

SHIFT

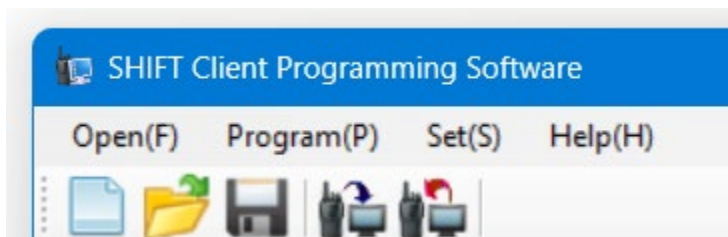
SHIFT Programming Instructions

1. Make sure that programming cable is working, well connected and with matched cable driver installed before programming.
2. Make sure that radio is powered on.
3. Run SHIFT programming software:

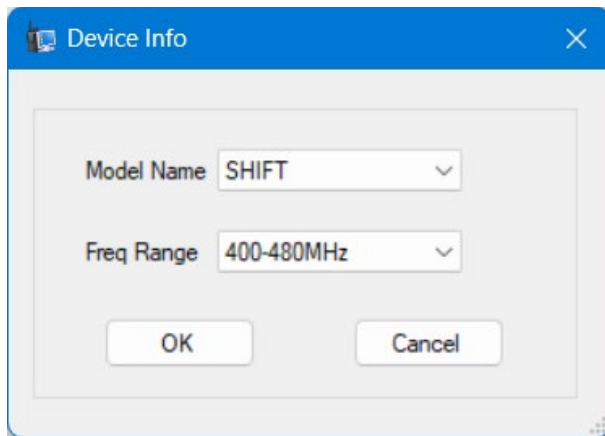


SHIFT CPS V2.2.6

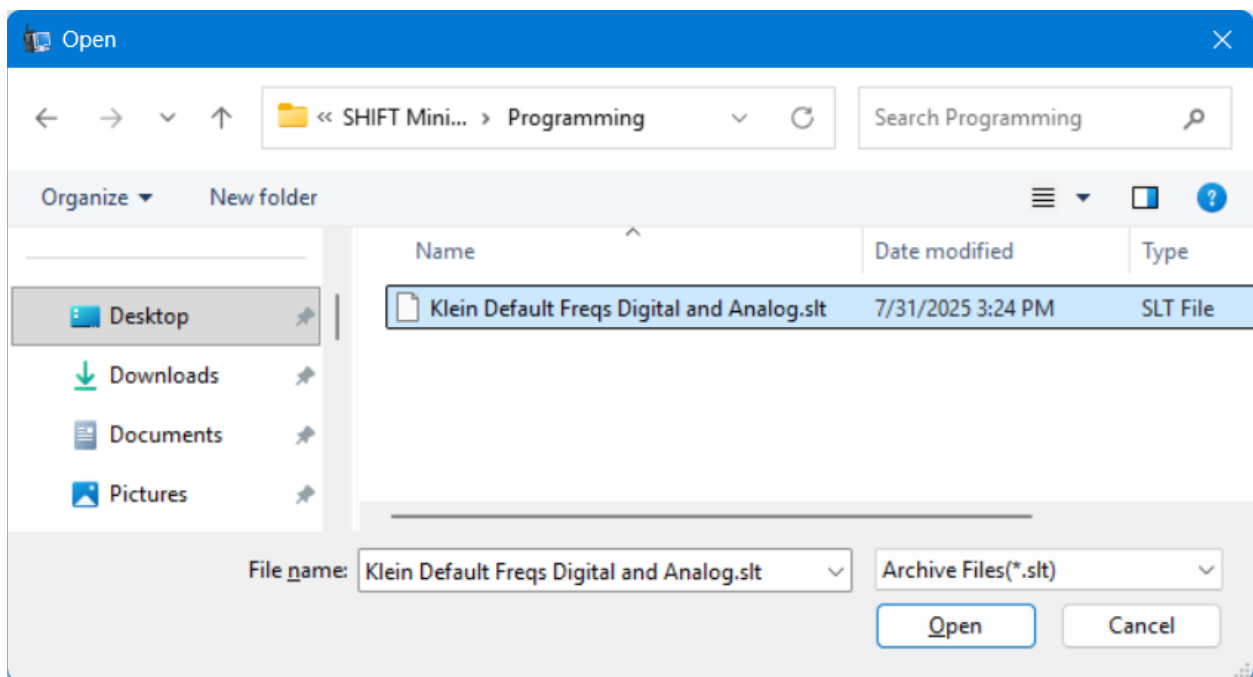
Software Interface



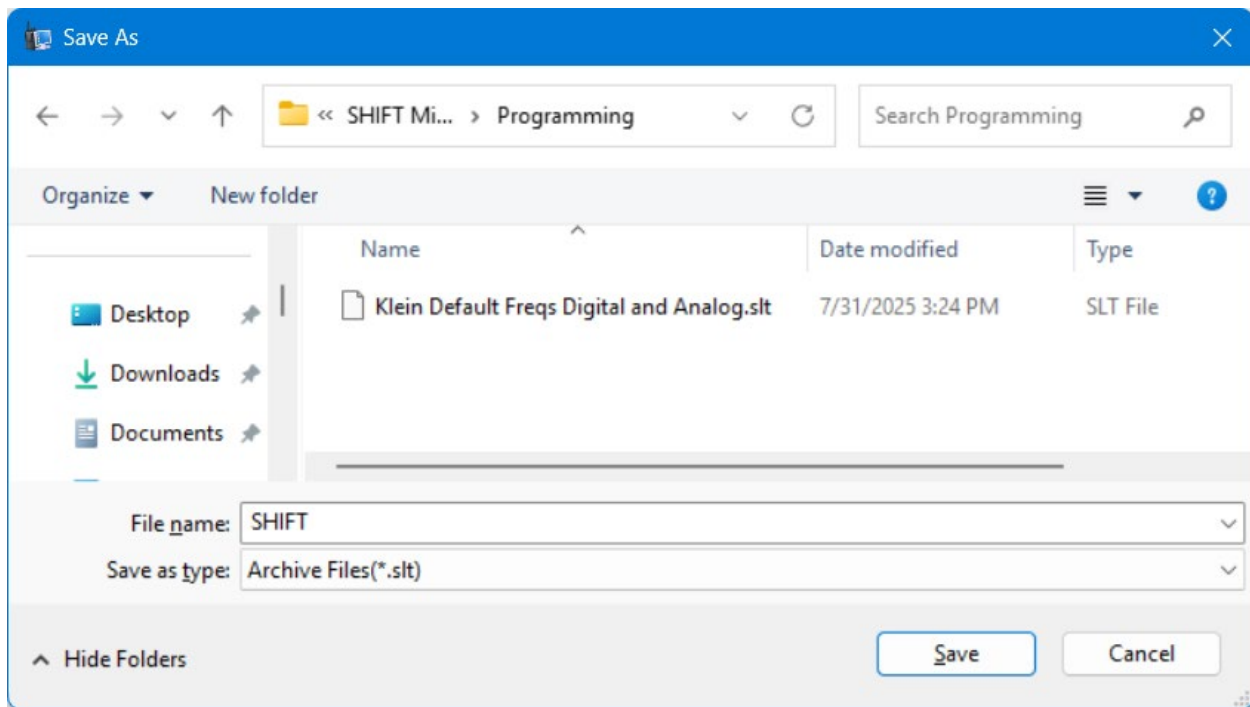
New: when clicking this option, you will see the window below, select the model and frequency range and press “OK” to confirm. Then user is able to input with required frequency, related parameter and setting to create a new data file for radio programming.



