press the CALL key. (The call mode is activated.)

2) Hold down the FUNC key and press the # CL PS key

The decimal point on the display flashes on and off to indicate full band scan operation.



Flashes

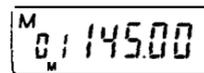
(3) Program scan

This functions scans a range of frequencies specified by you. Before starting the scan, you must store the scan start and end frequencies in memory.

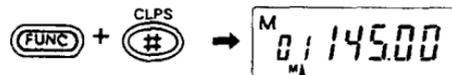
PROCEDURE

1) Store the scan start frequency in memory (Any memory address number may be used)

- 2) Store the scan end frequency in memory. (Any memory address number other than that of the start frequency may be used.)
- 3) Switch to the memory mode and call up the memory address number of the start frequency.

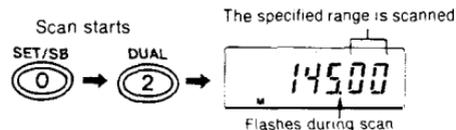


- 4) Hold down the FUNC key and press the # CL PS key. The memory address number on the display flashes on and off.



Flashes

- 5) Press the numeric keys corresponding to the memory address number of the end frequency. After inputting the number (two digits), the memory address number indication disappears from the display and program scan operation commences immediately (Decimal point flashes)



ADVICE

- If the start frequency is higher than the end frequency, the scan starts from the higher frequency and proceeds towards the lower

(2) Cancelling scan Operation

Press the # CL PS key.



(3) Other points regarding VFO scan

- 1) The display during 1 MHz scan, full band scan and program scan is identical
- 2) Pressing the ▲ / ▼ keys during a scan pauses scan Operation
To restart, press the ▲ / ▼ keys again
- 3) The scan direction can be changed, depending on the key used to restart it
Pressing the ▲ key twice during scan Operation switches to upward scan (lower to higher frequencies)
Pressing the ▼ key twice during scan Operation switches to downward scan (higher to lower frequencies)

(4) Using memory scan

(1) Memory scan

Press the ✖ MS MS.M key (Memory scan is activated)
If all memory address numbers are free, a boo (long medium pitched beep) sounds and no scan is initiated

(2) Block memory scan

The memory address numbers from M00 to M39 are divided into four blocks, and the block of your choice is scanned.

The memory address number block assignments are as follows

Block 0 M00 ~ M09 are scanned

Block 1 M10 ~ M19 are scanned.

Block 2 M20 ~ M29 are scanned

Block 3 : M30 ~ M39 are scanned.

PROCEDURE

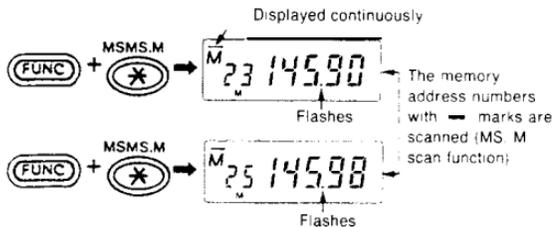
- 1) Press the ✖ MS MS M key to activate memory scan
- 2) Press the numeric key corresponding to the number of the block (0 ~ 3) you wish to scan.
Block memory scan begins.
If all memory address numbers in the specified block are free, a boo (long medium pitched beep) sounds and no scan is initiated
- 3) To return to memory scan, press the ✖ MS MS M key

(5) Memory scan memory

- Only the memory address numbers specified are scanned

PROCEDURE

- Call up one of the memory address numbers you wish to scan
- Hold down the FUNC key and press the * MS MS M key



- In like manner, mark all the memory addresses you wish to scan with the — indication
- Press the * MS MS M key to activate memory scan
- Hold down the FUNC key and press the * MS MS M key Only the memory address numbers with — marks are scanned.
- To return to normal memory scan, hold down the FUNC key and press the * MS MS.M key.

ADVICE

- In the VFO mode, holding down the FUNC key and pressing the * MS MS.M key Causes a — to appear on the display
Pressing the * MS MS.M key at this point initiates memory scan memory

(6) Canceling memory scan

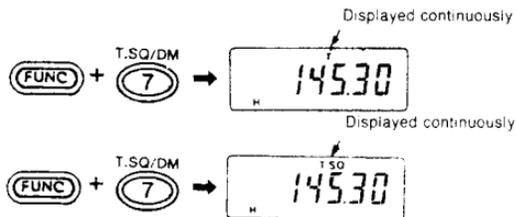
- Press the # CL PS key (The memory mode resumes)
Alternately, press the B V/M ENT key (This switches to the VFO mode ,

(7) Tone frequency scan

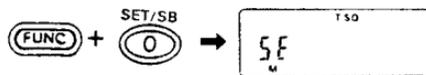
- The optional CTCSS unit is required.
If the CTCSS is not installed, a boo (long medium pitched beep) sounds and tone frequency scan does not take place
Tone frequency scan scans the tone frequency of the current reception frequency

PROCEDURE

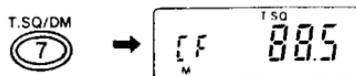
- Hold down the FUNC key and press the 7 T SQ/DM key twice
The TSQ indication disappears on the display



- Hold down the FUNC key and press the 0 SET S/B key



- 3) Press the 7 T SQ/DM key
The tone frequency appears on the display



- 4) Hold down the FUNC key and press the # CL PS key
Tone frequency scan commences
- 5) To stop tone frequency scan, press the # CL PS key.

Switching between pause scan, busy scan and hold scan

(1) Busy scan

PROCEDURE

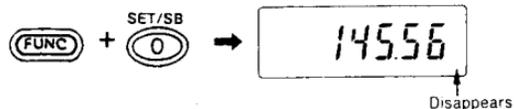
- 1) During scan operation, hold down the FUNC key and press the 0 SET S/B key
A B indication appears in the lower right portion of the display and busy scan is activated.



(2) Pause scan

PROCEDURE

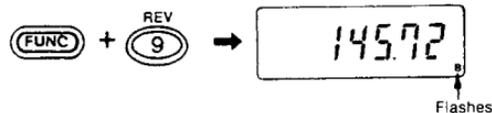
- 1) During scan operation with the B indication displayed, hold down the FUNC key and press the 0 SET S/B key
The B disappears from the display and pause scan is activated.



(3) Hold scan

PROCEDURE

- 1) During scan Operation, hold down the FUNC key and press the 9 REV/HSC key.
The B indication flashes on and off and hold scan is activated.



- 2) To cancel hold scan, hold down the FUNC key and press the 9 REV/HSC key again while the scan is in progress.
The B disappears from the display and pause (busy) scan is activated.

ADVICE

- (1) Busy scan and pause scan can be set independently of VFO scan and memory scan.
- (2) Hold scan can be used together with VFO scan or memory scan.
- (3) During hold scan, switching between pause and busy scan is possible, but pause (busy) scan will not commence until hold scan is turned off.
- (4) Hold scan Operation is not possible during tone frequency scan.
- (5) The order of precedence of the different scan types is as follows: hold scan > (busy scan = pause scan)

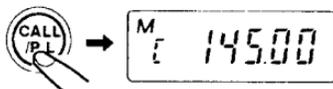
CALL Operation

- The call memory is entirely independent of memory address numbers M00 ~ M39
- The call frequency (referred to as the main channel) is set to 145.00 MHz when the unit is shipped from the factory
- The CALL memory frequency can be changed if desired

Using the CALL key

PROCEDURE

- 1) Press the CALL key
A pip (short high pitched beep) sounds and the call frequency appears on the display



- 2) Press the CALL key a second time
A puff (short low pitched beep) sounds and the display returns to the status it was in before the CALL button was first pressed

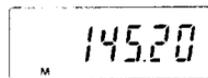
ADVICE

- If the # CL PS key is pressed, the rotary channel selector turned, or the ▲/▼ keys pressed while the call frequency is being displayed, the VFO frequency replaces the call frequency

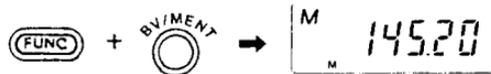
Changing the call frequency

PROCEDURE

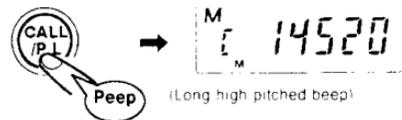
- 1) In the VFO mode, select the frequency you wish to assign to the CALL key



- 2) Hold down the FUNC key and press the B V/M ENT key



- 3) Press the CALL key
A peep (long high pitched beep) sounds and the call frequency changes to the new frequency



Dual Watch Operation

Receiving Signals on two frequencies alternately

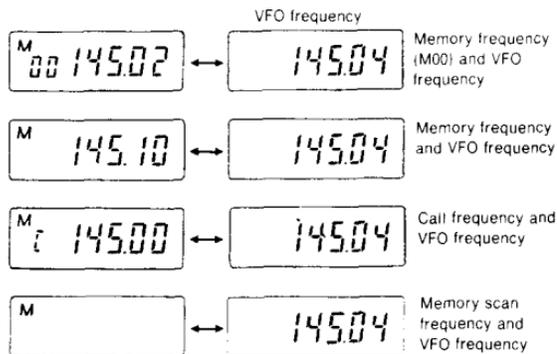
This function is called dual watch. It allows you to monitor one of the memory frequencies (M00 ~ M39) or the call frequency and the VFO frequency alternately.

