

How to use programming software

1. When you open programming software, you can't use the programming software, as show in following chart:



2. When you have our product, only use programming cable to contact transceiver with computer, programming software will auto contact with transceiver, as show in following chart:



Note: The interface of programming cable should be the same as programming software.

FM-channel

1. FM channel code: Corresponding with sixteen channel codes.
2. Rx frequency : Edit according to the local radio frequency, the range is: 87-108MHz.
3. Name of transmitter-receiver: You can edit name of radio frequency which you have set, it can make up with 26 letter (A-Z), ten number (0-9) , the length of transceiver-receiver name at most 6 bits.

Edit channel (only react on channel mode)

1. All kind of 0-199 channel information will be show in form.

1) RX frequency : selective range : According to model

2) TX frequency: selective range : According to model

2 . CTCSS/DCS encoding and decoding

1) CTCSS

Function: CTCSS tone

Option : 67.0 - 254.1 Hz

2) DCS

Function: DCS tone

Option : 000 - 754

Note: D×××N means normally DCS tone, D×××I means reverse DCS tone, you can put off CTCSS and DCS in each channel, select from list.

3. Transmit power

Function: Select transmit power

Option: High (4W) / Low (1W) , 1-5 means low power, 6-10 means high power

Default : 10

4. Channel bandwidth

Function: Set frequency working bandwidth

Option: 12.5KHZ (narrow) / 25KHZ (wide)

Default: 25KHZ

5. PTT-ID

PTT ID: Select way of transmit PTT ID (BOT/EOT/BOTH),

Option: BOT/EOT/BOTH

1) BOT: When press [PTT], transceiver will transmits ID code at the beginning of transmitting.

2) EOT: When release [PTT], transceiver will transmits ID code at the end of transmitting.

3) BOTH: Transceiver will transmit ID code at the beginning or at the end.

Default: OFF

6. Optional signaling

Function: Select signaling mode

Option: WDTS/DTMF / 2TONE / 5TONE

Default: WDTS

7. Mutemode

Function: Mutemode means the way of open speaker

Option: QT/AND/OR

1) QT: When transceiver receives a signaling which can open squeal or suited sub-tone, then it will open speaker. If transceiver doesn't set sub-tone, it only needs to receive a signaling which can open squeal that also can open the speaker.

2) AND: When transceiver receives the signaling of QT and has suited signal order, then it will open speaker.

3) OR: When transceiver receives one signaling suited QT or AND, it will open the speaker.

Default: QT

8. Busy channel lockout

Function: After switch on this function, it can prevent to disturb other transceivers which are communicating, if the channel which you have set has been used by other transceiver, then you could not transmit, when press [PTT].

Option: ON/OFF

Default: OFF

9. Voice encrypt compress

Function: Using voice encrypt compress, when on communication it can reduce noise, make the voice more clear.

Option: ON/OFF

Default: OFF

10. Add scanning

Function: This function means whether ensure to add the frequency of stored channel to scanning list or not;

Option: ON/OFF

Default: ON

11. Scrambler

Function: Means encrypt communication, using scrambler, it can avoid other transceivers which do not use scrambler to hear clear what you talk, but at the same time you also could not hear clear other's which do

not use scrambler.

Option: ON/OFF

Default: OFF

12. Signaling information

Function: This function is destined for signaling code of which edit signaling.

Option: 1~15

Default: 1

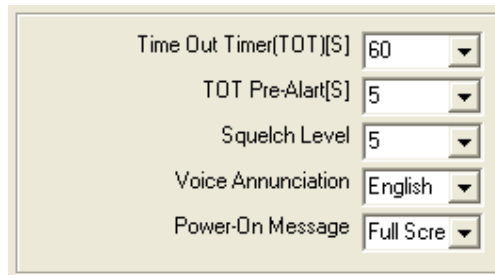
13. Channel name

Function: Edit channel name.

Option: Can make up of 26 letters (A~Z, ten number (0~9) .

Default: Blank

Optional parameter only react on frequency mode



Time Out Timer(TOT)[S]	60
TOT Pre-Alert[S]	5
Squelch Level	5
Voice Annunciation	English
Power-On Message	Full Scre

1. Transmit over timer

Function: The TOT is designed for to prevent your radio to continual transmit too a long time, when transceiver is exceeding the preset time limited, it will stops transmit and give you a prompt voice.