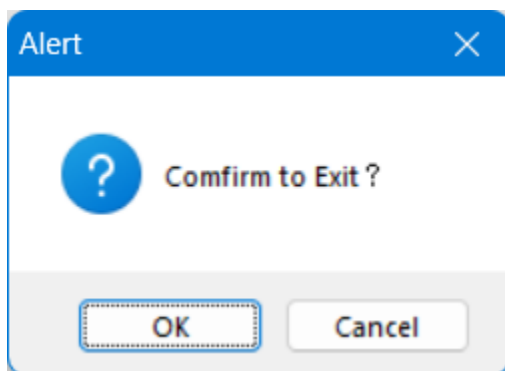
Open: when clicking this option, you will see this window below, select your previously saved file, then press “Open” to open the data in the software.



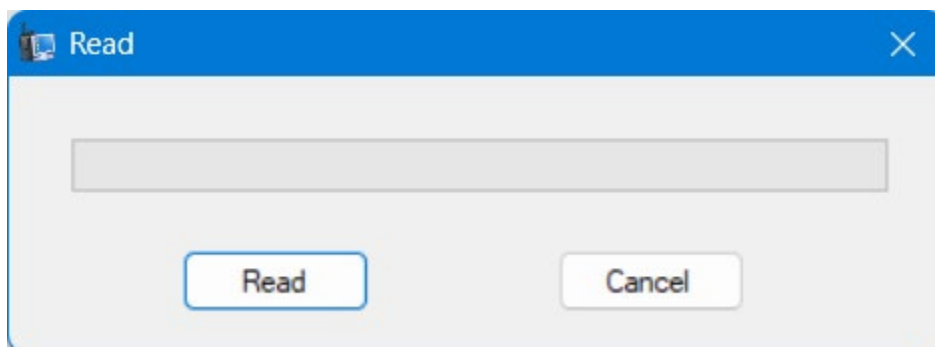
Save: when clicking this option, you will see this window below, you can select the folder you want to save the file in and then press “Save”.



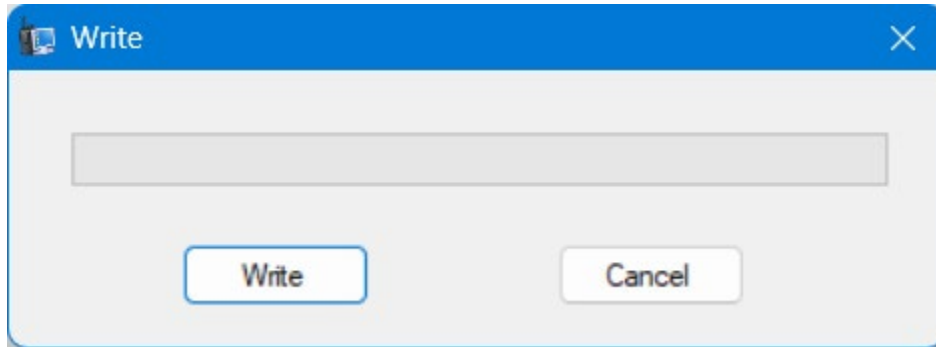
Exit: when quitting the software, you will see this window below, “Confirm” to exit the software, “Cancel” to keep the programming software open.



