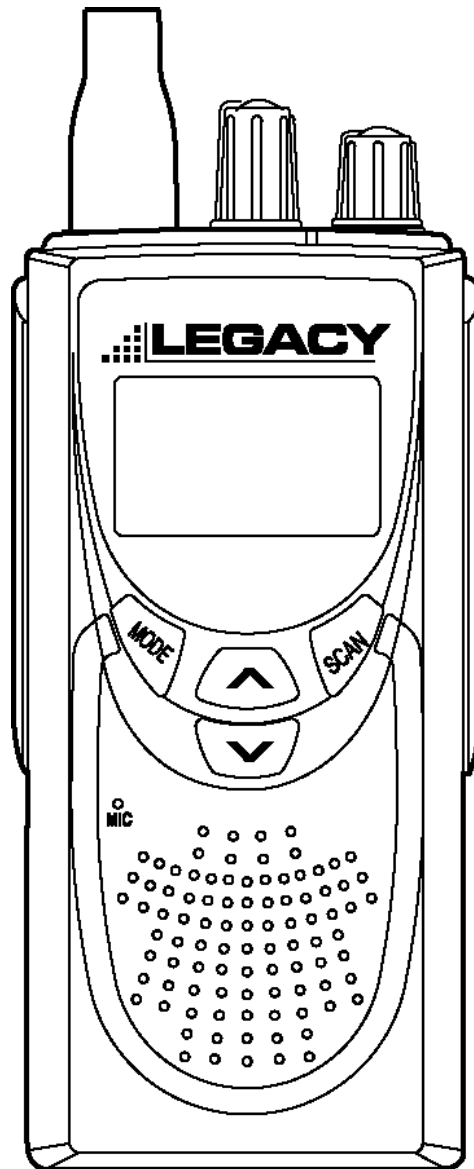




I.1.1.1 Pro



PL5161 / PL5164
Operating Instructions

TABLE OF CONTENTS

I	FCC RF EXPOSURE COMPLIANCE REQUIREMENTS FOR OCCUPATIONAL USE ONLY.....	4
I.1	CAUTION VHF AND UHF RADIOS (PL5151/PL5164).....	4
I.2	CAUTION VHF RADIO (PL5151).....	4
I.3	CAUTION UHF RADIO (PL5164).....	4
II	ABOUT TOPAZ3	5
III	ABOUT YOUR LEGACY PROLINE RADIOS.....	5
IV	UNPACKING AND CHECKING EQUIPMENT	6
V	RADIO CONTROL BUTTONS / OPERATION FEATURES	7
VI	GETTING STARTED.....	8
VI.1	CHARGING THE NIMH BATTERY PACK.....	8
VI.2	ATTACHING AND REMOVING THE BATTERY PACK	8
VI.3	INSTALLING THE ANTENNA.....	9
VI.4	INSTALLING THE BELT CLIP	9
VI.5	INSTALLING THE SPEAKER MICROPHONE JACK COVER.....	9
VI.6	ATTACHING THE OPTIONAL SPEAKER MICROPHONE	9
VII	RADIO OPERATION.....	10
VII.1	POWER ON / TRANSMIT	10
VIII	RADIO FUNCTIONS.....	11
VIII.1	TONE SIGNALING	11
VIII.2	SCAN MODES.....	11
VIII.3	NORMAL CHANNEL SCAN.....	11
VIII.4	PRIORITY SCAN TX	11
VIII.5	PRIORITY LOOK BACK SCAN	11
VIII.6	PRIORITY SELECT SCAN.....	11
VIII.7	VACANT CHANNEL SCAN.....	11
VIII.8	NUISANCE DELETE	11
VIII.9	BUSY CHANNEL LOCKOUT.....	11
VIII.10	MARKED IDLE	11
VIII.11	TX DELAY	12
VIII.12	TIME-OUT-TIMER (TOT).....	12
VIII.13	TIME-OUT-TIMER PENALTY (TX INHIBIT).....	12
VIII.14	BATTERY SAVE	12
VIII.15	LOW BATTERY WARNING.....	12
VIII.16	TWO-TONE DECODE.....	12
VIII.17	VOX (VOICE OPERATED X-MIT).....	12
IX	MODE OPERATION AND FUNCTION SET UP	13
IX.1	POWER ON.....	13
IX.2	CHANNEL CHANGE	13
IX.3	TRANSMIT	13
IX.4	CHANNEL OPTION VIEW	13
IX.5	LOW BATTERY	13
IX.6	CHANNEL OPTION, SYSTEM OPTION & DISPLAY OPTION SETTING.....	16
IX.7	CHANNEL OPTION SETTING.....	17
IX.8	RX/TX TONE OPTION SETTING.....	18
IX.9	NO TONE SELECT.....	18
IX.10	CTCSS TONE SELECT.....	19
IX.11	DCS TONE SELECT	19
IX.12	INVERT DCS TONE SELECT.....	20
IX.13	TX OUTPUT POWER HIGH/LOW SETTING	20
IX.14	NORMAL SCAN LIST ON/OFF SETTING.....	21
IX.15	PRIORITY SCAN LIST ON/OFF SETTING	21
IX.16	TWO-TONE OPTION SETTING.....	22
X	SYSTEM OPTION SETTING	23
X.1	SYSTEM OPTION MENU DISPLAY FORMAT.....	23
X.2	BEEP TONE ON/OFF SETTING.....	24
X.3	VOX OPTION ON/OFF SETTING.....	24
X.4	VOX SENSITIVITY SETTING.....	25
X.5	TIME-OUT-TIMER SETTING.....	25
X.6	TOT PENALTY SETTING.....	26
X.7	BUSY CHANNEL LOCK OUT ON/OFF SETTING.....	26
X.8	MARKED IDLE OUT ON/OFF SETTING.....	27
X.9	SCAN SETTING	27

X.9.1	SCAN SETTING MENU.....	27
X.9.2	SCAN MODE SETTING	28
X.9.3	SCAN SPEED TIME SETTING.....	28
X.9.4	SCAN DELAY TIME SETTING	29
X.9.5	LOOK BACK TIME SETTING.....	29
X.9.6	PRIORITY SCAN SETTING	30
X.10	TX DELAY ON/OFF SETTING.....	30
X.11	POWER SAVE SETTING	31
X.12	POWER SAVE ON TIME SETTING	31
X.13	POWER SAVE OFF TIME SETTING.....	32
X.14	POWER SAVE DELAY TIME SETTING	32
X.15	CLEAR TO TALK ON/OFF SETTING	33
X.16	ROGER BEEP ON/OFF SETTING	33
X.17	DISPLAY OPTION SETTING	34
X.18	CHANNEL DISPLAY FORMAT SETTING	34
X.19	NAME DISPLAY	34
X.20	CHANNEL NO. DISPLAY	35
X.21	FREQUENCY DISPLAY	35
X.22	DISPLAY SLIDE ON/OFF SETTING.....	35
XI	LICENSING, SAFETY AND SERVICE INFORMATION	36
XII	MAINTENANCE.....	36
XIII	SOFTWARE COPYRIGHTS.....	36
XIV	TOPAZ3 / LEGACY PRODUCT WARRANTY	37

I FCC RF EXPOSURE COMPLIANCE REQUIREMENTS FOR OCCUPATIONAL USE ONLY

The Federal Communications Commission (FCC), with its action in General Docket 93-62, November 7, 1997, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Topaz3 / Legacy subscribes to the same safety standard for the use of its products. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act (OSHA) and Federal Communications Commission limits.

I.1 CAUTION VHF AND UHF RADIOS (PL5161/PL5164)



DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded.

- This radio is NOT approved for use by the general population in an uncontrolled environment. This radio is restricted to occupational use, work related operations only where radio operator must have the knowledge to control the user's exposure conditions for satisfying the higher exposure limit allowed for occupational use.
- When transmitting, hold the radio in a vertical position with its microphone 2 inches (5 cm) away from your mouth.
- The radio is transmitting when the red LED on the front of the radio is illuminated. You can cause the radio to transmit by pressing the PTT bar on the radio.
- These are required operating configurations for meeting FCC RF exposure compliance. Failure to observe these restrictions mean violation.

I.2 CAUTION VHF RADIO (PL5151)



- This device has been approved for use, at a maximum duty factor of 50%, using the specific belt clip and leather belt-holster tested for body-worn SAR compliance. Other belt clips or body-worn accessories may not comply and should be avoided.

I.3 CAUTION UHF RADIO (PL5164)



- This device has been approved for use, at a maximum duty factor of 50%, using the specific leather belt-holster (ACC-304) tested for body-worn SAR compliance. Other belt clips or body-worn accessories may not comply and should be avoided.

II ABOUT TOPAZ3

Topaz3 is the exclusive supplier of Maxon®, Legacy and TruTalk brand communication products.

Our product line ranges from FCC licensed two-way radios suitable for Business and Industry (B&I) markets like farm, government, law enforcement, utility, etc. to consumer communications equipment for recreational and light-duty business markets.

Product offerings include a variety of UHF and VHF handheld and mobile radios, repeaters and RF link modules as well as FRS (Family Radio Service), GMRS (General Mobile Radio Service) radios, MURS (Multi User Radio Service) radios, Citizen's Band radios and weather monitors.

Available accessory items include a variety of carrying cases, spare batteries, desktop and mobile chargers, ear bud speaker microphones and more for each radio model.

For additional information on our product line, visit our website: www.topaz3.com

III ABOUT YOUR LEGACY PROLINE RADIOS

The Legacy ProLine models PL5161 (VHF) and PL5164 (UHF) are fully programmable, synthesized radios featuring:

- 16 Channels of operation
- 8 Character alphanumeric display
- 2 Watts or 5 Watts output power
- Channel scan
- 38 Standard and 11 non-standard CTCSS tones
- 104 DCS Codes
- Two Tone Decode
- Approved to MIL-STD810F Specifications
- Scan channel delete
- Busy channel lockout
- Programmable CTCSS / DCS tones, wide/narrow channel spacing, and two-tone decode
- TX Inhibit
- Die-cast aluminum frame, polycarbonate cabinet
- Locking single-pin accessory connector
- Battery save circuitry
- Tri-color status LED
- Body-worn accessories (refer to section I)

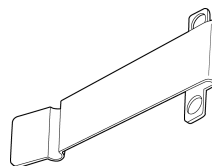
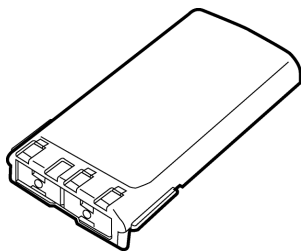
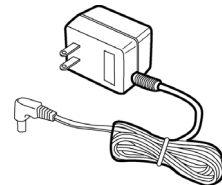
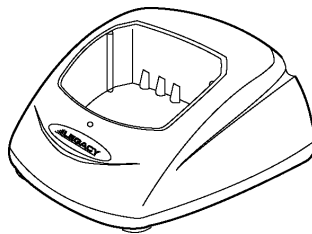
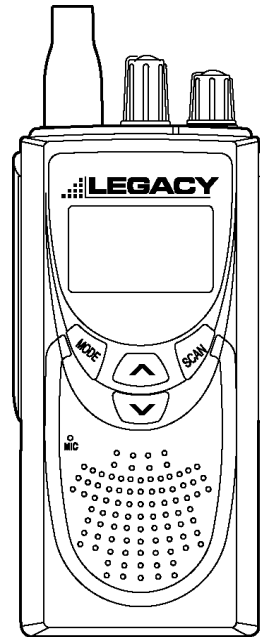
To assure satisfaction from the radio, we urge you to thoroughly read the operation and function information in this manual before operating your ProLine Series radio.

Application of some of the functions described in these Operating Instructions are determined by the system you use. Your radio communications Dealer will program the radio so that you have the greatest number of functions possible relative to your needs. Should you have questions regarding the operation of the radio, please consult with your radio communications Dealer, or contact the Topaz3 Customer Service Department: 1-800-821-7848, Ext. 499.

IV UNPACKING AND CHECKING EQUIPMENT

Carefully unpack the radio and its accessories. Use the item list below to identify the components included in the product packaging, to ensure that no items are discarded in the packing materials.

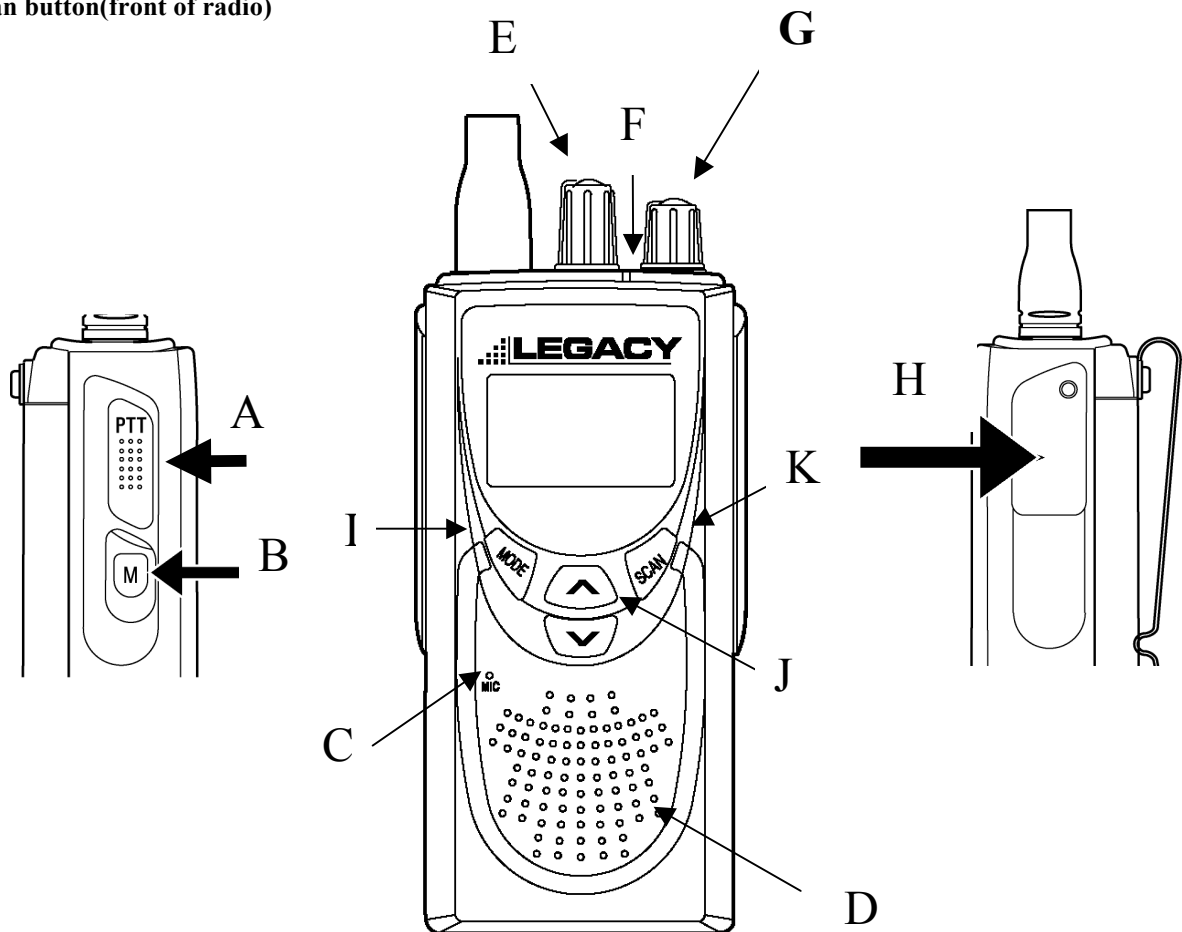
- Radio Body
- Antenna
- Battery Charger (with plastic spacer stored in charger base)
- AC Adapter
- NiMH Battery Pack
- Speaker Microphone Jack Cover
- Belt Clip
- Screw Set
- Operating Instructions
- Swivel Belt Holster



If any items are missing or damaged, you should contact the Topaz3 Customer Service Department for assistance: 1-800-821-7848, Ext. 499.