During dual watch operation, the memory frequency is received (and appears on the display) once every three seconds. This status is referred to as dual watch mode.

Dual watch Operation types

- The following four types of dual watch operation are possible.

- The M00 frequency and VFO frequency
- A memory address number of your choice and the VFO frequency
- The call frequency and VFO frequency
- Memory scan and the VFO frequency
(See page 35 for details of the memory scan function)

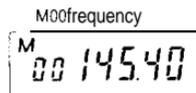


Using the dual watch function

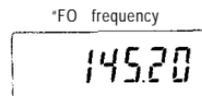
- The M00 frequency and VFO frequency

PROCEDURE

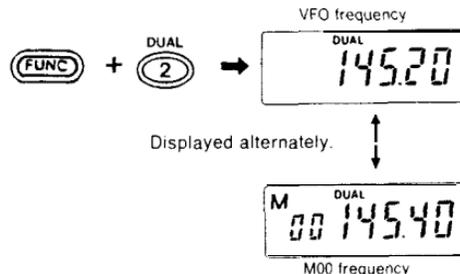
- Store one of the frequencies you wish to use for a dual watch operation in memory



- In the VFO mode, select the other frequency



- While still in the VFO mode, hold down the FUNC key and press the 2 DUAL key. The DUAL indication appears on the display and dual watch operation commences using the M00 frequency and the VFO frequency



(2) A memory address number of your choice and the VFO frequency

- 1) In the VFO mode, select the first dual watch frequency.
- 2) In the memory mode, select the other frequency from among the memory address numbers with frequencies assigned (Or store a frequency in memory)
- 3) While still in the memory mode, hold down the FUNC key and press the 2 DUAL key.
The DUAL indication appears on the display and dual watch operation commences using the memory address number frequency of your choice and the VFO frequency

(3) The CALL frequency and VFO frequency

PROCEDURE

- 1) In the VFO mode, select the first dual watch frequency
- 2) Press the CALL key.
- 3) Hold down the FUNC key and press the 2 DUAL key
The DUAL indication appears on the display and dual watch operation commences using the call frequency of your choice and the VFO frequency

(4) Memory scan and the VFO frequency

PROCEDURE

- 1) In the VFO mode. select the *first* dual watch frequency
- 2) Press the ✕ MS MS.M key to switch to the memory scan mode
- 3) Hold down the FUNC key and press the 2 DUAL key
The DUAL indication appears on the display and memory scan takes place along with dual watch Operation with the VFO frequency

ADVICE

- (1) Dual watch Operation will not commence if the memory address number selected is free
(A "boo long medium pitched beep" sounds)
- (2) Dual watch Operation is paused while the memory frequency is being received
(Dual watch recommences when the signal is lost)

(5) Communicating during dual watch Operation

PROCEDURE

- 1) To communicate on the VFO frequency press the # CL PS key to cancel dual watch operation
- 2) To communicate on the memory frequency, press the B V/M ENT key two times to switch to the memory mode

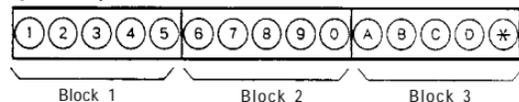
DTMF Operation

DTMF memory function

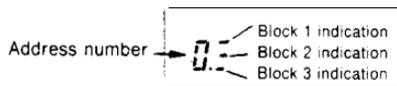
- You can store strings of up to 15 characters including 0 ~ 9, A ~ D, * and # in memory for later transmission as DTMF codes.
- There are 10 DTMF memory address numbers numbered 0 ~ 9

(1) DTMF memory display

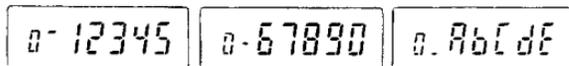
Input example



- The 15 column DTMF memory address numbers are each divided into three blocks of five columns.
- The blocks can be displayed one at a time. The block indicator shows which block, 1, 2 or 3, is being displayed.



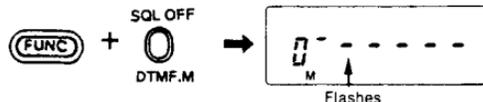
When block 1 is displayed When block 2 is displayed When block 3 is displayed



DTMF memory display

PROCEDURE

- Hold down the FUNC key and press the SQL OFF key. The last DTMF memory address number used is displayed. (The DTMF memory address number is set to 0 when the unit is shipped from the factory.) Block one is displayed.



- Select the desired DTMF memory address number using the rotary channel selector. A puff (short low pitched beep) sounds at DTMF memory address number 0. The ▲/▼ keys cannot be used to select DTMF memory address numbers because they are used as the C and D keys for this function.
- Input the code to be stored in memory using the numeric keys. The * Character is displayed as an [E] and the # as an [F].
- When Input is finished, hold down the FUNC key and press the B V/M ENT key. The code is stored in memory. If you input a code a full 15 characters long, a peep (long high pitched beep) display, hold down the FUNC key and press the SQL OFF key.

NOTE

(1) Do not perform step 4) above if you input a code a full 15 characters long.

Performing step 4) in this case will delete the code from memory.

ADVICE

- (1) You can move the cursor by holding down the FUNC key and pressing the ▲ /▼ key.
- (2) While the cursor move to a digit, the digit will be flashing and you can enter the new digit to change as you want.
- (3) After change, hold down the FUNC key and press the B V/M ENT key. The new code will be stored in memory.

Deleting DTMF memory address number entries

PROCEDURE

- (1) Select the DTMF memory address number you wish to delete using the rotary channel selector
- (2) Confirm that the leftmost digit of block one is flashing. If not, hold down the FUNC key and press the ▲ /▼ key as appropriate to cause the leftmost digit of block one to flash
- (3) Hold down the FUNC key and press the B V/M ENT key. A peep (long high pitched beep) sounds and the code is erased from memory. The display changes as follows.

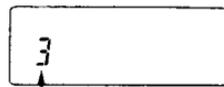


Transmitting DTMF memory codes

PROCEDURE

- (1) Press the PTT switch
- (2) With the PTT switch held down, press SQL OFF to blank the frequency display. (Do not press the FUNC key)
- (3) With the PTT switch still held down, press the numeric key corresponding to the DTMF memory code you wish to transmit.

The DTMF memory code you selected is transmitted and appears on the display



Displayed continuously

- (4) Release the PTT switch

NOTES

- (1) Be sure to keep the PTT switch held down until step 3) above is finished
- (2) Once transmission of the DTMF memory code begins, the PTT switch can be released with no ill effects (The full DTMF memory code will be sent regardless)

Additional Functions (Functions Accessed by Holding Down the FUNC Key and Pressing Another Key)

■ A number of **functions** are available in addition to those described in the preceding pages. They **can** be accessed by pressing **special key combinations**.

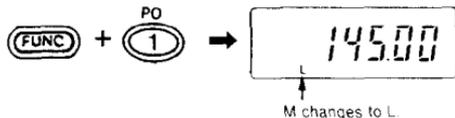
■ The following functions can be accessed by pressing numeric keys while holding down the FUNC key (Refer to the basic operation instructions on page 8.)

Transmission power switching

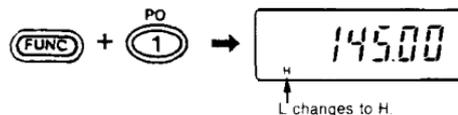
- The transmission power level can be switched in the following sequence: (H) high, (M) medium, (L) low. Choose the transmission power level appropriate to the application.
High .High output power
Medium Medium output power
Low . . .Low output power

PROCEDURE

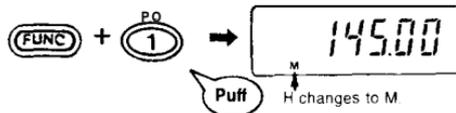
- 1) Hold down the FUNC key and press the 1 PO key. The M on the display changes to an L, indicating low power.



- 2) Holding down the FUNC key and pressing the 1 PO key again causes the L indication to change to an H, for high power.



- 3) Holding down the FUNC key and pressing the 1 PO key once again causes the H to change back to an M, indicating medium power.
A puff (short low pitched beep) sounds.



ADVICE

The power level setting is (M) medium when the unit is shipped from the factory.