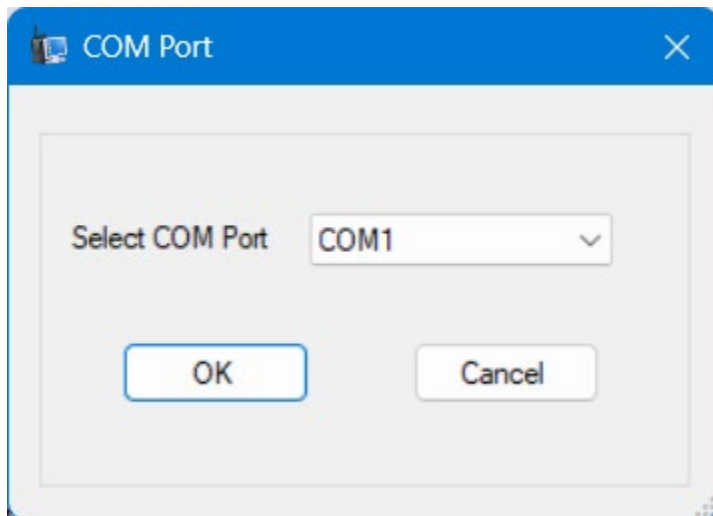
Read (Ctrl +R): when pressing the “Read” button, the window below will appear, click “Read” to read the data from the radio.



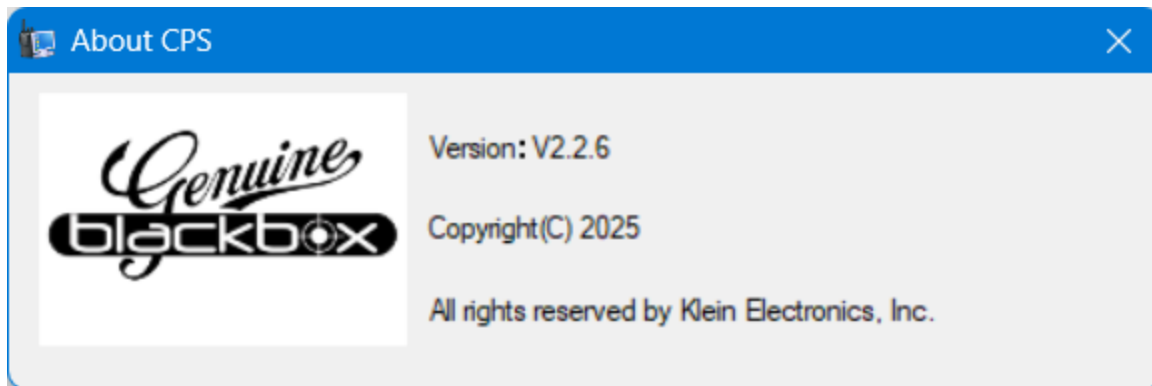
Write (Ctrl +W): when pressing the “Write” button, the window below will appear, click “Write” to write the data to the radio.



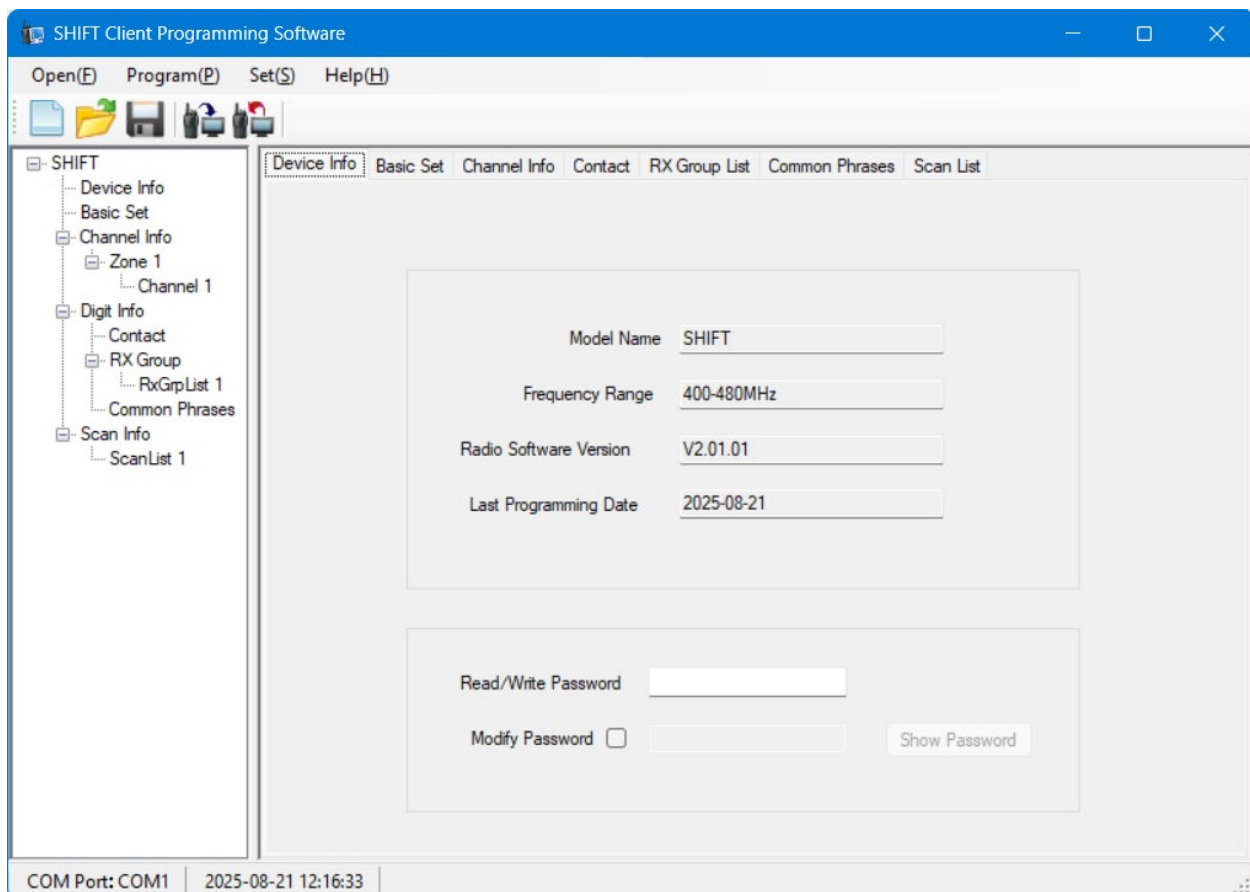
Set Com Port: when pressing the “Com Port” button, the window below will appear, you can select the required communication port and press “OK” to confirm.



