CS800D CPS Reference Manual

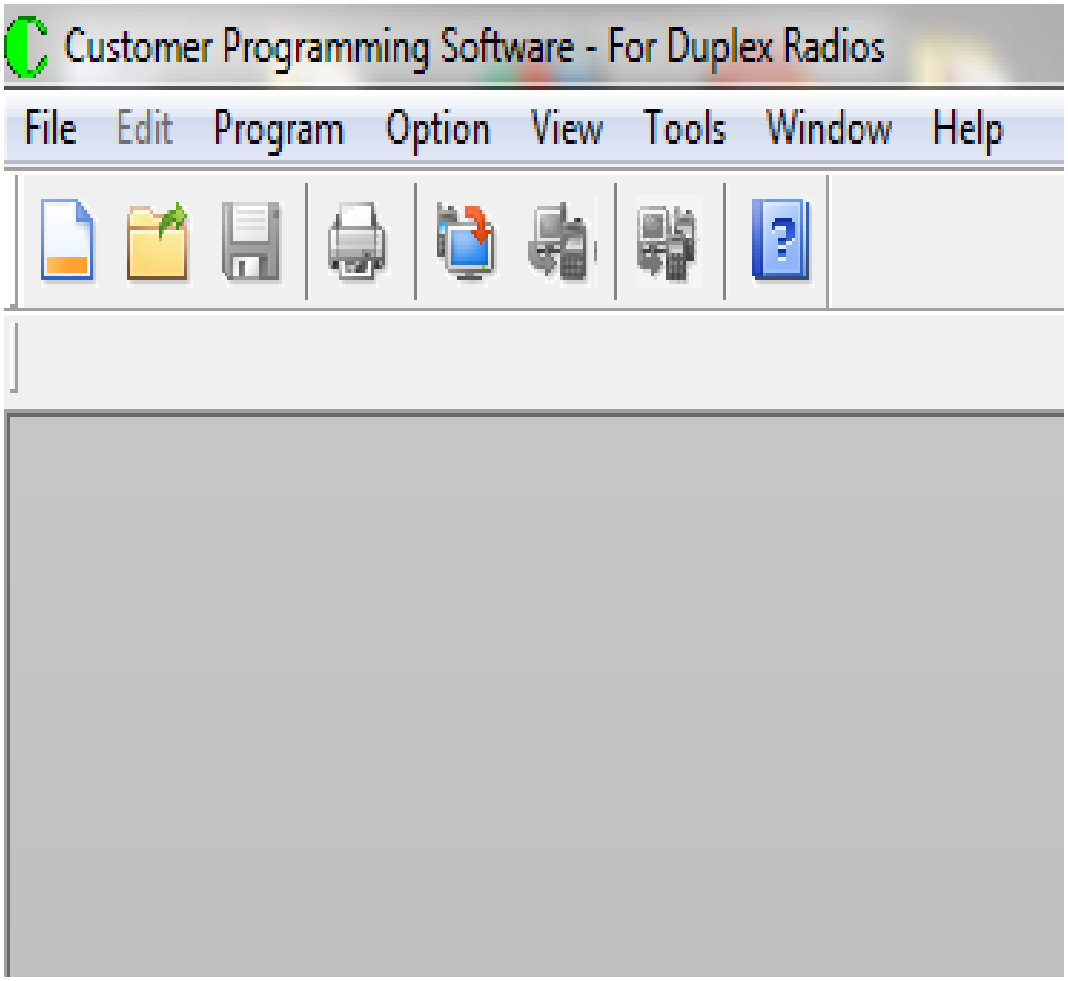
Version 1.0

Based of Release R4.03.04

OPENING SCREEN

When you first double click the ICON on your desktop as shown below,

You get the following opening screen.



Towards the top of the screen you will see 8 pull down menus and 8 ICONS.

The short meaning of the 8 pulldown menus are shown below. More detailed information will be shown later.

File
Allows you to manipulate the file involved in programming your radio.

Edit
Allows you to generate or modify a code plug.

Program
Allows you to read your code plug in your radio to the computer or write the code plug in your computer to your radio.

Option
Allows the language on your PC to be either in English or Chinese. Currently the only option is English.

View
Allows you to specify what information is on the computer screen.

Tools
Allows you to execute various utilities for advanced functions.

Window
Allows you to specify how the titles are arranged.

Help
Allows you to view various help topics and the revision of the program.

The short meaning of the 8 ICONS are shown below. More detailed information will be shown later.

This is the File “New” command.

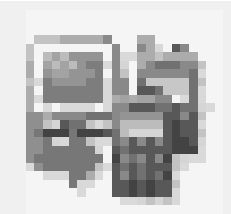
This is the File “Open…” command.

This is the File “Save” command.

This is the print command. It is not currently active in the program.

This is the Program “Read” command.

This is the Program “Write” command.

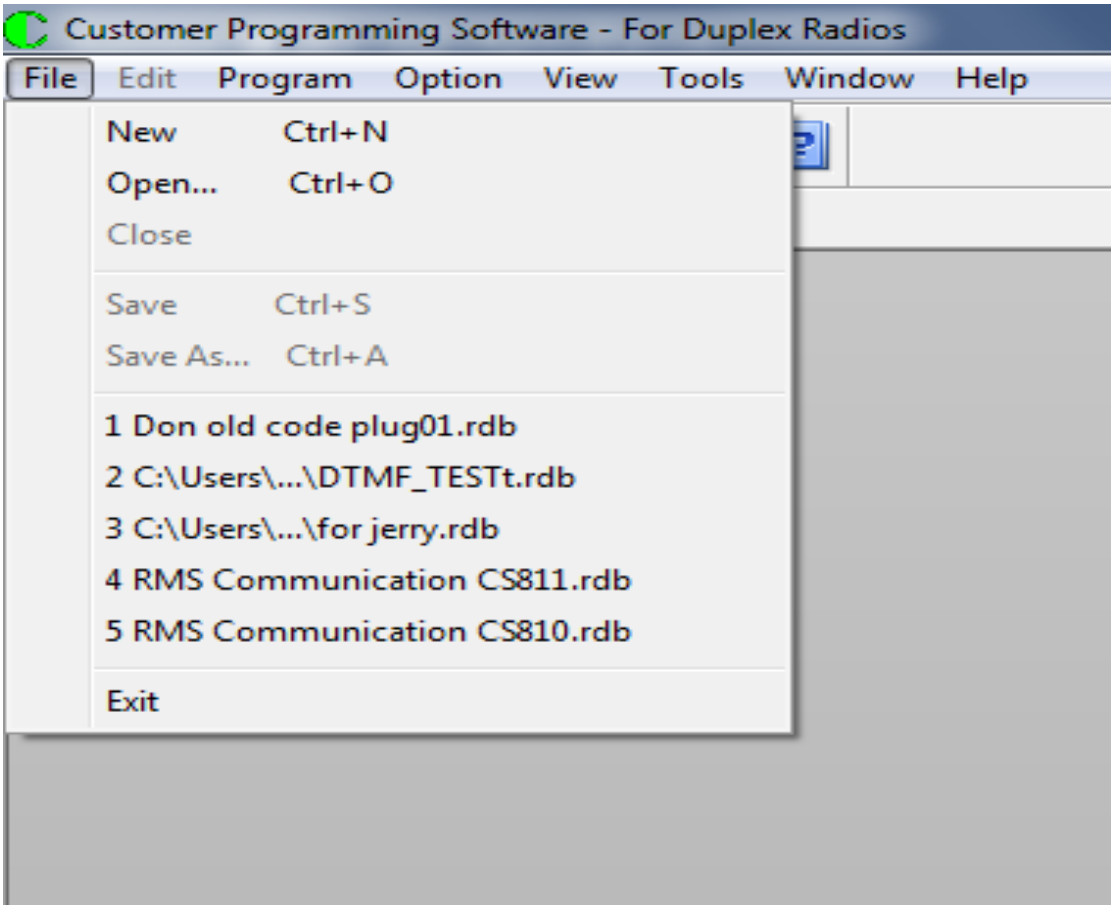


This is the Clone Command. It is not currently active in the program.

This is the Help “Help Topic” command.

FILE PULL DOWN MENU

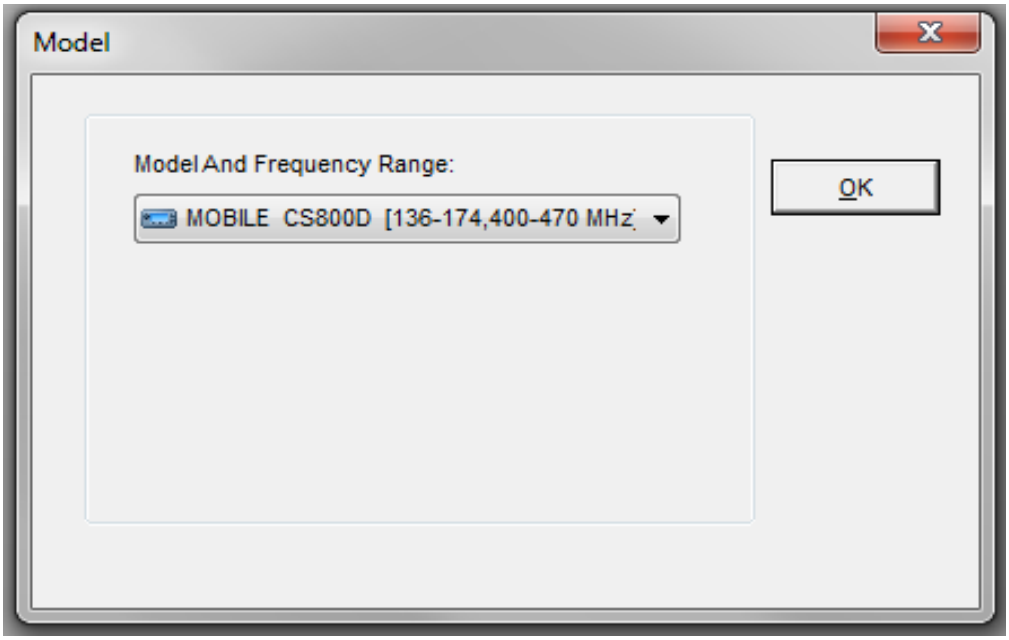
When you first turn on the program, and click on the File Pulldown menu, you get the following:



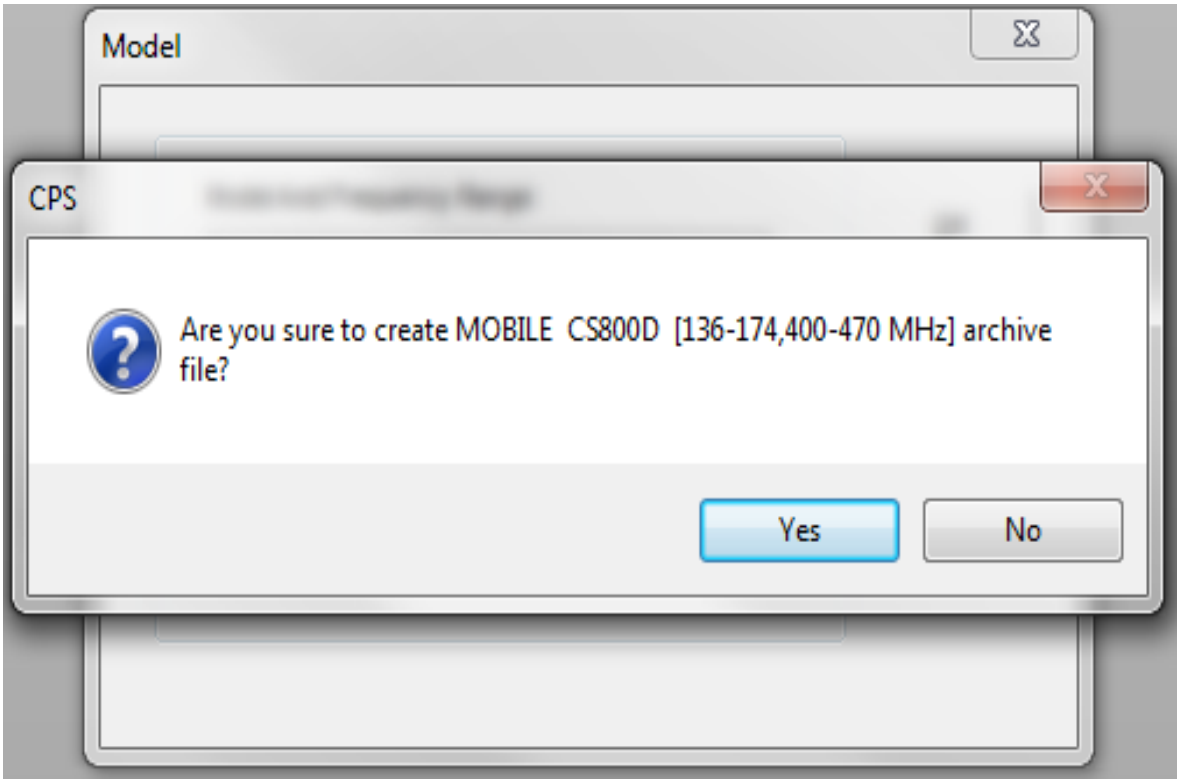
New

The New command generates a default code plug. The code plug consists of a single analog channel, a single digital channel, and one zone. This command is useful when you want to generate a code plug from scratch.

When you execute the “New” command, you get the following:



Press the OK button and you get:

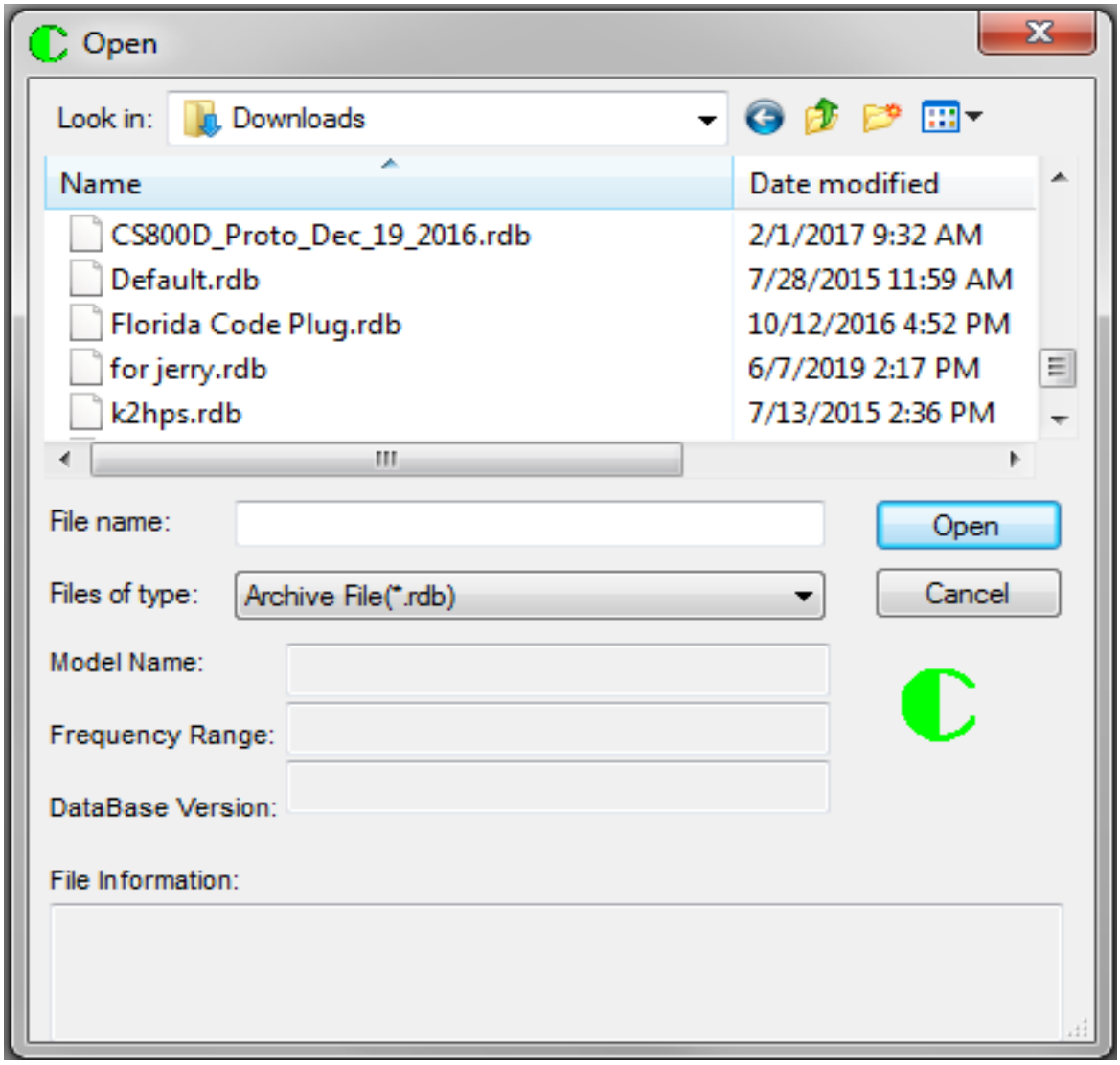


Press the Yes button and you are done.

Open

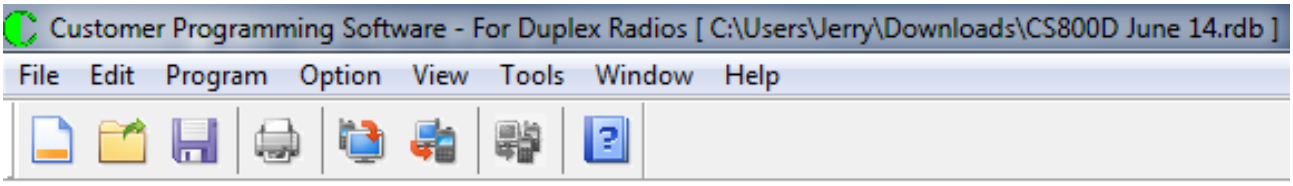
This command is used for opening an existing code plug already stored in your computer.

When you execute the “Open…” command, you get the following:



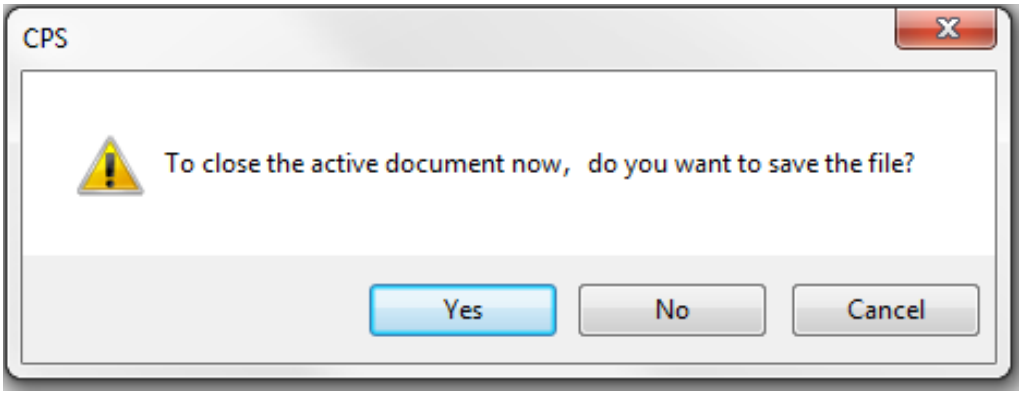
Using standard windows technique, locate your file and then double click on that file. When you double click on the file this screen will disappear or give you an error message. An error message will usually mean the file is not usable or does not exist.

If you successfully opened the file, the file name will be at the top of the screen as shown below.