Changing the tuning steps

- You can select the size of the tuning steps used when changing the frequency setting using the rotary channel selector or the ▲/▼ keys.

PROCEDURE

- Hold down the FUNC key and press the 4 STEP key
The current tuning step setting appears on the display



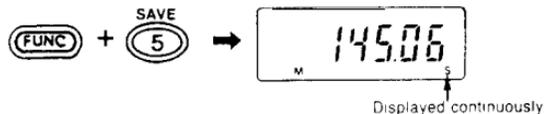
- Turning the rotary channel selector at this point Causes the display to change in the sequence 10 → 12 5 → 20 → 25 → 50 → 75 → 100 → 5 → 10 Select the tuning step setting of your choice
A puff (short low pitched beep) sounds at the 5 kHz setting
- The ▲/▼ keys can also be used to select the tuning step setting
- After selecting the desired step setting, press the # CL PS key The unit returns to the status it was in previous to tuning step setting

Save Operation

- This function reduces the amount of current consumed in receiving status Leaving the transceiver in receiving status for an extended period of time will run down the batteries When save Operation is activated, the transceiver receives only at specified intervals a few seconds long.

PROCEDURE

- Hold down the FUNC key and press the 5 SAVE key
An S indication appears on the display, indicating save operation



- To cancel save Operation, hold down the FUNC key and press the 5 SAVE key a second time The S indication disappears from the display

ADVICE

- The intervals between reception can be set to any of 10 different lengths

NOTES

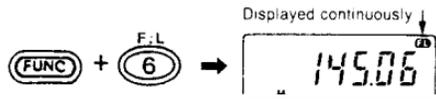
- Save operation is *not* possible during *dual watch operation* or *scan Operation*
- Always cancel save operation *before* activating the paging function

Frequency lock

- This function disables key input to prevent errors caused by inadvertently pressing the wrong key while communicating with another Station.
(Note that the rotary channel selector can be made to work even when frequency lock is on. See page 50)

PROCEDURE

- Hold down the FUNC key and press the 6 F.L key
An FL appears on the display, indicating frequency lock



- To cancel frequency lock, hold down the FUNC key and press the 6 F L key a second time The FL indication disappears from the display

Turning on the display illumination lamp

PROCEDURE

- Hold down the FUNC key and press the LAMP key
The display illumination lamp lights continuously
- To turn off the display illumination lamp, hold down the FUNC key and press the LAMP key a second time

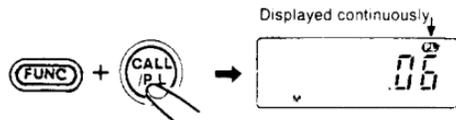
ADVICE

To turn on the lamp momentarily press only the lamp key

Inhibiting the PTT switch

PROCEDURE

- Hold down the FUNC key and press the CALL/P.L key.
A PL appears on the display, indicating that the PTT switch has been disabled.



- To re-enable the PTT switch, hold down the FUNC key and press the CALL/P L key a second time

A dditional Func tions (Functions Accessed by Pressing Numeric Keys in the Set Mode)

- The following functions are added by switching to the set mode and pressing the numeric keys indicated (Refer to the basic operation instructions on page 9)

Beeper ON/OFF

- This function is used to turn off the beeps which normally sound when keys are pressed

PROCEDURE

- 1) Switch to the set mode
- 2) Press the 0 SETISB key The beeper is disabled
- 3) To re-enable the beeper, again switch to the set mode and press the 0 SETISB key There is no display indication associated with this function

Changing the length of the paging signal received alarm to one beep

- This function allows you to reduce the length of the paging signal received alarm to one series of beeps

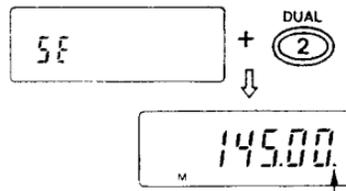
PROCEDURE

- 1) Switch to the set mode
- 2) Press the 1 PO key
Now, when a paging signal is received, the unit will alert you with one pip-pip-pip-pip (series of repeated high pitched beeps).
- 3) To restore the paging signal received alarm to five series of beeps. again switch to the set mode and press the 1 PO key.

Inputting the 1 kHz column from the keyboard

PROCEDURE

- 1) Switch to the set mode
- 2) Press the 2 DUAL key
A [.] indication appears on the display indicating that 1 kHz column Input is possible



Displayed continuously

- 3) To cancel this function. again switch to the set mode and press the 2 DUAL key
The [.] indication disappears

Paging function for **slow-access** repeater stations

- This function increases the interval between when the PTT switch is pressed and when the paging signal is transmitted from 400 to 700 msec.

PROCEDURE

- 1) Switch to the set mode
- 2) Press the 3 SFT key
A pip (short high pitched beep) sounds, indicating that the interval has been increased to 700 msec
- 3) To restore the interval to 400 msec., again switch to the set mode and press the 3 SFT key.
A puff (short low pitched beep) sounds, indicating that the interval is now 400 msec. There is no display indication associated with this function

Function for suppressing the pop noise when **squelch** opens

PROCEDURE

- 1) Switch to the set mode
- 2) Press the 4 STEP key
A pip (short high pitched beep) sounds, indicating that the function is on.
- 3) To cancel this function, again switch to the set mode and press the 4 STEP key
A puff (short low pitched beep) sounds, indicating that the function is off

NOTES

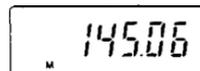
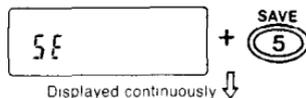
- (1) It is not possible to confirm whether this function is on or off by looking at the display.
- (2) When this function is on, current consumption increases slightly

Auto power off (APO) function

- This function prevents the batteries from being discharged should you forget to switch the power off after using the unit.
- When this function is active, a pip-pip-pip-pip warning (repeated high pitched beeps) sounds if the unit is left unattended for approximately 30 minutes.
- Approximately one minute after the warning Sounds, nearly all power is cut off automatically
This function is called auto power off (APO)

PROCEDURE

- 1) Switch to the set mode
- 2) Press the 5 SAVE key An AP appears on the display indicating that auto power off (APO) is on



- 3) To cancel auto power off, again switch to the set mode and press the 5 SAVE key. The AP disappears from the display and auto power off is canceled

Recovering from auto power off status

- After auto power off is triggered, the display goes blank To cancel this status (return to normal operating Status) either press one of the 0 ~ 9 or A ~ F keys, or switch power off and then back on again

NOTE

Auto power off reduces current consumption to the minimum level. However, as current is still flowing through a portion of the electronic circuitry, auto power off status is not really equivalent to switching the power off manually To turn the unit completely off, use the power switch

Function allowing use of the rotary channel selector even 'when frequency lock is turned on

- Many of the operation keys are disabled when frequency lock is on This function allows use of the rotary channel selector even when frequency lock is active

PROCEDURE

- 1) Switch to the set mode
- 2) Press the 6 F L key
Now the rotary channel selector will still work even if frequency lock is turned on
- 3) To cancel this function, again switch to the set mode and press the 6 F L key A puff (short low pitched beep) sounds indicating that the function is off

NOTE

If the above Operation is performed when the unit is in the frequency lock mode, a boo (long medium pitched beep) sounds and the function is not activated Turn frequency lock off before using this function

Additional Functions

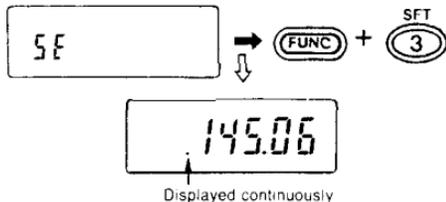
(Functions Accessed in the Set Mode by Holding Down the FUNC Key and Pressing Another Key)

All reset

- Perform the following steps to restore the factory settings. This function can be used to erase all memory entries or to restore normal operation if repeatedly switching the power on and off is not sufficient.

PROCEDURE

- Switch to the set mode.
- Hold down the FUNC key and press the 3 SFT key. A dot appears in the lower left portion of the display (to the right and below where the 1's column of the memory address number is displayed), indicating that the unit is ready for all reset.



- Switch to the set mode.
- Hold down the FUNC key and press the 1 PO key. No pip (short high pitched beep) sounds. The display is blanked briefly while the factory settings are restored, then 433.00 MHz appears on the display. (On the C168, 146.00 MHz appears on the display.)

ADVICE

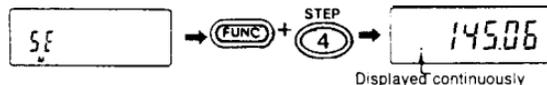
- If the unit's microprocessor seems to be malfunctioning, switch the power off and then on again. This will restore normal operation in most cases.
- If repeatedly switching the power on and off is not sufficient, it is possible that the contents of the unit's memory have been corrupted. Perform all reset. Refer to page 61 for more information.