Help - About CPS: when clicking this option, the window below will appear, you can view the software version information.



Functions Overview



Device Info: View model name, frequency range, radio software version and last programming date, set up read/write password or modify the password.

Basic Set: Change the basic settings of the radio here.

Channel Info: Change the zone info and channel info here.

Contact: Manage the digital contact here including digital call name, call type (all call, group call and individual call) and call ID.

RX Group List: Manage the RX group call list, to add digital contact to or remove from the list.

Common Phrases: Manage the common phrases to be pre-programmed to the radios for SMS function.

Scan List: Manage the scan channels, to add channel to or remove from scan list.

Device Info

- Read/Write Password: Set up read/write password here.
- Modify Password: Modify read/write password here.

Device Info	Basic Set	Channel Info	Contact	RX Group List	Common Phrases	Scan List
Model Name SHIFT Frequency Range 400-480MHz Radio Software Version V2.01.01 Last Programming Date 2025-08-21						
Read/Write Password Modify Password ☐ Show Password						

Basic Set



The screenshot shows a 'Basic' settings panel with three dropdown menus. The first is 'Squelch Level' set to '3'. The second is 'Battery Save Mode' set to '1:2'. The third is 'TOT(s)' set to '180'.

Setting	Value
Squelch Level	3
Battery Save Mode	1:2
TOT(s)	180

Squelch Level: Change squelch level here, level 0-9

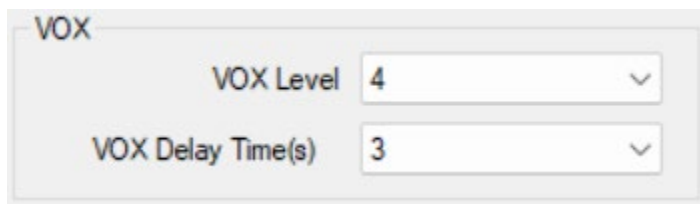
(To indicate the signal strength to unmute the audio output, the higher the level it requests the stronger signal for RX, the lower the level it requests the weaker signal for RX but with more background noise, default: level 3)

Battery Save Mode: Change battery save mode and ratio here, OFF, 1:1, 1:2 and 1:4(default 1:2)

TOT(s): Change TOT (time-out-timer) here, range: OFF, 30s, 60s, 90s...600s (default: 180s)

(TOT is the duration that the radio can continuously transmit before a transmission is automatically terminated. This feature is used to ensure the channel is not monopolized by any radio)

VOX



The screenshot shows a 'VOX' settings panel with two dropdown menus. The first is 'VOX Level' set to '4'. The second is 'VOX Delay Time(s)' set to '3'.

Setting	Value
VOX Level	4
VOX Delay Time(s)	3

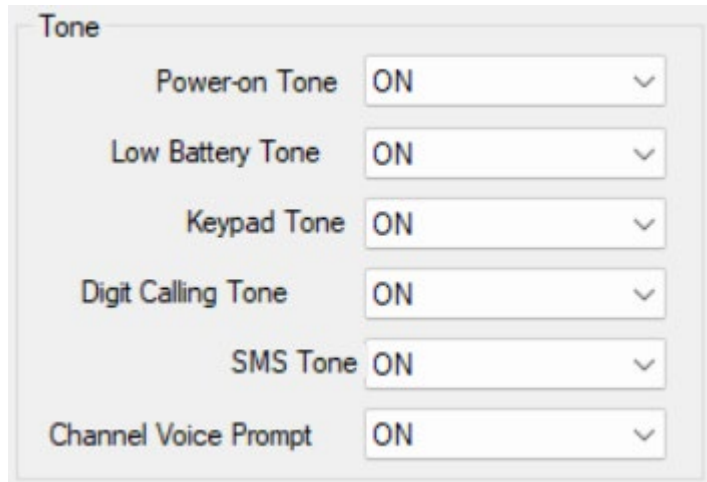
VOX Level: Change VOX level here, range: 0-9 (0=OFF, default: 0)