V RADIO CONTROL BUTTONS / OPERATION FEATURES

- A. **Push-To-Talk (P-T-T) button (left side of radio)** Press and hold while speaking into the radio microphone, release to listen to incoming messages
- B. **Monitor button (left side of radio)** Press and hold to turn radio squelch off. Release to turn squelch back on.
- C. **Microphone (front of radio)**
- D. **Speaker (front of radio)**
- E. **Channel switch (top panel of radio)**
- F. **LED Indicator (top panel of radio)** Identifies transmit (red), receive (signal only) orange, (signal + TONE) green, setup mode (orange), battery low (flashing red)
- G. **Power / volume control (top panel of radio)** Powers radio on and adjusts radio volume
- H. **Speaker microphone jack (right side of radio)**
- I. **Mode button (front of radio)**
- J. **Up/Down select buttons (front of radio)**
- K. **Scan button (front of radio)**



VI GETTING STARTED

VI.1 CHARGING THE NIMH BATTERY PACK

You will need to charge the battery pack fully before initial use. *For best results from your charging cycle, follow these tips:*

- Ensure the ambient temperature is between 41 and 104° F (5 and 40° C) while charging. Temperatures outside this range may not fully charge the battery.
- Always switch OFF the transceiver equipped with a NiMH battery pack before charging. Using the radio during the charging cycle will hinder correct charging.
- Do not recharge the battery pack if it is already fully charged. Doing so may cause the life of the battery pack to shorten or the battery pack may be damaged.
- If the battery is stored for 2 months or more, it is a good idea to complete the charge / discharge cycle two or three times to allow the battery capacity to return to normal.
- Never dispose of the battery in fire - it can explode causing personal injury.
- Never attempt to disassemble the battery or remove its case material or charging contacts. Do not short the battery terminals.

NOTE: The first few uses from the battery will not be at “normal” capacity. After repeating the charge / discharge cycle two or three times, the battery capacity will increase to provide full capacity.

1. Plug the AC adapter cable in the adapter jack located on the rear of the charger, then into an AC outlet.
2. Slide the NiMH battery pack (or the radio equipped with a NiMH battery pack) into the charging slot.
3. Ensure that the metal contacts on the battery pack come in contact with the charging terminals.
4. When charging the NiMH battery pack alone, insert the provided plastic spacer (stored in charger base) into the charging well, then insert the battery pack.
5. The charger LED will light to advise that charging has begun. Charge the standard battery pack for 9 hours. THEN REMOVE THE PACK OR RADIO FROM THE CHARGER.

IMPORTANT NOTE: The ACC-410 SLOW charger DOES NOT TURN OFF AUTOMATICALLY after the charging cycle has been completed. Damage to the battery or reduced battery life may result if charged in excess of the recommended charging time.

VI.2 ATTACHING AND REMOVING THE BATTERY PACK

NOTE: After recharging the battery pack, REMOVE IT FROM THE CHARGER. Charging the battery pack for more than 5 days may reduce the battery life.

The battery pack life is over when its operating time decreases even though it is fully and correctly charged. Replace the pack with the manufacturer’s recommended model.

Average battery pack life from the supplied 750 mAh battery is 8+ hours; the optional 1350 mAh battery, 10+ hours. This service time is calculated using 90% standby, 5% transmit and 5% receive time and 5W operation.

After charging the battery pack as described, you are ready to install it to the radio body. Simply;

1. Match the four grooves of the battery pack with the guides on the back of the radio.
2. Slide the battery pack up along the back of the radio until the release latch locks.
To remove the battery pack, push down on the release latch and slide the pack downward, and away from the radio.

VI.3 INSTALLING THE ANTENNA

Screw the antenna into the connector on the top of the radio by holding the antenna at its base and turning it clockwise until seated. Do not overtighten.

The antenna should never be used to carry your radio, or as a base to clip radio accessories. Misuse of the antenna can cause damage, and reduce your radio's performance.

VI.4 INSTALLING THE BELT CLIP

We recommend that the belt clip is installed on the radio. It keeps the radio from coming in contact with hot surfaces, and away from your body if heat build-up occurs with excess transmissions.

Use the two supplied screws to install the belt clip. If a replacement is needed, use a screw designed to the exact specifications as the original, to prevent accidental contact with internal circuitry, or possible personal injury. Never use glue in conjunction with the provided screws. Some of the glue's components may crack the radio back panel, causing radio damage and possible personal injury.

VI.5 INSTALLING THE SPEAKER MICROPHONE JACK COVER

If you are not using an accessory, install the provided cover over the speaker microphone jack using the screw supplied. This will keep the radio water resistant.

VI.6 ATTACHING THE OPTIONAL SPEAKER MICROPHONE

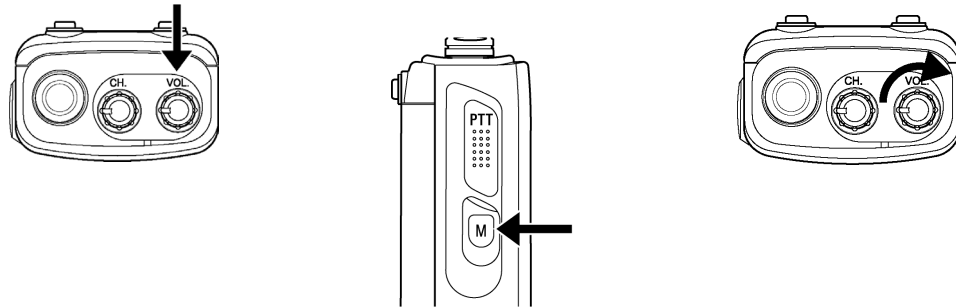
1. Insert the speaker microphone jack into the radio.
2. Use the thumbscrew attachment on the speaker microphone to make connection to the radio.

NOTE: The radio is not fully water resistant while the speaker microphone is attached.

VII RADIO OPERATION

VII.1 POWER ON / TRANSMIT

Power on the radio by turning the power / volume control clockwise out of detent. You will hear a confirmation tone on power-up. To check the radio volume, press and hold the monitor button then rotate the control to desired volume level.



Use the channel switch to choose the desired channel. Press the monitor button to check the channel for activity. To avoid interrupting another user, make sure the channel is clear before you begin transmitting.

To transmit, place the radio microphone approximately 2" (5 cm) from your mouth. Press and hold the PTT bar while speaking in a normal tone. Release the PTT bar when you are finished speaking; the radio will be placed into receive mode.

When the battery pack voltage becomes too low for operation to continue, a tone will sound, LOW Batt will show in the display, the LED will blink red and the battery icon located in the lower left corner of the display will flash empty. The radio will allow only one more transmission - change or charge your battery. Refer to the "Low Battery Warning" section of this manual.

VIII RADIO FUNCTIONS

VIII.1 TONE SIGNALING

To help block out unwanted calls to your radio, the PL5151 and PL5164 can be programmed by your radio communications Dealer to look for tones.

VIII.2 SCAN MODES

Scanning is a Dealer programmable feature that allows you to monitor a number of channels. Your radio communications Dealer will help you define a scanning mode and your channel "scan list".

Once the scan list has been established, initiate scan by pressing the SCAN button. The SCAN icon will show in the upper left corner of the display to confirm radio scanning.

VIII.3 NORMAL CHANNEL SCAN

If a conversation is detected on any of the channels in the scan list, the radio will stop on that channel and you will be able to hear the conversation. In normal scan, you will be able to transmit on that active channel during the programmable scan delay time. (The scan delay time is the amount of time the radio will stay on that channel once activity has ceased. Dealer programmable, 4 - 7 seconds is typical).

The radio will resume scanning once the scan delay time has expired, and will continue to scan until the channel is changed. In scan mode, if radio power is turned off and on, the radio will return to the scan mode until a channel is changed.

VIII.4 PRIORITY SCAN TX

A single channel may be programmed as the "Priority" channel. The radio will constantly monitor this channel while scanning and when stopped on an active channel. If a call is detected on the priority channel, the radio will automatically move to, and remain on, the priority channel. Priority channel activity takes precedence over all other conversations. During the scan mode if a PTT is initiated the radio will transmit on the priority channel.

VIII.5 PRIORITY LOOK BACK SCAN

A single channel may be programmed as the "Priority" channel. The radio will constantly monitor this channel while scanning and when stopped on an active channel. If a call is detected on the priority channel "during a conversation", the radio will automatically move to, and remain on, the priority channel. Priority channel activity takes precedence over all other conversations.

VIII.6 PRIORITY SELECT SCAN

The selected channel becomes the priority channel. As you change the channel that channels frequency will become your new priority channel. Priority channel activity takes precedence over all other conversations.

VIII.7 VACANT CHANNEL SCAN

The radio will automatically scan for the first open channel. Once a channel is found normal scan operation will take place. All radios you intend to communicate must be programmed for this same scan function.

VIII.8 NUISANCE DELETE

During receiving a signal or scan delay time, if the monitor button is pressed, the current receiving channel is deleted in scan list and is no longer scanned. When the power is turned off and on, the deleted channel is restored to the scan list.

VIII.9 BUSY CHANNEL LOCKOUT

When the RX signal is being received, the radio's transmitter is disabled. Dealer programming makes this feature active or disabled.

VIII.10 MARKED IDLE

When used in conjunction with busy channel lockout, the transmitter is allowed to operate as long as valid RX tone is received. Dealer programming makes this feature active or disabled.

VIII.11 TX DELAY

The TX will remain active for approximately 180 seconds even though P-T-T button is released when using CTCSS tones.

This eliminates squelch tail by sending CTCSS turn-off code (No Tone TX).

VIII.12 TIME-OUT-TIMER (TOT)

The purpose of the time-out-timer is to prevent any single person from using a channel for an extended period. The time-out-time can be programmed from 10 seconds to 990 seconds by your radio Dealer. When active the TOT icon will show in the display.

VIII.13 TIME-OUT-TIMER PENALTY (TX INHIBIT)

When TOT is applied, transmission will be inhibited after time-out-time expires. This TX inhibit time can be selected and programmed by your Dealer from 1 second to 100 seconds. For instance, when TOT is set to 3 minutes and TOT penalty is set to 5 seconds, if you continuously transmit for 3 minutes, the radio will stop transmitting. A tone will sound with each

PTT bar press until the 5-sec. TX inhibit time expires.

Press the P-T-T bar after the TX inhibit time expires to resume transmitting.

VIII.14 BATTERY SAVE

The battery save function decreases the amount of power used when a signal is not being received and no operations are being performed (no bars are being pressed, no controls are being used, etc.)

When the channel is not busy and no operation is performed, battery save is enabled. When an operation is performed, or a signal is received, battery save is disabled.

VIII.15 LOW BATTERY WARNING

When the battery power goes below a pre-determined value, the LED will blink red and a tone sounds. The radio will then allow only one more transmission. After that, the transceiver will stop transmitting. Replace or recharge the battery pack.

VIII.16 TWO-TONE DECODE

Each channel can be programmed with two-tone decode by your radio communications Dealer. Two-tone selections are: Individual Call, Group Call and Super Group Call.

VIII.17 VOX (VOICE OPERATED X-MIT)

Allows your radio to PTT with the sound of your voice for hands free operation. Your radio has VOX sensitivity adjustment for noisy or windy conditions. VOX icon will be displayed when option is turned on.

IX MODE OPERATION AND FUNCTION SET UP

Depending on how your dealer has programmed your radio you may be able to change certain mode and functions of your radio. Please consult your dealer regarding what functions are available with your radio.

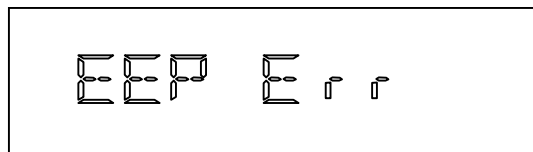
The following information is a menu tree with brief description and display reading of how to access radio mode functions.

All functions are accessed or turned off or on by pressing the mode button. Using the up (^) or down (v) buttons move your radio display up and down each function feature. To exit press the PTT or wait for the radio to time out.

IX.1 POWER ON

Power on the radio by turning the power/volume control clockwise out of detent. You will hear a confirmation tone on power-up. When Power-on, all character and icon are displayed for around 0.7 sec. A beeps is sounded when the radio is ready to enter normal operation mode.

- * When Power-On, it checks the last Memory and if data is wrong, it will indicate the below display and beep an error tone. The radio enters normal operation with two beeps.



IX.2 CHANNEL CHANGE

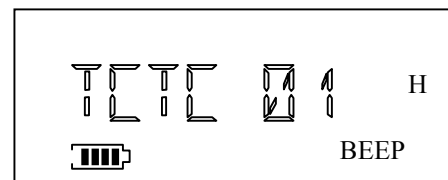
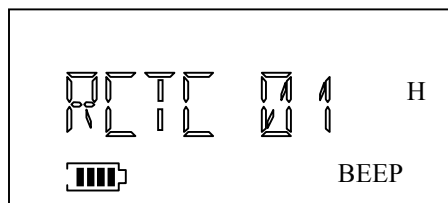
Rotate Channel Knob to select the channel among 16 channels your display will change with each channel selection. Your channel display reading will vary depending on how your dealer programmed each channel description.

IX.3 TRANSMIT

- Press PTT button to transmit. If PTT button is released, the radio returns to receive mode. Both TX and RX mode are indicated by display icons. When VOX option is set and voice is input, the radio transmits the signal. If voice input stops, the radio maintains TX for around 2 sec. if there is no voice input, the radio returns to receive mode.

IX.4 CHANNEL OPTION VIEW

- In receiving mode, if the Monitor button is pressed for more than 2 sec., the RX tone option and the TX tone option for each channel selected will display for one sec.



IX.5 LOW BATTERY

- If Battery voltage goes under a predetermined value a Low Battery error message is shown for 2 sec. The battery Icon will flash.