Protect mode

- This mode protects most of the contents of memory from alteration.
- Unlike the frequency lock function, the status of this mode is indicated on the display.

PROCEDURE

- Switch to the set mode.
- Hold down the FUNC key and press the 4 STEP key. A [] dot appears in the lower left portion of the display (in the middle of where the memory address number is displayed), indicating that protect mode is active. If an attempt is made to change the contents of a memory address number when this mode is active, a boo (long medium pitched beep) sounds and the change is not allowed.
- To cancel this mode, again switch to the set mode and press the 4 STEP key while holding down the FUNC key. A puff (short low pitched beep) sounds and protect mode is canceled.



■ Squelching audio output even if the paging **code matches**

- When this function and the paging function are active and a matching paging code is received, only the pip-pip-pip-pip alarm (repeated high pitched beeps) sounds. Audio output is squelched.

PROCEDURE

- 1) Switch to the set mode.
- 2) Hold down the FUNC key and press the 5 SAVE key.
A pip (short high pitched beep) sounds, indicating that the function is on.
- 3) To cancel this function, again switch to the set mode and press the 5 SAVE key while holding down the FUNC key. A puff (short low pitched beep) sounds and the function is cancelled

■ Changing the tuning **steps** used when the rotary channel selector is turned with the FUNC key depressed.

- If the FUNC key is held down and the rotary channel selector turned, the frequency changes in 100 kHz steps. The tuning step size can be changed to 1 MHz if desired.

PROCEDURE

- 1) Switch to the set mode
- 2) Hold down the FUNC key and press the 6 F.L key
A pip (short high pitched beep) sounds, indicating that the 1 MHz steps have been selected



- 3) To restore 100 kHz steps, again switch to the set mode and press the 6 F.L key while holding down the FUNC key
A peep (long high pitched beep) sounds and the 100 kHz tuning step size is restored



Clone mode

- This function allows you to copy the contents of your transceiver's memory to the memory of another transceiver using DTMF codes
- A maximum of approximately four minutes is required for copying

PROCEDURE

- 1) Switch to the set mode
- 2) Hold down the FUNC key and press the 7 T SQ DM key.
No pip (short high pitched beep) Sounds. The clone mode is activated.
- 3) Press the PTT switch to transmit the contents of the transceiver's memory as DTMF codes.
If such a transmission is received while in the clone mode, your transceiver's memory is overwritten with the data received
- 4) When receiving (transmission) is finished, the unit returns to the normal operating mode

NOTES

- (1) *While clone mode is active, if you perform another Operation in the gaps between when DTMF signals received (or sent), clone mode is canceled automatically.*
- (2) *The control keys do not function while receiving (or sending) in the clone mode.*
- (3) *If the power switch is turned off while receiving (or sending) in the clone mode, the unit's proper operation cannot be guaranteed.*
- (4) *The unit's proper Operation cannot be guaranteed if the contents of memory were not copied correctly and completely.*

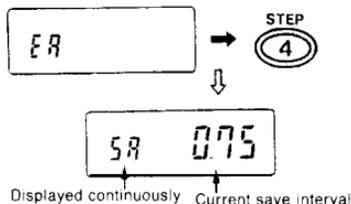
Selecting the save interval

- There are 10 save interval settings to choose from. The available save intervals are 0.25, 0.5, 0.75, 1.0, 1.5, 2.0, 3.0, 5.0, 7.0 and 10.0 seconds.
- The save interval is set to 0.75 seconds when the unit is shipped from the factory.

PROCEDURE

- Switch to the extra mode.
- Press the 4 STEP key.

The current save interval is displayed. A SA indication appears on the display during the save interval setting process.



- Select the desired save interval using the ▲/▼ keys or the rotary channel selector. A puff (short low pitched beep) sounds at the 0.75 setting.
- After selecting the save interval, press the # CL PS key.
- The save interval setting function is cancelled automatically.

Increasing the DTMF signal transmission interval

- DTMF signals are normally transmitted with an interval of 50 msec. between digits. This function increases the interval to 100 msec.

PROCEDURE

- Switch to the extra mode.
- Press the 5 SAVE key. A pip (short high pitched beep) sounds and the interval is set to 100 msec.
- To restore normal 50 dual msec interval, again switch to the extra mode and press the 5 SAVE key. A puff (short low pitched beep) sounds and the DTMF signal transmission interval is restored to 50 dual msec.

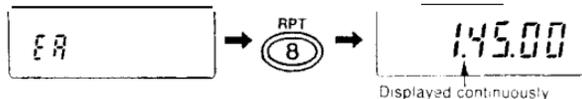
NOTE

- This setting affects the paging, code squelch, DTMF and memory functions.

Inputting frequencies from the 100 MHz column

PROCEDURE

- 1) Switch to the extra mode
- 2) Press the 8 RPT key.
A [.] indication appears on the display and frequency input from the 100 MHz column is enabled



- 3) To return to the previous status, again switch to the extra mode and press the 7 T SQ DM key. The [.] indication disappears and frequency input from the 1 MHz column is restored

How to use charging battery

- 1) Plug DC adaptor into DC IN plug socket on battery box.
- 2) Charging time needs 14-16 hours approximately.

NOTE

Don't use other charging source on charging avoid damaging battery.

Specifications

● General Specifications

Frequency range	144.00 – 145.995 MHz or 144-147.995 MHz
PLL operation range	137-174MHz
Radio wave type	F3
Microphone input impedance	600 Ω
Speaker impedance	8 Ω
Operating voltage range	6 – 16 V (using external power supply jack)
Rated voltage	7.2 V
Current consumption	Transmitting : 13.8 V
High (5 W)	Approx. 1,300 mA
Medium (2.5 W)	Approx. 800 mA
Transmitting : 7.2 V	
High/medium (2 W)	Approx. 900 mA
Transmitting : 13.8/7.2 V :Low (350 mW)	Approx. 450 mA
	Approx. 400 mA
Receiving	Approx. 32 mA
Battery save operation	Approx. 12 mA
Auto power off (APO) operation	Approx. 0.5 mA
Body dimensions (excluding protrusions)	54 W x 130 H x 33 D mm
Weight	300 g (including antenna and batteries)