(Allows to initiate a handsfree voice activated call when the user switches to the programmed channel. The radio automatically transmits whenever the microphone detects voice activity. The user can still start voice call through PTT key, even if this feature is not checked)

VOX Delay Time(s): Change VOX delay time here, range: 1s, 2s, 3s, 4s

(If the radio returns to RX Mode too quickly after making a call, the end of your call may not be transmitted. To avoid this, select an appropriate delay time that allows your entire call to be transmitted)

Tone



Power-on Tone	ON
Low Battery Tone	ON
Keypad Tone	ON
Digit Calling Tone	ON
SMS Tone	ON
Channel Voice Prompt	ON

Enable users to mute all the tones or turn off certain tones.

Digit



Own ID	1
Remote Monitor Time(s)	10
Call Hang Time(s)	3

Own ID: Enable user to set an individual ID that uniquely identifies the radio, this ID is used by other calling radios when addressing the radio, for instance, when making a private call or sending a text message. Range 1-16,776,415.

Remote Monitor Time: Enable user to set interval time for remote monitoring of other channels, range 10s, 20s, 30s...120s.

Call Hang Time: Allow user to set call hang up time, range 0-60s

(The brief period after a transmission ends where the radio continues to receive audio, preventing a sudden squelch or audio cut-off)

Keypad

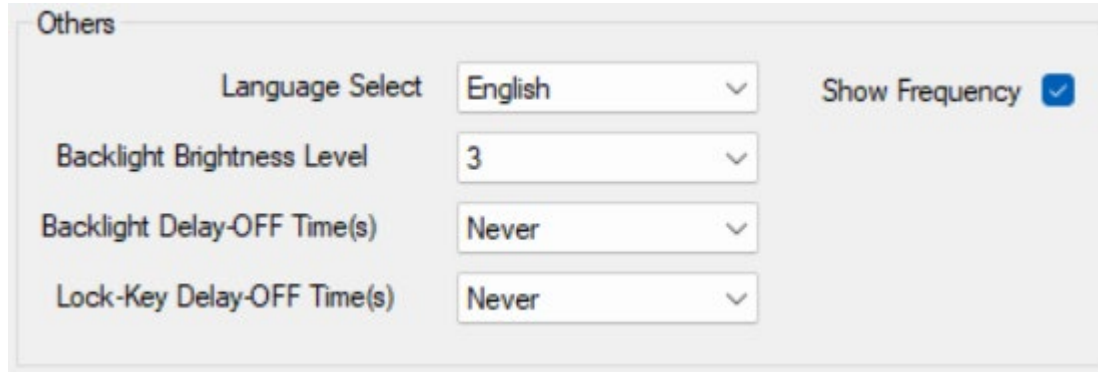
	Short Press	Long Press
PF1	None	None
PF2	None	None
P1	None	None
P2	None	None
P3	None	None
P4	None	None
P5	None	
Long Press Time(s)	1.0	

Key Assignment: Side keys PF1 and PF2 can be re-assigned to any of the following functions by programming, and user can select “short press” or “long press” (with long press duration 0.5s-3s, default 1s) as per needs. None, Zone Up, Zone Down, Power Adjustment, Squelch OFF, Monitor, Talk Around, Scan ON/OFF, VOX ON/OFF, Local Alarm, Remote Alarm, Remote Monitor, Remote Stun, Remote Kill, Remote Activation, One-touch-all-call, Battery Prompt. Note: [PF1] and [PF2] can have the same key assignment.

- None: No functions
- Zone Up: Switch to the previous zone (Range: Zone 1 -Zone 64)
- Zone Down: Switch to the subsequent zone (Range: Zone 1-Zone 64)
- Power Adjustment: Switch between HIGH/LOW power output
- Squelch OFF: In analog mode, press the side key to switch ON/OFF squelch, press again to exit. Note: This function is invalid in digital mode.
- Monitor: In analog mode, press the side key as monitor key to open signaling squelch so that audio conversation can be heard when the signal is weak, press again to turn off it. Note: this function is invalid in digital mode.
- Talk Around: Press the side key, the RX frequency will be used in place of the TX frequency when transmitting. Note: After Talk Around function is activated, both receiving frequency and receiving signaling will be used in place of the transmitting frequency and signaling during transmitting.