Option: 15~600 seconds

Default: 60 seconds

2. Transmit overtime alarm

Function: Transmit overtime alarm is set for the user that when he/she will reach the time set of TOT, then give a voiceprompt and light will flicker during transmit.

Option: OFF/1~10

Default: 5

3 . Squelch level

Function: Set squelch level is that keeps the speaker silent when there is no signaling. When the squelch level is set all right, then you will hear voice only transceiver receives signaling. If the squelch level set too high, then the signaling should be strong enough that transceiver can receive.

Option: 0~9

Default: 5

4. Voice guide

Function: Select kind of voice guide.

Option: English/ Chinese/OFF

Default: English

5. Power on display

Function: Select the display of power on

Option: Full display/Welcome/Voltage

Default: Full display

The following chart only react A segment on frequency mode

A Band Frequency Mode

Frequency	400.02500	MHZ
TX Power	10	
RX QT/DQT	OFF	
TX QT/DQT	OFF	
W/N	WIDE	
Step Frequency	12.50 KHZ	
Scrambler	OFF	
Optional Signal	WDTS	
Signal Code	1	
Speak Mute	QT/DQT	
SFT_D	OFF	00.600

Shift direction

Function: Select receive frequency is higher (+) or lower (-) than transmit frequency

Option: OFF/+/-

Default: OFF

Offsetfrequency

Function: Offsetfrequency is dispersion frequency between receive and transmit

Option: 0~99.950MHz

Default: 0.6MHz

The following chart only react B segment on frequency mode

B Band Frequency Mode

Frequency	470.62500	MHZ
TX Power	5	
RX QT/DQT	OFF	
TX QT/DQT	OFF	
W/N	WIDE	
Step Frequency	12.50 KHZ	
Scrambler	OFF	
Optional Signal	WDTS	
Signal Code	1	
Speak Mute	QT/DQT	
SFT_D	OFF	00.600

The screenshot shows two sections of a settings menu. The 'Work Mode' section has two radio buttons: 'Frequency' (selected) and 'Channel'. To the right is a 'CHT' field with the value '200'. The 'Channel Mode' section has three checkboxes: 'Menu' (checked), 'Reset' (checked), and 'Synchr' (unchecked). Below these are two dropdown menus: 'A Channel Disp Way' set to 'Channel+Name' and 'B Channel Disp Way' set to 'Channel'.

Currently working mode

Frequency/channel: Means when you have finished set transceiver, when restart transceiver, to work on frequency mode or channel model.

Channel number: Means edit the number of this transceiver channels.

Channel mode

Setting MENU: Means whether turn on MENU function or not on channel mode.

Reset: Means whether turn on reset function on channel mode.

Synchronous display: Means whether display A/B segment at the same time.

The screenshot shows a settings menu with various options. 'DTMF-ST' is set to 'KB DTMF Side T' with a 'K_Lock' checkbox. 'VOX' is 'OFF' and 'VOX_T' is '15'. 'ABR' is '3' with 'LUM P' checked and 'Auto Lock' unchecked. 'Ring_Mode' is 'Tone' with 'Beep' checked and 'BCL' unchecked. 'Ring_Time' is '5' with 'Scan_Add' checked. 'Scan_Rev' is 'T0' and 'Save' is '1:2'. 'PTT_ID' is 'OFF' and 'PTT_Delay' is '600'. At the bottom, 'FM Radio Enabled' is checked.

DTMF sidetone

Function: Means whether turn on speaker or not when transmit DTMF sidetone, and hear a suited DTMF sidetone from speaker.

Option:

KEY : Switch on sidekey tone, when transmit.

ANI : Switch on ANI ID sidetone, when transmit.

BOTH : Switch on sidekey tone and ANI ID sidetone, when transmit.

OFF : Turn off all

Default: KEY

VOX

Function: When check a voice, switch to transmit mode.

Option: OFF/1~10

Default: OFF

Auto backlight

Function: The time of turn on backlight

Option: OFF/1~5

Default: 3

Ring mode

Function: After transceiver receives a suited signaling, it will give a voice prompt

Option: SOUND : Switch on ring time

BIV : Switch on libration

BOTH : Switch on both ring and libration

OFF : Turn off all

Default: SOUND

Ring time

Function: When it exceeding to the preset value of ring time, speaker will turn on.

Option: 0~10

Default: 5

Scan mode

Function: Transceiver will stop scan when detects a signaling frequency or stored channel. According to you select restart, transceiver will go on scan or stop scan.