Close

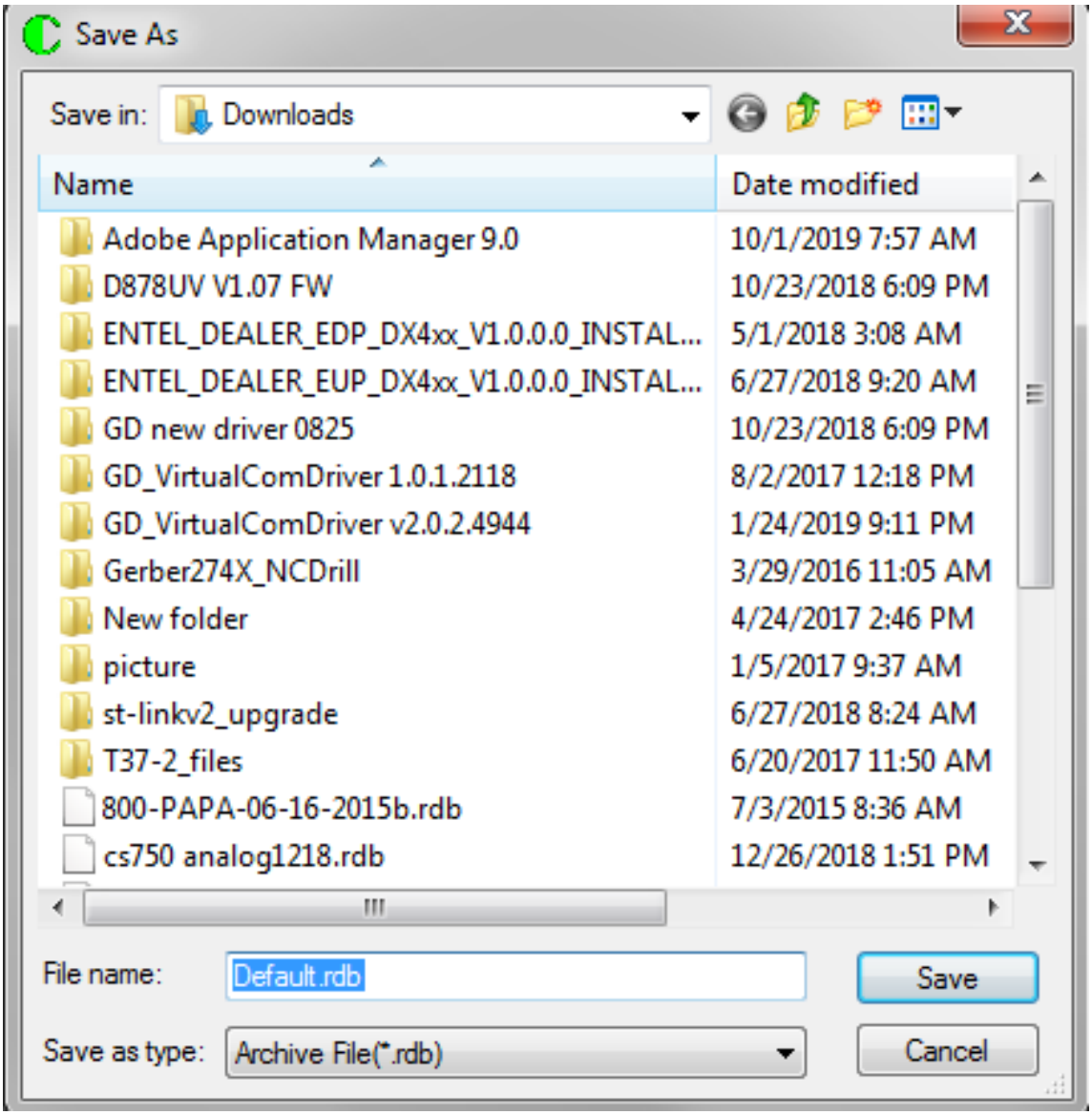
The close command closes the existing code plug without saving it. If you modified the code plug, the program will generate the following screen and then you have a choice of saving the new changes or abandoning the new changes as shown below.



If you press Yes then the command changes to a “Save As” command and you can change the name and decide where to store the code plug.

Save

The save command is normally used for saving the code plug in the same location and with the same name as when you opened it. However, this save command is really a “Save As” command and it allows you to change the name which is useful if you want to save the old code plug before you save the modified code plug. It also allows you to change the location of where you want the code plug to be stored. Pressing the save button will give you the following screen.

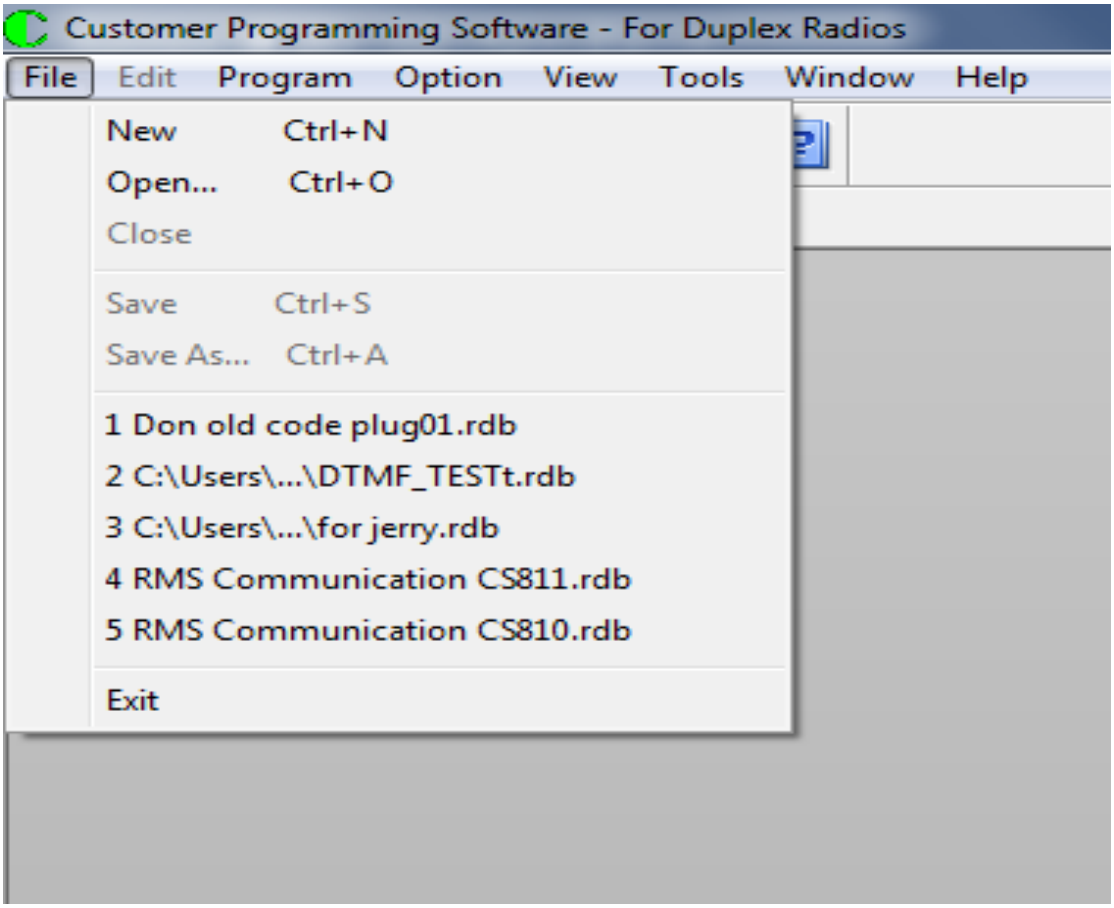


Save As

The Save As and the Save command are identical in this program. See above for details.

Short Cut for Open Command

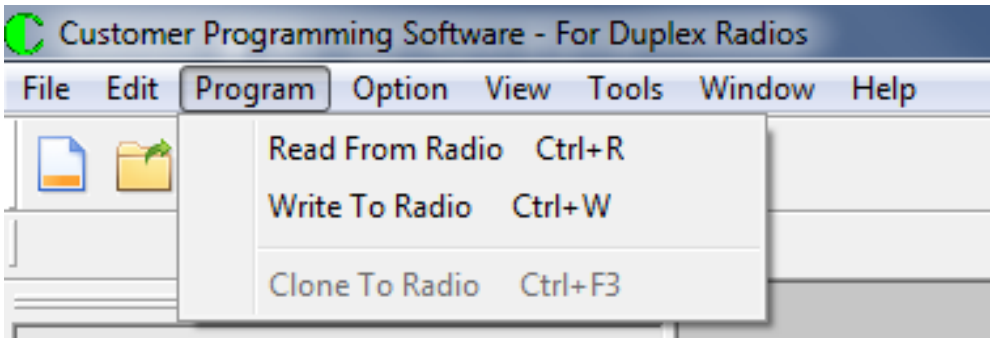
When you first access the file pulldown menu you get a screen as follows:



The files numbered 1 – 5 in the above screen is the last five CPS files you accessed. If you double click on any of the files above, you will open that file. That allows you to skip the task of finding the correct file location before you can open that file.

PROGRAM PULL DOWN MENU

When you click on the Program Pulldown menu you get the following:

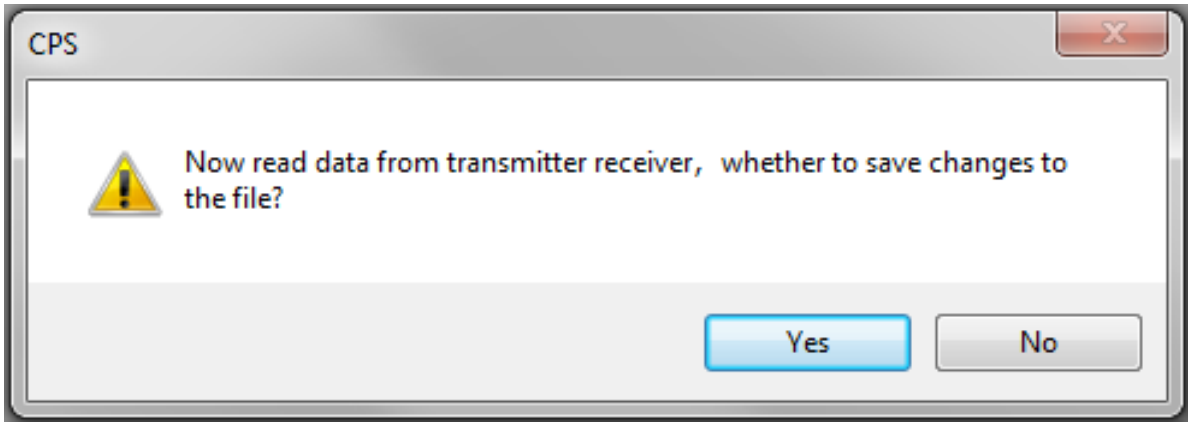


Read From Radio

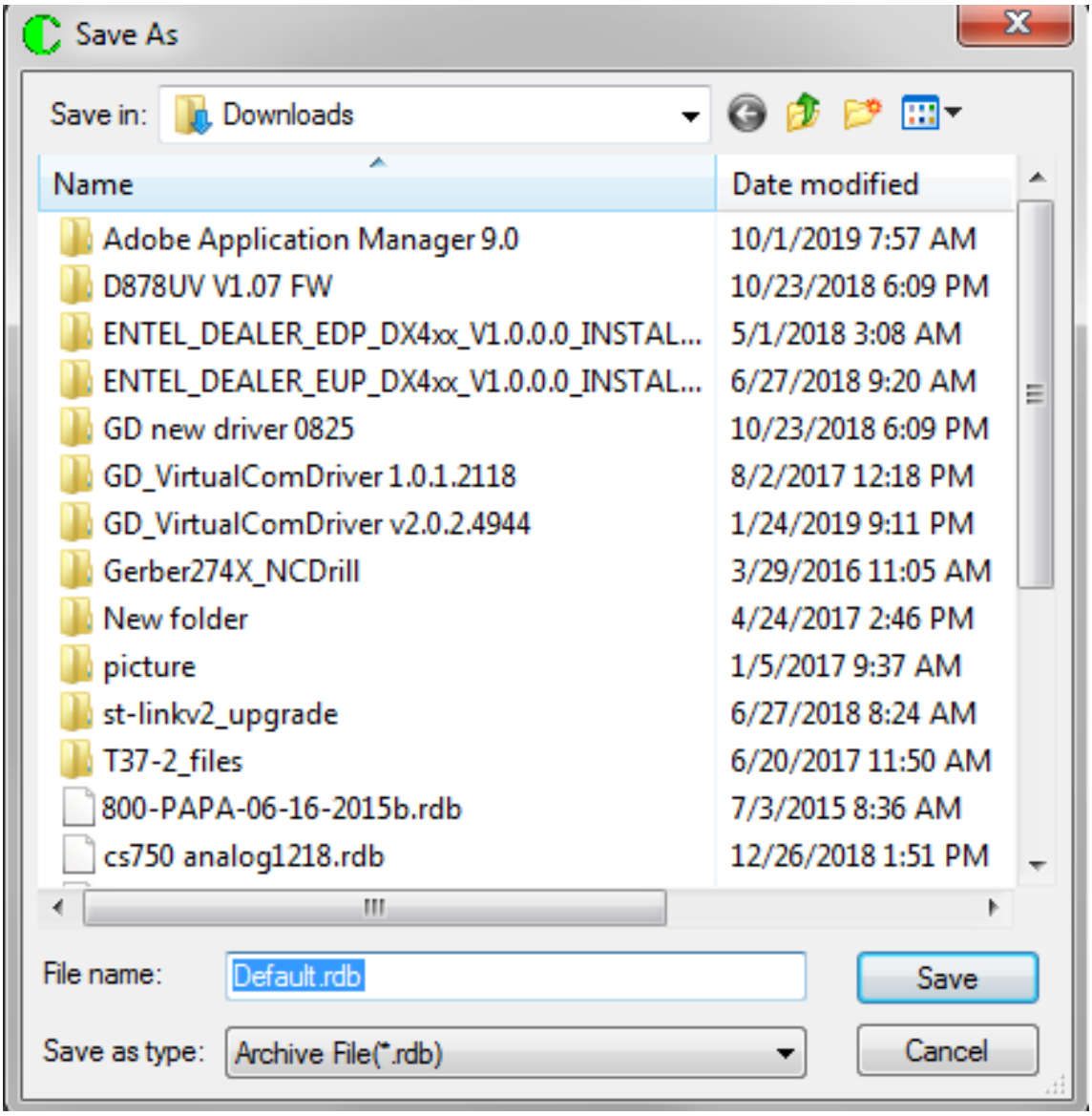
The “Read From Radio” command is used to transfer the code plug in the radio to the computer. This command does not store the data unless you use the “Save” or “Save As” command after you read the radio.

Before you use this command, attach the DB15 to USB cable between the 15 pin connector in the back of the radio and the computer. Turn on the radio but do not press any other keys other than the power key when you turn on the radio.

When you execute the “Read From Radio” command, you will get the following screen:

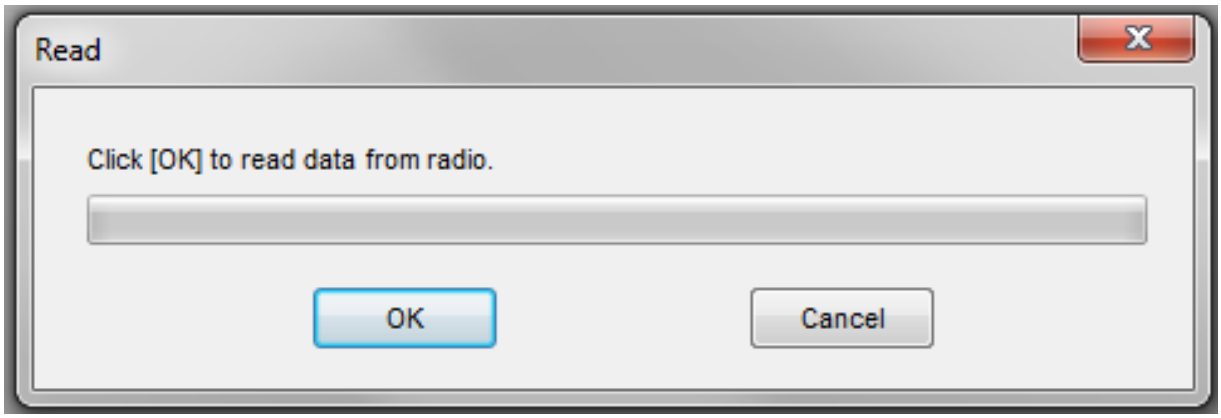


Pressing the Yes button will then give the following screen that will allow you to store the active code plug on your screen to the computer. This allows you to store what you were working on before the data in the radio overwrites what is currently on the screen. If you pressed the No key this step will be bypassed.

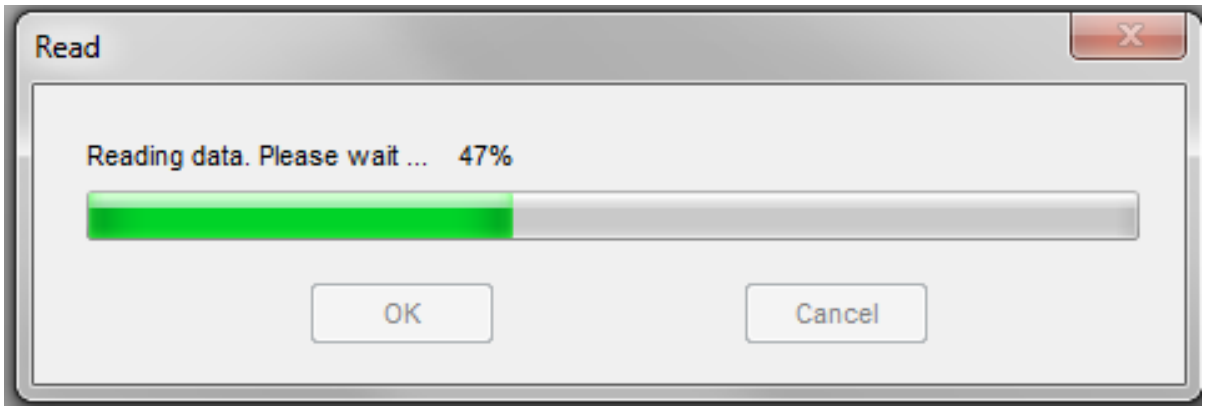


Pressing the Save program will allow you to store the code plug that is currently on the screen. Pressing the Cancel button will ignore this step.

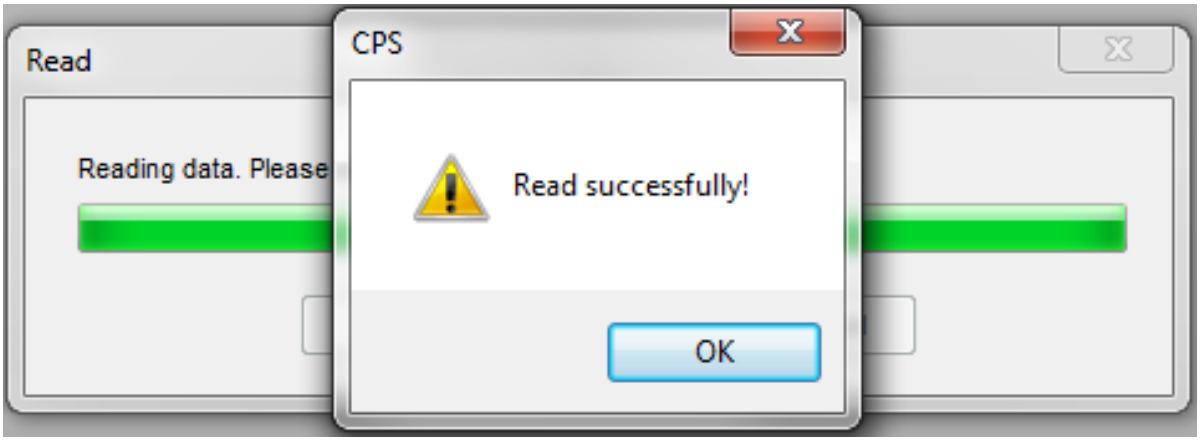
After the key is pressed you will then get the following screen.



Press the OK key and you will get the following screen:

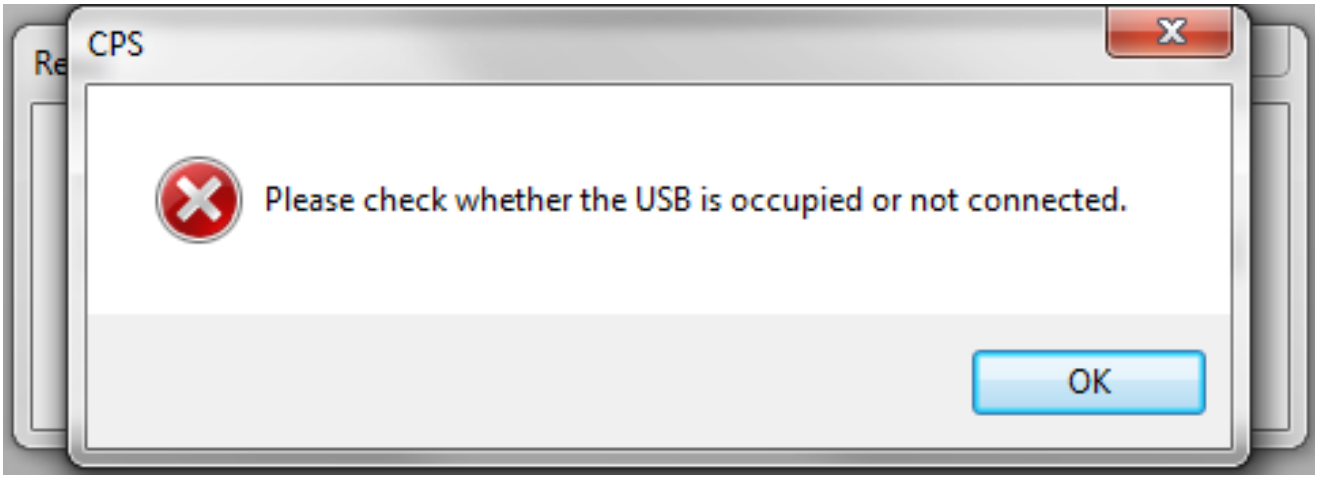


When the screen shows 100% you will then get the following message.