- Scan ON/OFF: Press the side key to initiate radio scanning from the current channel, and scanning ascends through the channel numbers in scan list. The green LED flashes when scanning proceeds, and solidly glows when a signal is received with signaling matched on a channel. Press the scan key again to exit radio scanning mode. The scan status will not be memorized after the radio being restart.
- VOX ON/OFF: After inserted with earpiece, press the side key to activate or disable VOX function. Note: This function is invalid without being inserted with an earpiece.
- Local Alarm: Press the side key to activate/disable local alarm function, radio will emit on-site alarm tone after activated, this function is helpful for emergency rescue.
- Remote Alarm: Press the side key to activate remote alarm function in the pre-defined radio, once remote alarm function activated successfully the calling radio will receive acknowledgement message sent from the pre-defined radio. Note: This function is valid only in digital mode.
- Remote Monitor: Press the side key to activate remote monitor function in the pre-defined radio, once remote monitor function activated successfully the calling radio will be able to monitor the conversation in the pre-defined radio. Note: This function is valid only in digital mode. Remote Stun: Press the programmed key to remote stun the pre-defined radio by sending remote stun code. Only receiving is allowed for a stunned radio (Transmitting is prohibited). Note: This function is valid only in digital mode.
- Remote Kill: Press the side key to remote kill the pre-defined radio by sending remote kill code. Transmitting and receiving are prohibited for a killed radio, and can be revived only by PC software programming with revived code. Note: This function is valid only in digital mode.
- Remote Activation: Press the side key to remote revive the pre-defined radio having been stunned by sending remote revive code. Note: This function is valid only in digital mode.
- One-touch All-call: Press the side key to change the current existing digital contact call mode to all call, then user is able to place all call by pressing PTT button. Note: This function is valid only in digital mode.
- Battery Prompt: Press to turn ON/OFF low battery level alert.

Others



The screenshot shows a settings window titled "Others". It contains five configuration items:

- Language Select:** A dropdown menu currently set to "English".
- Backlight Brightness Level:** A dropdown menu currently set to "3".
- Backlight Delay-OFF Time(s):** A dropdown menu currently set to "Never".
- Lock-Key Delay-OFF Time(s):** A dropdown menu currently set to "Never".
- Show Frequency:** A checkbox that is checked.

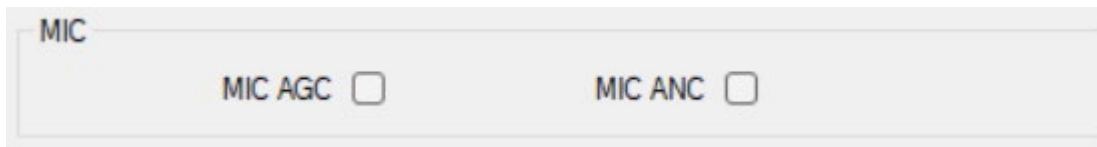
Language Select: Change LCD display language here, English is currently the only option

Backlight Brightness Level: Change brightness level for LCD display here, level 0-5 (default 3)

Backlight Delay-off Time: Set backlight delay-off time for LCD display here, range: Never, 5s, 10s...60s (default: never)

Lock-key Delay-off Time: Set lock-key delay-off time of the keypad here, range: Never, 5s, 10s...60s. Note: The keys will lock-up automatically after the setting time without any operation (excluding PTT button, PF1 and PF2)

MIC



The screenshot shows a settings window titled "MIC". It contains two configuration items:

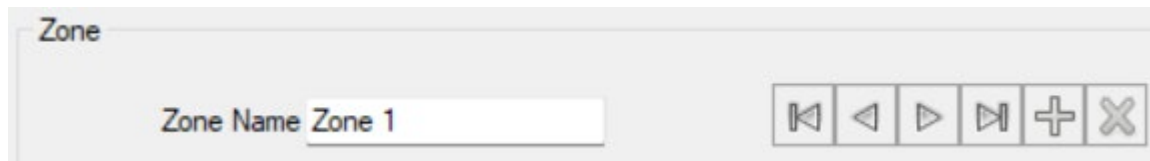
- MIC AGC:** A checkbox that is currently unchecked.
- MIC ANC:** A checkbox that is currently unchecked.

MIC AGC: Microphone automatic gain control, with it ON, radio will automatically adjust the microphone's sensitivity to maintain a consistent output level, regardless of variations in the input signal's loudness during transmitting.

MIC ANC: Microphone active noise cancellation, with it ON, it will actively reduce background noise using the built-in algorithm of the digital chipset, allowing for clearer voice capture during calls.

Channel Info

Zone (There is a maximum 64 zones)

The image shows a 'Zone' configuration window. It has a title bar 'Zone'. Below the title bar, there is a text input field labeled 'Zone Name' containing the text 'Zone 1'. To the right of the input field is a set of six navigation buttons: a double left arrow, a single left arrow, a single right arrow, a double right arrow, a plus sign, and an 'X' sign.

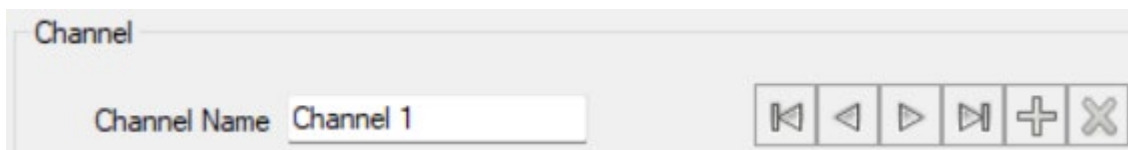
Zone Name: Change zone name here, 16 characters maximum.

Navigation arrows for the first and last Zone, previous and next Zone.

+ Button to add a new Zone.