Option:

TO : After signal on channel disappears, the transceiver will start scanning if you do not have any operation within 5 seconds

CO : Transceiver will stop scan when searches a signaling, it will go on scanning after signal disappears 3 seconds

SE : Scanning will stop when receives a signal

Default : TO

Delay VOX

Function : The purpose of setting VOX delay time is made transceiver return to RX mode after calling, whether the last part of calling can be transmit or not, in order to avoid this problem, then you can set a propriety delay time, make calling can be transmitted complete. But be care, do not set delay time too a long time.

Option: 0~20 ms

Default: 15 ms

Beep prompt

Function: Beep prompt is to tell you whether transceiver is run well or run wrong or has an malfunction.

We kindly advice you to switch on this function

Option: ON/OFF

Default: ON

Keyboard lock/auto lock

Function: Lock keyboard

Option: ON/OFF

Default: OFF

Busy channel lockout

Function: After switch on this function, it can prevent to disturb other transceivers which are communicating, if the channel which you have set has been used by other transceiver, then you could not transmit, when press [PTT].

Option: ON/OFF

Default: OFF

Savemode

Function: This function will turn off RX circuit for a minute (can set), then after a minute it will turn on and detect signaling.

Option: OFF1:1/1:2/1:3/1:4 (Means the impulse of turn on and turn off of RX)

Default: 1:2

Delay transmit ID

Function: If repeater does not respond to the ID which transmit from transceiver, then you can adjust this parameter.

Option:: 0~2000 ms

Default: 600 ms

Switch on frequency modulation radio

Function: Defined whether switch on radio

Option: ON/OFF

Default: ON

The screenshot shows a configuration menu with the following items:

- PF1 Define: FM Radio
- PF2 Define: Alarm
- Monitor Define: Monitor Mon
- Wait Back Light: Blue
- RX Back Light: Blue
- TX Back Light: Orange
- Work Mode: 范围设置密码
- Below Work Mode: 000000 and 012345

Defined sidekey

Function: Set function of sidekey

1. FM : FM radio function key
2. CALL : Currently signaling calling key

3. NO-SUB : Cancel receiving CTCSS/DCS signaling

4. JP-PRI : Switch to priority channel scan

5. JP-EMC : Switch to alarm channel

>>When FM radio on working, and currently frequency or channel still on standby, if receives a signaling, it will auto switch to transceiver. After signaling disappears 5 seconds, it will auto back to FM radio, if you want to exit FM, please press sidekey 1 again.

>>You can edit FM radio channel by programming software, make the FM radio display FM frequency and name, When you have successful edited, press sidekey to switch on FM radio, then you can use the channel knob to switch FM radio, or use the UP or DOWN to switch. If the model doesn't have channel knob, you can use the UP or DOWN to switch.

Defined topkey

Function: Set function of topkey

1. EMCALL: Turn on alarm function
2. CALL01-CALL15: Signaling calling

Defined MoNI key

Function: Defined for turn on squelch circuit.

1. CONTIN: Do keep press sidekey 2, then turn off squelch circuit.
2. PRESS : Press sidekey 2 one time, then turn off squelch circuit.

Standby display color

Function: Defined for transceiver backlight on standby.

Option: Purple/Blue/Orange

Default: Purple

Receive display color

Function: Defined for transceiver backlight on receiving.

Option: Purple/ Blue/Orange

Default: Blue

Transmit display color

Function: Defined for transceiver backlight on transmitting.

Option: Purple/Blue/Orange

Default: Orange

Switching mode password

Function: Means that whether set password to switch between frequency mode and channel mode.

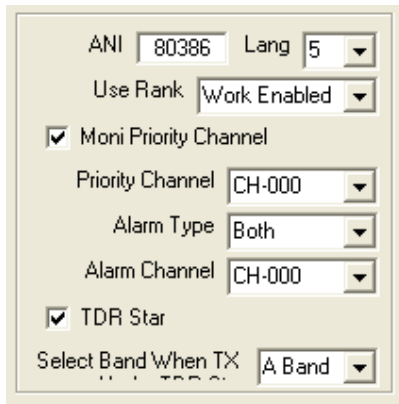
Option: 0~9

Default: 000000

Set working range password

Function: Limited transceiver working range

Option: 0~9



ANI 80386 Lang 5

Use Rank Work Enabled

☒ Moni Priority Channel

Priority Channel CH-000

Alarm Type Both

Alarm Channel CH-000

☒ TDR Star

Select Band When TX A Band

ANI ID code

Function: Use to send information to receiver, when alarm, allcall, groupcall or selectcall.