Press the OK button and you are finished.

If you got the following message it means one of a few things:



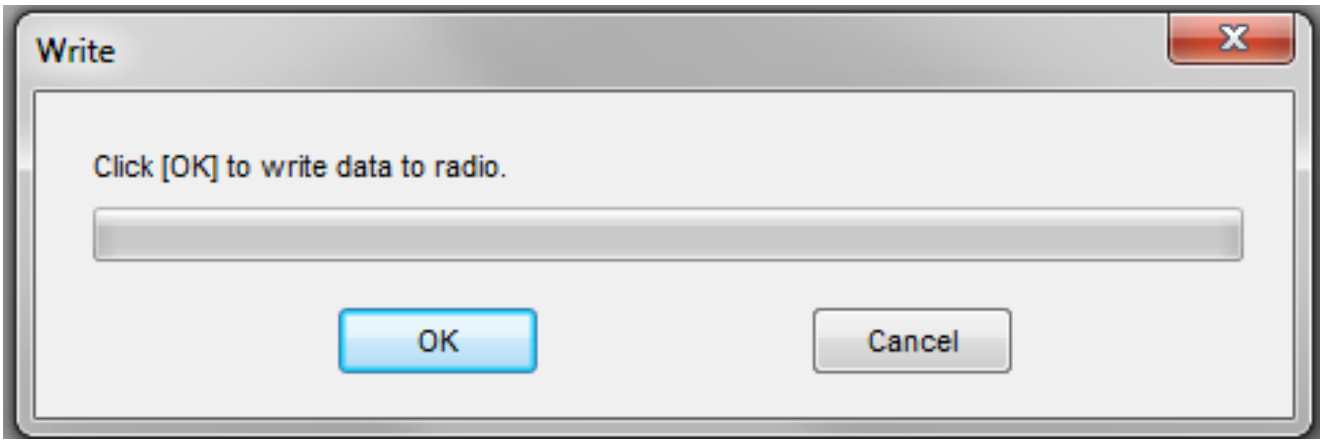
1. Your Radio is not turned on.
2. Your radio is not working
3. Your Computer is not working properly
4. The Programming Cable is not connected
5. The Cable is broken

Write To Radio

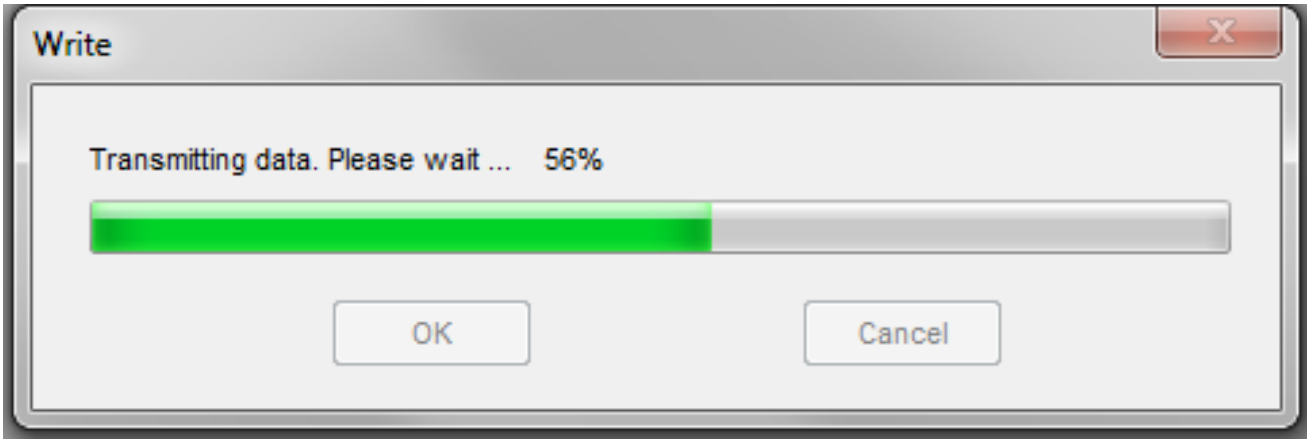
The “Write To Radio” command is used to transfer the code plug in the computer to the Radio.

Before you use this command, attach the DB15 to USB cable between the 15 pin connector in the back of the radio and the computer. Turn on the radio but do not press any other keys other than the power key when you turn on the radio.

When you execute the “Write To Radio” command, you will get the following screen:



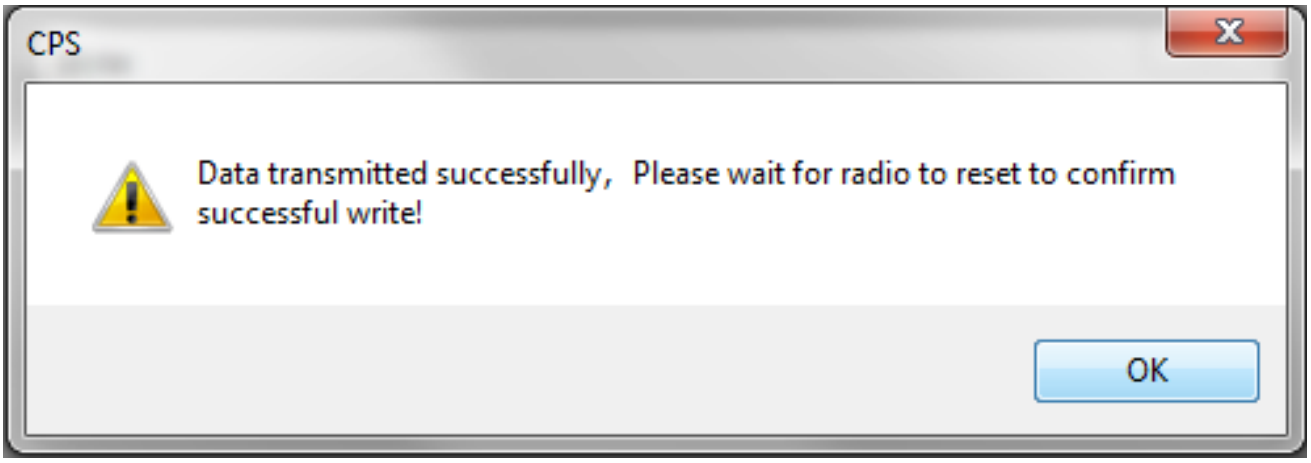
Pressing the OK button will then start the following screen.



and the radio screen will say:

Program Mode
Writing…

When the display reaches 100%, the following will be displayed:



and the radio screen will say:

Radio Restart

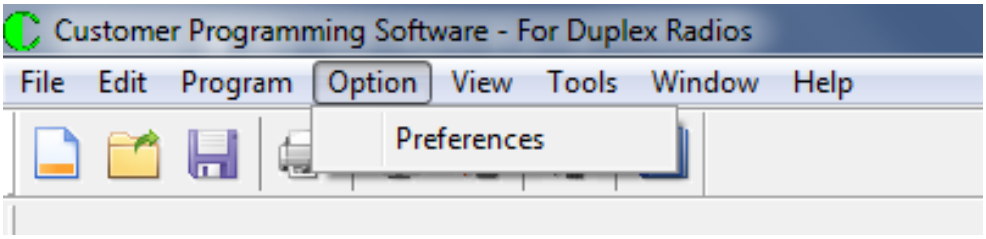
and after a few seconds the radio screen will go blank, then the radio will turn back on and you should hear the turn on tone. Press the OK button and you are now finished.

Clone To Radio

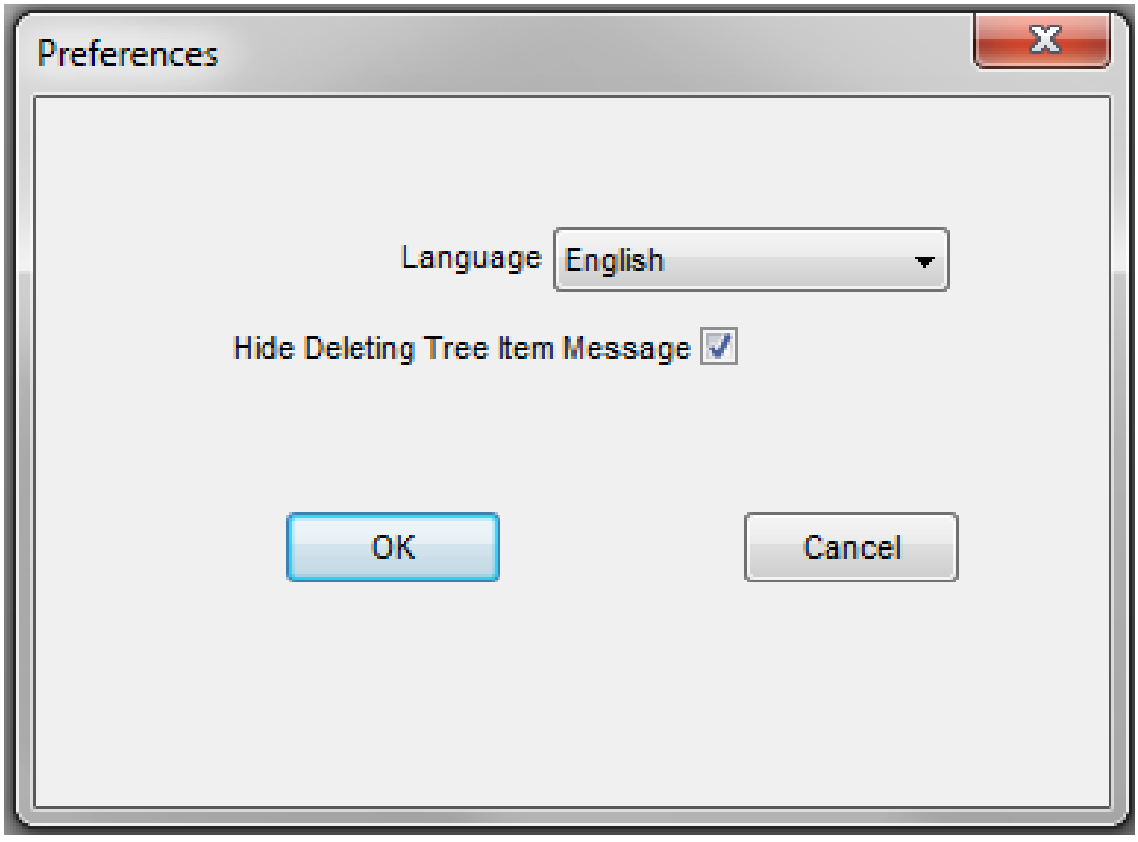
The Clone To Radio feature not yet implemented.

OPTION PULL DOWN MENU

When you click on the Option Pulldown menu you get the following:



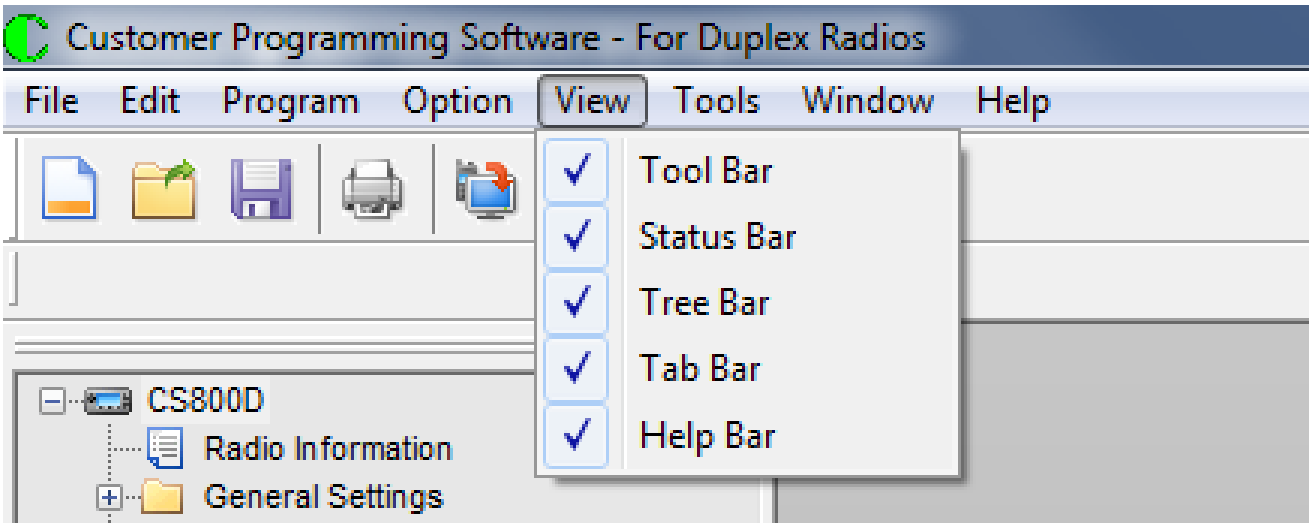
The “Preferences” command is used for setting the language for this product. When you execute the “Preferences” command, you will get the following screen:



Pressing the OK button will set the language to English. At the current time there is no other choice.

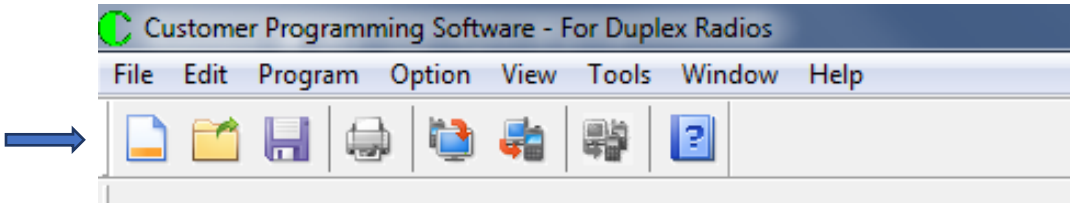
VIEW PULL DOWN MENU

When you click on the View Pulldown menu you get the following:

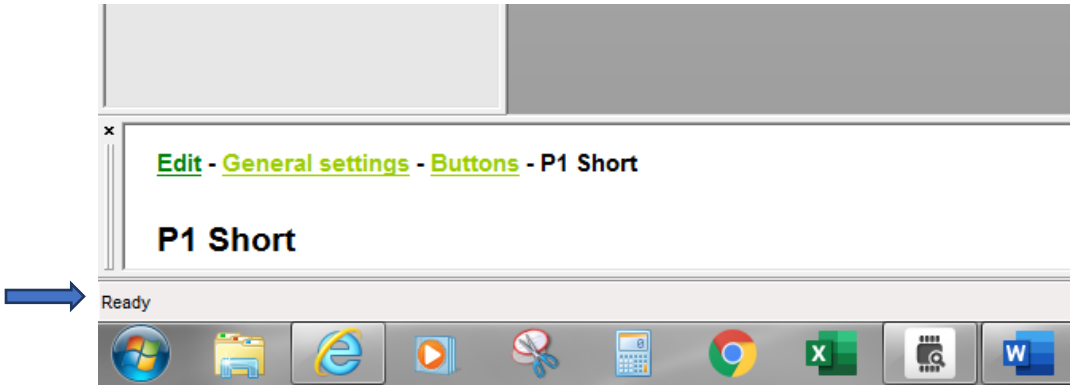


The View Pulldown Menu is used to determine which features are on the screen. The information below shows which feature is for which part of the screen.

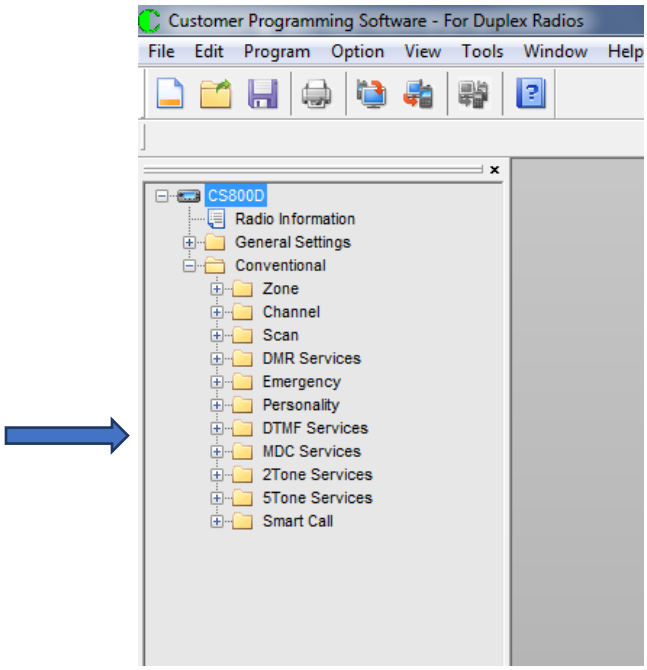
Tool Bar



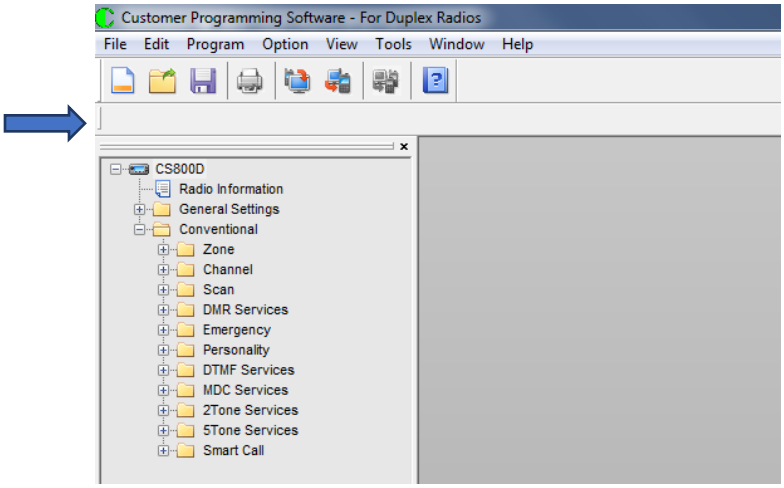
Status Bar



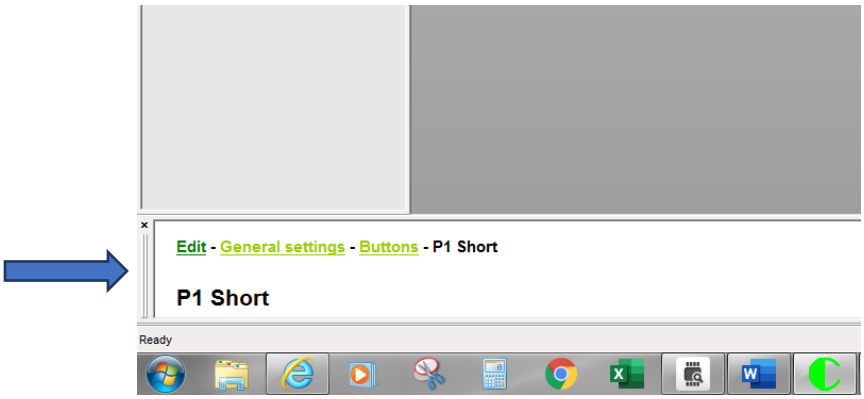
Tree Bar



Tab Bar

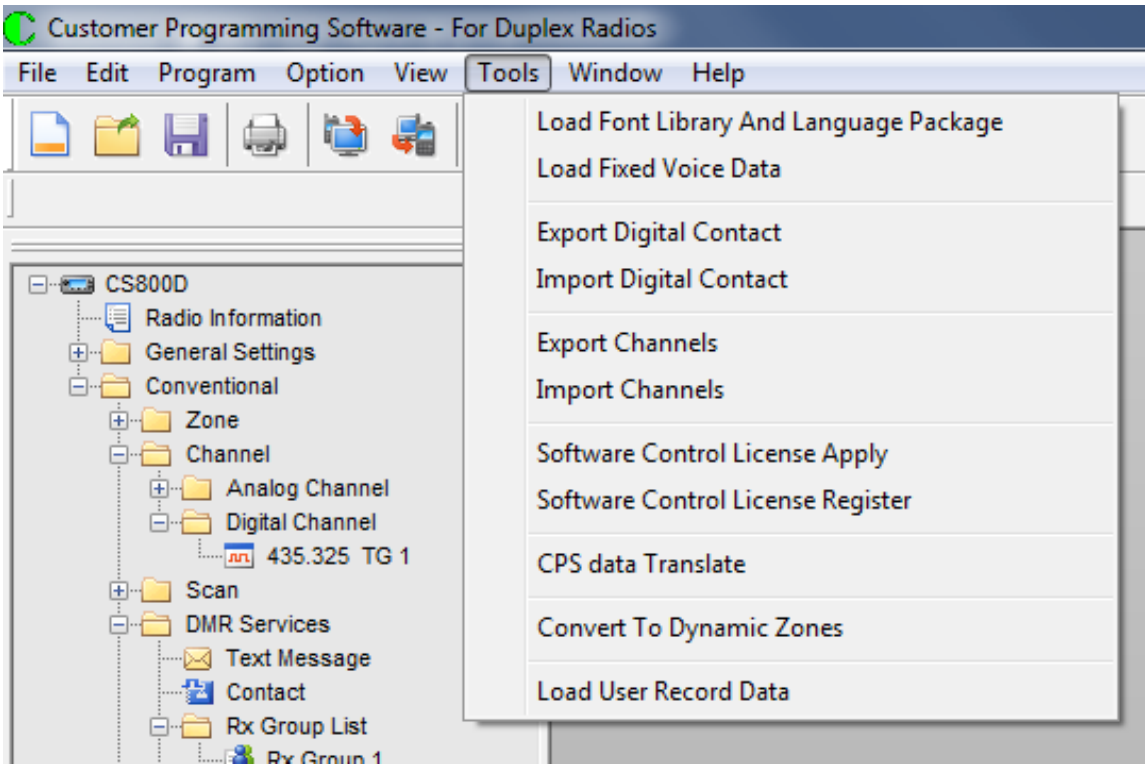


Help Tab



TOOLS PULL DOWN MENU

When you click on the Tools Pulldown menu you get the following:



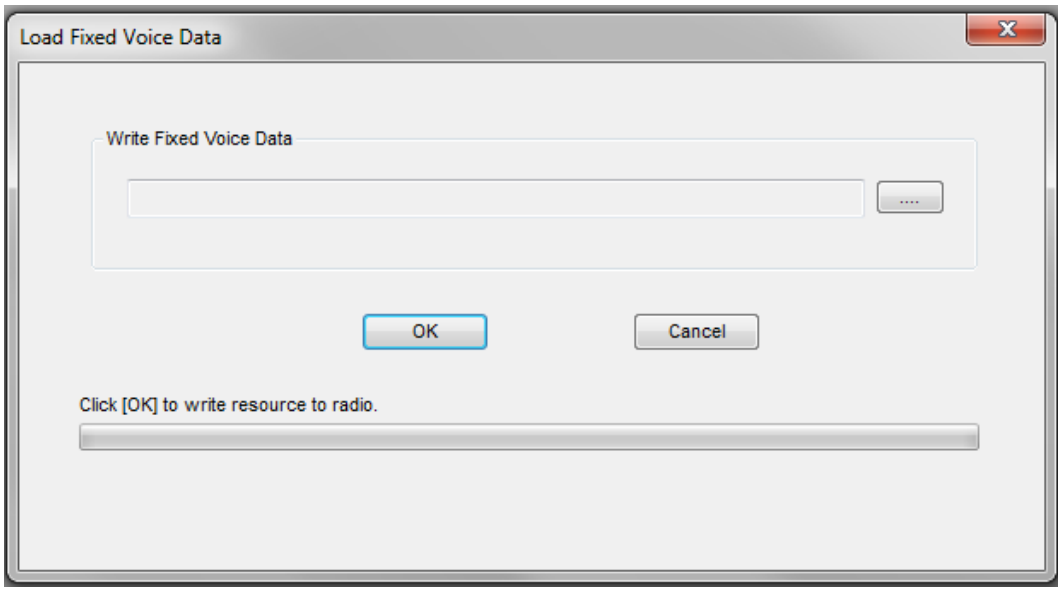
The Tools Pulldown Menu is used to do some advanced features mostly used for updating the radio.