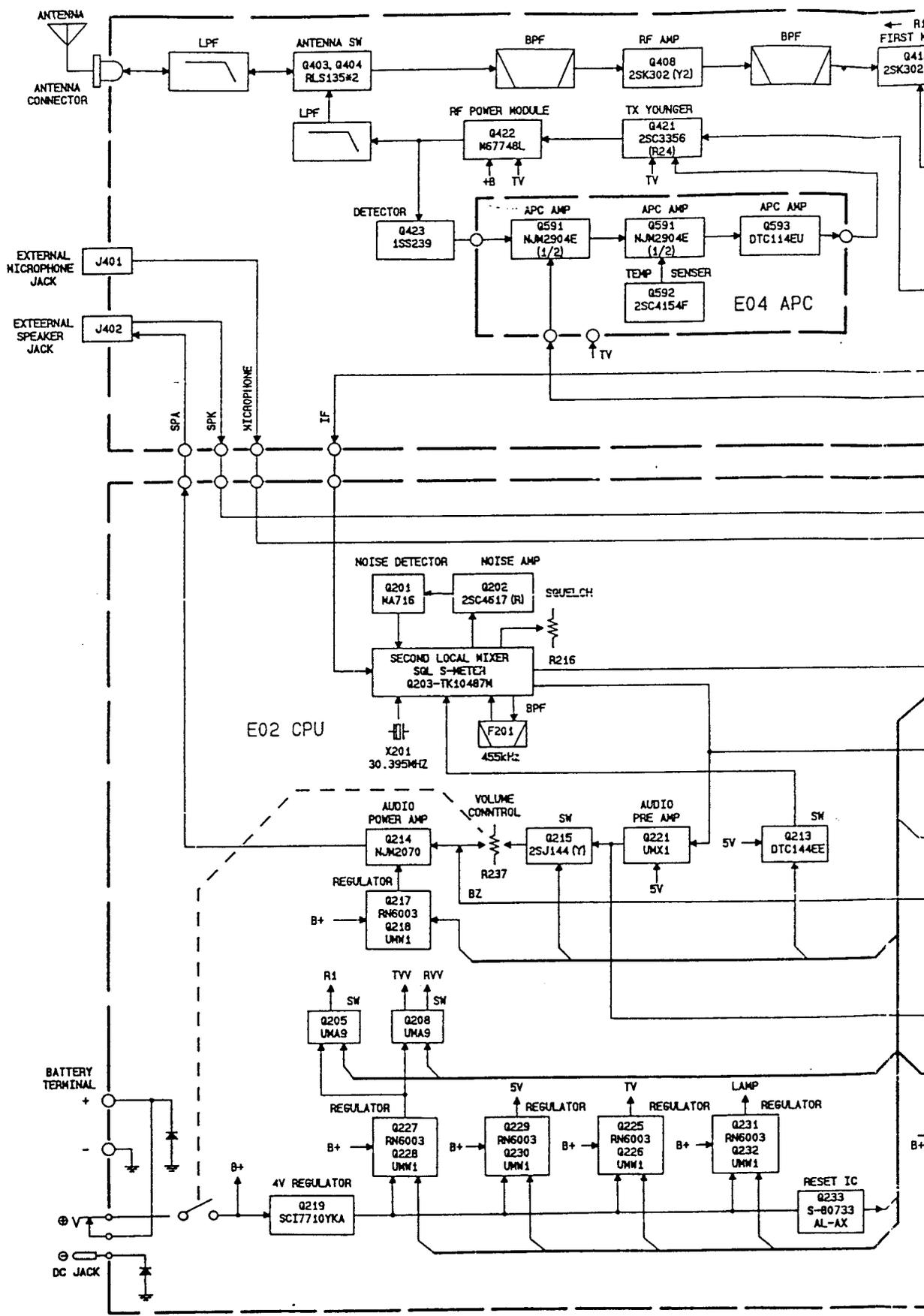
● Reception

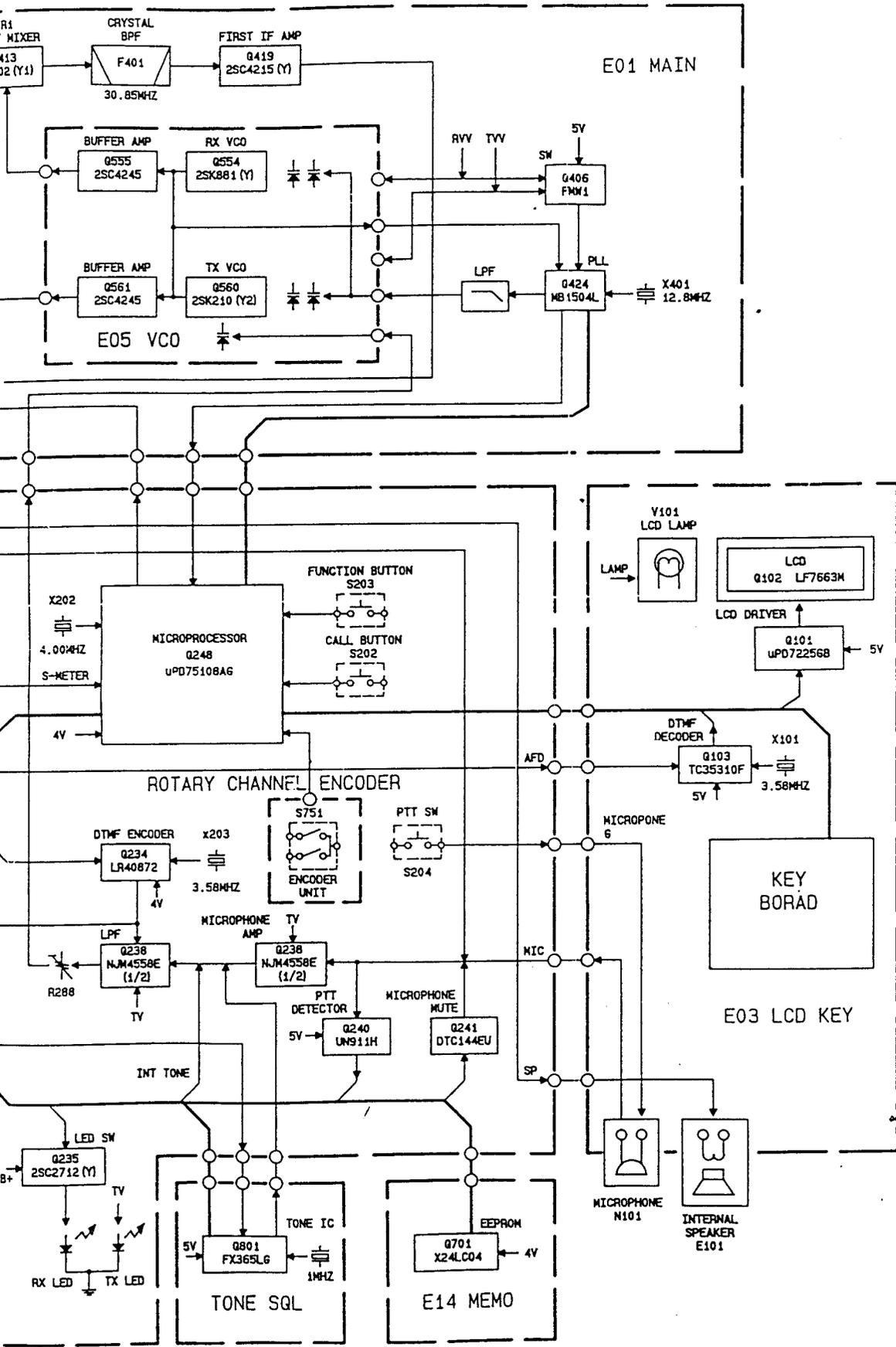
Reception type	Double super heterodyne
Intermediate frequencies	1st IF: 30.85 MHz, 2nd IF: 455 kHz
Reception sensitivity	0.158 μ V
S/N ratio with 0.5 μ V input	Min. 30 dB
Squelch open sensitivity	0.1 μ V
Audio output	200 mW (8 Ω , 10% distortion)