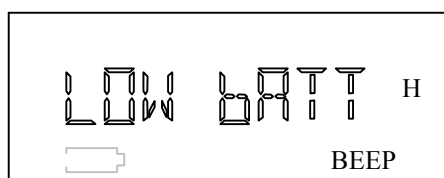
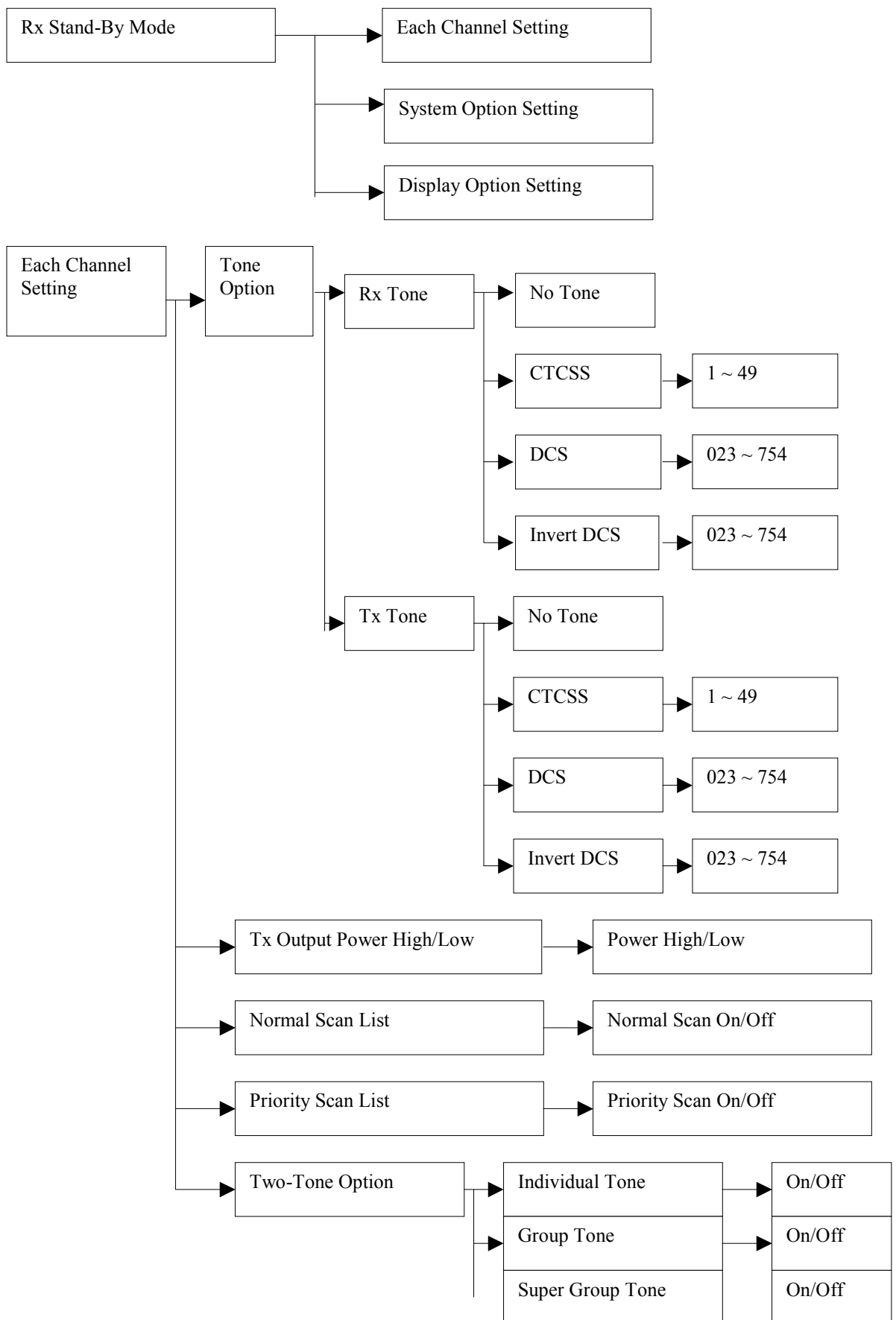
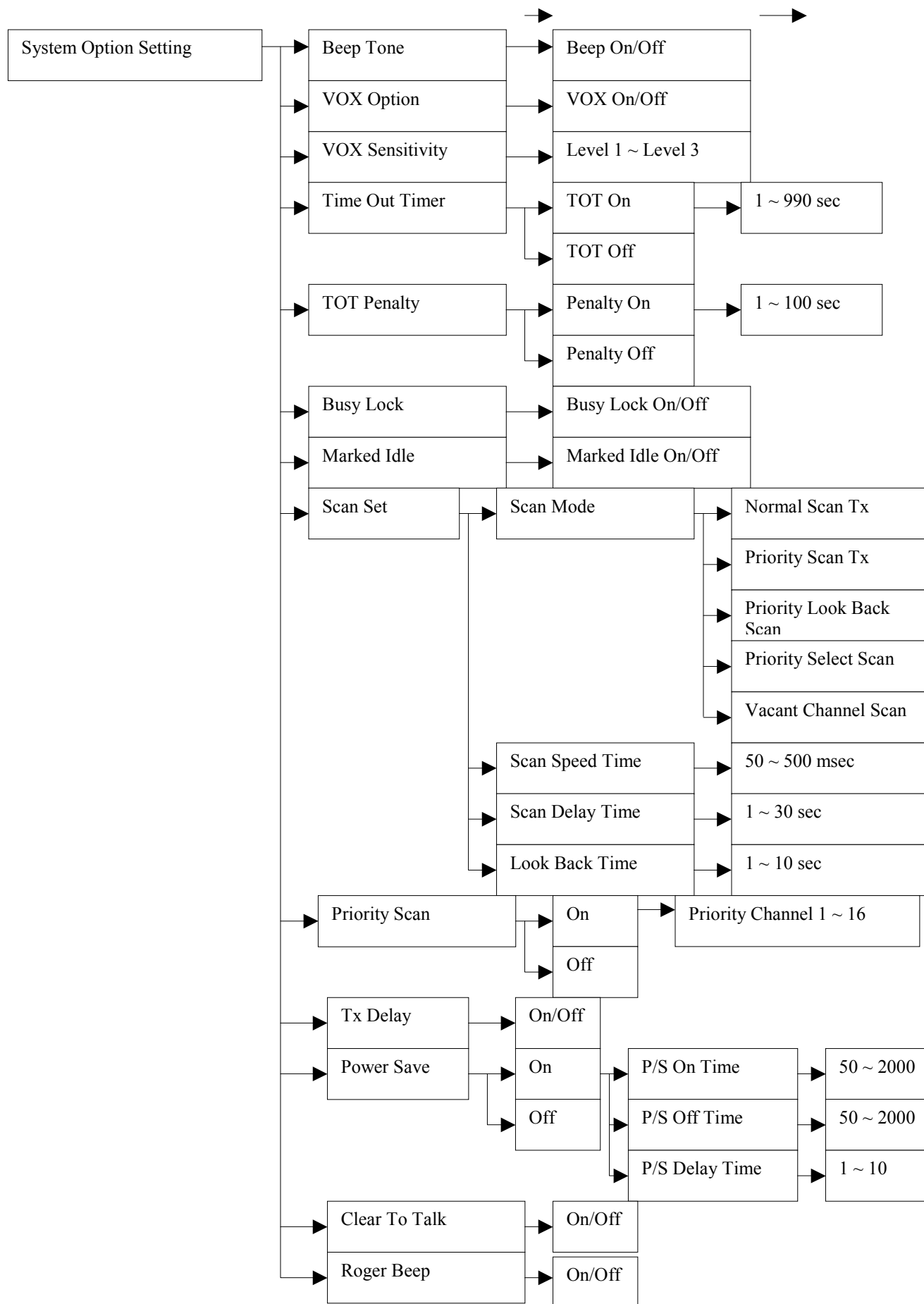
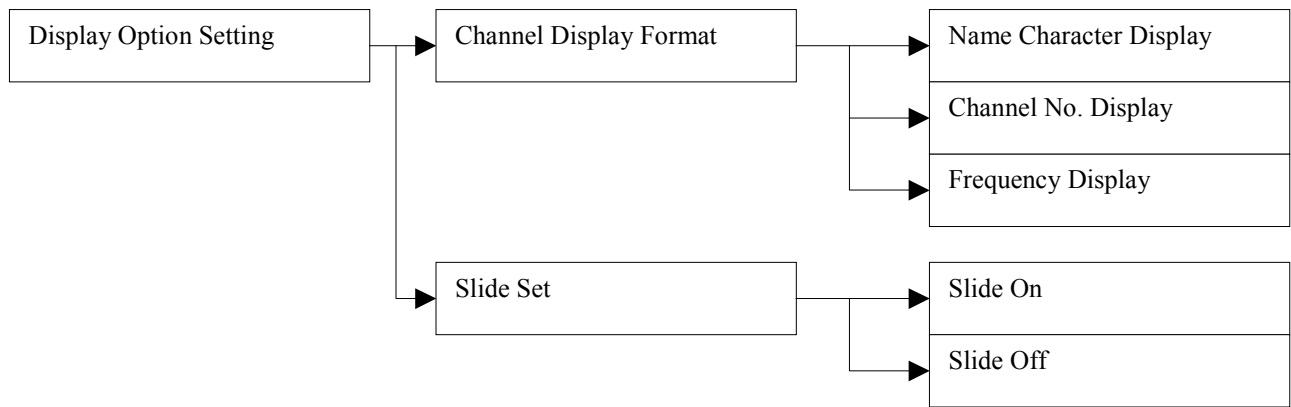


FIGURE IX-1: MENU TREE





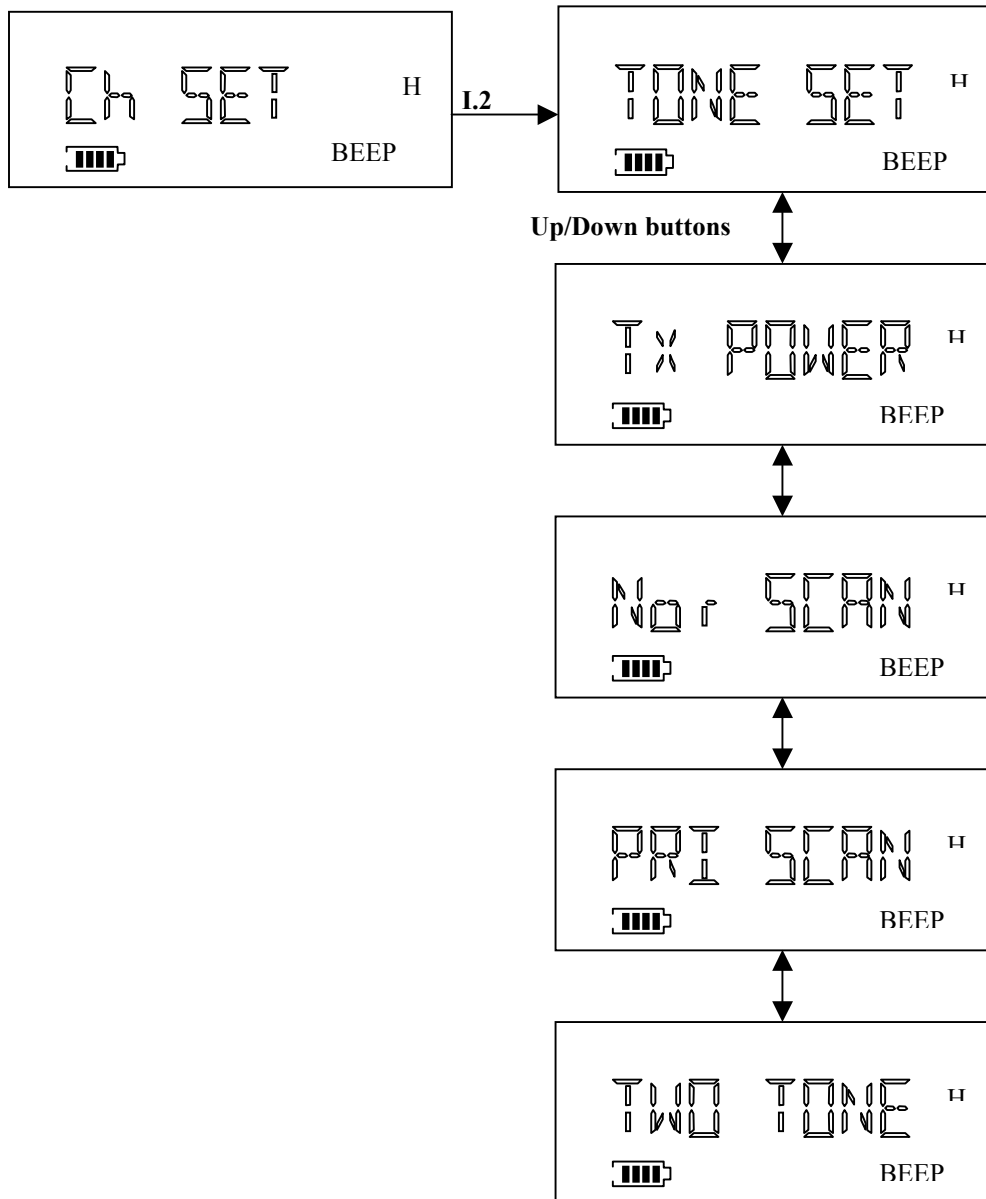


IX.6 CHANNEL OPTION, SYSTEM OPTION & DISPLAY OPTION SETTING.

- To enter Menu Setting, press and release Mode button in receive mode or stand-by mode.
- In Menu Setting, press Up/Down buttons to move in an up or down direction in the current menu display setting.
- To enter the Sub-menu of Setting Menu, press mode button, press Up/Down buttons to move in an up or down direction in the displayed Sub-menu setting. To turn on or off a Sub-menu setting press and release the mode button. The radio will save the setting and exit to receiving standby mode.
- If PTT button is pressed, the radio exits to receiving standby mode.
- If Monitor button is pressed, the radio will return to the previous Menu setting displayed.