Load Font Library and Language Package

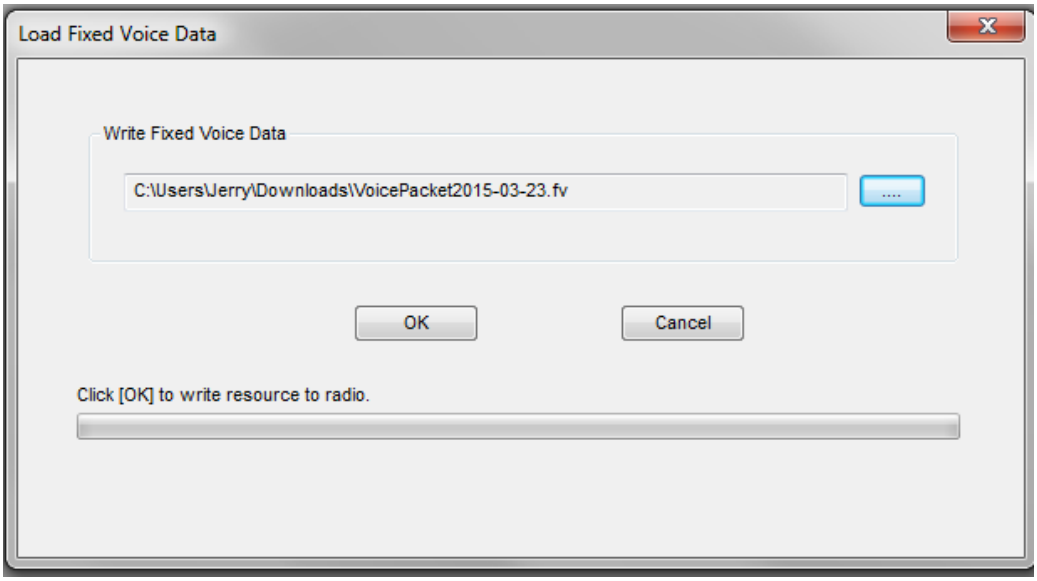
This feature is used when you want to implement other languages such as Chinese or Italian or German. This feature has never been used in this product and there are no files to support this feature.

Load Fixed Voice Data

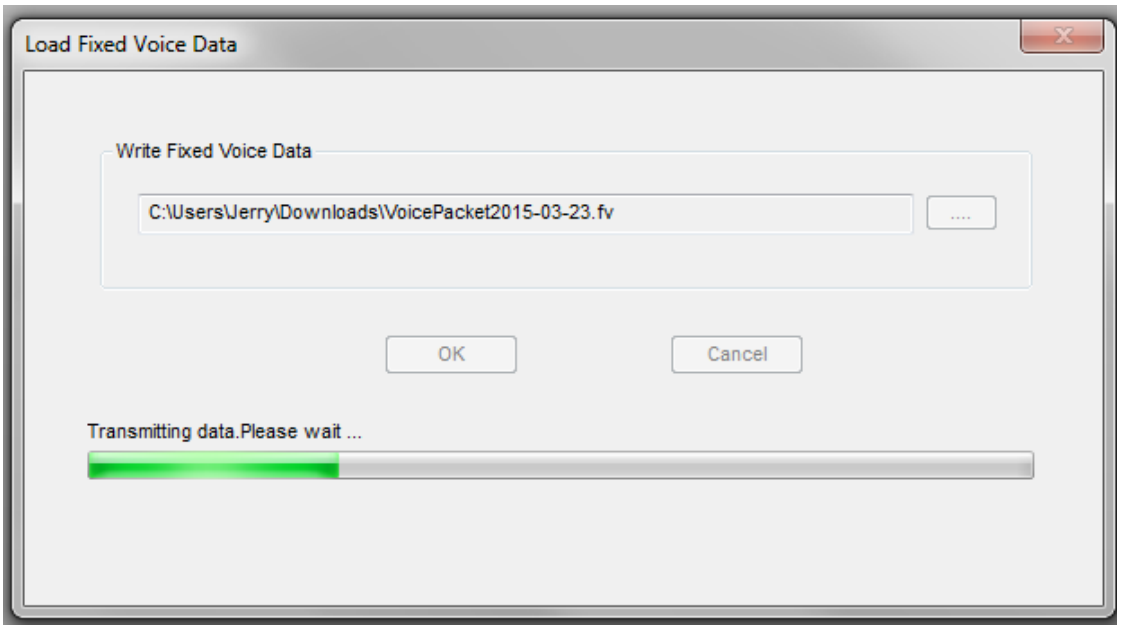
This feature is used to load or reload the voice prompts available for this radio. When this feature is executed the following screen appears:



Use the button with …. To select the file name and location and then press the OK button to load the file into the radio. The screen shot below shows the voice packet selected.



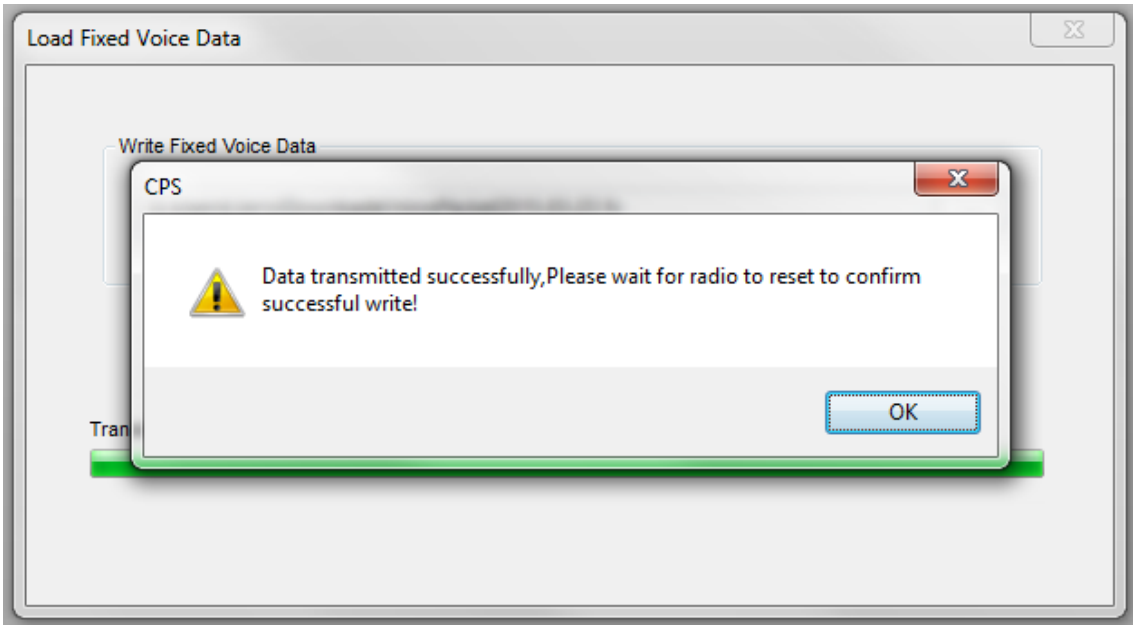
Press the OK button and the following screen appears:



and the radio display will say:

Program Mode
Load SP Data

When the entire file is loaded into the radio, the following screen appears



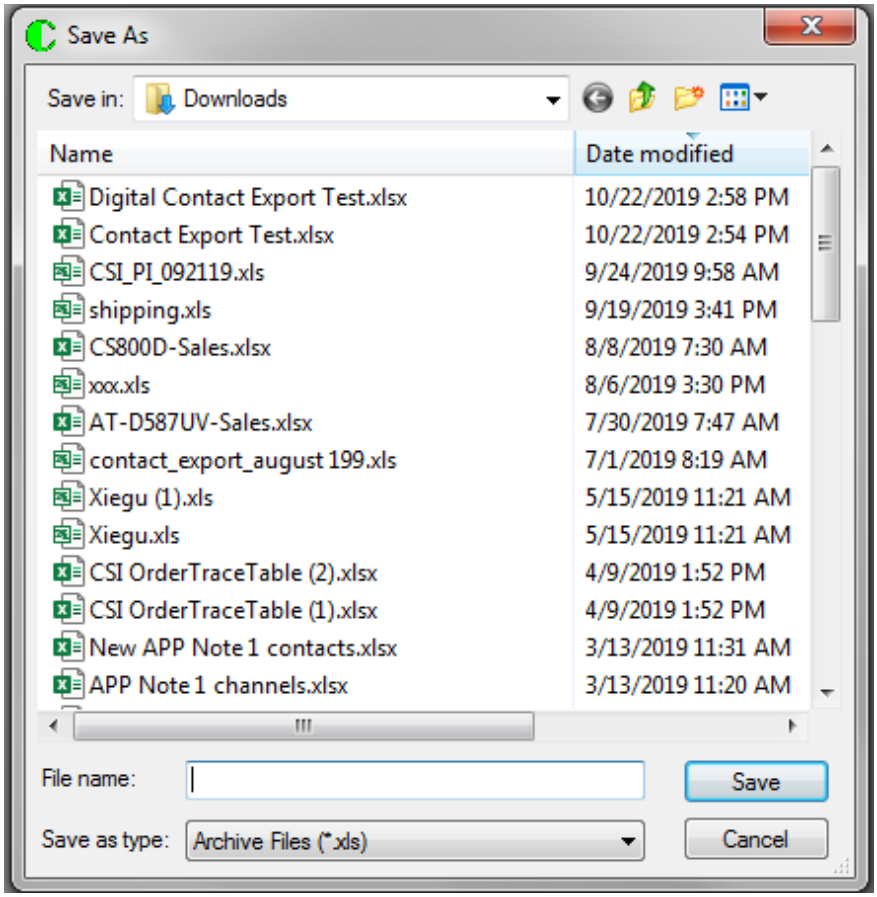
and the radio screen will say:

Radio Restart

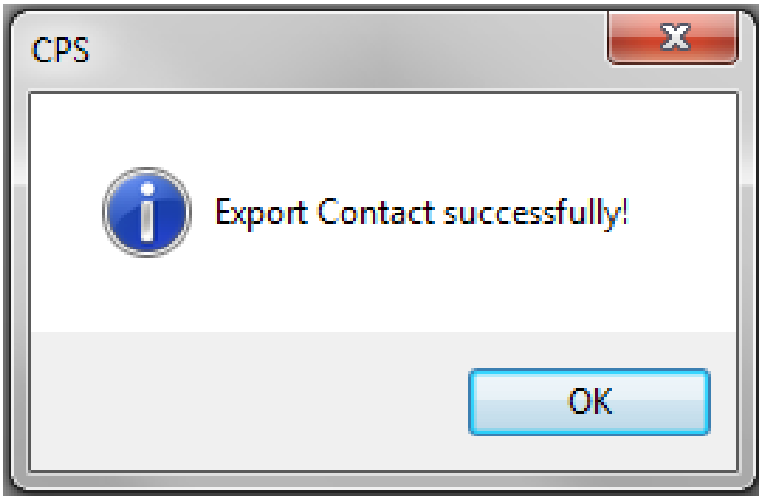
and after a few seconds the radio screen will go blank, then the radio will turn back on and you should hear the turn on tone. Press the OK button and you are now finished.

Export Digital Contacts

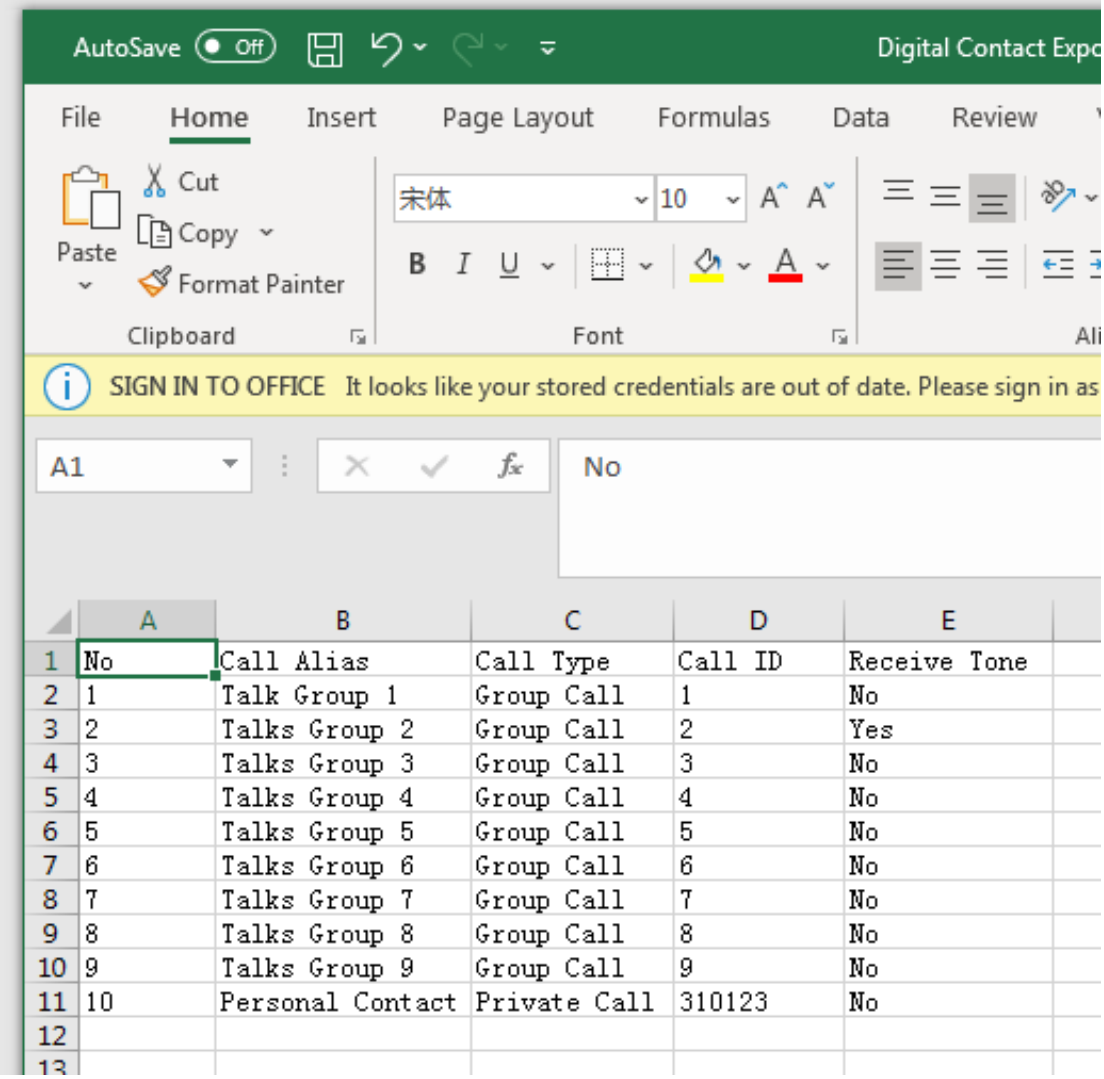
This is used for saving the contacts in your radio to an Excel file on your computer. Executing the Export Digital Contact command will give the following screen:



Enter the name you want the file to be and press Save and the Contact List in the radio will get transferred to the computer in Excel format and the following screen will be generated:



For this command to work, you need a Microsoft Excel program in your computer. An equivalent program will not work! The file that is generated when opened with Excel looks like what is below.

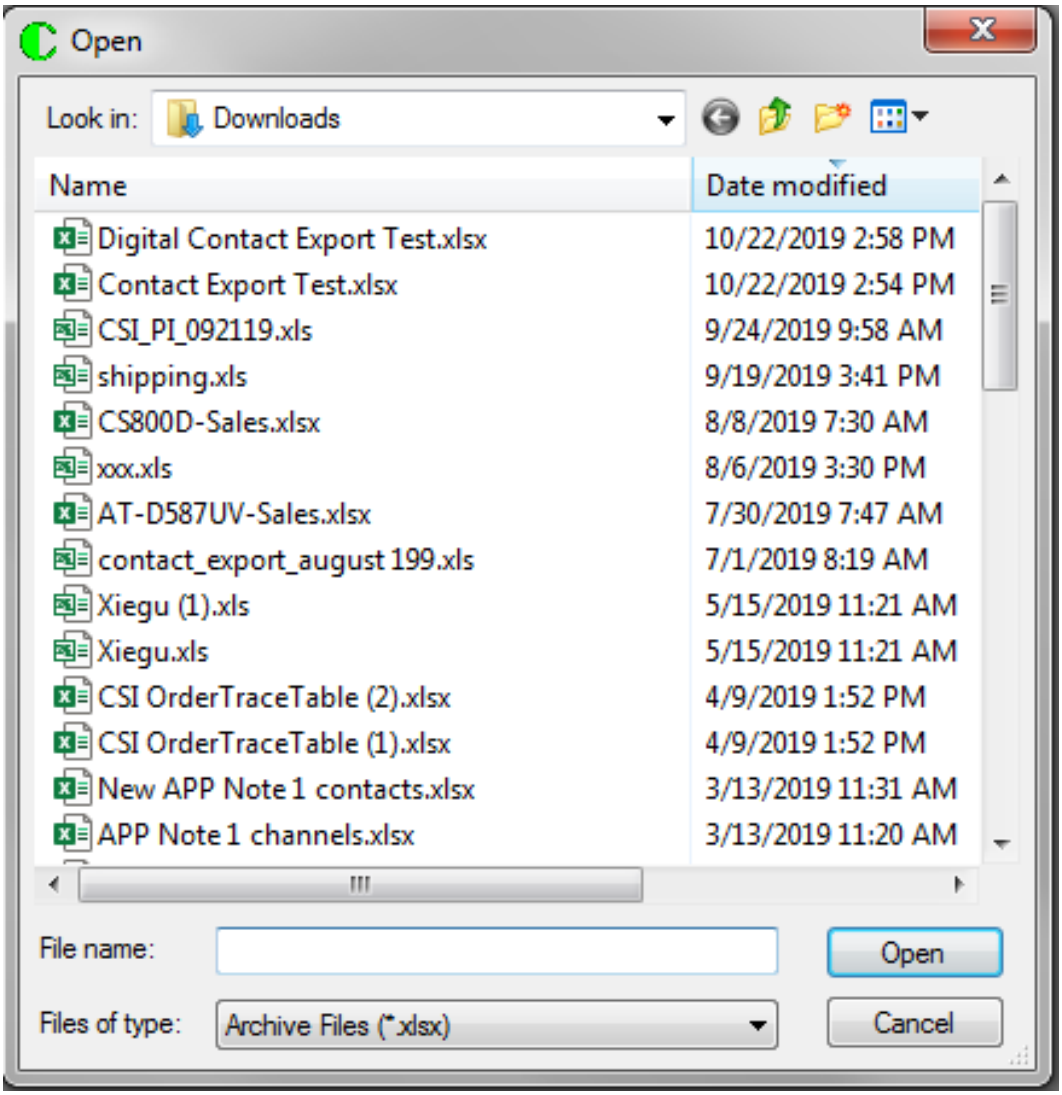


	A	B	C	D	E
1	No	Call Alias	Call Type	Call ID	Receive Tone
2	1	Talk Group 1	Group Call	1	No
3	2	Talks Group 2	Group Call	2	Yes
4	3	Talks Group 3	Group Call	3	No
5	4	Talks Group 4	Group Call	4	No
6	5	Talks Group 5	Group Call	5	No
7	6	Talks Group 6	Group Call	6	No
8	7	Talks Group 7	Group Call	7	No
9	8	Talks Group 8	Group Call	8	No
10	9	Talks Group 9	Group Call	9	No
11	10	Personal Contact	Private Call	310123	No
12					

The file structure is important because when you import the file from the Computer to the Radio, it must be in the same format.