● Transmission

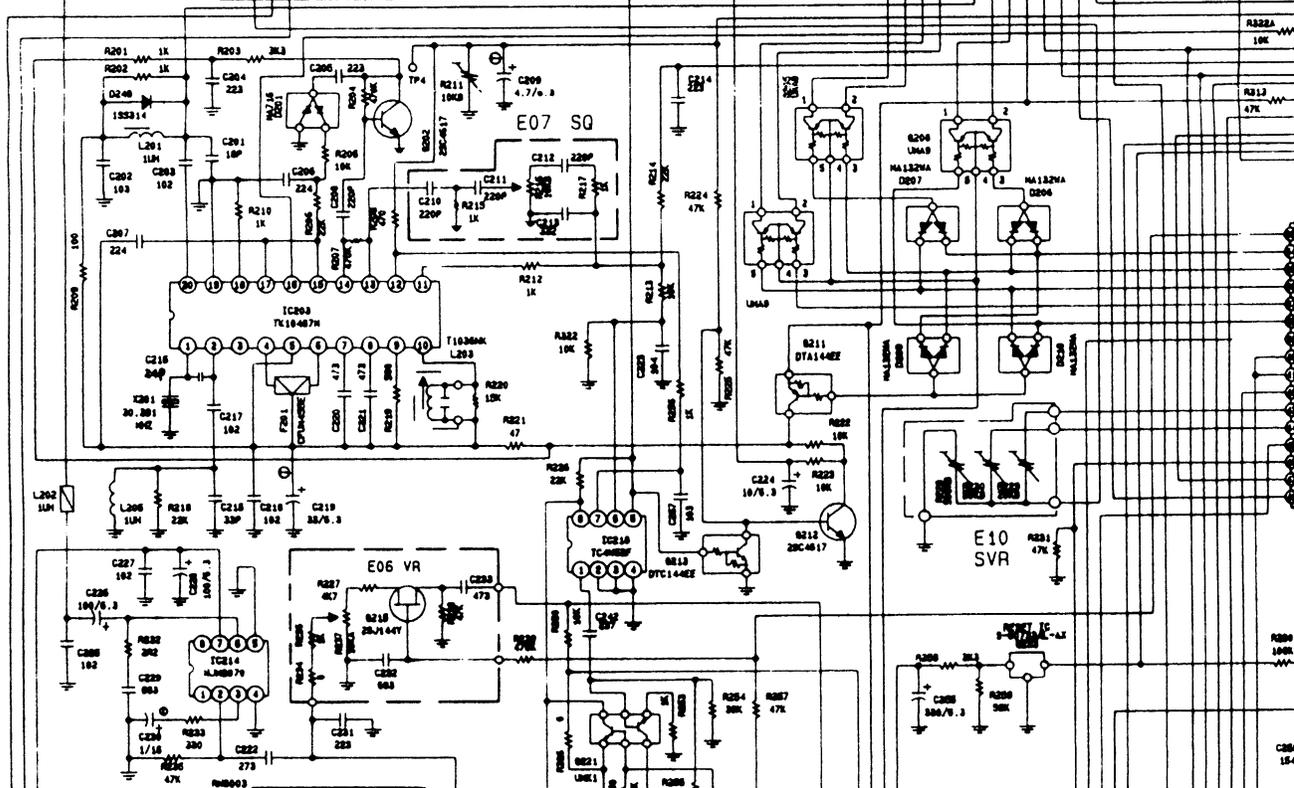
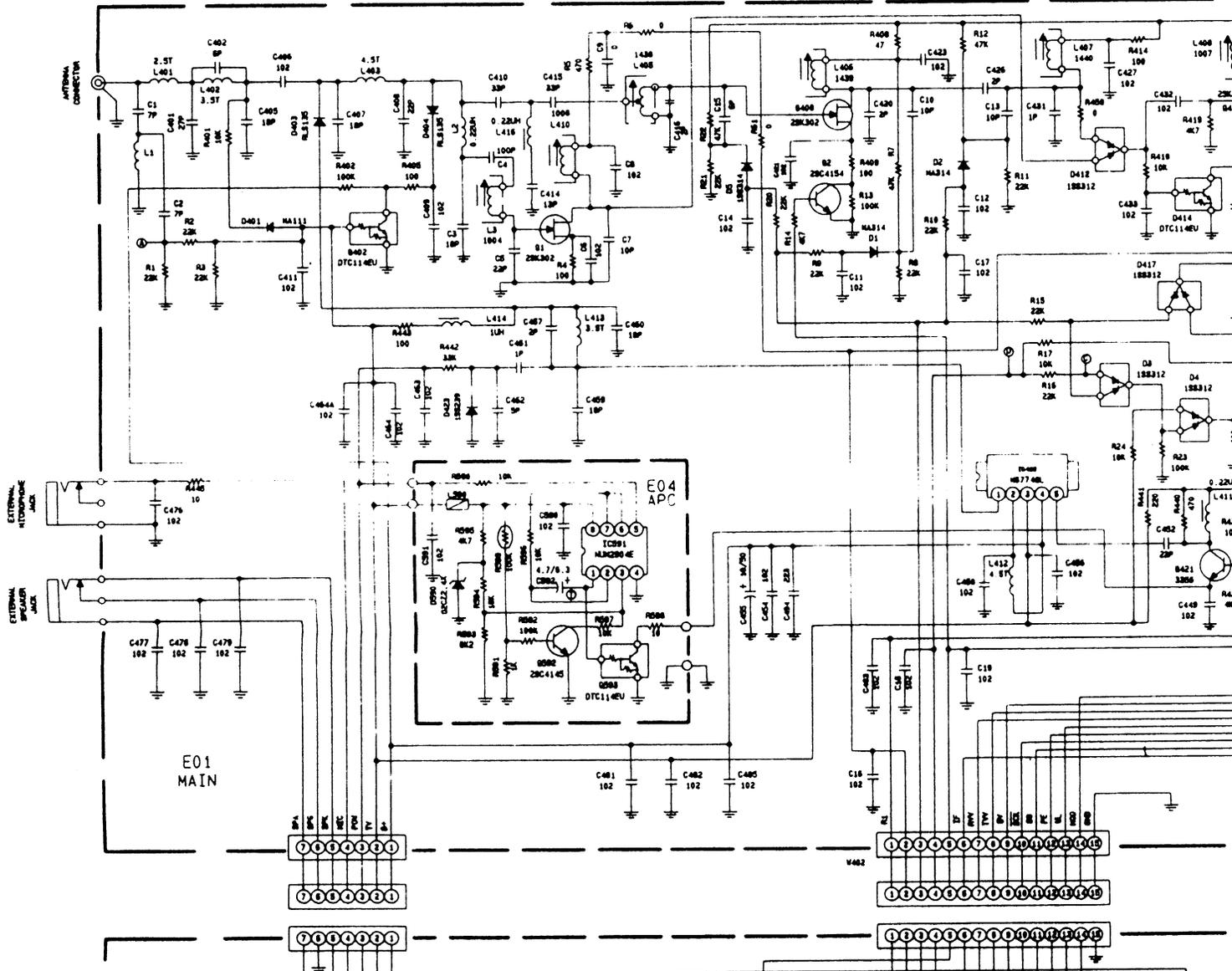
Output power	High
With 7.2V Batt	2.0 W
With 12V Batt	4.5 W
Medium With 7.2V Batt	2.0 W
With 12V Batt	2.5 W
Low	0.35 W
Modulation method	Reactance modulation
Maximum frequency deviation	\pm 5 kHz
Spurious ratio	60 dB
Built-in microphone	Electret condenser type

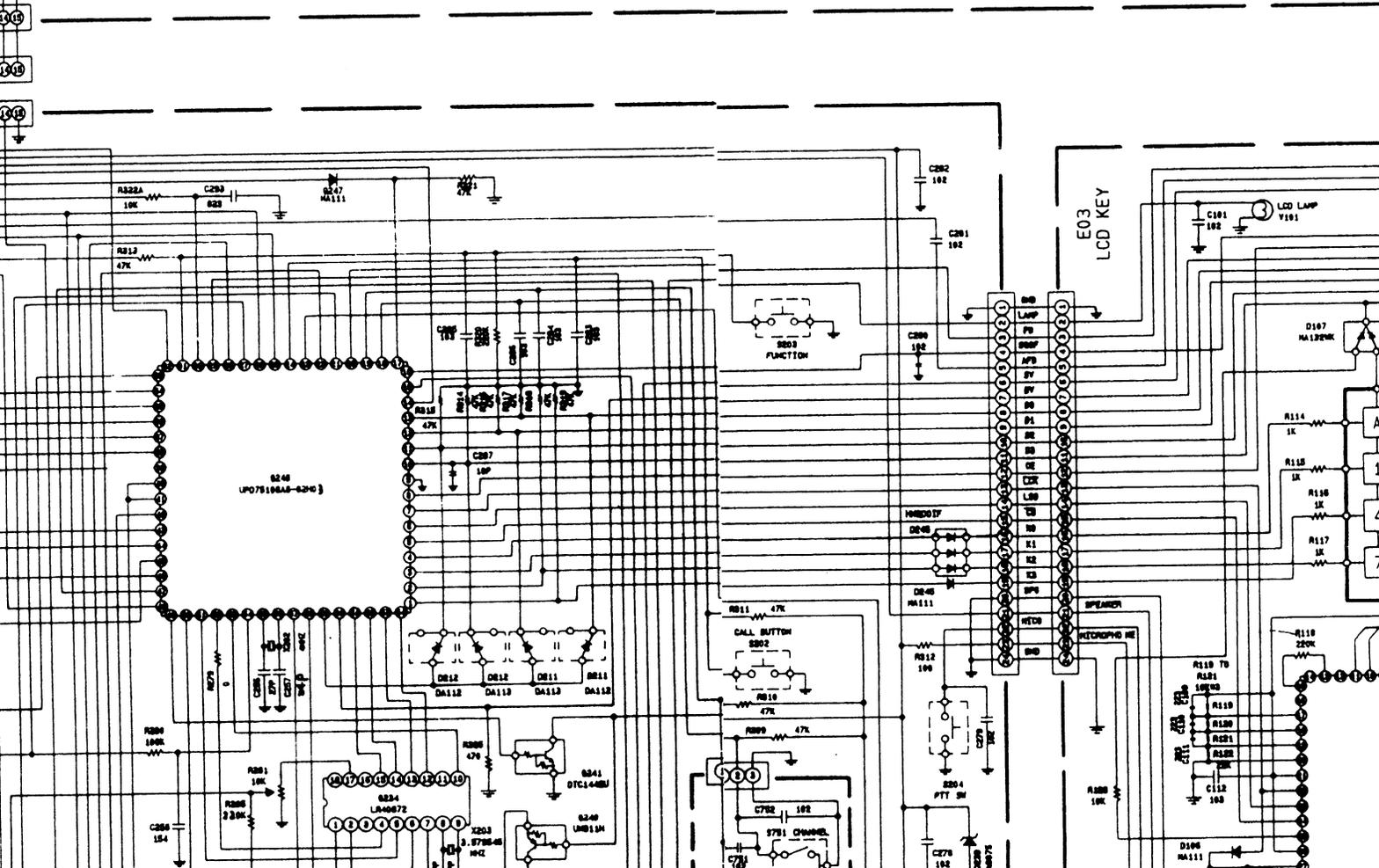
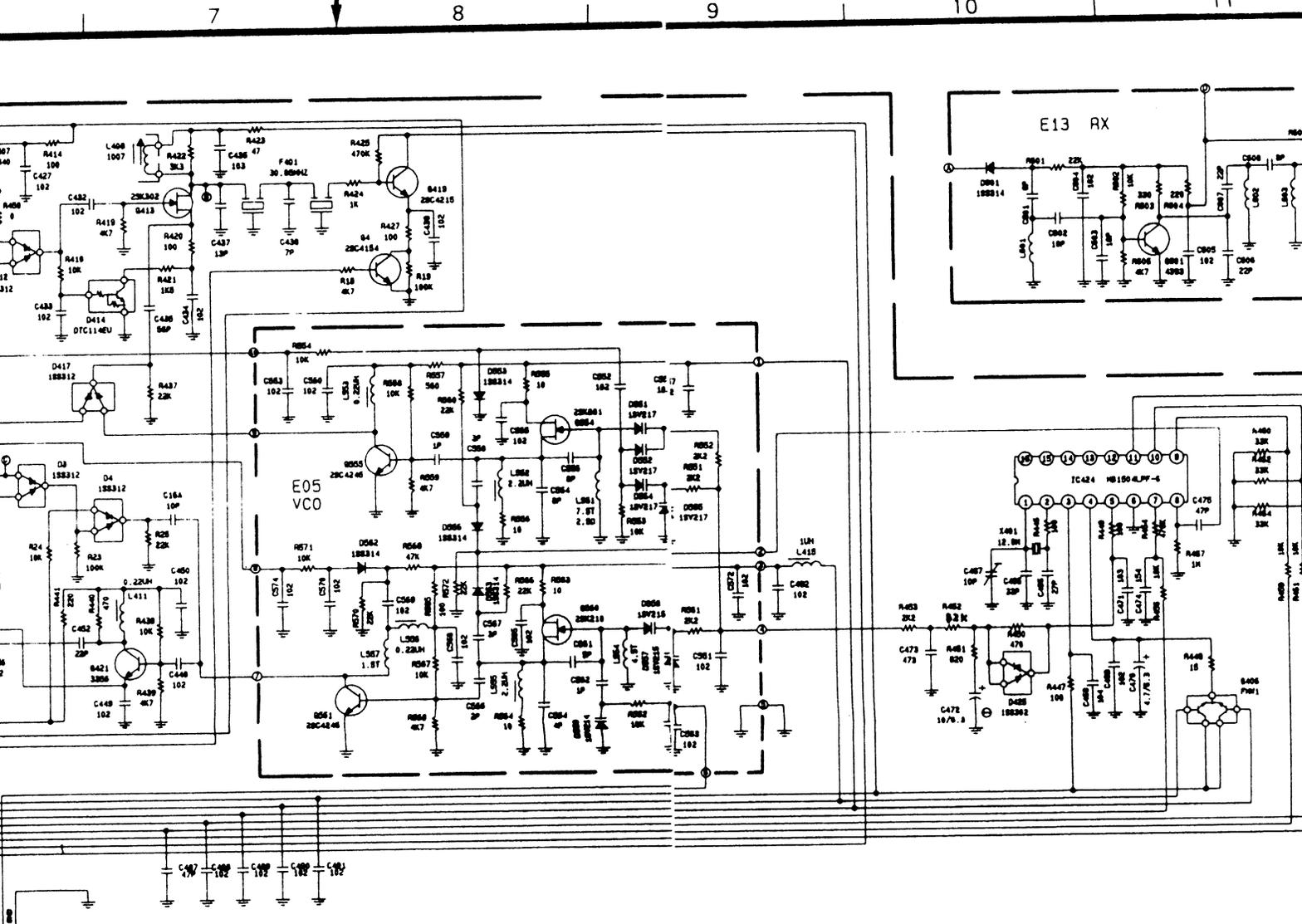
The specifications and external appearance of the unit are subject to change without notice due to product improvements.