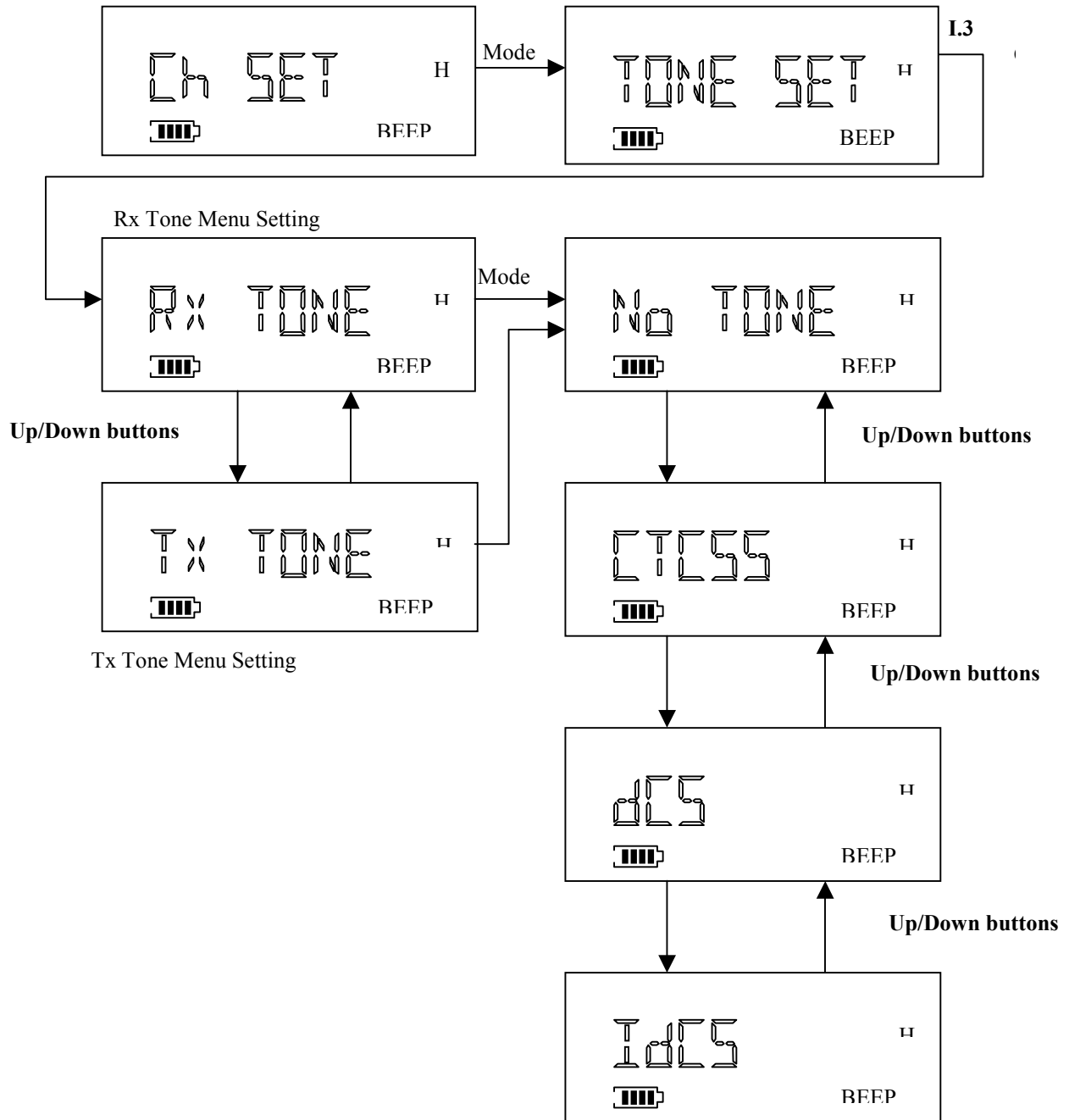
IX.7 CHANNEL OPTION SETTING

FIGURE IX-2: EACH CHANNEL MENU DISPLAY FORMAT

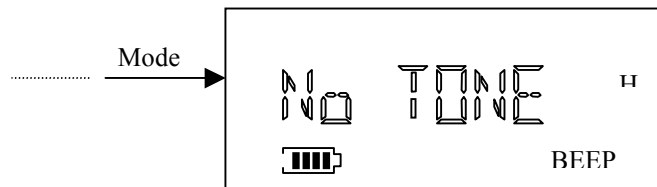


IX.8 RX/TX TONE OPTION SETTING

Each Channel Option Menu Setting

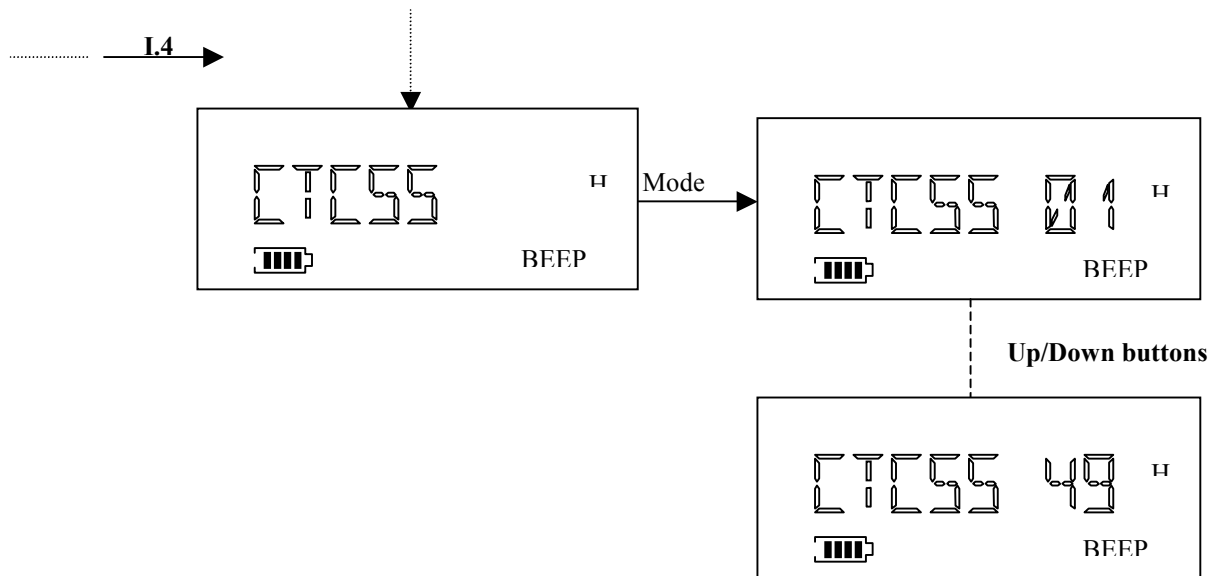


IX.9 NO TONE SELECT



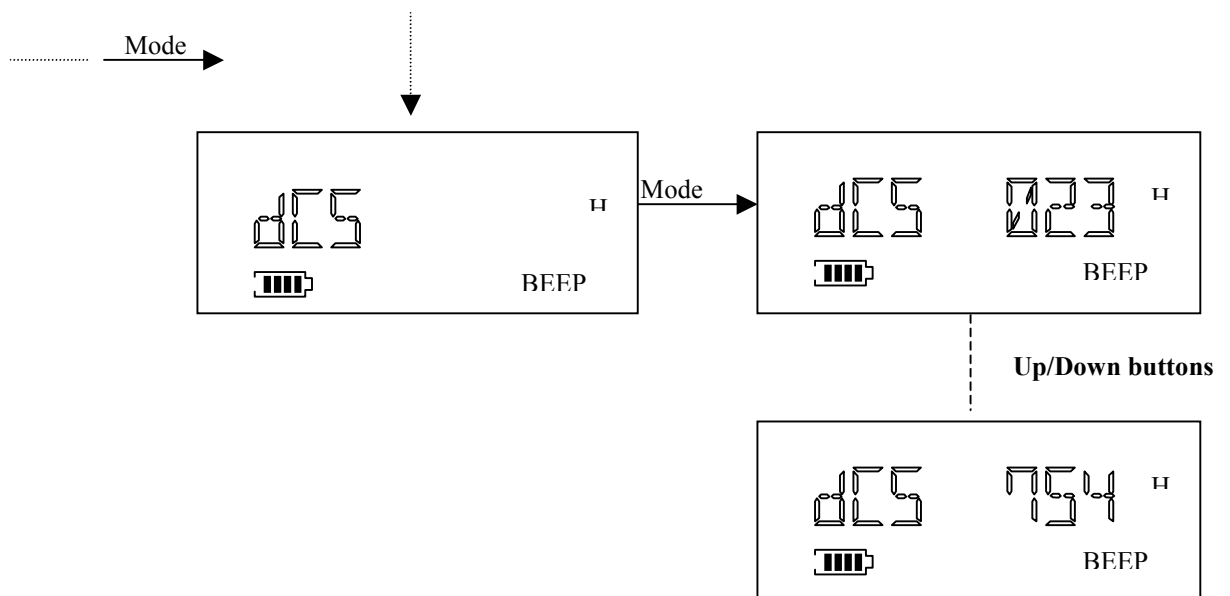
Under the above, if MODE button or PTT Button is pressed, it sets No tone for RX or TX Tone option and Exits to receiving stand-by mode.

IX.10 CTCSS TONE SELECT



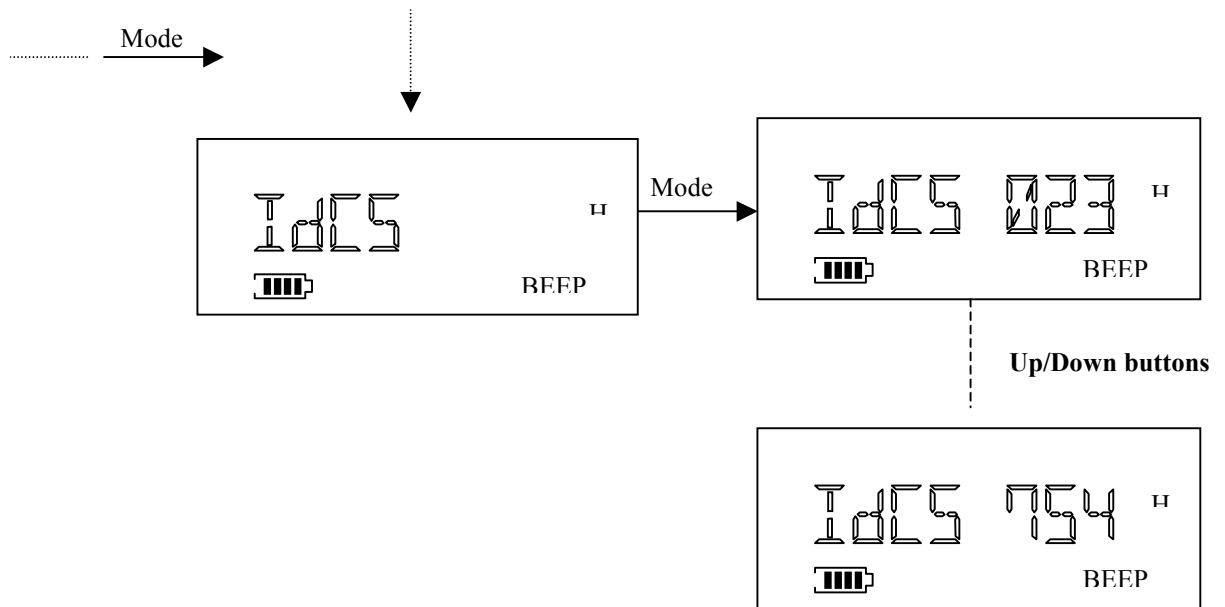
Under the above mode, press Up/Down buttons to select desired CTCSS Tone and then press Mode button or PTT button to set RX or TX tone option. The radio will then save selection and exit to receiving stand-by mode.

IX.11 DCS TONE SELECT



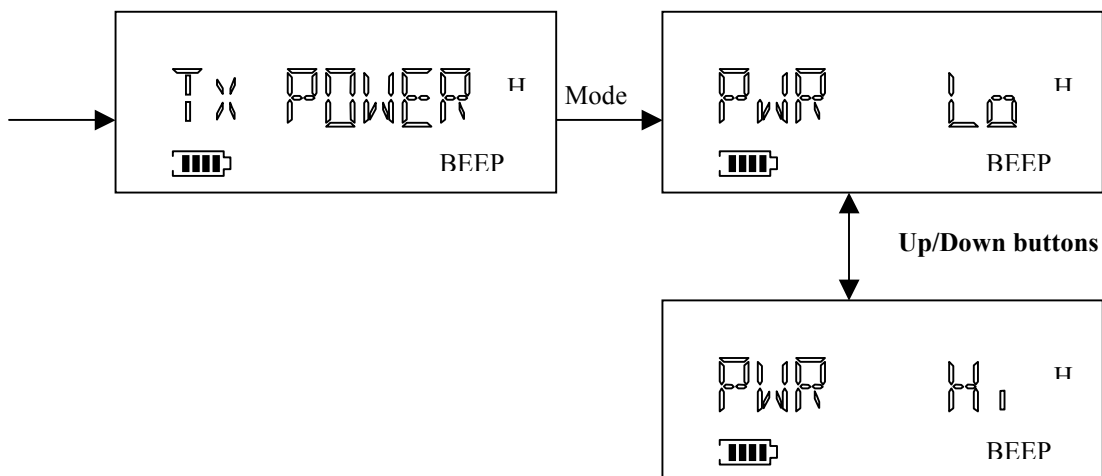
Under the above mode, press Up/Down buttons to select desired DCS Tone and then press Mode button or PTT button to set RX or TX tone option. The radio will then save selection and exit to receiving stand-by mode.

IX.12 INVERT DCS TONE SELECT



Under the above mode, press Up/Down buttons to select desired DCS Tone and then press Mode button or PTT button to set RX or TX tone option. The radio will then save selection and exit to receiving stand-by mode.

IX.13 TX OUTPUT POWER HIGH/LOW SETTING

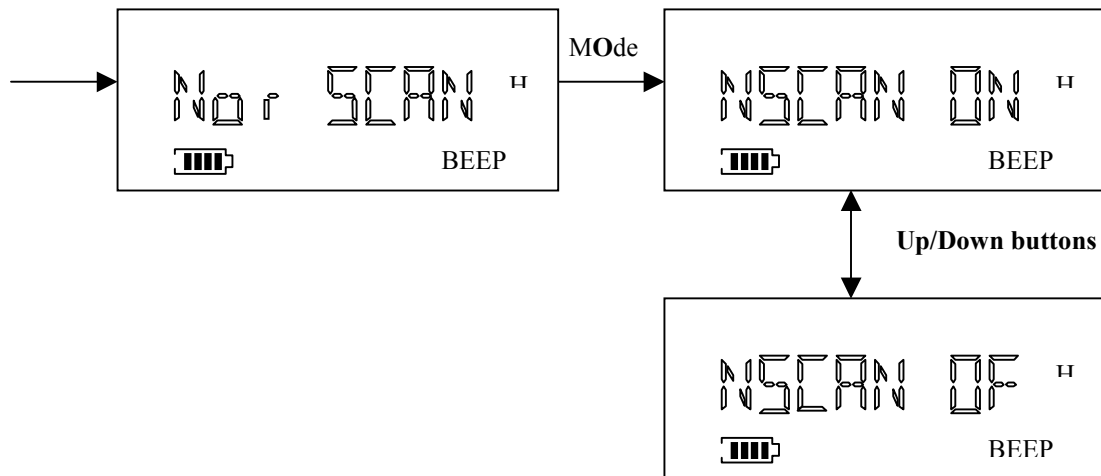


Under the above mode, press Up/Down buttons to select desired Output Power and then press Mode button

Or

PTT button to set the output power to 1W or 5W for the current channel. The radio will then save selection and exit to receiving stand-by mode.