Option: 0~9

Default: 80386

NOTE

>>Due to ANI ID code of this transceiver has difference of 3 bits, 4 bits and 5 bits, so using any one of transceivers in group should be set the same.

Length of code

Function: Edit bit of ANI ID code

Option: 3~5

Default: 5

This transceiver using level

Function: Means currently transceiver the right of using range

Option: Normally use/Forbid transmitting/ Forbid transmitting and receiving

Default: Normally use

Monitor priority channel

Function: Whether switch on priority scan

Option: ON/OFF

Default: OFF

NOTE

>>This transceiver priority channel scan can selectable from 0-199.

>>There is only display an "S" on LCD screen, that means transceiver has started priority channel scan.

>>Start priority channel scan needs two condition: 1) Do priority channel scan switch on.

2) This function only scan channels which has been stored.

>>On frequencmode, channelmode or on scanning, when transceiver detects signaling on priority channel scan, it will transfer the priority channel, if you don't do any operation after signaling disappears 3 seconds, transceiver will back to primary frequency and resume priority scan.

>>The speed of start or resume priority scan, is relate with the time of setting auto backlight. When the time of auto backlight be set as "1", the speed of start or resume priority scan will be the fastest.

>>When priority channel scan which has been set parameter receives signaling, then only the suited frequency, transceiver can transfer priority channel.

>>The transferred priority channel only can be used communication, you can't do any other operation until resume primary frequency.

Emergency calling type

Function: Means the type of emergency calling

Option :

ALARM : Field alarm

ENI : Distant alarm

BOTH : Field + distant alarm

Default: BOTH

NOTE

>>On frequencymode/channelmode, only type of emergency calling be set as ENI and BOTH, then can use the alarm channel to alarm.

>>On frequencymode/channelmod, if you don't set alarm channel, then it will alarm at present channel or frequency

Alarm channel

Function: Select one of channel which has been edited to emergency alarm.

Option: CH-000~CH199

Default: CH000

Switch on dual-standby

Function: Means whether to make A/B segment standby at the same time.

Option: ON/OFF

Default: ON

Select type of transmit after switch on dual-standby

Function: When switch on dual-standby, select to transmit on A segment or on B segment.

Option: A segment/B segment

Default: A segment

Describe of using signaling

Allcall, groupcall, selectcall

This transceiver has function of transmit ANI ID code, edit ANI ID code and DTMF decoding, When without other communication equipment, it can accomplish the operation of allcall, groupcall and selectcall.

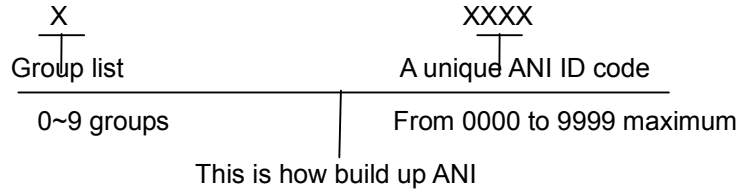
How to use allcall, groupcall and selectcall

1. Edit ANI ID code

NOTE: Using any one of transceivers in group should edit difference ANI ID code.

ANI ID code: ANI—XXX ANI—XXXX ANI—XXXXX (total has three methods)

XXXXX : Means can edit 5 bits ANI ID code



6. Setting PTT-LT: According to present condition, set delay time of transmit code, the details see user's manual MENU 26

>>Using any one of transceiver in group, the frequency or channel must be set the same.

Press [PTT] to transmit, after transmitting ANI ID code, input ANI ID code you want to call directly from keyboard.

>>This transceiver has difference of 3 bits, 4bits and 5bits, so all transceiver's ANI ID code in group has