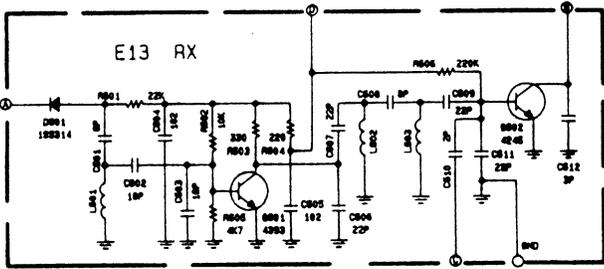




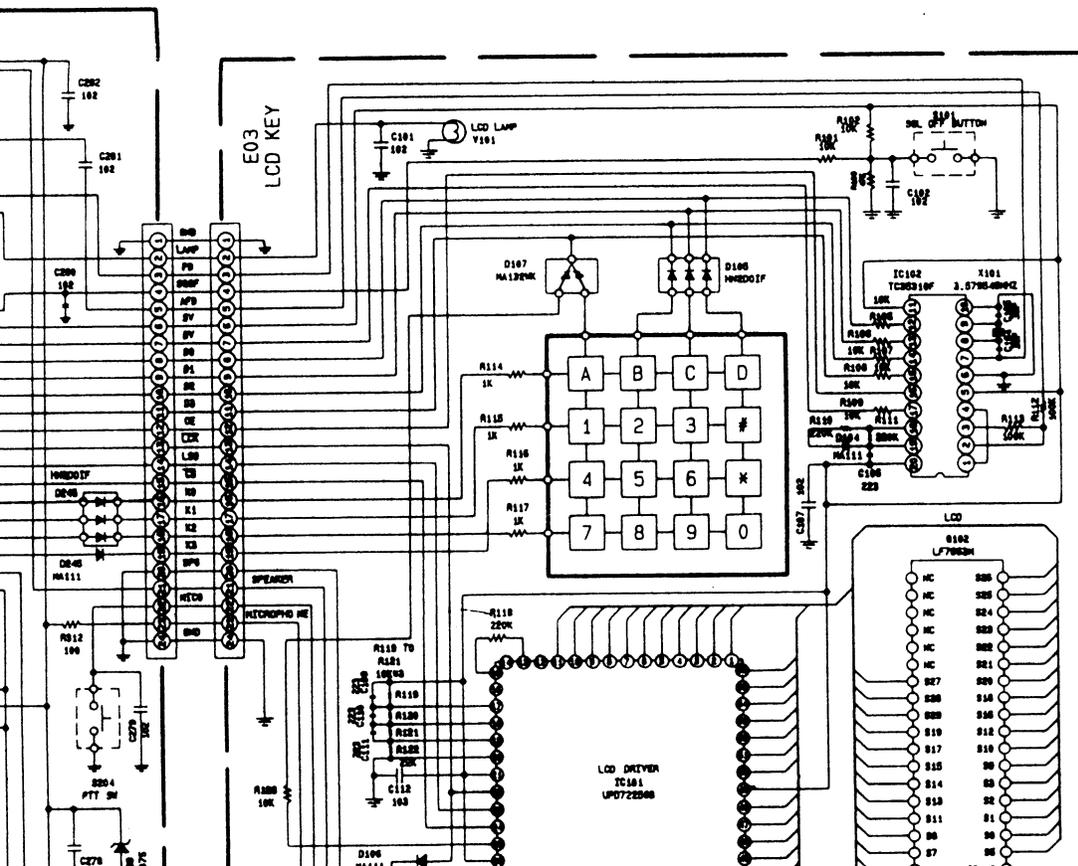
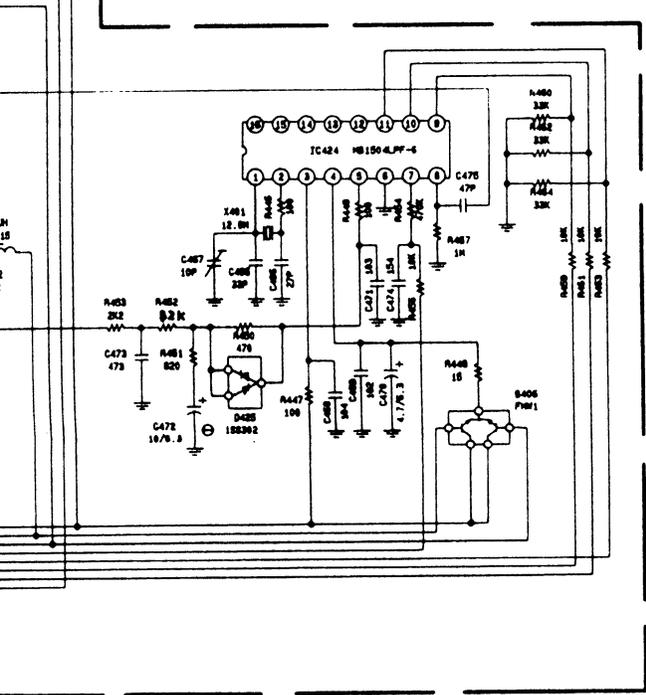
INTEK S.P.A.	
BLOCK DIAGRAM	
TITOLO	MODELLO
DATA	INTEK KT-350EE - 355 EE