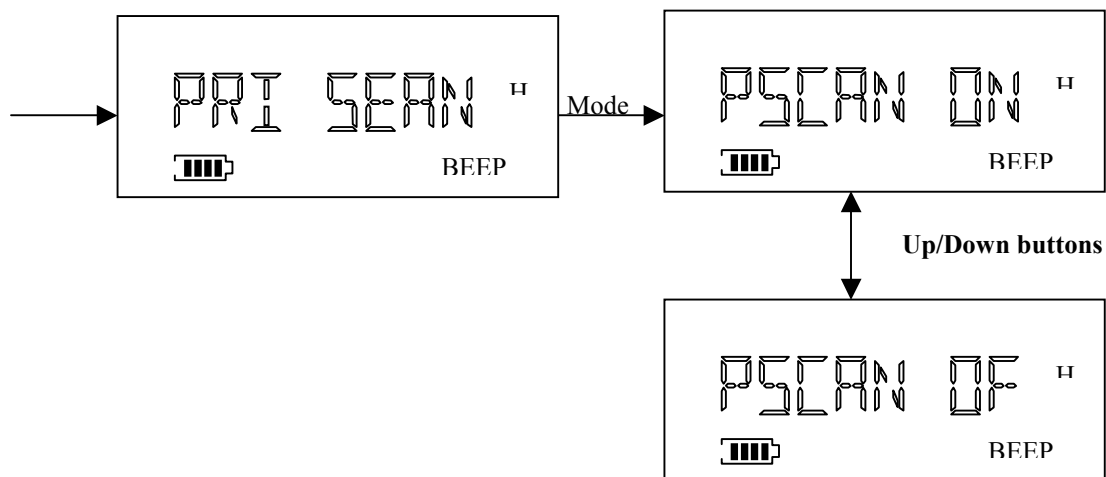
IX.14 NORMAL SCAN LIST ON/OFF SETTING



Under the above mode, press Up/Down buttons to select On or Off and then press Mode buttons or PTT button to set the scan option On or Off for the current channel. The radio will then save selection and exit to receiving standby mode.

During SCAN the radio scans only channels, which are set "On".

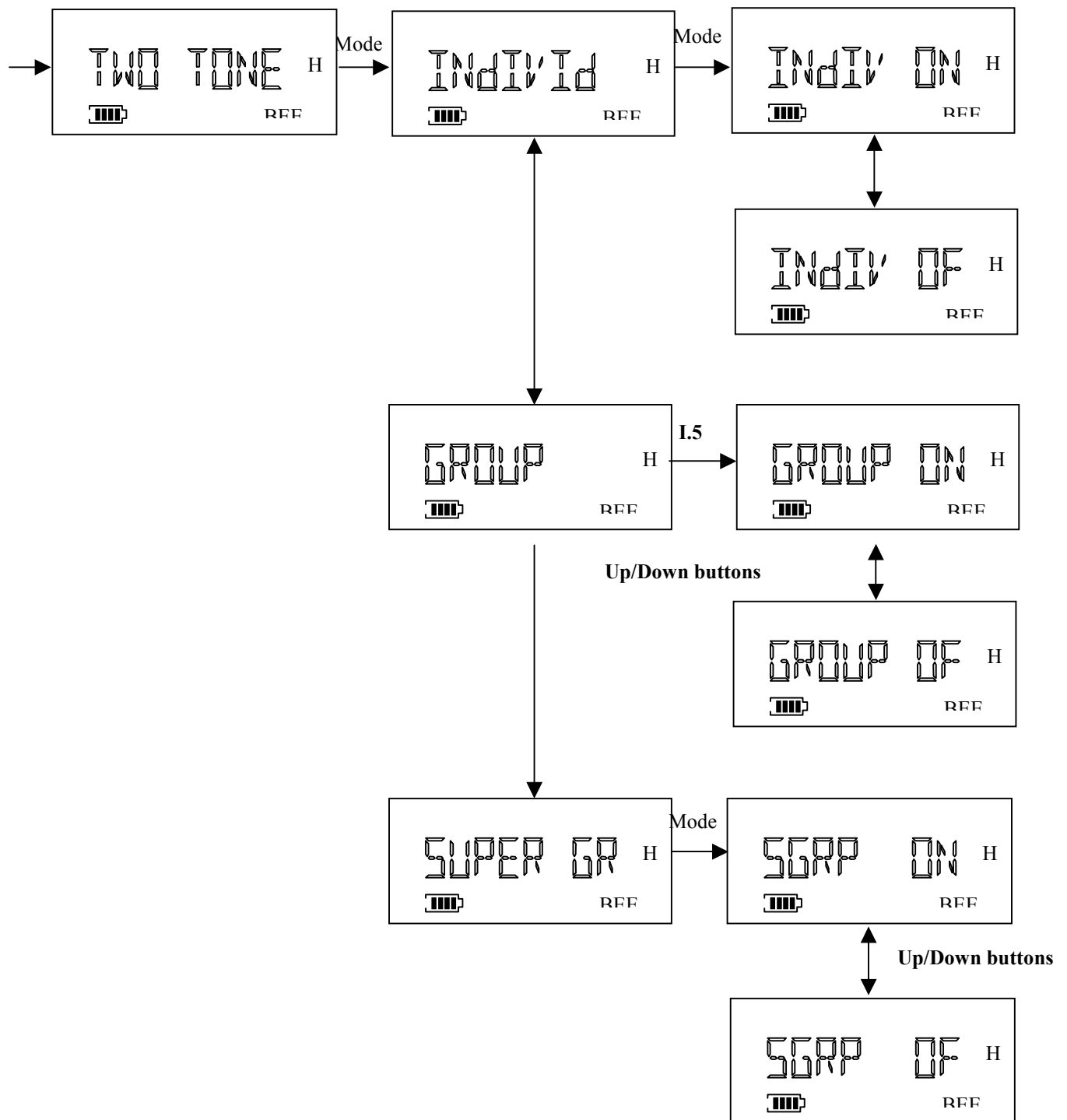
IX.15 PRIORITY SCAN LIST ON/OFF SETTING



Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set the priority scan option On or Off for the current channel.

** If Priority Scan option of "System Option" menu is on, Priority scan works only when the channel selector is positioned to the channel with "PSCAN ON".

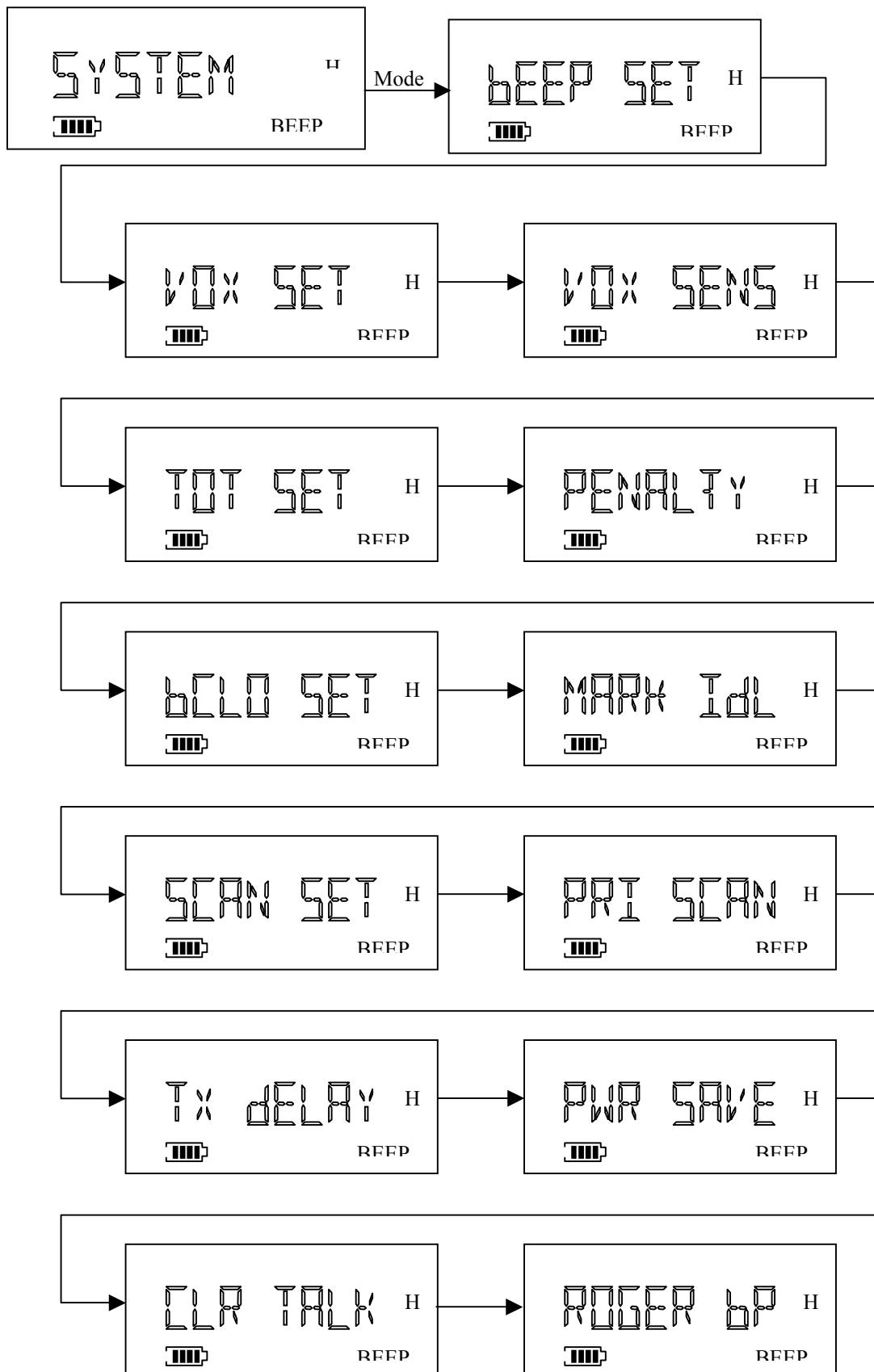
IX.16 TWO-TONE OPTION SETTING



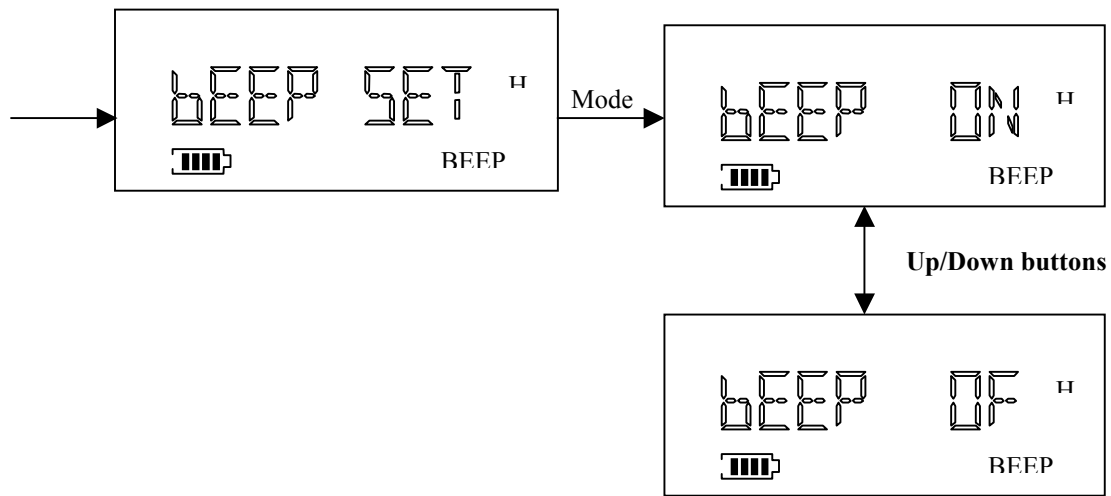
Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set 2-Tone Option (Individual, Group, Super-Group) On or Off for the current channel. The radio will then save selection and exit to receiving stand-by mode.

** Individual, Group, Super-Group, Tone A, and Tone B frequency and timing are dealer programmed.

X SYSTEM OPTION SETTING
X.1 SYSTEM OPTION MENU DISPLAY FORMAT

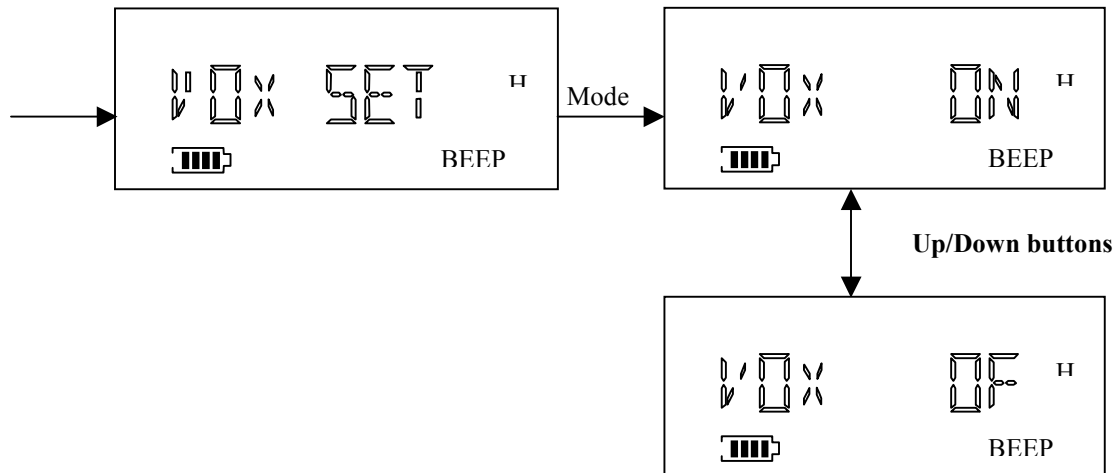


X.2 BEEP TONE ON/OFF SETTING



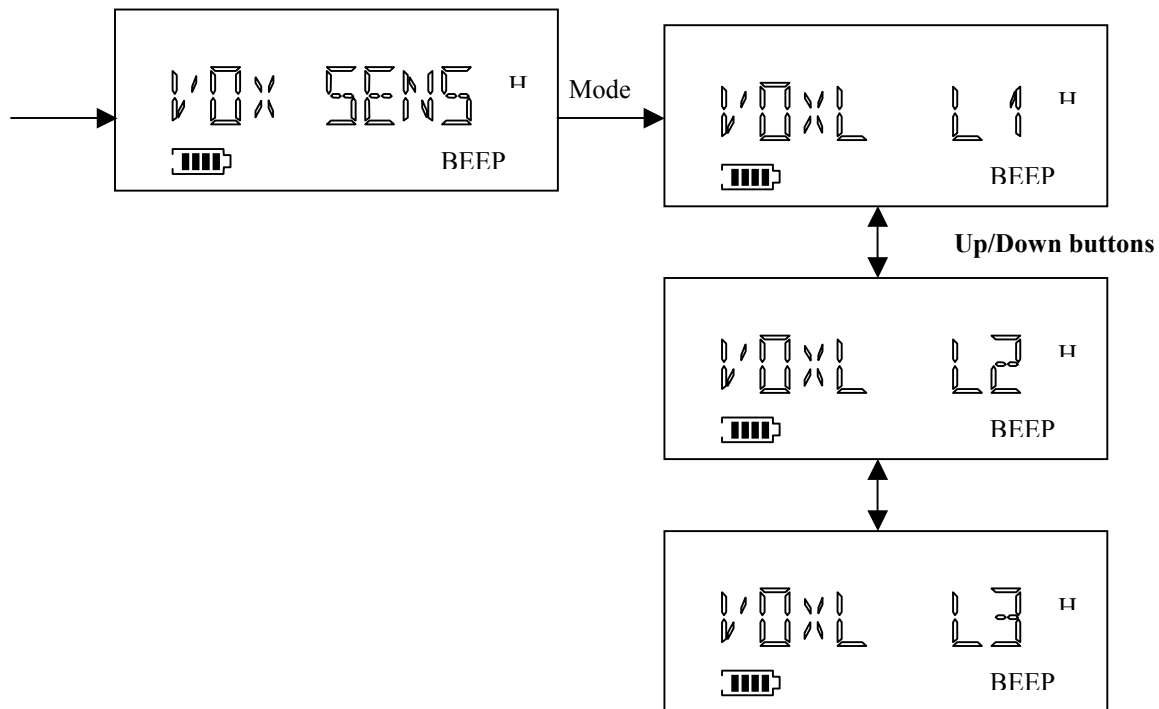
Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set Beep Tone On or Off. The radio will then save selection and exit to receiving stand-by mode.