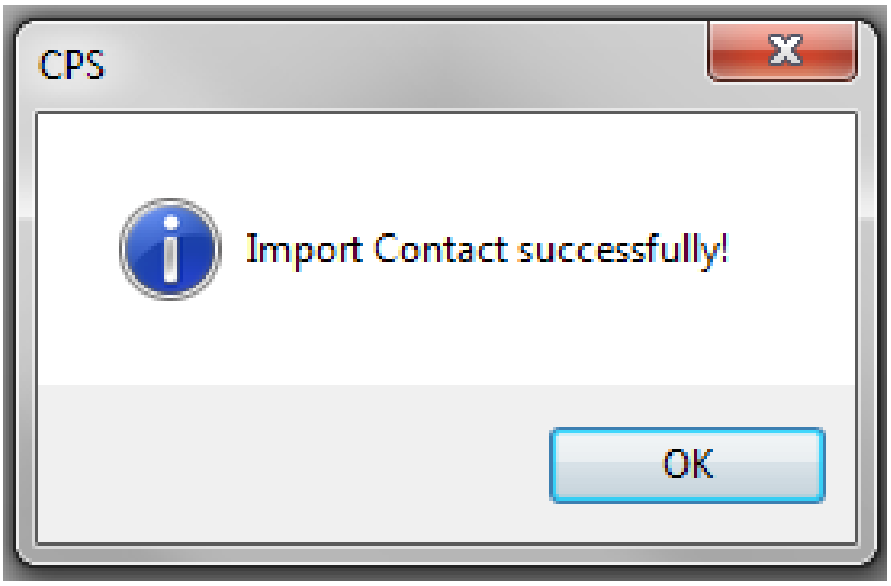
Import Digital Contacts

This is used for transferring the contacts in your computer to your radio. The format must be as shown above and presented in Excel xls format. For this command to work, you need a Microsoft Excel program in your computer. An equivalent program will not work! Executing the Import Digital Contact command will give the following screen:



Double clicking on the file name or single clicking on the file name followed by pressing the Open key will transfer the data from the file to the radio.

Once the file has been transferred to the radio, the following screen will appear.

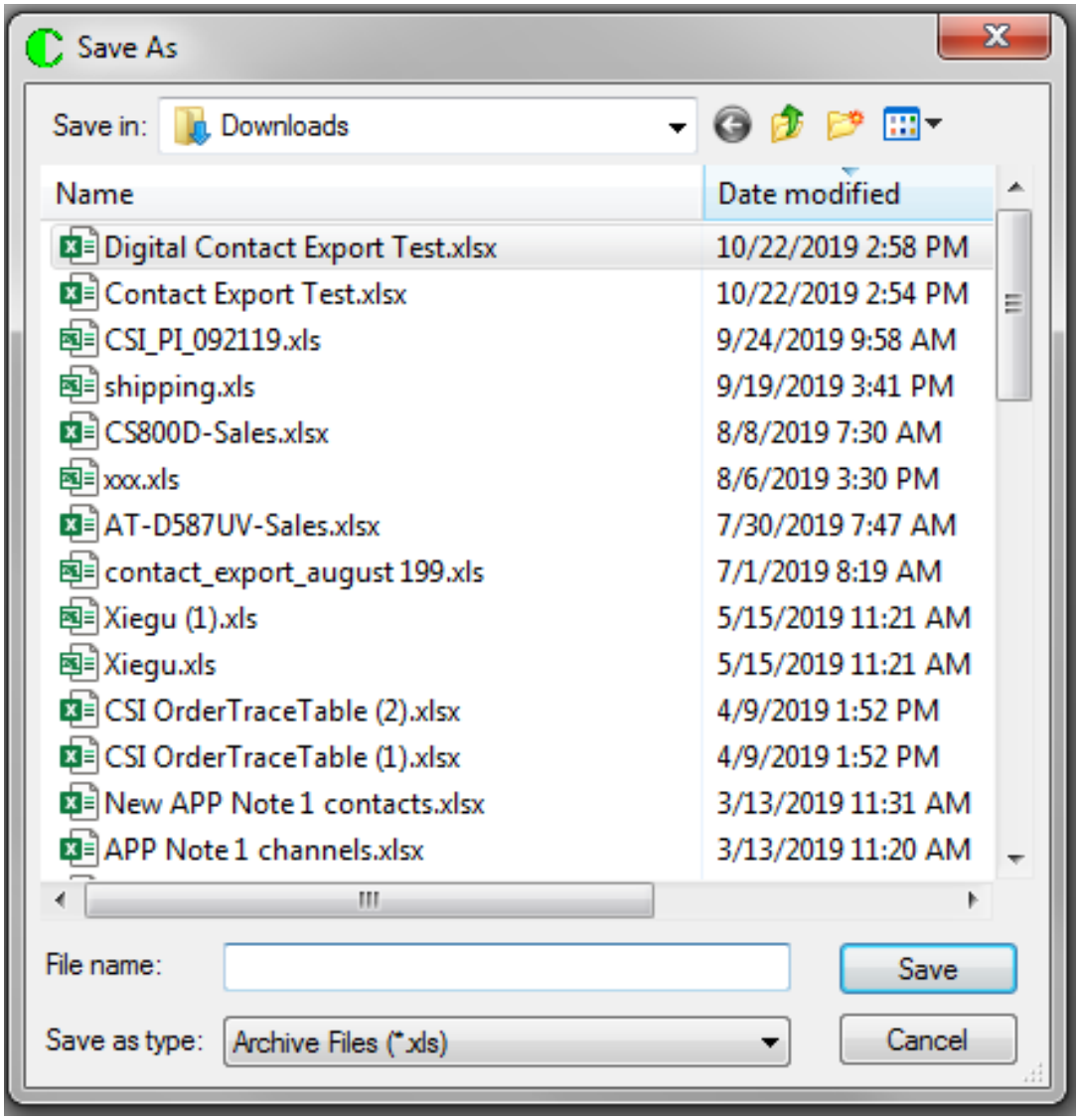


Press the OK button and you are now finished.

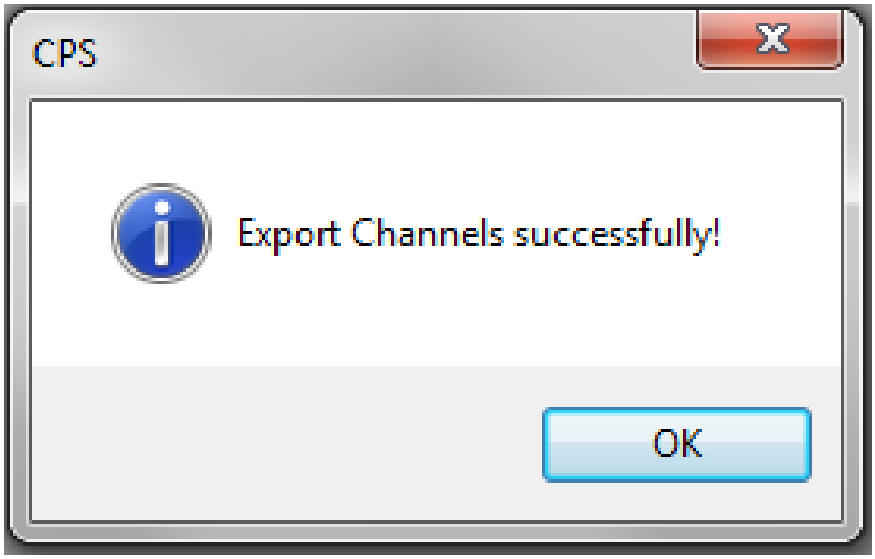
Export Channels

The purpose of Export Channels and Input Channels command is to accomplish widespread changes to the data using the Excel programs. You can also rearrange channels in the Excel program before sending it back to the radio.

For this command to work, you need a Microsoft Excel program in your computer. An equivalent program will not work! Executing the Export Channels command will give the following screen:



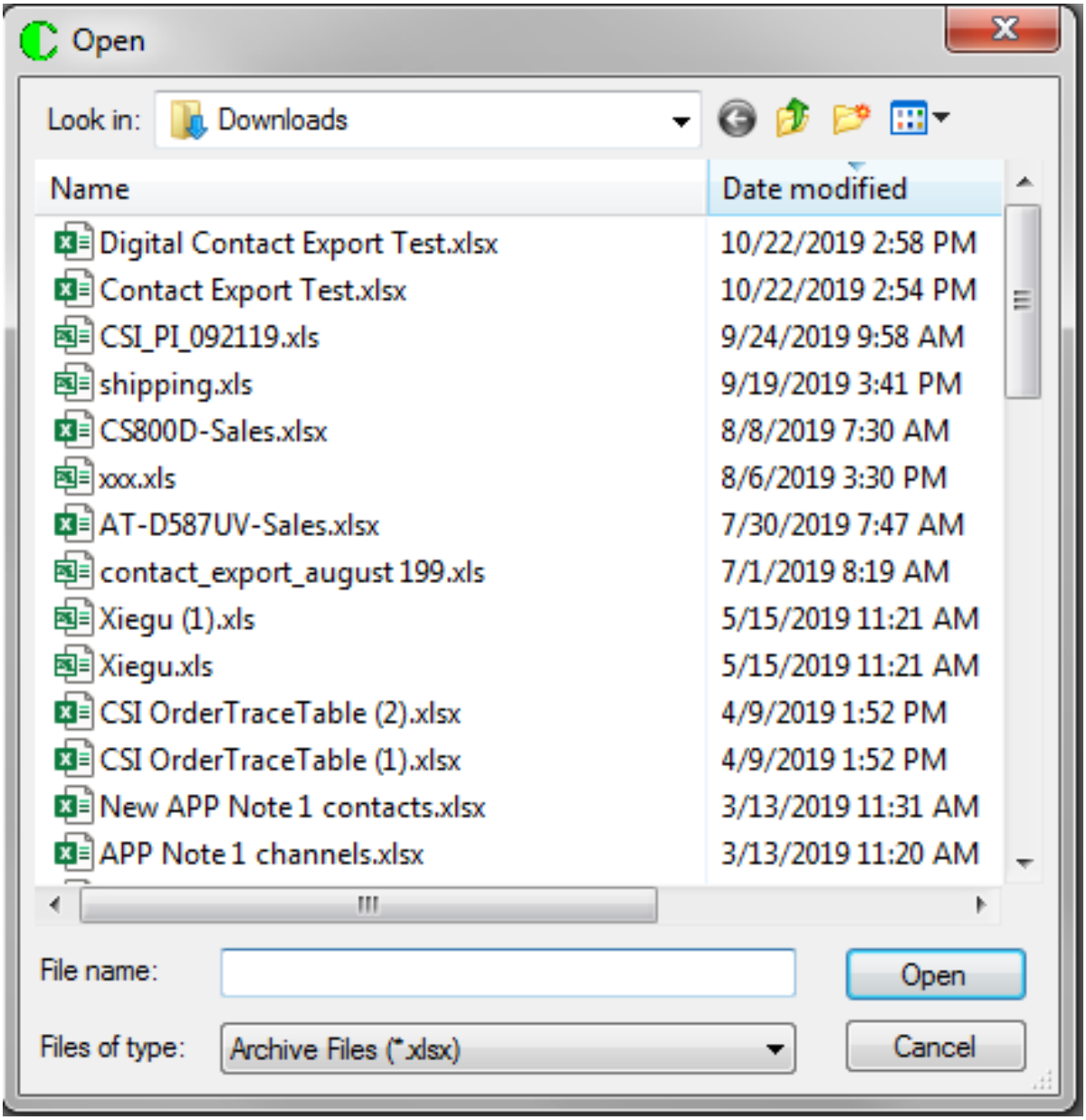
Enter the name you want the file to be and press Save and the Channel List in the radio will get transferred to the computer in Excel format. When finished, the computer will show the following screen:



Press the OK button and you are now finished.

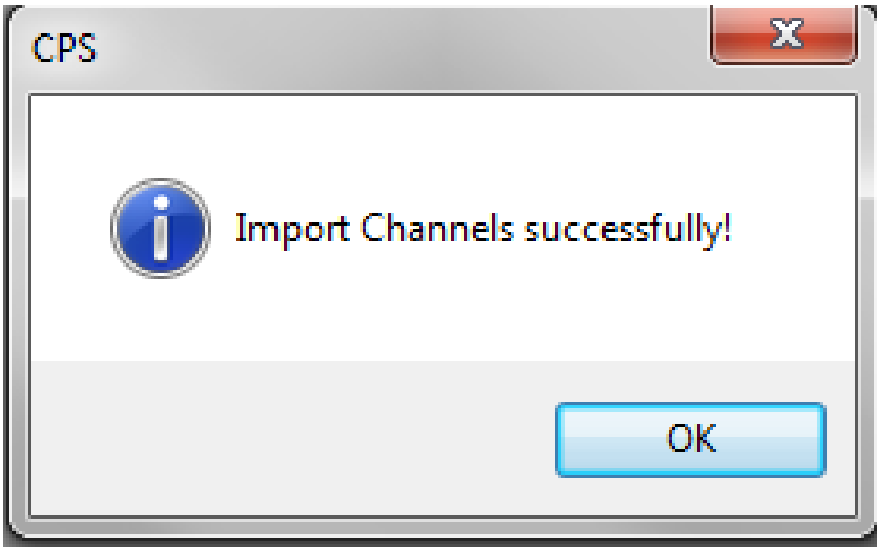
Import Channels

This is used for transferring the channels in your computer to your radio. The format must be correct and presented in Excel xls format. For this command to work, you need a Microsoft Excel program in your computer. An equivalent program will not work! Executing the Import Channel command will give the following screen:



Double clicking on the file name or single clicking on the file name followed by pressing the Open key will transfer the data from the file to the radio.

Once the file has been transferred to the radio, the following screen will appear.



Press the OK button and you are now finished.

Software Control License Apply

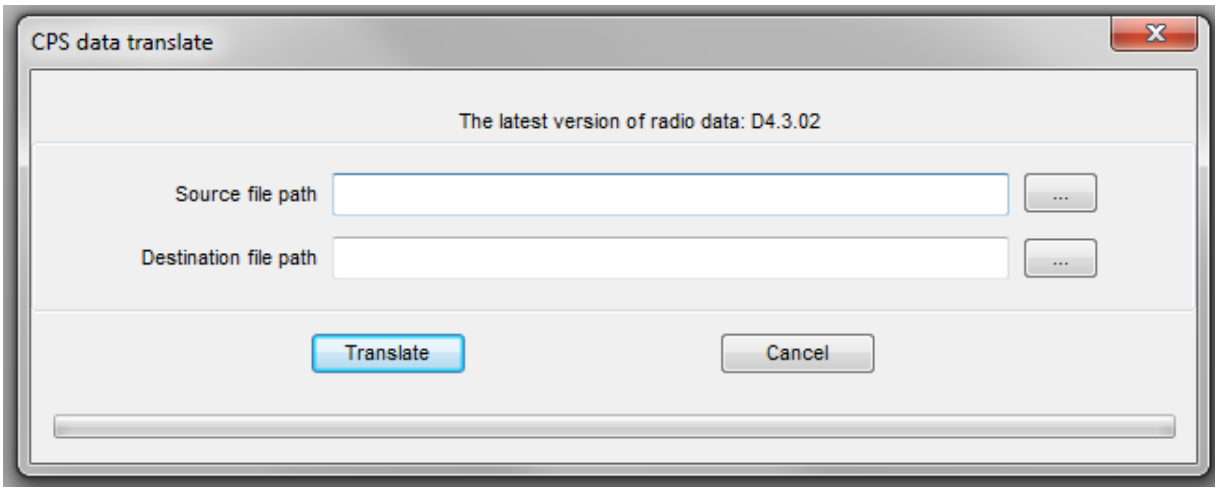
This feature was only used in the CS800, CS801, CS750 and CS751. It is not used in the CS800D.

Software Control License Register

This feature was only used in the CS800, CS801, CS750 and CS751. It is not used in the CS800D.

CPS Data Translate

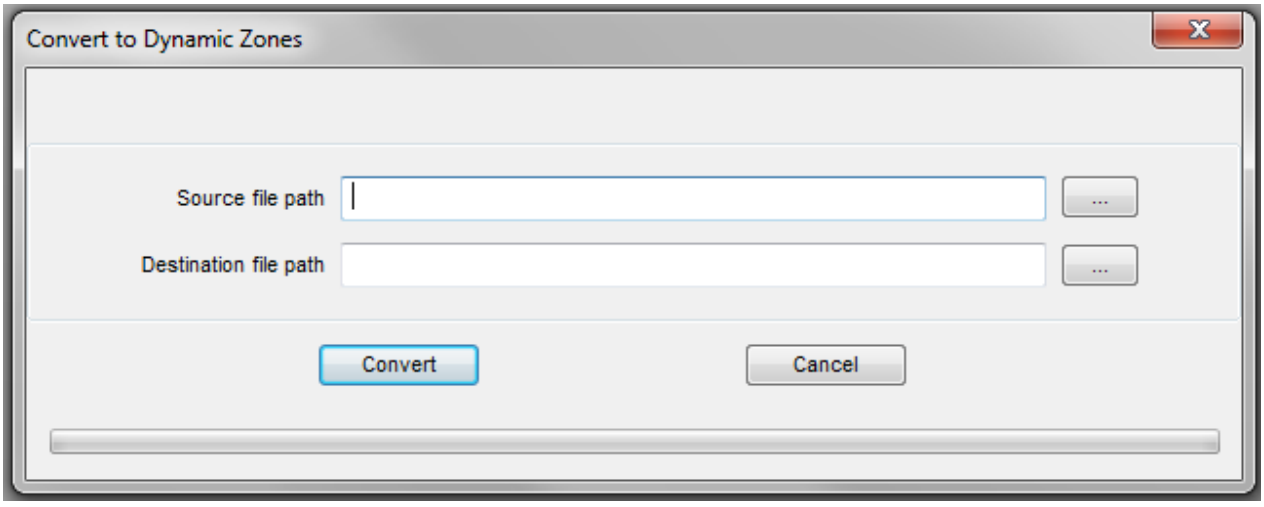
This feature is used to translate between different software versions on pre Dynamic Zones. This was mostly used to transfer between the CS800, CS801, and the CS750 databases to the CS800D data base. If you need to use it, execute the CPS Data Translate program. When you do it you get the following screen:



Set up the source and destination files, press the Translate button, and the program will generate the new database. Then use the Convert To Dynamic Zones command to generate a database compatible with this program.

Convert To Dynamic Zones

This program is used to convert the database that had fixed 16 channels per zone to the current Dynamic Zone database. Executing the Convert To Dynamic Zones command will give the following screen:



Set up the source and destination files, press the Convert button, and the program will generate the new database. Now use the open

command to read in the new file and the Write command to put it back in the radio.