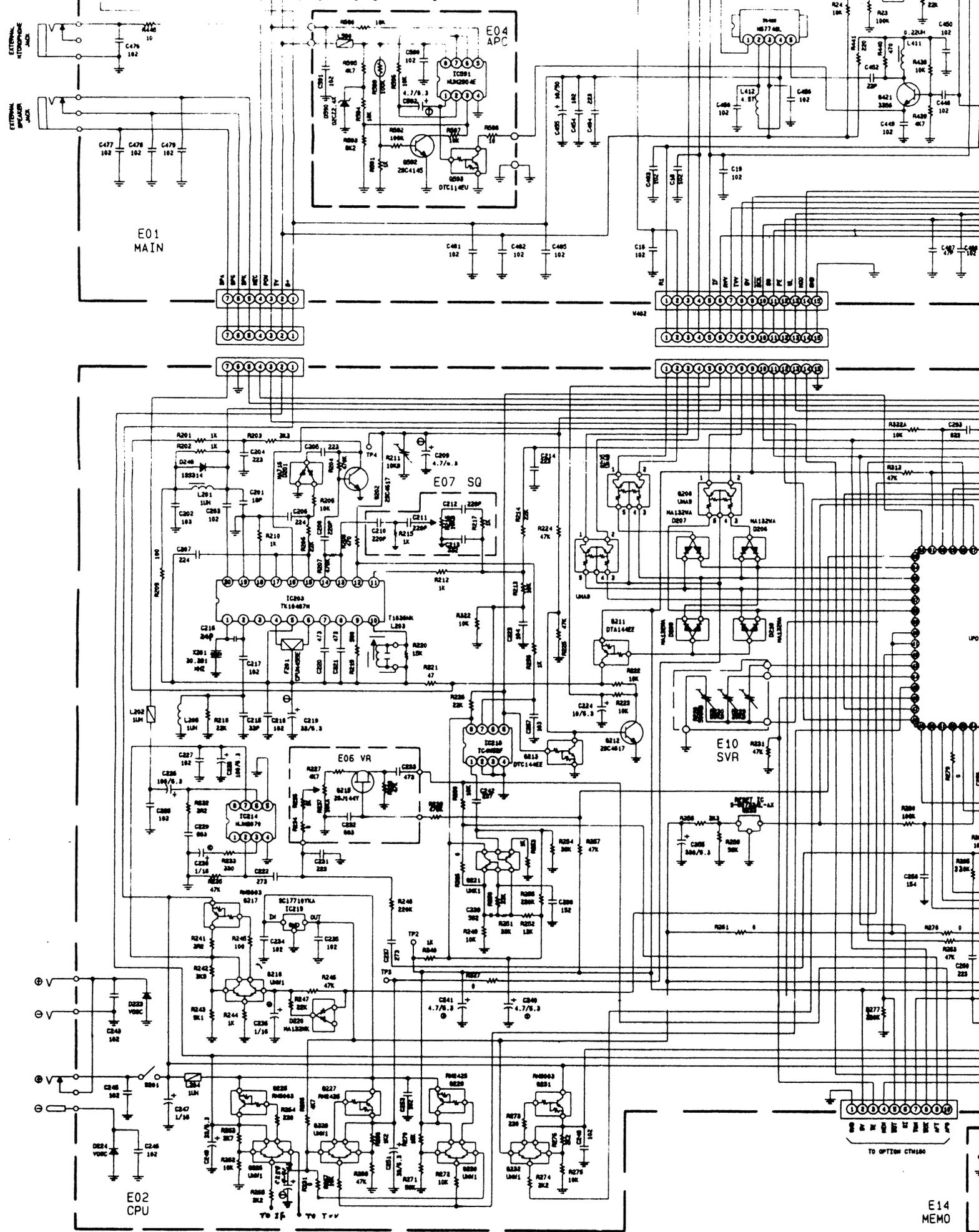




REP: ECHS-9884	FIG: A
1.0280 SP → SP	
DATE: 1/31/84	REV: 1.0E
REP: ECHS-9886	FIG: A
1.8441 100 → 220	
DATE: 6/27/84	REV: 1.0E

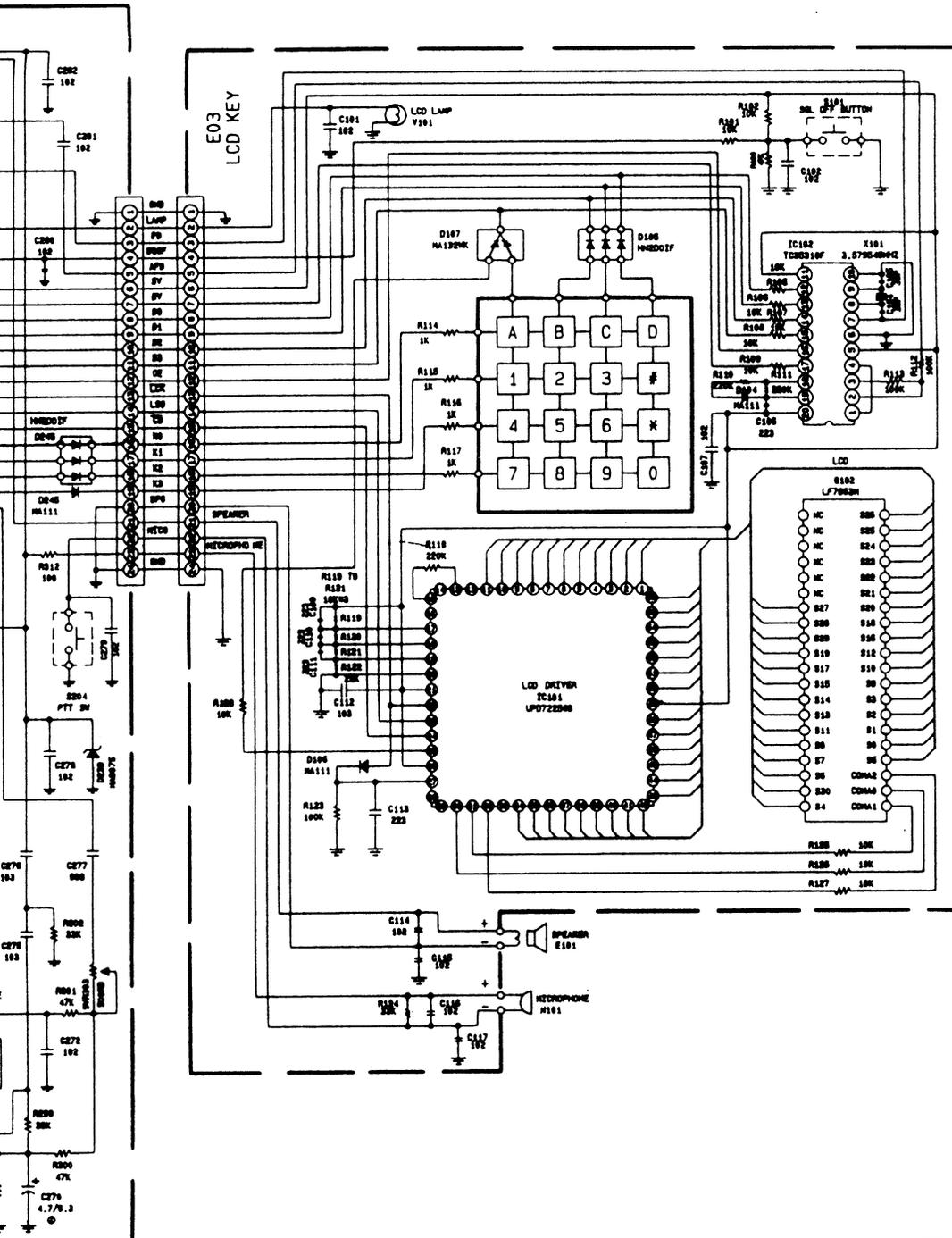
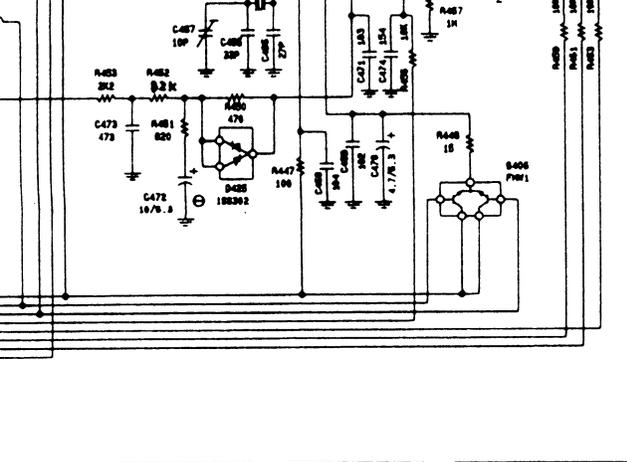


PROPRIETARY
非經許可不得複印



TO OPTION CTR160

E14
MEMO



PROPRIETARY
非經許可不得複印

INTEK s.p.a.

KT-355

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Direzione. amministrazione. ufficio vendite e magazzino

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