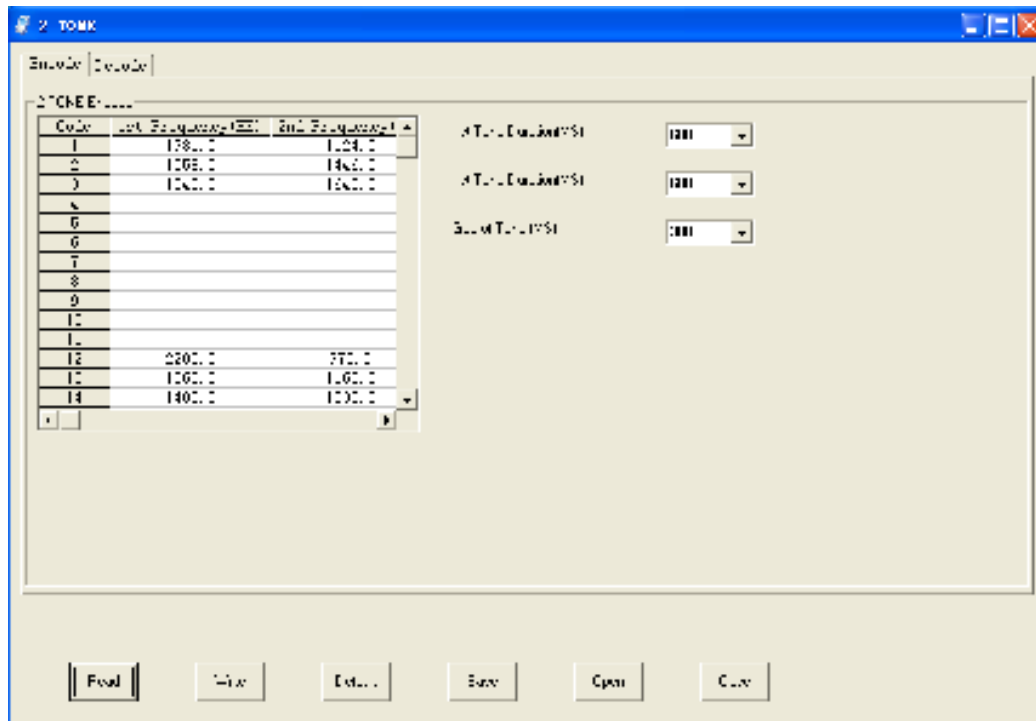
EXT

DTMF、2TONE、5TONE



1. When DTMF/2TONE/5TONE is set as one frequency, then press PTT to transmit DTMF/2TONE/5TONE.
2. When one channel has been set DTMF/2TONE/5TONE, the preset function will act only transceiver receives a matching DTMF/2TONE/5TONE signaling.
3. Setting signaling
 - 1) NOTE: Using any one of transceivers in group should be set DTMF/2TONE/5TONE optional signaling, the details of setting optional signaling see user's manual MENU 23.
 - 2) Setting sidetone: The details see user's manual MENU 16, according to you need to select.
 - 3) Mutemode should be set as AND, the details of method see user's manual MENU 24.
 - 4) Setting PTT: Depend on your requirement to select one of BOT/EOT/BOTH, see user's manual MENU 25.
 - 5) Setting S-INFO: The information of receiver and transmitter should be set the same.
 - 6) Setting PTT-LT: according to present condition, set delay time of transmit code, the details see user's manual MENU 26.

Describe of setting 2tone:



Encoding

Information code

Function: Edit serial number of transmit ID code.

Option: 1~15

First frequency

Function: 2-tone has fifteen serial number, edit first frequency of transmit ID code

Option: 300Hz~3000Hz

Second frequency

Function: 2-tone has fifteen serial number, edit second frequency of transmit ID code

Option: 300Hz~3000Hz

The time of transmit first frequency

Function: The time of transmit first tone of 2tone.