X Button to delete the current zone.

Channel (There is a maximum 16 channels for each zone)

The image shows a 'Channel' configuration window. It has a title bar 'Channel'. Below the title bar, there is a text input field labeled 'Channel Name' containing the text 'Channel 1'. To the right of the input field is a set of six navigation buttons: a double left arrow, a single left arrow, a single right arrow, a double right arrow, a plus sign, and an 'X' sign.

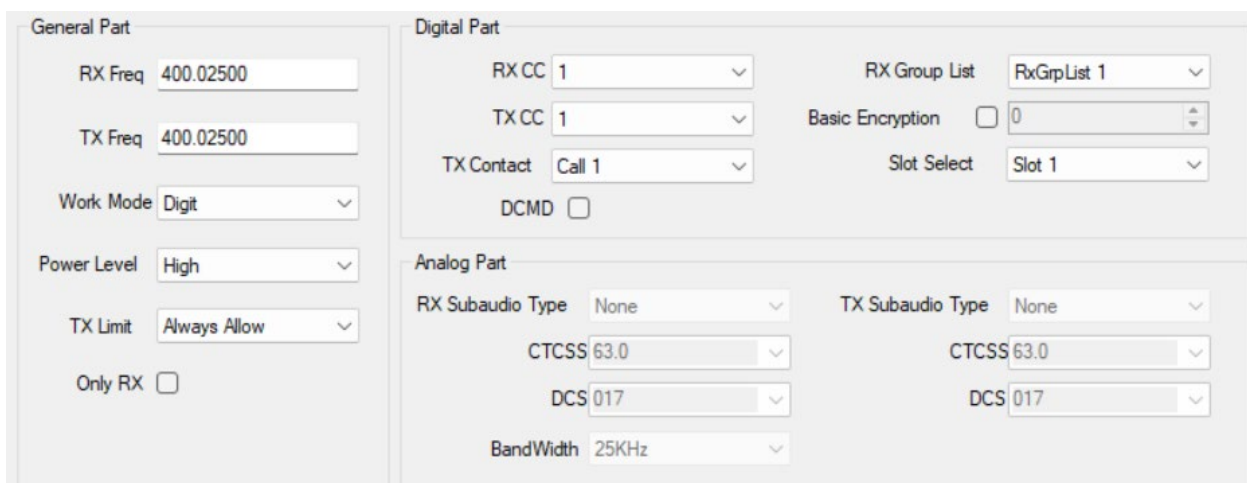
Channel Name: Change channel name here, 16 characters maximum.

Navigation arrows for the first and last Channel, previous and next Channel.

+ Button to add a new Channel.

X Button to delete the current Channel.

General Part

The image shows a 'General' configuration window divided into two main sections: 'General Part' and 'Digital Part'. The 'General Part' section includes fields for 'RX Freq' (400.02500), 'TX Freq' (400.02500), 'Work Mode' (Digit), 'Power Level' (High), 'TX Limit' (Always Allow), and an 'Only RX' checkbox. The 'Digital Part' section is further divided into 'Digital Part' and 'Analog Part'. The 'Digital Part' section includes 'RX CC' (1), 'TX CC' (1), 'TX Contact' (Call 1), 'DCMD' checkbox, 'RX Group List' (RxGrpList 1), 'Basic Encryption' checkbox, and 'Slot Select' (Slot 1). The 'Analog Part' section includes 'RX Subaudio Type' (None), 'TX Subaudio Type' (None), 'CTCSS' (63.0), 'DCS' (017), and 'BandWidth' (25KHz).

RX Freq: Allow user to input with desired RX frequency within range 400-480MHz for the current channel, this feature allows to receive a signal with matched frequency, color code, time slot and even encryption.

TX Freq: Allow user to input with desired TX frequency within range 400-480MHz for the current channel, this setting is effective on the programmed channel only.

Work Mode: Allow user to select analog mode, digit mode, MISC-analog mode and MISC-digit mode.

- Analog mode, both TX and RX for current channel working in analog mode only.
- Digit mode, both TX and RX for current channel working in digital mode only.
- MISC-analog mode, normally both TX and RX for current channel working in analog mode, at the same it will detect and receive digital calling with matched RX frequency, color code and time slot, and it will be able to call back in digital mode within revert time.
- MISC-digital mode, normally both TX and RX for current channel working in digital mode, at the same it will detect and receive analog calling with matched CTCSS/DCS, and it will be able to call back in analog mode within revert time.

Power Level: Allow user to change high or low power here for the current channel.

TX Limit: Allow user to set “always allow”, “channel free”, “CC match” and “Subaudio match”.

Always Allow: Transmitting is always allowed for the current channel.

Channel Free: Transmitting is allowed only when current channel is free.

CC (color code) Match: Transmitting is allowed only when color code of the incoming call is matched with the radio.

Subaudio (CTCSS/DCS) Match: Transmitting is allowed only when CTCSS/DCS of the incoming call is matched with the radio.

Only RX: Only receiving is allowed for the current channel, transmitting is prohibited.

Digital Part

RX CC (Receiving color code): Radio will receive incoming call with matched color code, RX CC range 0-15 selective.

TX CC (Transmitting color code): TX CC range 0-15 selective.