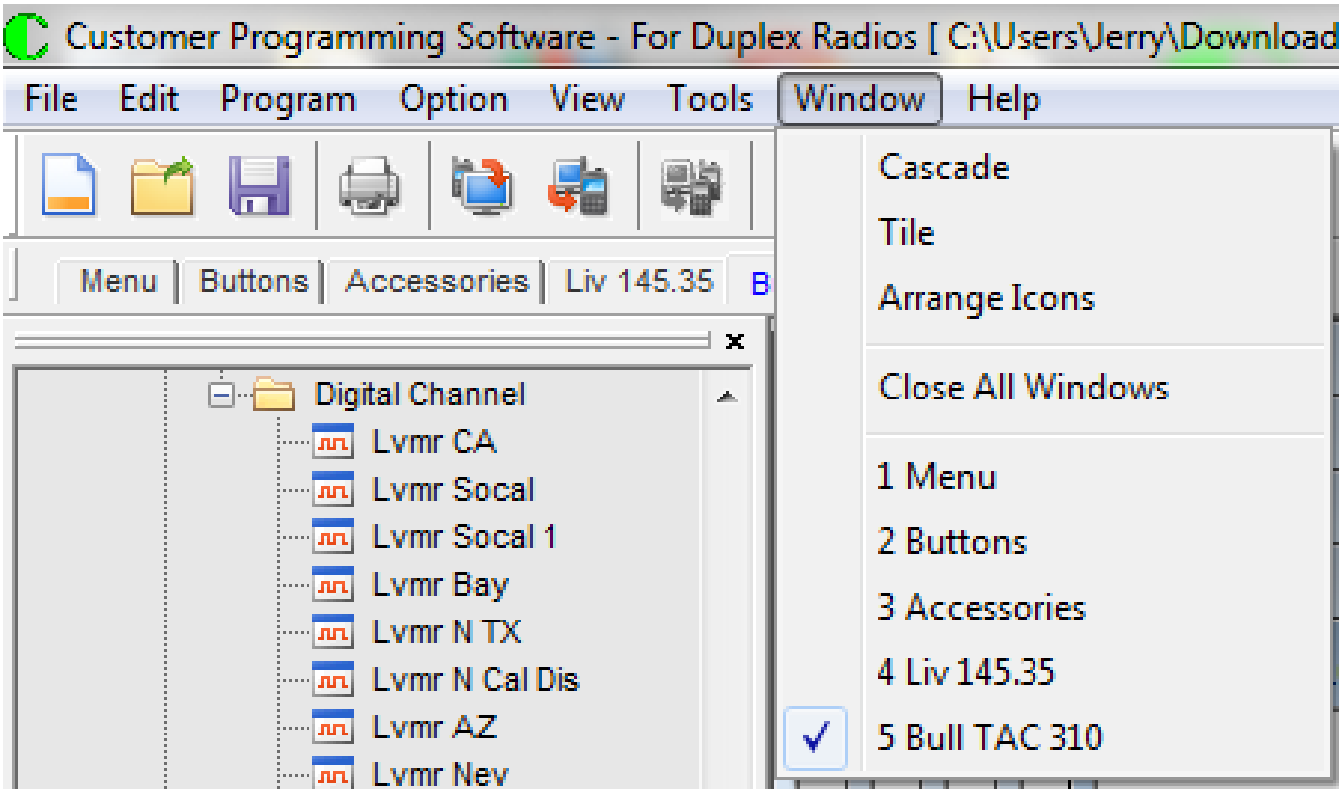
When you set up the source file path, the Destination file path will be automatically generated with the exact same parameters except the file name will have a 01 appended to the end. You can modify the name and the destination parameters if you prefer.

Load User Record Data

This used to be to allow the user to record in their own voice the different voice prompts available in the radio. This feature is no longer operational.

WINDOWS PULL DOWN MENU

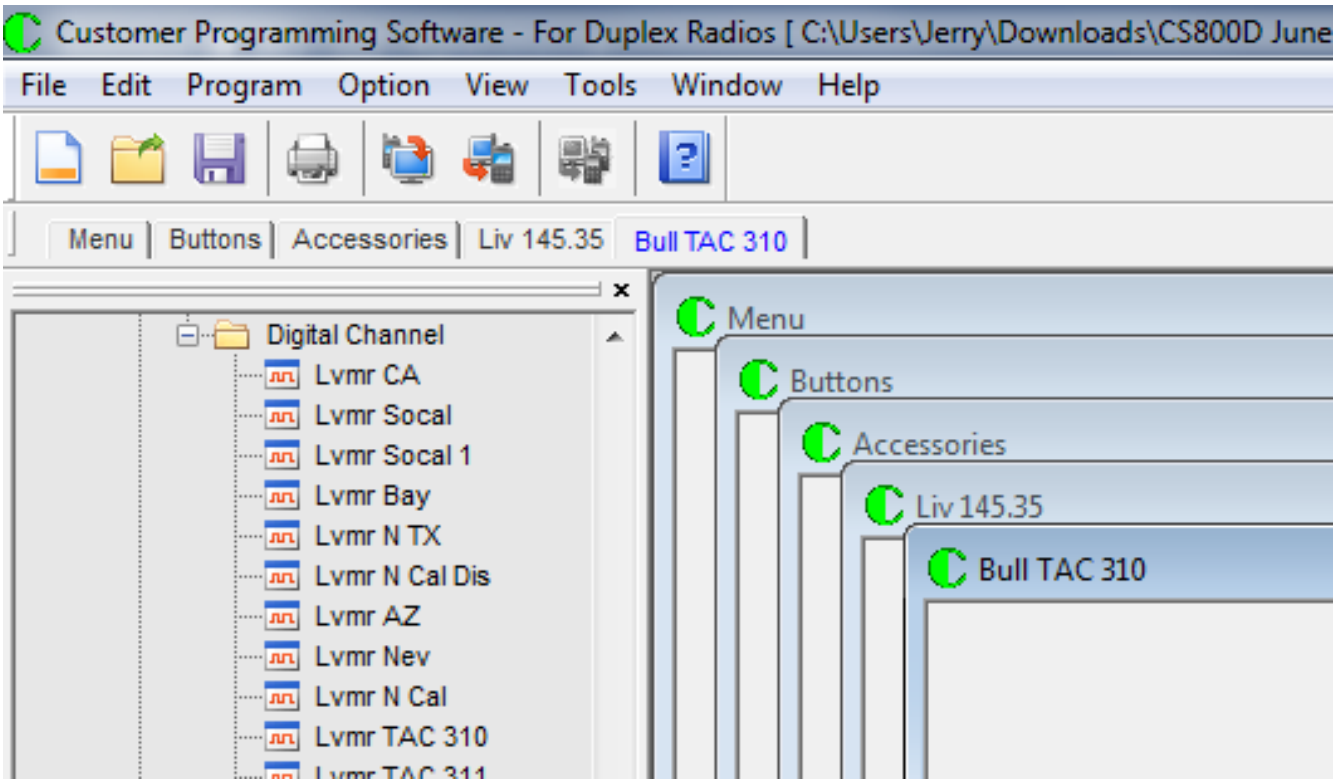
When you click on the Windows Pulldown menu you get the following:



This is menu is used to specify how different open screens get arranged on the screen.

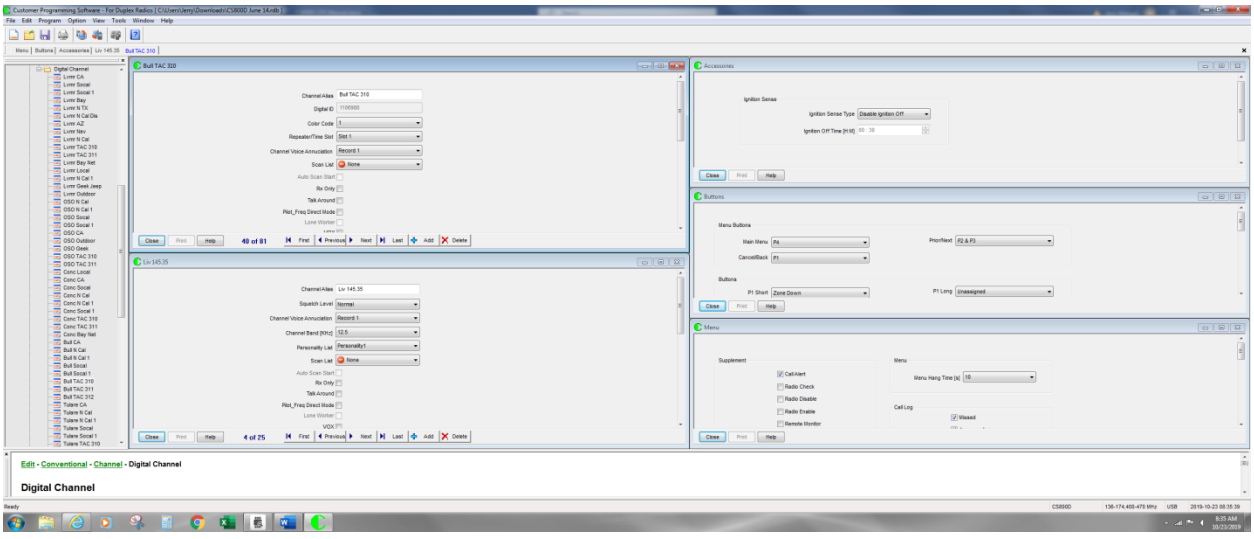
Cascade

This feature is used to arrange the various open screens as follows:



Tile

This feature is used to arrange the various open screens as follows:



Arrange Icons

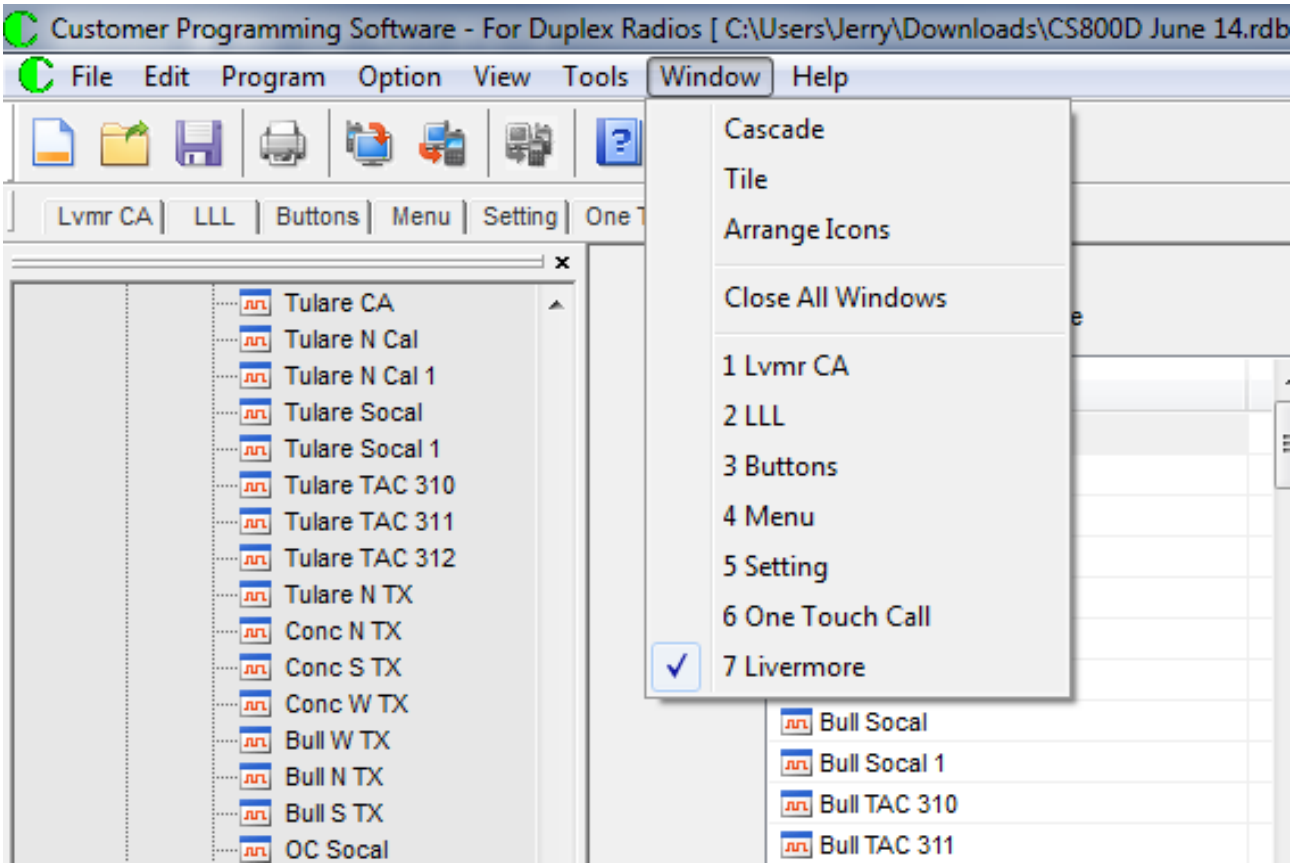
This feature does not seem to do anything.

Close All Windows

This command clears all windows from the screen and closes all windows.

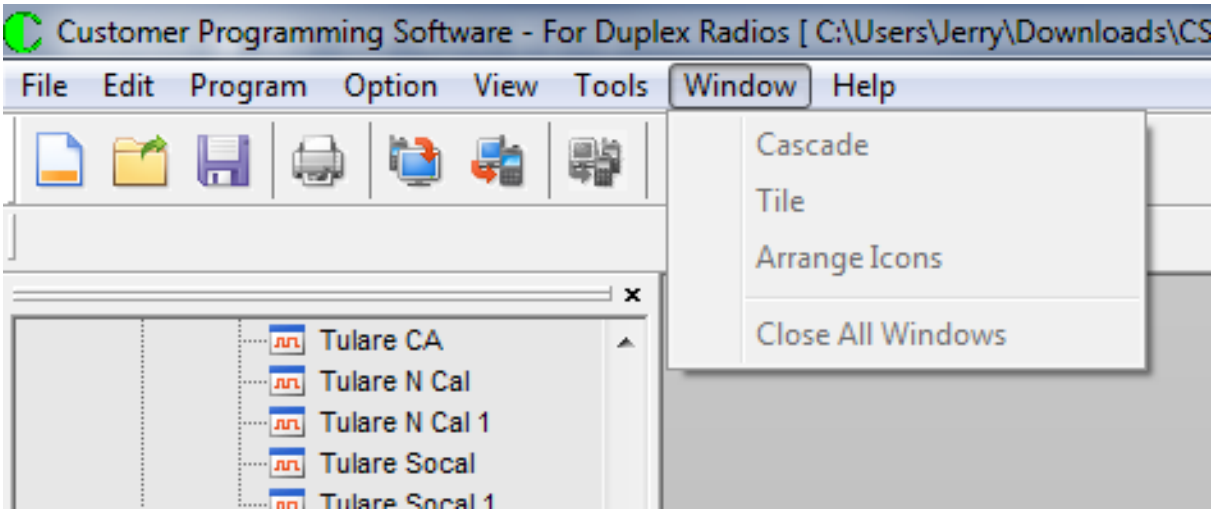
Shortcut For Accessing Last Used Screens

The following screen is typical of a programming session:



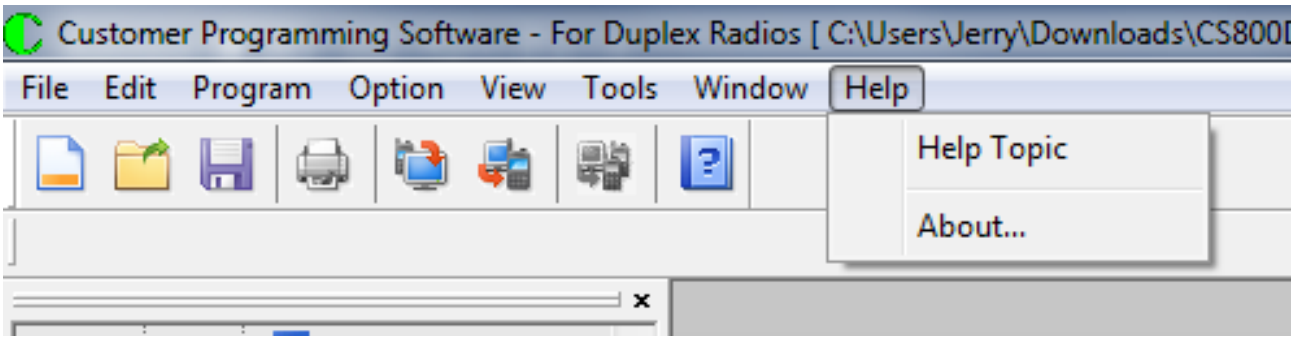
The checkbox next to the “7 Livermore” is the active screen. The other numbers are the open screens. To switch between open screens, double click on the open screen you want to use.

When you use the Close All Windows command, 1-7 will disappear and all the commands will be greyed out because there are no open windows to manipulate. An example of that condition is as follows:

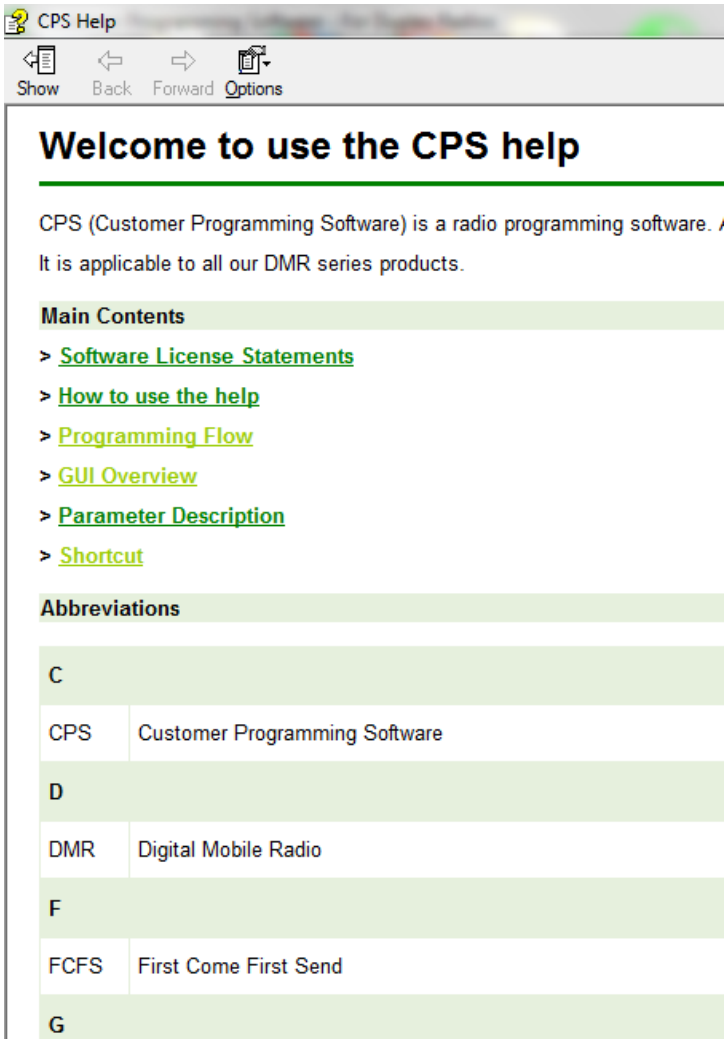

Customer Programming Software - For Duplex Radios [C:\Users\Jerry\Downloads\CS
File
Edit
Program
Option
View
Tools
Window
Help
Cascade
Tile
Arrange Icons
Close All Windows
Tulare CA
Tulare N Cal
Tulare N Cal 1
Tulare Socal

HELP PULL DOWN MENU

When you click on the Help Pulldown menu you get the following:



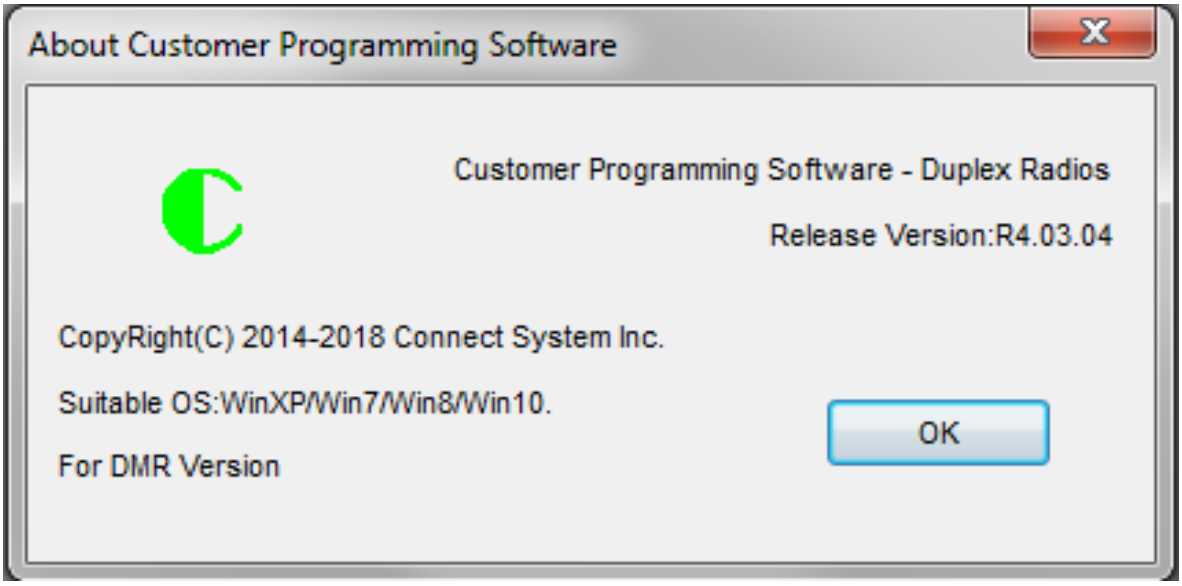
When you execute the Help Topic Command, you get the following screen:



From there you can navigate to the help topic of your choice. For all practical purposes, this document has almost everything in the Help files and more.