X.3 VOX OPTION ON/OFF SETTING



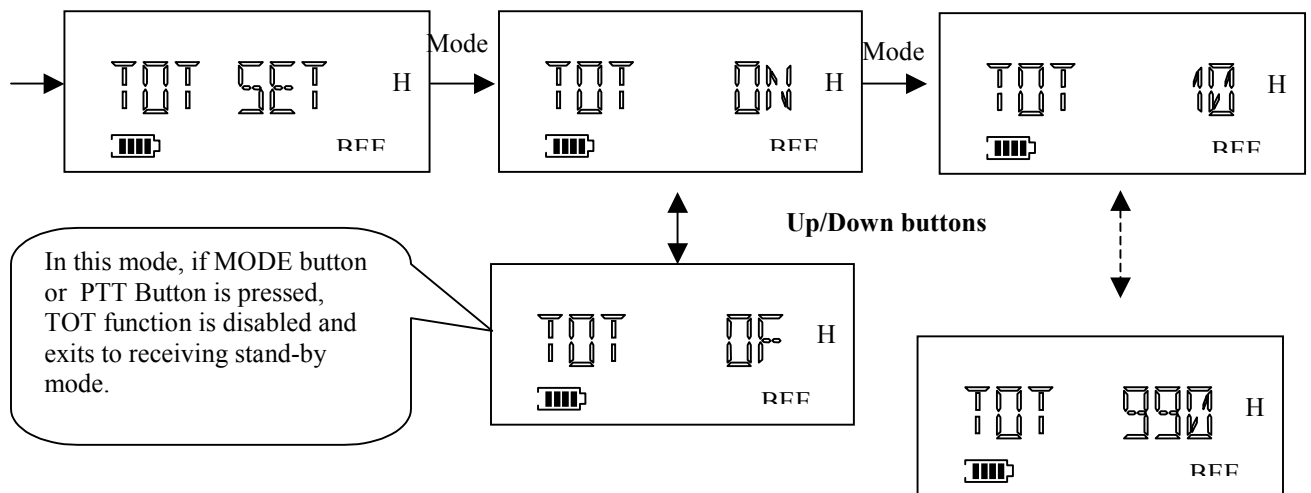
Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set VOX Option On or Off. The radio will then save selection and exit to receiving stand-by mode.

X.4 VOX SENSITIVITY SETTING



Under the above mode, press Up/Down buttons to select desired level and then press Mode button or PTT button to set VOX sensitivity level. The radio will then save selection and exit to receiving stand-by mode.

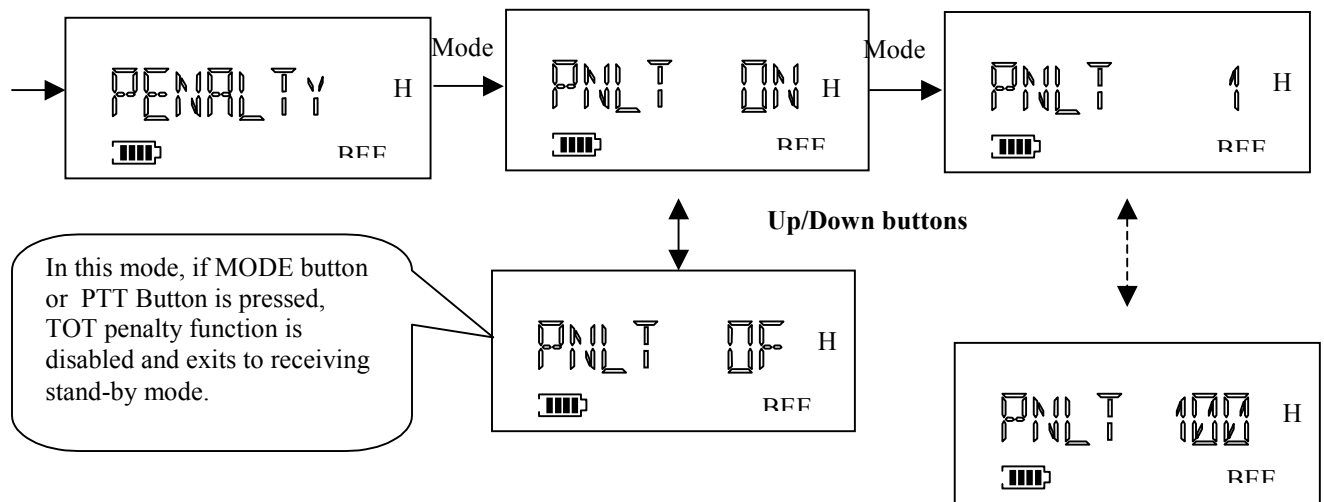
X.5 TIME-OUT-TIMER SETTING



Under the above mode, press Up/Down buttons to select desired time and then press Mode button or PTT button to set T-O-T time. The radio will then save selection and exit to receiving stand-by mode.

** T-O-T : This function inhibits TX after a set time.

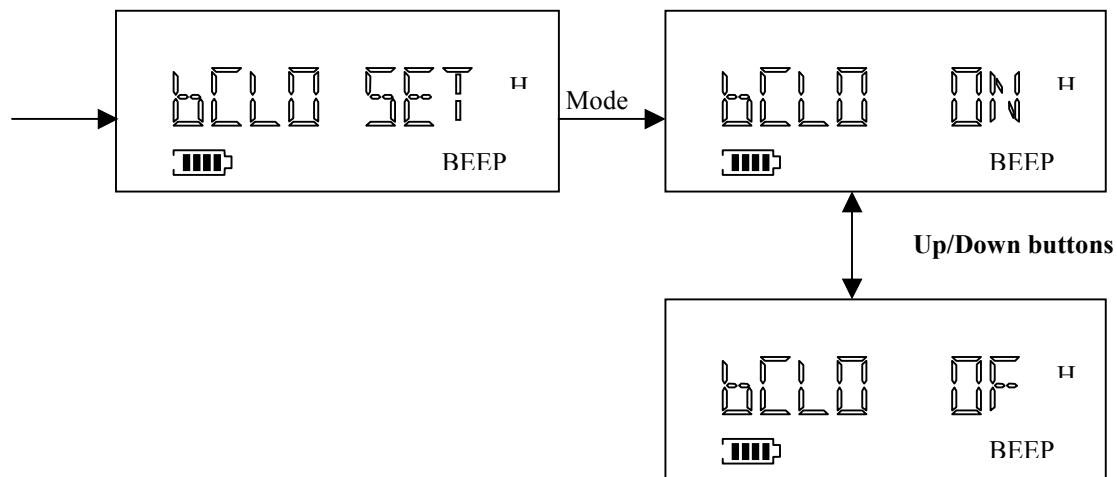
X.6 TOT PENALTY SETTING



Under the above mode, press Up/Down buttons to select desired time and then press Mode button or PTT button to set T-O-T penalty time. The radio will then save selection and exit to receiving stand-by mode.

**** TOT Penalty :** If the radio transmits over a set time, it will beep an T-O-T error tone and the radio will only receive a signal for the penalty time. (TX inhibited for this time.)

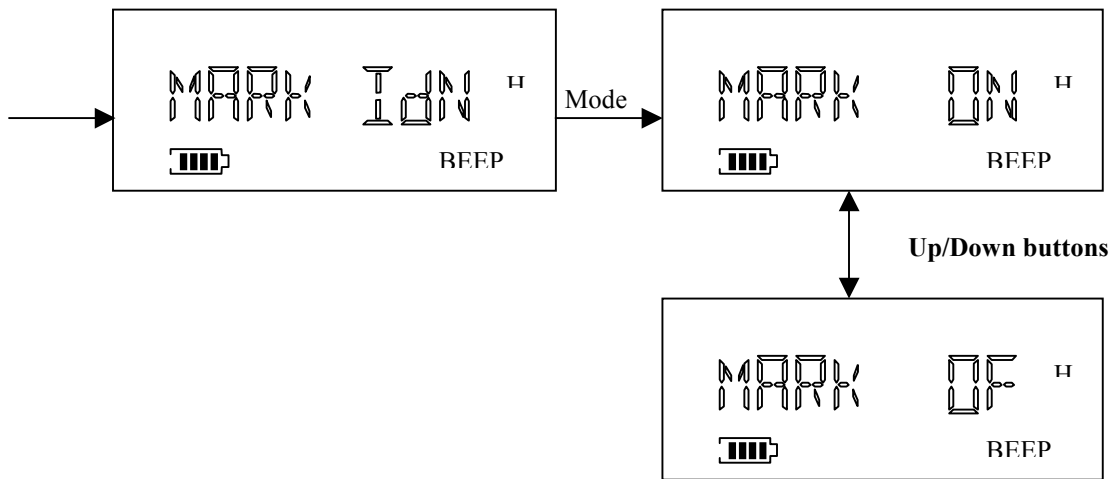
X.7 BUSY CHANNEL LOCK OUT ON/OFF SETTING



Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set Busy Channel Lock Out. The radio will then save selection and exit to receiving stand-by mode.

**** Busy Channel Lock Out :** If the channel is busy, it inhibits transmission.

X.8 MARKED IDLE OUT ON/OFF SETTING

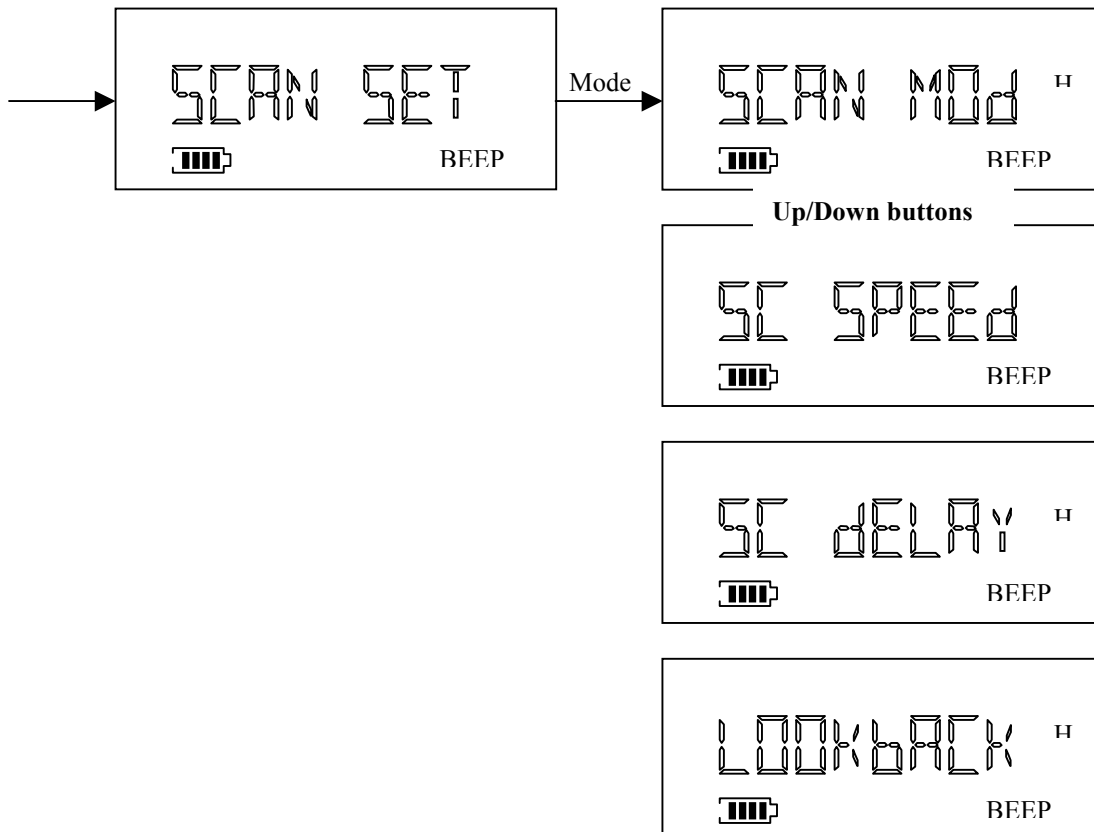


Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set Marked Idle Out. The radio will then save selection and exit to receiving stand-by mode.

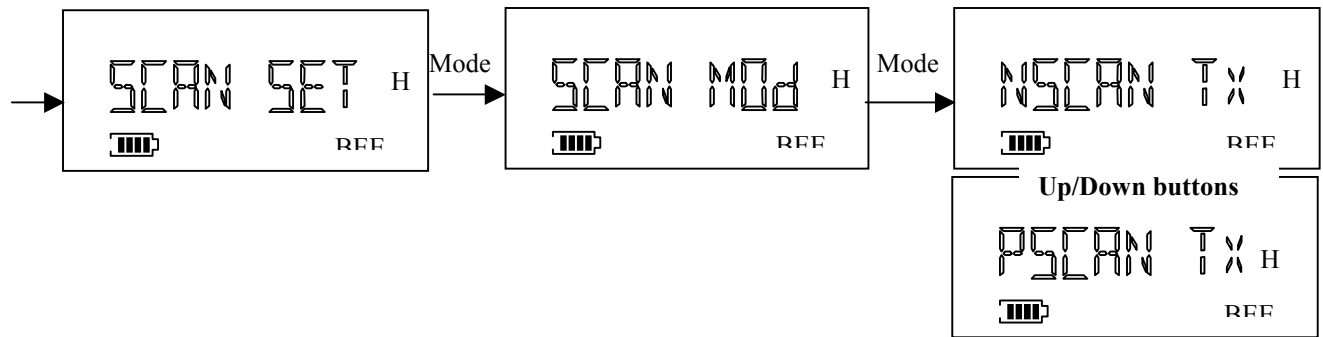
** Marked Idle : If the channel is set by Busy Lock and TX is inhibited during RX, this function allows a TX when it is CTCSS or DCS correct call.