TX Contact (Transmitting Contact): There are maximum 128 transmitting contacts for users to select, each transmitting contact can be programmed as individual call, group call or all call.

Dual Capacity Direct Mode (DCDM): DCDM supports simultaneous subscriber transmissions within a 12.5KHz channel bandwidth for Direct Mode transmissions. The radios within the same group must use the same timeslot so that the group using timeslot 1 does not interfere with the group using timeslot 2. When a 12.5KHz RF channel is configured for dual capacity direct mode, both timeslots are available for independent and simultaneous radio call conversations.

RX Group List: This option is to configure receiving channel list to the current channel. When matched calling group ID from the list detected, the receiving transceiver will open the speaker to receive audio. Noted: This function is valid only in digital mode.

Voice Encryption: This function allows user to program voice encryption code to the current channel. Conversation is allowed between radios only when same encryption code is programmed. Code range: OFF, 0-65535.

Time Slot Selection: This function is used for dual capacity direct mode (DCDM) and working through repeater, each digital channel can be configured with time slot 1 or time slot 2.

Analog Part

RX Subaudio Type/TX Subaudio Type: Allow user to select a specific CTCSS/DCS code. CTCSS/DCS is used to prevent unwanted conversation on the same frequency. If CTCSS/DCS has been programmed to the current channel, CTCSS/DCS match is required for radio to unmute to an incoming signal, without CTCSS/DCS programmed the radio can receive calls from all users operating on the same frequency.

CTCSS/DCS: Select desired CTCSS/DCS through the CPS drop down, refer to the CTCSS/DCS table about the code in the user manual.

Bandwidth: Select wide/narrow bandwidth 25KHz/12.5KHz here.

Digital Contact

NO.	Call Name	Call Type	Call ID
▶ 1	Call 1	Group Call	1

Buttons: Add, Insert, Delete

Call Name: Click to select it and click again to input with desired name, maximum 16 characters.

Call Type: Allow user to select desired call type “Group Call”, “Individual Call” or “All Call”.

Add: Press the button to add with a new digital contact.

Insert: Press the button to add and insert with a new digital contact.

Delete: Press the button to delete the current selected digital contact.

RX Group List

The screenshot shows a software interface for configuring an RX Group List. At the top, there is a horizontal tab bar with the following tabs: 'Device Info', 'Basic Set', 'Channel Info', 'Contact', 'RX Group List' (which is the active tab), 'Common Phrases', and 'Scan List'. Below the tabs, the main area is divided into several sections. At the top of this area, there is a label 'Rx Group List Name' followed by a text input field containing the text 'RxGrpList 1'. To the right of the text field is a set of six navigation buttons: a double left arrow, a single left arrow, a single right arrow, a double right arrow, a plus sign, and an 'X' sign. Below these elements are two vertical list boxes. The left list box is titled 'Available Members' and is currently empty. The right list box is titled 'RX Group List Members' and contains one item, 'Call 1', which is highlighted with a blue background. Between these two list boxes are two buttons: 'Add >>' and '<< Delete'.

Rx Group List Name: Change RX group list name here, maximum 16 characters.

Navigation arrows for the first and last RX Group List, previous and next RX Group List.

+ Button: add a new RX Group List.

X Button: delete the current RX Group List.

Available Members: contains digital contact.

RX Group List Members: contains the digital contacts in this RX Group List.

Add Button: Press this button to add the selected digital contact to RX Group List.

Delete Button: Press this button to delete the selected digital contact from RX Group List.

Common Phrases

Allow user to create short message and program to the radio as common phrases, and used to send a fast SMS, maximum 36 characters for the message length.

NO.	Common Phrases
1	Hello!
2	How are you?
3	Reply ASAP
4	

Add

Insert

Delete

Add Button: Press this button to add with a new phrase.

Insert Button: Press this button to add and insert with a new phrase.

Delete Button: Press this button to delete current phrase.

Scan List

Device Info Basic Set Channel Info Contact RX Group List Common Phrases Scan List

Scan List Name ScanList 1

Navigation buttons: First, Previous, Next, Last, Add, Delete

Available Members

- Zone 1-Channel 7
- Zone 1-Channel 8
- Zone 1-Channel 9
- Zone 1-Channel 10
- Zone 1-Channel 11
- Zone 1-Channel 12
- Zone 1-Channel 13
- Zone 1-Channel 14
- Zone 1-Channel 15
- Zone 1-Channel 16
- Zone 2-Channel 1
- Zone 2-Channel 2
- Zone 2-Channel 3
- Zone 2-Channel 4
- Zone 2-Channel 5

Add >>

<< Delete

Scan List Members

- Zone 1-Channel 1
- Zone 1-Channel 2
- Zone 1-Channel 3
- Zone 1-Channel 4
- Zone 1-Channel 5
- Zone 1-Channel 6

Current Scan List ScanList 1

Scan List Name: Change Scan List name here, maximum 16 characters.

Navigation arrows for the first and last Scan List, previous and next Scan List.

+ Button: add a new Scan List.

X Button: delete the current Scan List.

Available Members: Channels available.

Scan List Members: contains the Channels in this Scan List.

Add Button: Press this button to add the selected channel to current Scan List.

Delete Button: Press this button to delete the selected channel from current Scan List.

Current Scan List: pull down menu to quickly change current Scan List.