About…

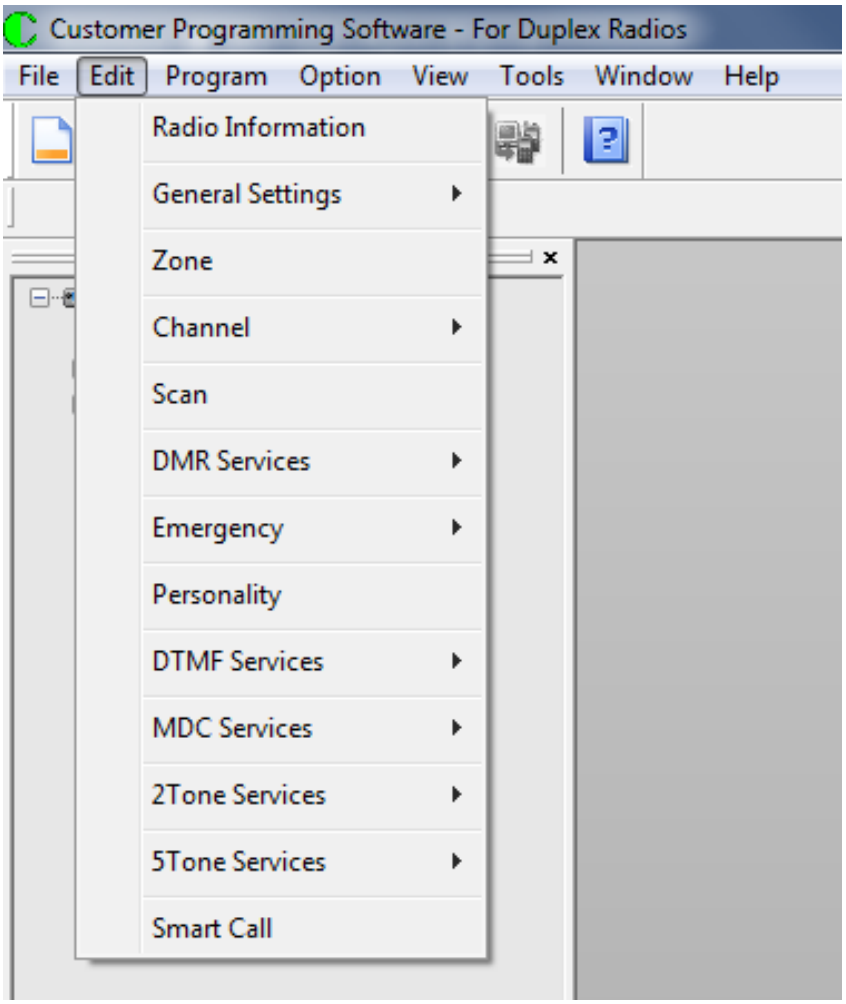
When you execute the “About…” command, you get the following screen:



This shows the version of the Firmware you are running.

EDIT PULL DOWN MENU

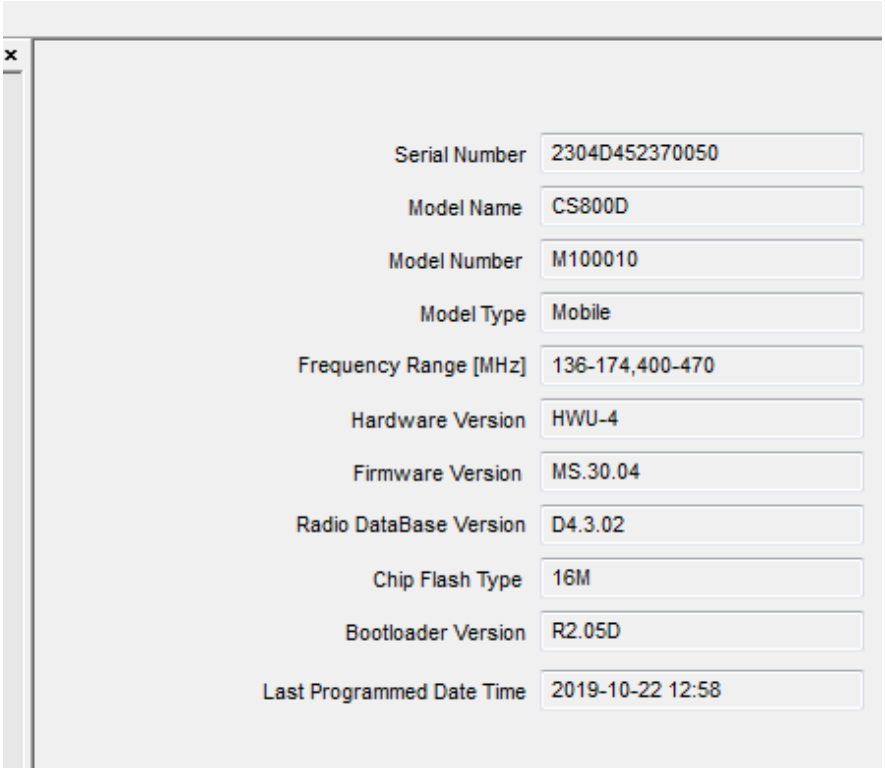
When you click on the Help Pulldown menu you get the following:



The edit pulldown menu is the heart of this program in that it allows you to see all parameters in the radio and allows you to change the parameters to meet the needs of the user of the radio. With this program you can add zones, channels, contacts, and all the other parameters as necessary.

Radio Information

Pressing the Radio Information command gets the following:



This screen shows the various hardware and firmware versions in the radios as well as a few other features such as serial number. The information presented here cannot be changed from this program.

Serial Number

This option displays a string of 16 alphanumeric characters that identifies the radio. Via the Serial Number, other radio information is available such as model, production data, etc.

Model Name

This option displays a string of alphanumeric characters and numbers to represent the model information of the radio.

Model Number
This option displays a string of alphanumeric characters and numbers to represent the radio model information.

Model Type
This option differentiates radios that with same Model Name with different application fields, such as: Portable, Mobile, Repeater, etc.

Frequency Range [MHz]
This option indicates the radio's frequency range. The range is defined as being between, or equal to, the minimum and maximum frequencies, at which the radio is legally allowed to operate under FCC Part 90 certification. The radio will operate beyond its specified range.

Hardware Version
This option displays the Hardware version programmed in the radio. The Non-FCC Part 90 version can be between HWU 1 and HWU 4. The FCC Part 90 version starts at HWU 5 or V2 or greater.

Firmware Version
This option displays the firmware version programmed in the radio.

Radio DataBase Version
This option indicates the configuration database that radio is using. Different data structures require special radio data version to match.

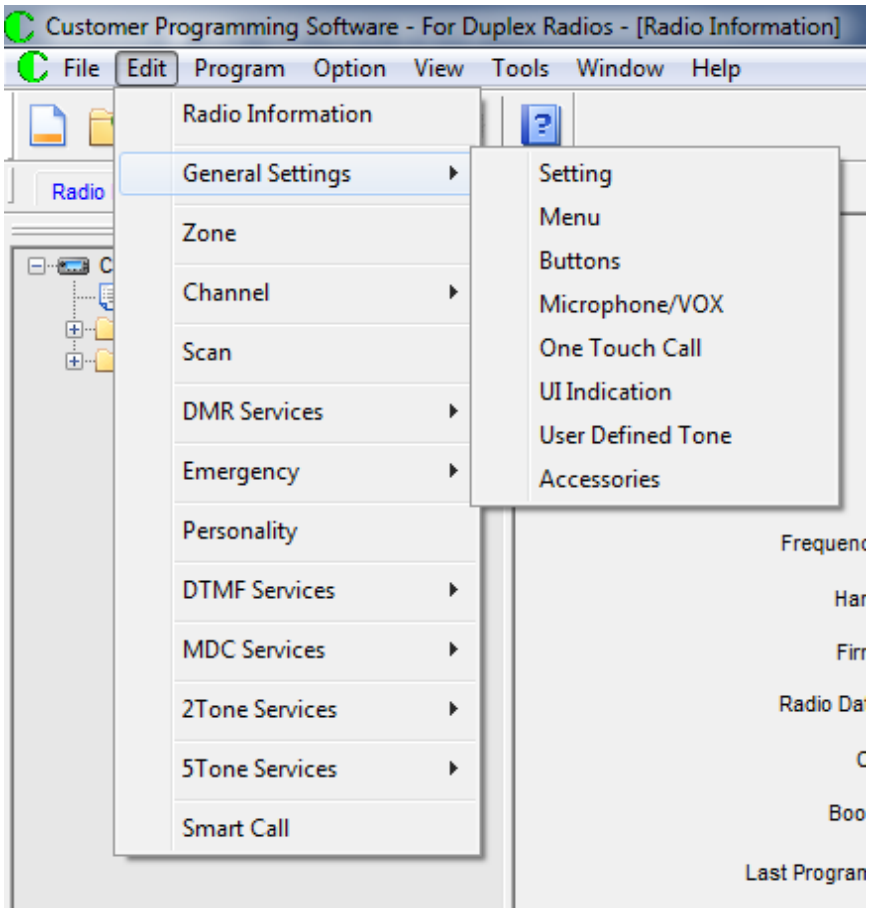
Chip Flash Type
This option indicates the chip flash type that radio is using. The radios use a 64 Megabit/8 Megabyte Serial Flash Memory. **The screen is wrong!**

Bootloader Version
This option displays the bootloader version programmed in the radio.

Last Programmed Date Time

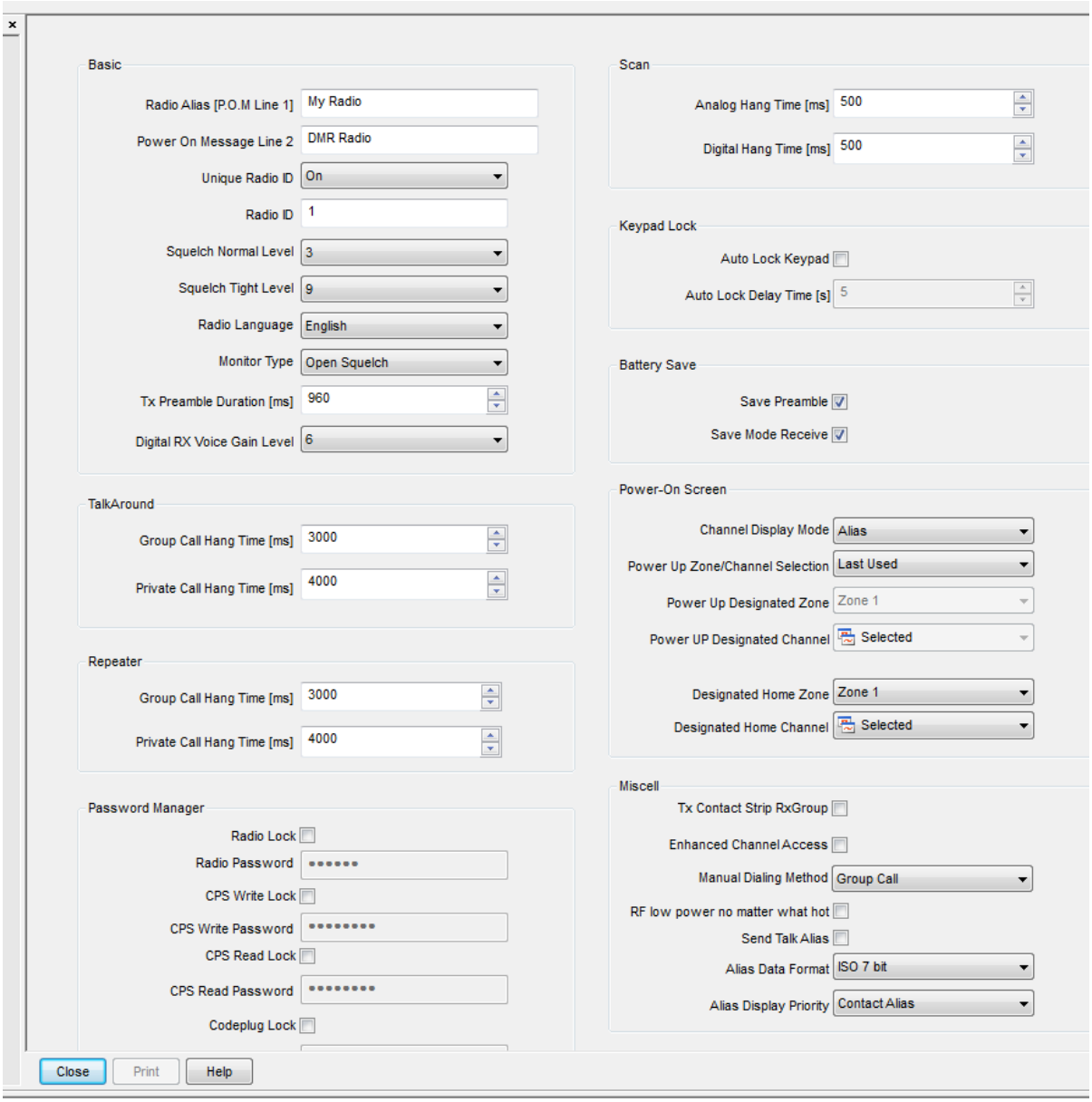
This option indicates the last date on which the radio was programmed.

General Settings



The General settings gets to a submenu as shown above. The details of the submenus will be shown in the following pages.

Setting



BASIC

Radio Alias[Power on Message Line 1]

The radio shows the message when powering on. The maximum length is 16 characters and consist of digits, symbols and letters. The default is “My Radio”.

Power On Message Line 2

The radio shows the message when powering on. The maximum length is 16 characters and consist of digits, symbols and letters. The default is “DMR Radio”.

Unique Radio ID

Sets an individual ID per channel if “ON” or a global ID if “OFF” that uniquely identifies the radio. This ID is used by other calling radios when addressing the radio for making a private call or sending a text message. By setting the parameter to “ON”, the user can use the radio for both HAM and commercial use because you can have different ID’s for both the HAM and the commercial users.

Radio ID

If “Unique Radio ID” is set to “OFF”, then the number in this field is the global ID for all channels.

Squelch Normal Level

This option allows users to set squelch normal level. This feature adjusts the squelch normal threshold of an incoming transmission. This parameter is used only in the Analog Channel screen. The Squelch Normal Level must be less than or equal to the Squelch Tight Level. The lower the number the more sensitive the receiver will be. However, if it is too low, then background noise will always be heard. Setting a value to zero will disable the squelch and will let all noise thru.

Squelch Tight Level

This option allows users to set the squelch tight level. This feature adjusts the squelch tight threshold of an incoming transmission. This parameter is used only in the Analog Channel screen. The Squelch Normal Level must be less than or equal to the Squelch Tight Level. The lower the number the more sensitive the receiver will be. However, if it

is too low, then background noise will always be heard. Setting a value to zero will disable the squelch and will let all noise thru.

Radio Language
Defines which language is used in this program. At this time, only English is supported.

Monitor Type
Monitor Type could be only Open Squelch or Silent. If open squelch all noise gets through and not normally recommended to use.

Tx Preamble Duration [ms]
Preamble is a string of bits added in front of a data message or control message (Text Messaging, Location Messaging, Registration, Radio Check, Private Call, etc…) before transmission. This preamble prolongs the message in order to reduce the chances of the message being missed by the receiving radio. This feature is supported in Digital mode only and if set to a value of zero this feature is disabled.

Digital Rx Voice Gain Level
This option allows users to set the receiving voice gain level for the digital channel. A large gain level may cause voice distortion on the digital channel.

TALKAROUND

Group Call Hang Time [ms]
Sets the duration during which a radio will talk back to a received call or continue a transmitted Talkaround Group Call using the previously received or previously transmitted digital group ID. After expiration of the Talkaround Group Call hang timer, the radio will transmit using the TX Contact Name (digital group) specified for this channel in CPS.

Private Call Hang Time [ms]
Sets the duration the radio keeps the Talkaround Private Call setup

after the user releases the Push-to-Talk (PTT) button. This is to avoid setting up the call again each time the user presses the PTT to transmit. During this time, other radios can still transmit since the channel is essentially idle. After the hang timer expires, the radio transmits using the TX Contact Name specified for this channel in CPS.

REPEATER

Group Call Hang Time [ms]
Sets the duration during which a radio will talk back to a received call or continue a transmitted Repeater Group Call using the previously received or previously transmitted digital group ID. After expiration of the Repeater Group Call hang timer, the radio will transmit using the TX Contact Name (digital group) specified for this channel in CPS.

Private Call Hang Time [ms]
Sets the duration the radio keeps the Repeater Private Call setup after the user releases the Push-to-Talk (PTT) button. This is to avoid setting up the call again each time the user presses the PTT to transmit. During this time, other radios can still transmit since the channel is essentially idle. After the hang timer expires, the radio transmits using the TX Contact Name specified for this channel in CPS.

PASSWORD MANAGER

Radio Lock
When this option is enabled, users have to input the correct Radio Password to operate the radio normally.

Radio Password
This option allows users to create a password required for powering up a radio.

CPS Write Lock
This option allows users to configure the password to manage CPS write

admission. When this option is checked, users can edit the CPS Write Password. Once configured, this password is required every time users write data to the radio.

CPS Write Password
This option allows users to edit the password for CPS Write Lock. A maximum of eight(8) digits can be configured for the password.

CPS Read Lock
This option allows users to configure the password to manage CPS read admission. When this option is checked, users can edit the CPS Read Password. Once configured, the password is required every time when users read data from the radio.

CPS Read Password
This option allows users to edit the password for CPS Read Lock. A maximum of eight (8) digits can be configured for the password.

Code Plug Lock
This option allows users to configure the password to manage codeplug admission. When this option is checked, users can edit the Codeplug Password. Once configured, this password is required every time users open the data from the local driver .

Code Plug PassWord
This option allows users to edit the password for Codeplug Lock . A maximum of eight(6) digits can be configured for the password.

SCAN

Analog Hang Time [ms]
Sets the time the radio will remain on an analog scan list member following the end of the channel activity. The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets

whenever a valid activity is detected on the analog channel during the hang time.

Digital Hang Time [ms]
Sets the time the radio will remain on a digital scan list member following the end of the channel activity. The hang time prevents the radio from resuming scanning until the conclusion of the response to the initial call. The timer starts at the end of a transmission and resets whenever a valid activity is detected on the digital channel during the hang time.

KEYPAD LOCK

Auto Lock Keypad
This option allows users to enable/disable the Keypad Auto Lock feature.

Auto Lock Delay Time [ms]
This option allows users to choose the Keypad Auto Lock Delay Time. The radio will lock the keypad automatically if no operation or carrier receiving is made within this time period.

BATTERY SAVE

Save Preamble
This feature enables or disables the battery saver preamble. The radio sends a preamble before each transmission to enhance the ability of receiving radios in battery saver mode to synchronize in preparation for transmissions; reducing the occurrence of late-entry. To avoid interoperability issues, it is recommended that all radios in a system share the same setting for this field. The value of this field does not affect Capacity Plus channels. This is a radio-wide feature.

Save Mode Receive

Enabling this feature causes an idle radio to automatically enter battery saver mode where it places certain radio functions on standby. After a certain duration or when there is any user button action, the radio returns to normal operation and checks the channel for incoming calls. If no calls are detected, it returns to the battery saver mode. While results vary across battery chemistry and user conditions, battery saver can deliver about a 10% improvement in battery life, but also causes a delay in response time. When this feature is enabled, it is important to note that for the transmitting radios, there will be a slight delay in call setup (in the range of milliseconds) when pressing the Push-to-Talk (PTT) button. For the receiving radios, there may be an increase in late entry due to radios in battery saver mode having less opportunity to properly synchronize. This may cause the radios to miss the initial second of some audio transmissions in poor radio frequency (RF) conditions. This, however, will not be experienced in good RF coverage. Although they are important to note, these delays are considered minor versus the 10% improved battery life, therefore it is recommended to enable battery saver mode for all radios. This is a radio-wide feature.

POWER ON SCREEN

Channel Display Mode

This option allows users to set the channel display mode. The choice is Frequency or Alias.

Power Up Zone/Channel Selection

Allows you to select Last Used, Designated, or Designated With Lock.

Power Up Designated Zone

The option allows users to set the current zone when powering on.

Power Up Designated Channel
The option allows users to set the current channel when powering on.

Designated Home Zone
The option allows users to design the home Zone when press the programmed button.

Designated Home Channel
The option allows users to design the home channel when press the programmed button

MISCELLANEOUS

Tx Contact Strip RxGroup
This option allows users to enable or disable the tx contact strip from rx group list feature

Option Description

- Checked:The radio will not include the Tx Contact into the Rx Group List automatically.
- Unchecked:The radio will include the Tx Contact into the Rx Group List automatically.