Option: 0~1000 ms

Default: 600 ms

The time of transmit second frequency

Function: The time of transmit second tone of 2tone

Option: 0~1000 ms

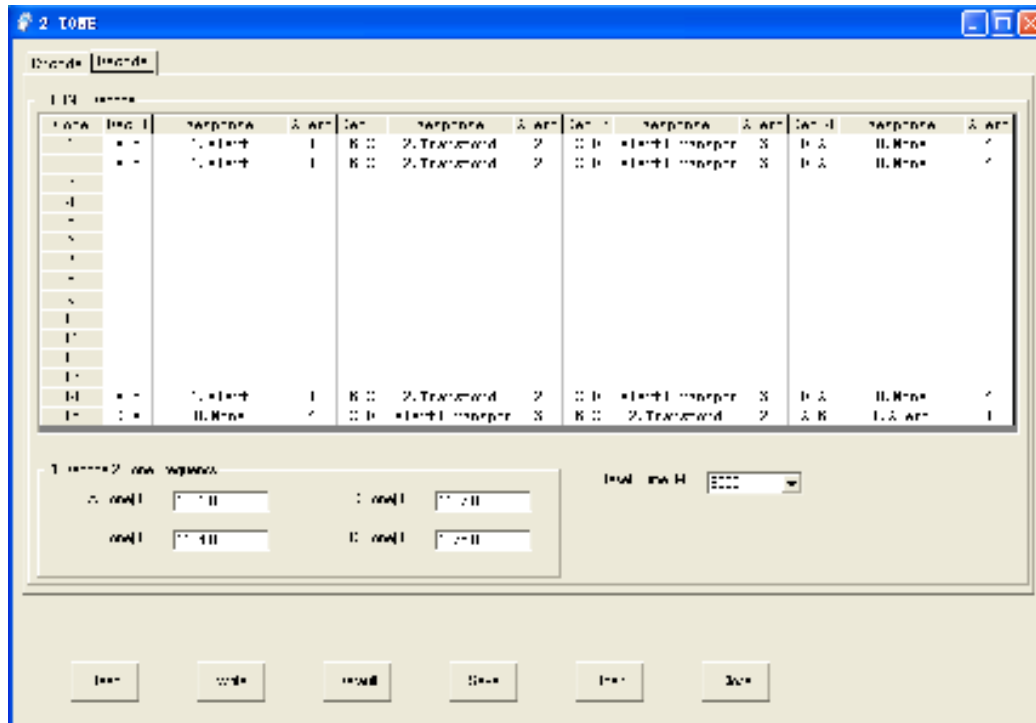
Default: 600 ms

The time between 2 frequencies

Function: The time between first tone and second tone of the 2tone.

Option: 0~1000 ms

Default: 600 ms



Decoding

Decoding (There are the same of Decoding 1、Decoding 2、Decoding 3、Decoding 4)

The way make up of 2tone:

There has twelve methods to make up of 2tone: A-B/ A-C/ A-D/ B-A/ B-C/ B-D/ C-A/ C-B/C-D/ D-A/ D-B/ D-C/

The way of respond to decoding 2tone:

When you have succeed of decoding 2tone, there has 4 ways to respond: Nothing/ Prompt/Revert/Prompt and revert.