X.9 SCAN SETTING

X.9.1 Scan Setting Menu

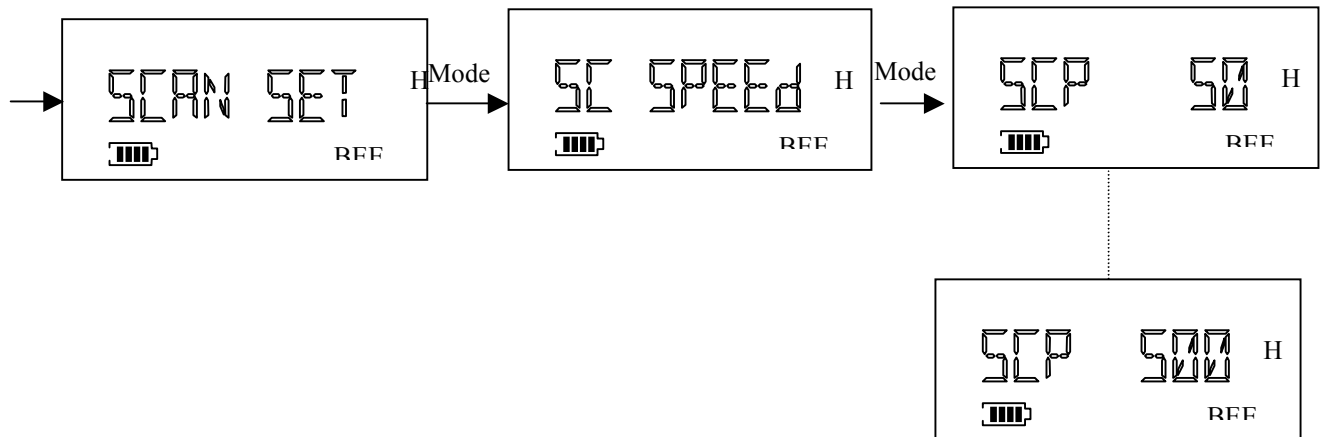


X.9.2 Scan Mode Setting



Under the above mode, press Up/Down buttons to select the desired Scan operation. Press Mode button or PTT button to set a scan mode. The radio will then save selection and exit to receiving stand-by mode.

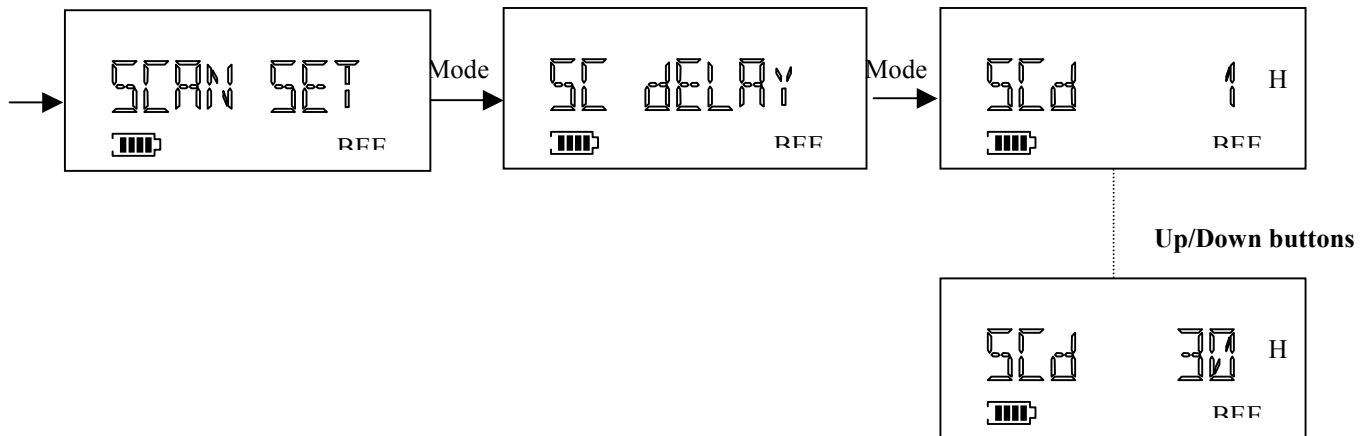
X.9.3 Scan Speed Time Setting



Under the above mode, press Up/Down buttons to select desired time and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

**** Scan Speed Time :** In SCAN, this is the time to stay on the channel before moving to another channel when there is no signal.

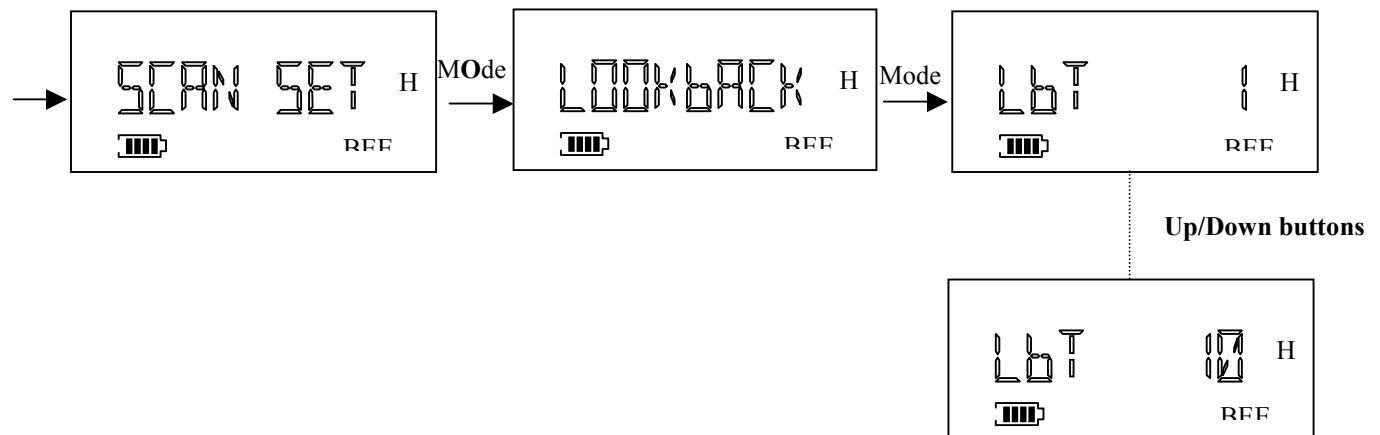
X.9.4 Scan Delay Time Setting



Under the above mode, press Up/Down buttons to select desired time and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

Scan Delay Time : In SCAN, this is the stand-by time to stay on the channel after the receiving signal stops or after transmitting.

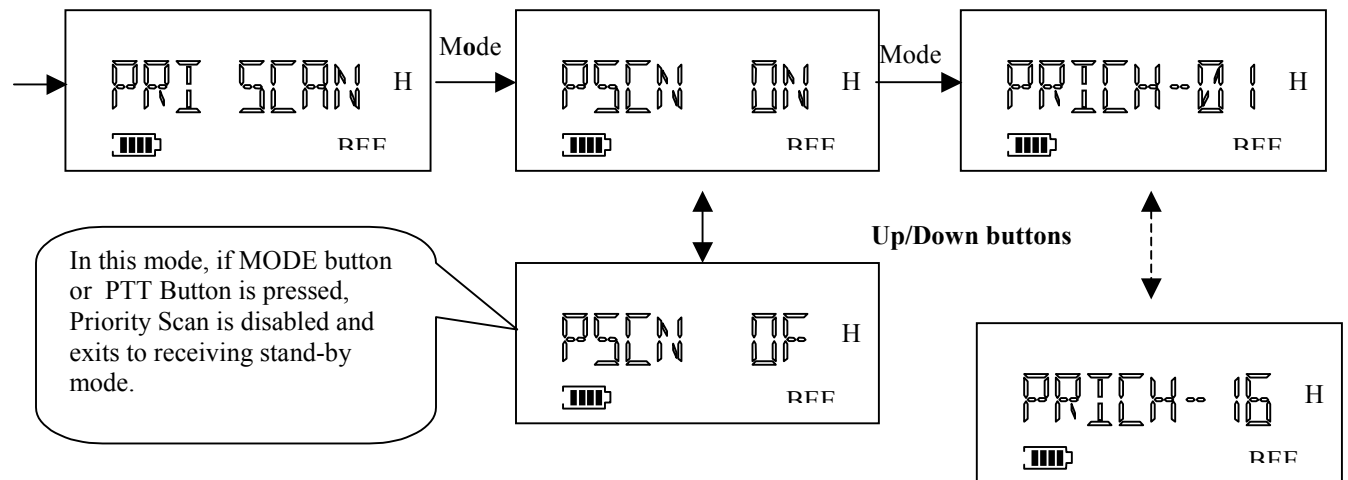
X.9.5 Look Back Time Setting



Under the above mode, press Up/Down buttons to select desired time and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

**** Look Back Time :** In Priority SCAN mode, this is the interval time to check the priority channel when the radio receives a signal on a non- priority channel.

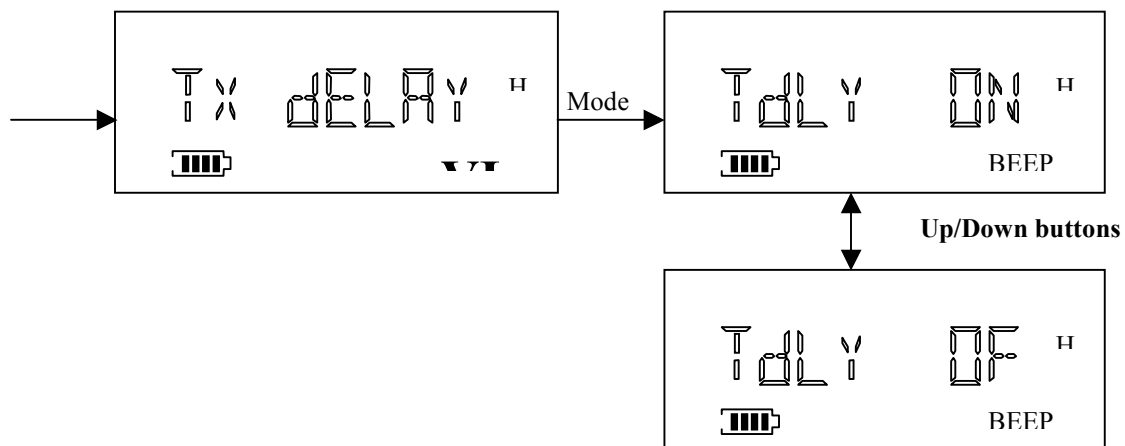
X.9.6 Priority Scan Setting



Under the above mode, press Up/Down buttons to select desired priority channel and then press Mode button or

PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

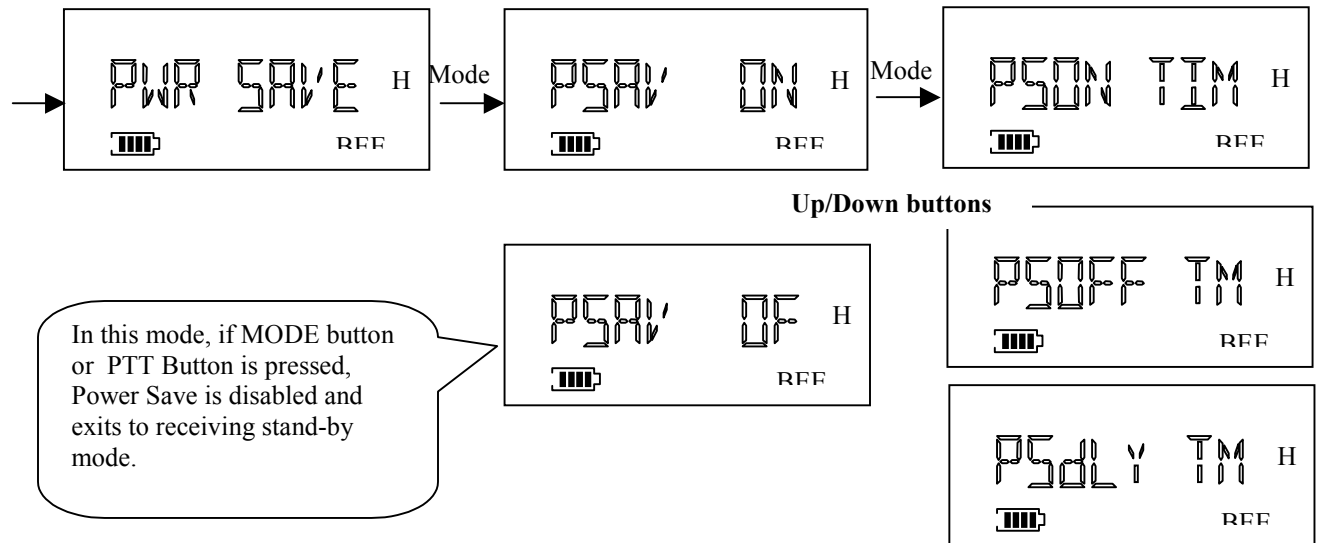
X.10 TX DELAY ON/OFF SETTING



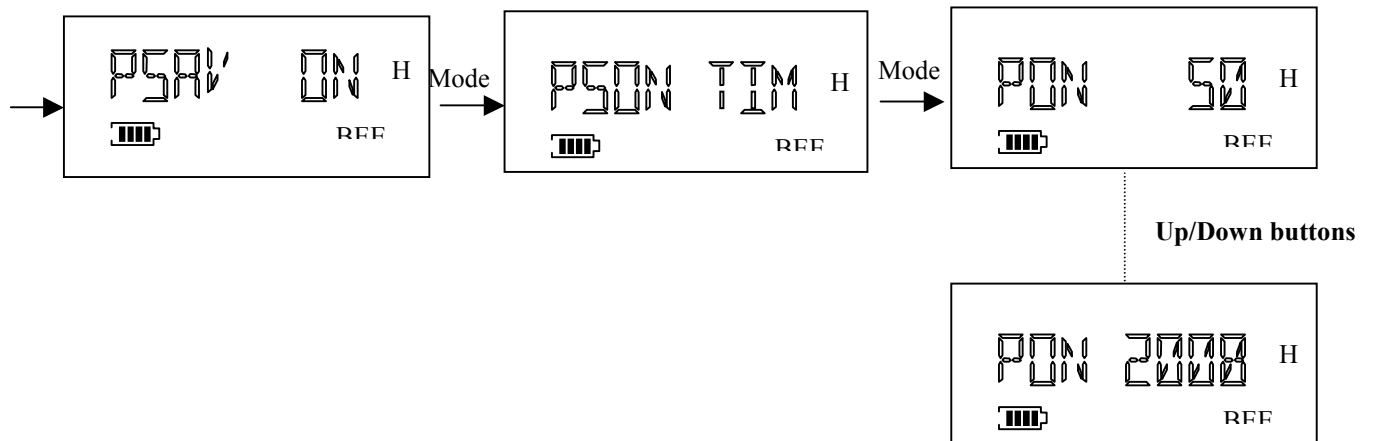
Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

** Tx Delay : This function is to remove Squelch tail of receiving Radio by creating a CTCSS Turn-Off (No Tone) during 180msec after TX is completed if TX tone option is set by CTCSS Option.