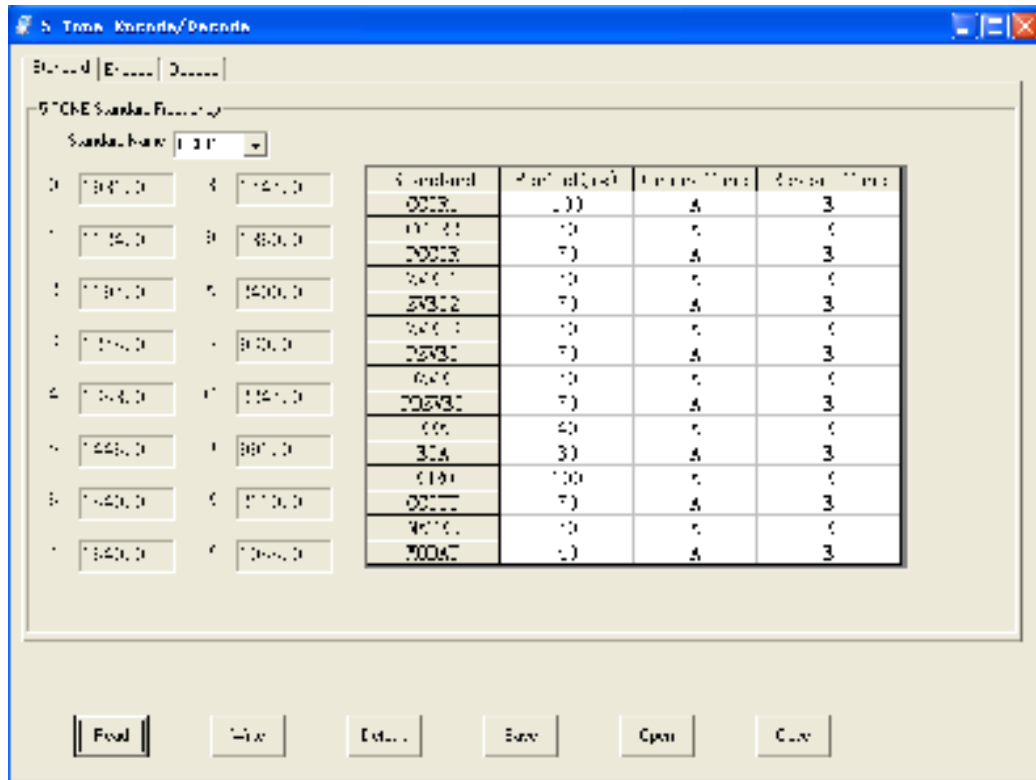
A tone[Hz]: Select range: 300~3000 Hz

B tone [Hz]: Select range: 300~3000 Hz

C tone [Hz]: Select range: 300~3000 Hz

D tone [Hz]: Select range: 300~3000 Hz

Reset time [ms]: 100~8000ms



Standard

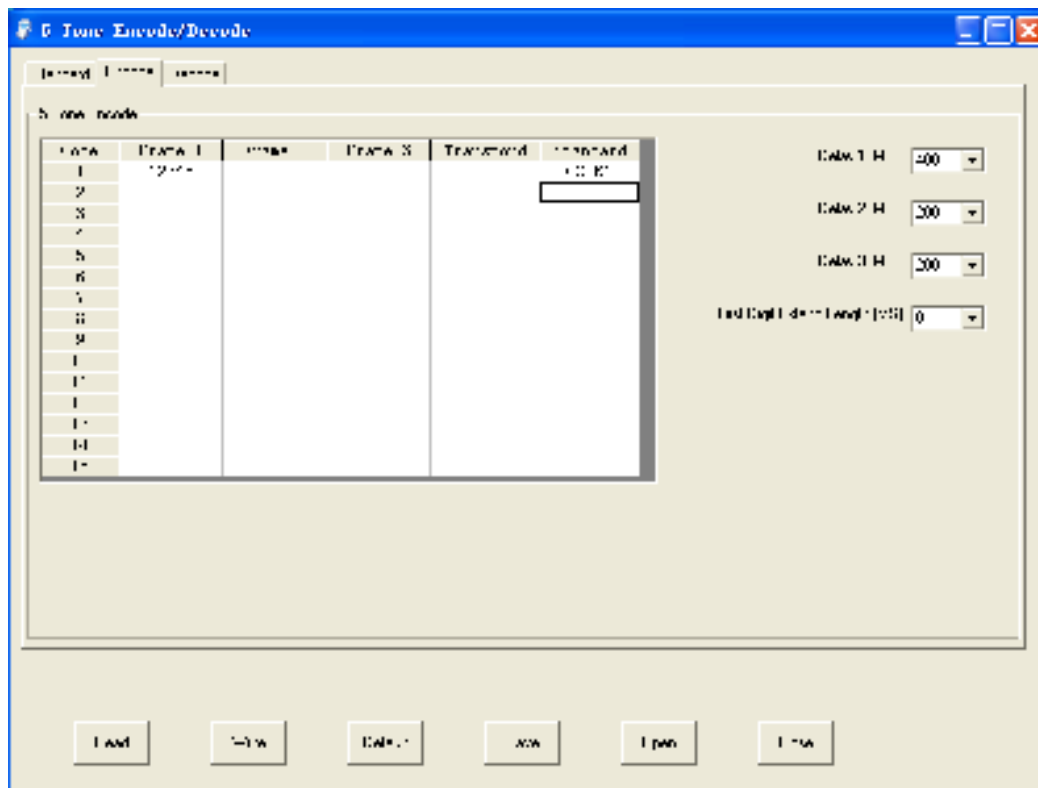
Standard frequency of 5tone (5-TONE)

This transceiver has fifteen 5tone international standard can be selectable: CCIR1、CCIR2、PCCIR、

ZVEI1、ZVEI2、ZVEI3、PZVEI、DZVEI、PDZVEI、EEA、EIA、EURO、CCITT、NATEL、MODAT

Standard name

You can view the corresponding tone of fifteen 5 tone international standard, as show in following chart



Encoding

Information code

Function: Edit serial number of transmit ID code.

Option: 1~15

First frame encoding (there are the same encoding of first frame, second frame and third frame)

Function: Edit transmitting ID code

Option: 0~9

Using standard

Each information code has sixteen standard encoding can be selectable.

Option: ZVEI1, ZVEI2, ZVEI3, PZVEI, DZVEI, PDZVEI, CCIR1, CCIR2, PCCIR, EEA, EUROSIGNAL, NATEL, EIA, MODAT, CCITT, USER DEFINED

Default: CCIR1

NOTE: The standard of encoding and decoding, information code and information encoding should be the same, then you can decode.

Delay time before transmit first code: The delay time of transmit first frame 5tone, during this time it only allows carrier wave signaling.

Option: 0 - 1000 ms

Default: 400 ms

Delay time before transmit second code: The delay time of transmit second frame 5tone, during this time it only allows carrier wave signaling

Option: 0 - 1000 ms

Default: 200 ms

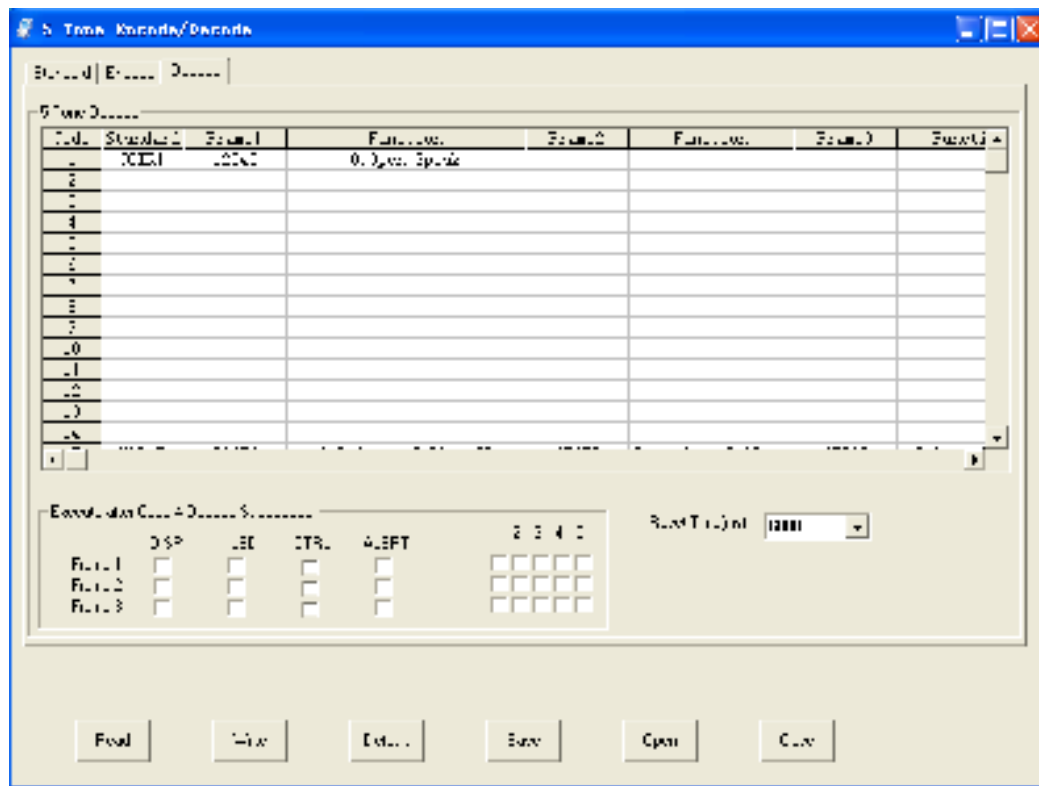
Delay time before transmit third code: The delay time of transmit third frame 5tone, during this time it only allows carrier wave signaling

Option: 0 - 1000 ms

Default: 200 ms

Expand time of first tone in each group code: The time of transmit first tone of each frame.

Option: 0 - 1000 ms



Decoding

Information code

Function: Edit serial number of transmit ID code

Option: 1~15

Using standard

Each information code has sixteen standard decoding can be selectable.

Option: ZVEI1, ZVEI2, ZVEI3, PZVEI, DZVEI, PDZVEI, CCIR1, CCIR2, PCCIR, EEA, EUROSIGNAL, NATEL, EIA, MODAT, CCITT, USER DEFINED

Default: CCIR1

First frame decoding (there are the same of first frame, second frame and third frame)

Function: Edit transmitting ID code

Option: 0~9

Function:

Option:

1. **Call:** Receiving matching 5tone, turn on squelch to communicate
2. **Monitor:** Receiving matching 5tone, auto transmitting.
3. **Inspection:** Receiving matching 5tone, reply transmitter.
4. **Emergency:** Receiving matching 5tone, turn on alarm function.
5. **Stun:** Receiving matching 5tone, couldn't transmit.
6. **Kill:** Receiving matching 5tone, could not receive and transmit.
7. **Revive:** Receiving matching 5tone, revive the stunned or killed transceiver.