X.11 POWER SAVE SETTING



X.12 POWER SAVE ON TIME SETTING



Under the above mode, press Up/Down buttons to select the desired time and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

X.13 POWER SAVE OFF TIME SETTING



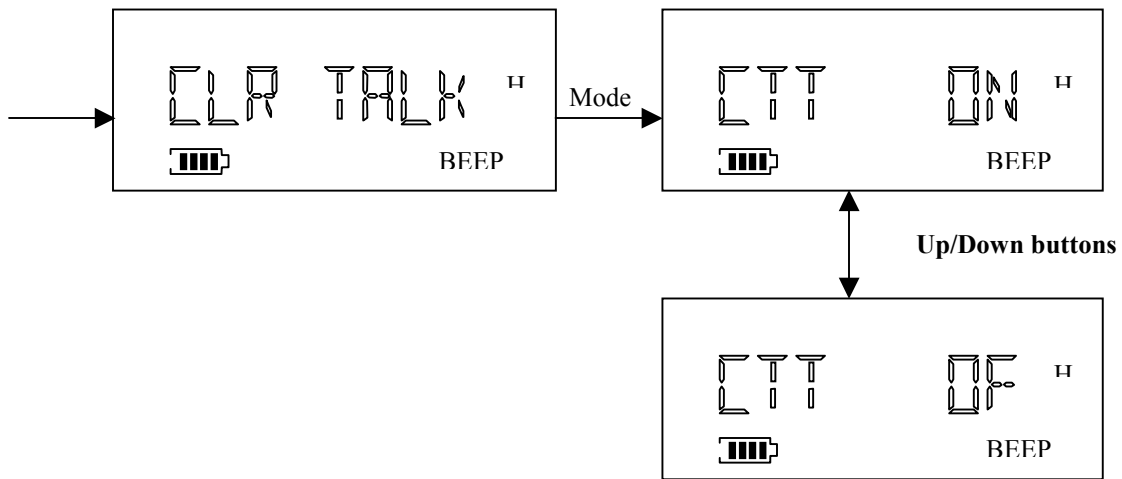
Under the above mode, press Up/Down buttons to select the desired time and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

X.14 POWER SAVE DELAY TIME SETTING



Under the above mode, press Up/Down buttons to select the desired time and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

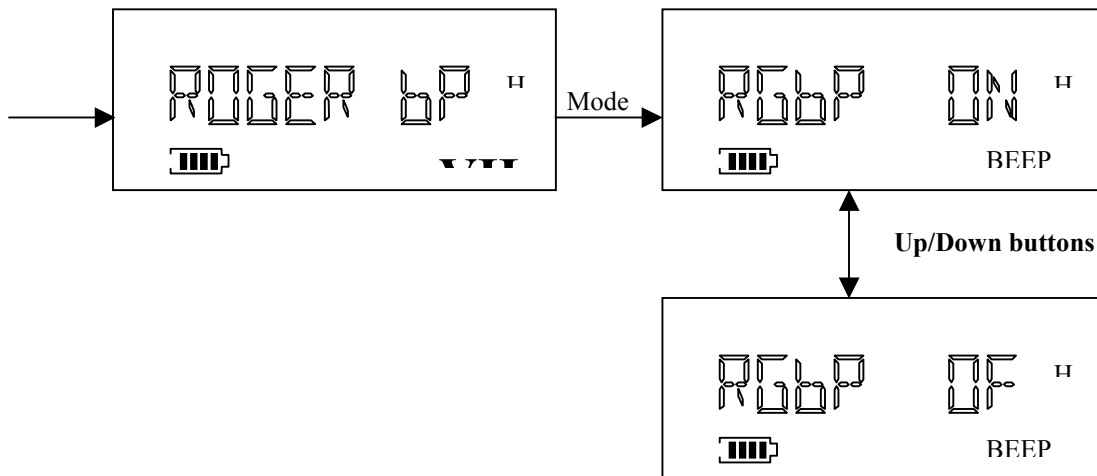
X.15 CLEAR TO TALK ON/OFF SETTING



Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

**** Clear To Talk :** This function issues a beep tone when pressing the PTT Button, letting you know speaking may begin.

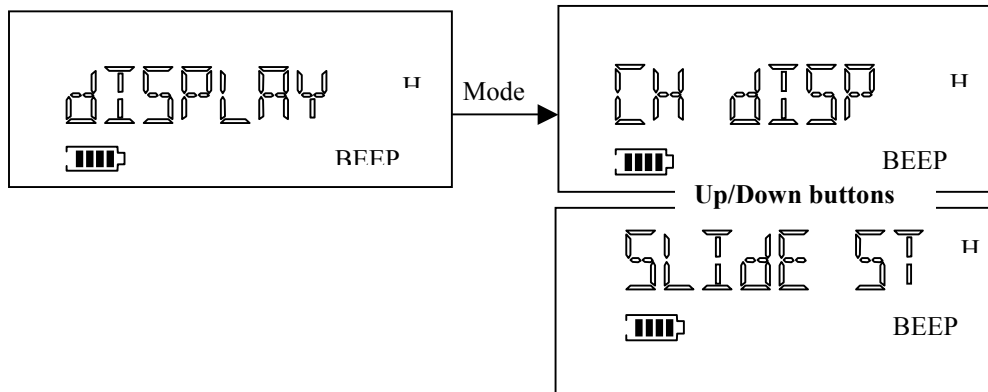
X.16 ROGER BEEP ON/OFF SETTING



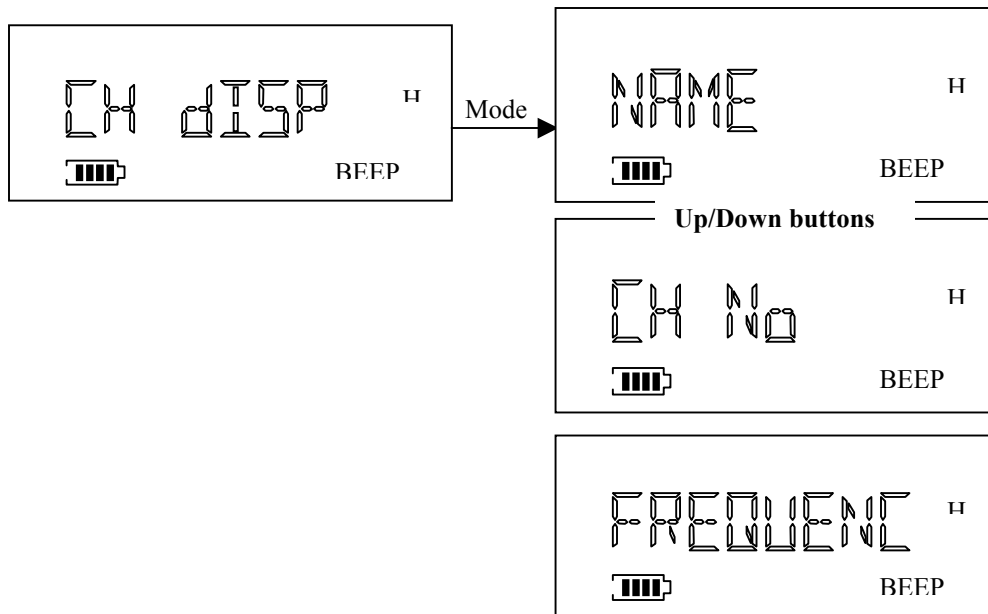
Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

**** Roger Beep :** This function issues a beep tone after TX is completed to confirm the transmission has finished.

X.17 DISPLAY OPTION SETTING

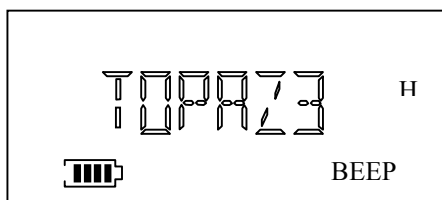


X.18 CHANNEL DISPLAY FORMAT SETTING

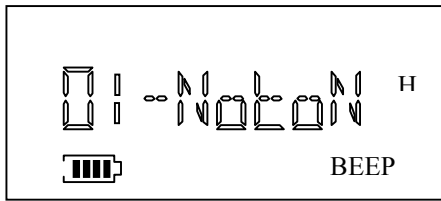


Under the above mode, press Up/Down buttons to select Display Format and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

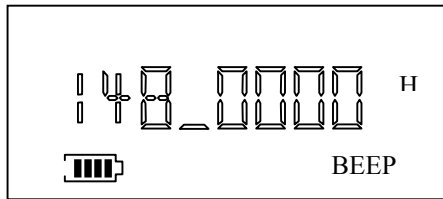
X.19 NAME DISPLAY



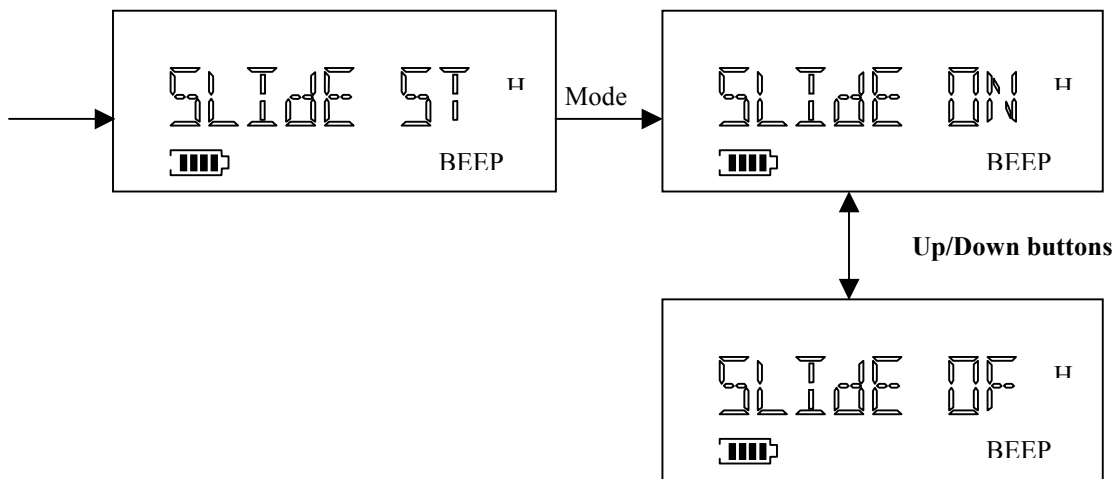
X.20 CHANNEL NO. DISPLAY



X.21 FREQUENCY DISPLAY



X.22 DISPLAY SLIDE ON/OFF SETTING



Under the above mode, press Up/Down buttons to select On or Off and then press Mode button or PTT button to set. The radio will then save selection and exit to receiving stand-by mode.

**** Display Slide :** If the radio is not in TX or RX and no button is pressed and time passes over 1 min, a slide message programmed by your dealer scrolls.

XI LICENSING, SAFETY AND SERVICE INFORMATION

FCC Licensing

The Federal Communications Commission requires the operator of this radio be properly licensed under the applicable Part and / or Parts of the FCC Rules and Regulations.

Consult with an authorized Topaz3 / Legacy radio communications Dealer, or contact the nearest FCC Field Office for information about obtaining a license.

Safety Information

- WARNING -** DO NOT hold the radio in such a manner that the antenna is next to, or touching, exposed parts of the body, especially the face or eyes, while transmitting.
- WARNING -** DO NOT allow children to operate transmitter-equipped radio equipment.
- CAUTION -** DO NOT operate the radio near unshielded electrical blasting caps or in an explosive atmosphere, unless it is a type especially designed and qualified for such use.
- CAUTION -** DO NOT press and hold the transmit bar (P-T-T) when not actually wishing to transmit.

Service

DO NOT tamper with internal radio adjustments - damage to the equipment and / or improper operation may result. There are no serviceable items inside the radio. It is recommended that you return the radio to a qualified Topaz3 / Legacy radio communications Dealer for any service or repairs.

XII MAINTENANCE

Your Legacy radio is designed to be maintenance-free, and can be kept in good working condition by:

- Cleaning all external surfaces with a clean cloth, dampened in a mild solution of dishwasher and detergent diluted in water. Apply the solution sparingly to avoid any moisture leaking into cracks or crevices - NEVER submerge the radio. Use a non-metallic brush if needed to dislodge stubborn particles. Dry the radio surface thoroughly with a soft, lint-free cloth.
- DO NOT use solvents or spirits for cleaning - they may permanently damage the radio.
- Clean the battery and accessory jack contacts with a lint-free cloth to remove dirt, grease or foreign materials.

XIII SOFTWARE COPYRIGHTS

The Topaz3 / Legacy products described in these operating instructions may include copyrighted Topaz3 / Legacy software programs stored in semi-conductor memories or other media. Laws in the United States and other countries preserve for Topaz3 / Legacy certain exclusive rights for copyrighted software programs, including the exclusive right to copy or reproduce in any form the copyrighted software program.

Accordingly, the copyrighted Topaz3 / Legacy software programs contained in the Topaz3 / Legacy product(s) described in this operating instruction manual may not be copied or reproduced without the express written permission of Topaz3, LLC.

Furthermore, the purchase of Topaz3 / Legacy products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Topaz3, LLC, except for normal non-exclusive, royalty-free license to use that arises by operation of law in the sale of a product.

XIV TOPAZ3 / LEGACY PRODUCT WARRANTY

Topaz3, LLC (hereinafter, "Topaz3") warrants that the Products and included accessories sold herein will be free from defects in workmanship or materials under normal use and service for a period of two (2) years (one year for accessories) from the date of purchase by the original end user, provided that the buyer has complied with the requirements stated herein. This warranty is offered to the initial end user and is not assignable or transferable. Topaz3 is not responsible for any ancillary equipment which is attached to or used in conjunction with Topaz3 / Legacy products.

If the Product fails to function under normal use because of manufacturing defect(s) or workmanship during the two (2) years period following the date of purchase, it will be replaced or repaired at Topaz3's option at no charge when returned to the place of purchase. The defective unit must be accompanied by proof of the date of purchase in the form of a sales receipt.

The sole obligation of Topaz3 hereunder shall be to replace or repair the Product covered in this Warranty. Replacement, at Topaz3's option, may include a similar or higher-featured product. Repair may include the replacement of parts or boards with functionally equivalent reconditioned or new parts or boards. Replaced parts, accessories, batteries, or boards are warranted for the balance of the original time period. All replaced parts, accessories, batteries or boards become the property of Topaz3.

Topaz3 shall have no obligation to make repairs or to cause replacement required through normal wear and tear or necessitated in whole or in part by catastrophe, fault or negligence of the user, improper or unauthorized alterations or repairs to the Product, use of the Product in a manner for which it was not designed, or by causes external to the Product. This warranty is void if the serial number is altered, defaced or removed.

The user is responsible for the payment of any charges or expenses incurred for the removal of the defective product from the vehicle or site of its use, for the transportation of the product to the place of repair, for the return of the repaired / replaced product to the site of its use and for the reinstallation of the product.

THE EXPRESS WARRANTIES CONTAINED HEREIN ARE IN LIEU OF ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

FOR ANY PRODUCT WHICH DOES NOT COMPLY WITH THE WARRANTY SPECIFIED, THE SOLE REMEDY WILL BE REPAIR OR REPLACEMENT. IN NO EVENT WILL TOPAZ3 BE LIABLE TO THE BUYER OR ITS CUSTOMERS FOR ANY DAMAGES, INCLUDING ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, OR FOR THE LOSS OF PROFIT, REVENUE OR DATA ARISING OUT OF THE USE OF OR THE INABILITY TO USE THE PRODUCT.

This warranty is void for sales and deliveries outside of the U. S. A.

**Topaz3, LLC
10828 NW Air World Drive
Kansas City, Missouri 64153
www.topaz3.com
Toll free: 800-821-7848
Phone: 816-891-6320 • Fax: 816-891-8815**

Maxon is a registered tradename of Maxon America, Inc.

Printed in Korea

P/N: 680-090-xxxx