Enhanced Channel Access
This option allows the user to enable or disable the Enhanced Channel Access feature. If checked, the radio will receive the call except its own radio id. If unchecked, the radio will receive the call include its own radio id.

Manual Dialing Method
Selects Group Call, Private Call or both.

RF low power no matter what hot
Disables the temperature foldback.

Send Talk Alias

If enabled, allows the taker Alias to be sent.

Alias Data Format

Choice of ISO 7 bit, ISO 8 bit or 16 bit Unicode.

Alias Display Priority

Choice of Contact Alias or Air Alias. If "Contact list" is selected, display the user from the contact list database stored in the radio if available. If not available, then use the Alias found from over the air. If Air Alias is selected, use Alias found from the radio packet. If not available, then use the Alias from the contact list database stored in the radio. If neither is available, just use the ID number found in the over the air packet.

Menu

This screen is used to determine which features get displayed on the radio so you can program them without having to use the CPS.

SUPPLEMENT

Call Alert

This option allows users to send an Alert Call to a **private contact** using the menu.

Radio check

This option allows users to check a radio by menu operations, e.g. enter the corresponding menu and send out a private contact**.**

Radio Disable

This option allows users to disable a radio by menu operations, e.g. enter the corresponding menu and send out a private contact.

Radio Enable

This option allows users to enable a radio by menu operations ,e.g. enter the corresponding menu and send out a private contact.

Remote Monitor

This option allows users to remotely monitor a **private contact** using the menu.

CONTACT

Contact

Allows the user to enable or disable contact of the radio menu.

New Contact

Allows the user to enable or disable new contact of the radio menu.

Manual Dial

Allows the user to enable or disable manual dial of the radio menu.

Phone Manual Dial
Allows the user to enable or disable phone manual dial of the radio menu.

Edit Contact
Allows the user to enable or disable phone manual dial of the radio menu.

Delete Contact
This option allows the user to include the Delete Contact menu in the radio. The radio user can delete the contact using the menu.

Program Key
Allows the user to enable or disable the Program Key menu in the radio. The Program Key feature allows the user to associate a call to the number buttons on the radio keypad (1-9 and 0). When the user long presses these buttons in the home screen, the associated call entry will be prompted. The supported call types are Group, Private, or All Call calls in Digital or Capacity Plus mode. This is a radio-wide feature.

SCAN

Scan
This option allows the user to scan or not scan.

Scan On/Off
This option allows users to toggle Scan feature between On and Off using the radio menu.

Edit List
This option allows users to edit the Scan List using the radio's menu. Under this option, users can perform these o
- to view a scan list
- to change scan priority
- to add or delete a member

MESSAGE

Inbox
This parameter decides whether to include Inbox on the menu.

Sent Items
This parameter decides whether to include Outbox on the menu. The Outbox can automatically save up to 50 last sent messages. In addition, the radio user can re-send or forward these messages in the Outbox via the menu

Draft Box
This parameter decides whether to include Drafts on the menu. The radio user can save the current editing message in the Drafts, or re-edit and send these messages.

Quick Text
This option allows users to access the Quick Text feature where the predefined text templates are saved (maximum of 25 items). Users can choose to insert any of the templates when creating a new message.

Write
This option allows users to create a new message using the radio's menu. Each message contains up to 256 characters. For the created messages, users can to send it or save it to the radio's memory.

Forward
This option allows the user to forward a message to others.

Reply
This option allows users to reply directly to the message sender.

MENU

Menu Hang Time [s]

This parameter allows users to define the amount of time that the radio remains in the menu mode. The counter will be activated after the radio enters the menu. In the event of no operation (e.g. key press) within the preset time, the radio will exit the menu automatically.

CALL LOG

Missed

Allows the user to track the last ten incoming private calls that the user missed or failed to respond. The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a private call.

Answered

Allows the user to track the last ten incoming private calls that the user answered. The user accesses the call log via the menu. This log also provides a quick way for user to initiate a private call.

Outgoing

Allows the user to track the last ten phone call numbers that the user initiated and provides easy redial access. The user accesses the call log via the menu. This log also provides a quick way for the user to initiate a phone call.

UTILITIES

Radio Settings

Allows the user to set the radio settings.

Talkaround
Allows the user to set the radio in Talkaround mode via the menu. Talkaround mode is required in the absence of a repeater.

Tones/Alerts
Allows the user to toggle all the tones and alerts on or off via the menu.

Power
This option allows users to toggle the transmit power between High and Low from the radio's menu.

Backlight
This option allows users to control the backlight using the menu.

Intro Screen
Allows the user to enable or disable the Introduction Screen upon radio power up via the menu. When enabled via the menu, the Radio Name shows as the welcome text when the radio powers up.

Keypad Lock
Allows the user to toggle the keypad lock on or off via the menu.

LED Indicator
This parameter decides whether to include LED on the menu. The radio user can control LED via the menu.

Squelch
Allows the user to access the Squelch feature to select between Normal or Tight Squelch via the menu.

VOX
Allows the user to toggle the VOX (Voice Activated Transmit) feature between on and off for the current channel via the menu. VOX enables the radio to automatically transmit whenever its microphone on the VOX-capable accessory detects voice. This is a channel-wide feature.

Lone Worker

The Lone Worker feature, when enabled, causes the radio to automatically transmit an alarm if the radio user/operator does not react to reminder beeps which the radio periodically generates. Before this feature will function, it must be programmed by your radio dealer and it must be enabled.

Radio user/operator reaction is accomplished by simply pressing any radio key or by rotating a radio knob before a programmed reminder timer expires. Either reaction will reset the programmed reminder and response timers, thus starting a new response period of time. The response timer is typically programmed for many minutes or hours (255 minutes maximum), and the reminder timer is typically programmed for several seconds to a minute (255 seconds maximum).

If no reaction is taken when the radio begins beeping and the response timer is allowed to expire, the radio automatically enters the programmed emergency mode and if the selected channel is programmed for Alarm or Alarm with Call emergency mode operations, it immediately begins alarm transmissions on the selected channel, or on a channel pre-assign for emergency communications. However, the radio does not transmit if the selected channel is not programmed for Alarm or Alarm with Call emergency mode operations.

Man Down

Users can enable or disable the Man Down feature using the menu.

Password and Lock

To set whether to allow the users to configure the power-up password via the menu.

Encrypt

This option allows users to enable or disable the Encrypt feature using the menu.

Channel Display Mode

This option allows users to choose a channel display mode (alias or frequency)of home screen.

Language

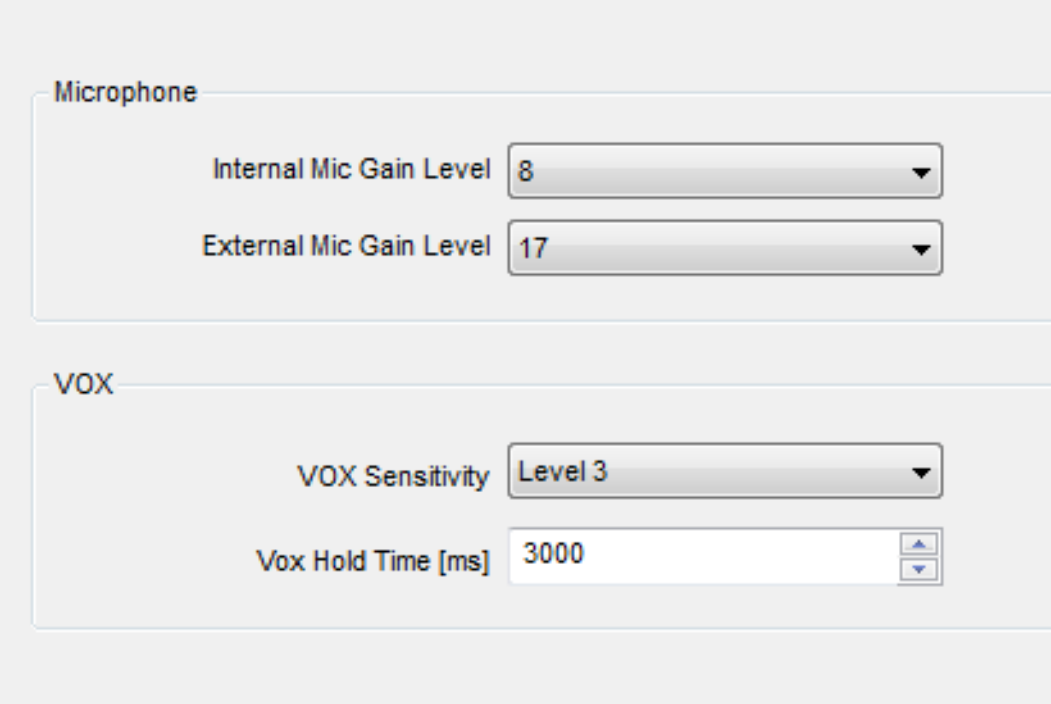
This option allows users to choose a language from the menu.

ZONE

Zone

This option allows users to organize channels conveniently

Microphone/VOX



MICROPHONE

Internal Mic Gain Level

This option allows users to set the internal microphone Gain Level,A large microphone gain may cause voice distortion.

External Mic Gain Level

This option allows users to set the external microphone Gain.

VOX

VOX Sensitivity

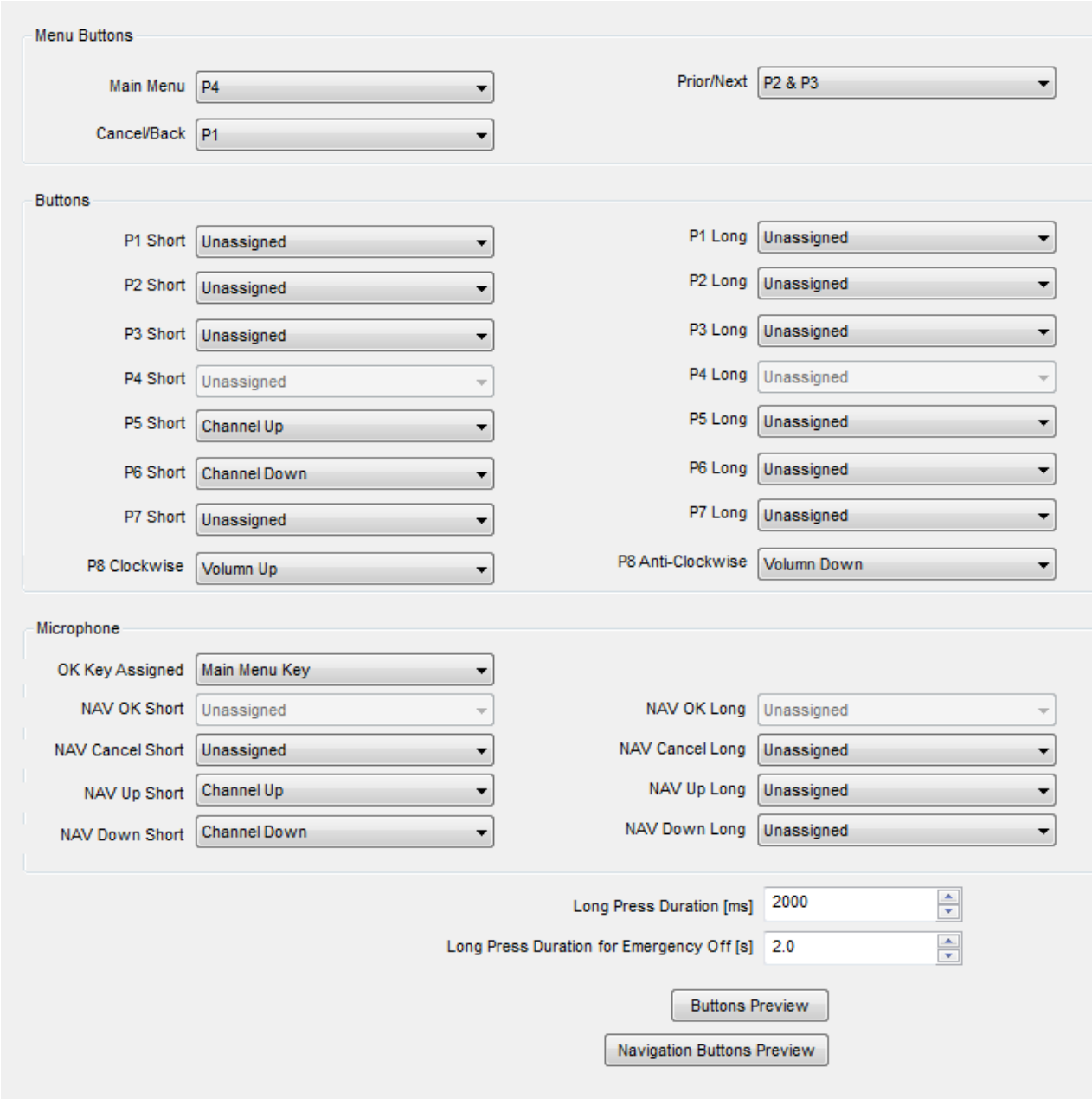
This feature adjusts the VOX sensitivity level. Of the six available levels, Level 1 is the most sensitive level,while level 6 is the least sensitive level. VOX sensitivity should be configured properly to avoid situations where VOX is frequently triggered unintentionally or where it is difficult to trigger VOX. Several factors should be considered when configuring

this feature, such as the type of accessory used, the environment in which the radio performs, the radio user's regular speech volume, etc.

VOX Hold Time [ms]

After the VOX function is enabled and the user ceases to speak, the radio will remain in TX mode for the period of time defined here.

Buttons


Menu Buttons
Main Menu
P4
Prior/Next
P2 & P3
Cancel/Back
P1
Buttons
P1 Short
Unassigned
P1 Long
Unassigned
P2 Short
Unassigned
P2 Long
Unassigned
P3 Short
Unassigned
P3 Long
Unassigned
P4 Short
Unassigned
P4 Long
Unassigned
P5 Short
Channel Up
P5 Long
Unassigned
P6 Short
Channel Down
P6 Long
Unassigned
P7 Short
Unassigned
P7 Long
Unassigned
P8 Clockwise
Volumn Up
P8 Anti-Clockwise
Volumn Down
Microphone
OK Key Assigned
Main Menu Key
NAV OK Short
Unassigned
NAV OK Long
Unassigned
NAV Cancel Short
Unassigned
NAV Cancel Long
Unassigned
NAV Up Short
Channel Up
NAV Up Long
Unassigned
NAV Down Short
Channel Down
NAV Down Long
Unassigned
Long Press Duration [ms]
2000
Long Press Duration for Emergency Off [s]
2.0
Buttons Preview
Navigation Buttons Preview

MENU BUTTONS

The keys are defined as follows:

On Front Panel

P1: P1 button on front Panel
P2: P2 button on front Panel
P3: P3 button on front Panel
P4: P4 button on front Panel
P5: ^ button on front panel
P6: v button on front panel
P7: Pushing Rotary knob
P8: Rotary knob. Either clockwise or counterclockwise.

On Microphone

Cancel Key: C on keypad of microphone
UP Key: ^ on keypad of microphone
Down Key: v on keypad of microphone
OK Key: O on keypad of microphone. This is not the number 0.

Main Menu

This option allows users to enter the main menu by pressing this key. After entering the main menu, the key cannot be used as a programmable button. Choice is None, P4 or P7 If P4 or P7 is used for the Main Menu, then that key will not be available for any other function. The OK key on the microphone can also be used to enter the Main Menu.

Cancel/Back

This option allows users to back menu to upper level by pressing this key. After entering the main menu, the key cannot be used as a programmable button. Choice is P1 or P4. If P4 is used for this function, then Main Menu cannot also be P4.

Prior/Next
This option allows users to browse menu by pressing this key. After entering the main menu, the key cannot be used as a programmable button. Choice is P2 & P3, P5 & P6 or P8

Long/Short
These keys can normally be used for two purposes. One is called the short and the other is called long. If you press the key for a duration greater than or equal to the Long Press Duration parameter on this screen, then that key will be defined as Long.

Long Press Duration [ms]
Sets the duration a button is required to be pressed (and held down), for it to be interpreted as a long press. This duration also controls the long press operation of the button assigned to the Emergency feature. This is a radio-wide feature.

Long Press Duration for Emergency Off[s]
This option allows users to set how long the Emergency key should be pressed and held down to exit from Emergency mode.

Key Assignments
Each key can be assigned a function. The possible functions are as follows:
Advanced Features
Does not current do anything

All Alert Tone On/Off
Allows the user to enable or disable all the alert tones simultaneously.

Channel Down
Allows the user to switch to next channel in current zone.

Channel Switch Disable
This feature is available for portables only

Channel Up
Allows the user to switch to previous channel in current zone.

Designed Home Zone
Allows the user to switch the current zone to designated home zone.

Digital Auto Reply Info Lock
Sets up the channel based on what you are hearing in the digital monitor mode.

Digital Monitor Mode
Allows the radio to work in promiscuous mode where everything on that channel is heard.

Emergency Alarm Ack
Allows the user to enable the ***Emergency Alarm Ack*** feature permanently. This feature is applicable to Digital mode only.

Emergency Off
To end an emergency call. This is the recommended option for the TK Long. Only long press supports this feature and short press must be set as ***Emergency On*** .

Emergency On
To initiate an emergency call. Only short press supports this feature and long press must be set as ***Emergency Off*****.**

Encrypt On/Off
Allows the user to toggle the Privacy feature between on and off for the channel.

Lone Worker On/Off
Allows the user to toggle the Lone Worker feature between on and off.

Manual Dial For Private
Provides the user with the flexibility to dial any private number that is unavailable in Contacts.

Monitor
Allows the user to toggle the Monitor feature between on or off. The Monitor feature allows the user to monitor a channel.

Monitor Momentary
To monitor the activities on the current channel. This feature will exit when the programmed key is released. Please note that this function must be assigned with short press and long press of a key.

Nuisance Delete
To temporarily remove an unwanted nuisance channel from the scan list in hang time. The removed channel will not be scanned in subsequent scanning, but it will be restored into the scan list when radio is restarted.

One Touch Call 1
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Call 2
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Call 3
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Call 4
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Call 5
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

One Touch Call 6
Allows the user to make a digital Group Call, digital Private Call, Call Alert or send a Quick Text via a One Touch Access (applicable to Digital mode only).

Public Address
Allows the user to toggle between Public Address and Normal mode.

Record Delete
Deletes current recording.

Record Play/Play Next/Play Stop
Allows the user to toggle the record feature between play, next and stop.

Repeater/Talk around
Allows the user to toggle between Repeater and Talkaround mode.

RF Power Switch
Allows the user to toggle between high and low power.

Scan On/Off
Allows the user to toggle the Scan feature between on or off.

Squelch Level
Allows the user to change the squelch level. Three levels available: Open, Normal and Tight.

Squelch Switch
Allows the user to enable the Squelch feature permanently.

Surveillance/Covert Mode
This feature is available for portables only.

Tight/Normal Squelch
Allows the user to toggle between tight or normal squelch.

Unassigned
Pressing this switch is ignored.

Volume Down
Allows the user to decrease the volume.

Volume Up
Allows the user to increase the volume.

VOX On/Off
Allows the user to toggle the VOX feature between on and off for the channel.

Zone Down
Allows the user to switch to next zone.

Zone Up
Allows the user to switch to previous zone.

One Touch Call

One Touch Call

No.	Type	Call Mode	Call List	Call Type	Text Message
One Touch Call 1	Call	Digital	None	None	None
One Touch Call 2	Call	Digital	None	None	None
One Touch Call 3	Call	Digital	None	None	None
One Touch Call 4	Call	Digital	None	None	None
One Touch Call 5	Call	Digital	None	None	None
One Touch Call 6	Call	Digital	None	None	None

Numeric Key Quick Access

No.	Type	Call Mode	Call List	Call Type	Text Message
Numeric Key 0	Call	Digital	None	None	None
Numeric Key 1	Call	Digital	None	None	None
Numeric Key 2	Call	Digital	None	None	None
Numeric Key 3	Call	Digital	None	None	None
Numeric Key 4	Call	Digital	None	None	None
Numeric Key 5	Call	Digital	None	None	None
Numeric Key 6	Call	Digital	None	None	None
Numeric Key 7	Call	Digital	None	None	None
Numeric Key 8	Call	Digital	None	None	None
Numeric Key 9	Call	Digital	None	None	None
Numeric Key *	Call	Digital	None	None	None
Numeric Key #	Call	Digital	None	None	None

This is a shortcut way for the radio user to make calls or send messages. By pressing a programmed One Touch Call key, the radio user can make a call or send a message to the predefined contact.

Type

This parameter allows you to make a call to the predefined contact or access the predefined menu directly by pressing the programmed One Touch Call/Menu key.

Call Mode
Allows the user to select the operation mode for the call member selected in the Call column.

- Digital: Enables the One Touch Call function in digital mode.
- Analog: Enables the One Touch Call function in analog mode.
- None: Disables the One Touch Call function.

Call List
Allows the user to select the operation mode for the call member selected in the Call column.

- In digital mode, available options include: None, Group/Private Call Alias.
- In analog mode, available options include: None, Smart Call 1 – Smart Call 4.

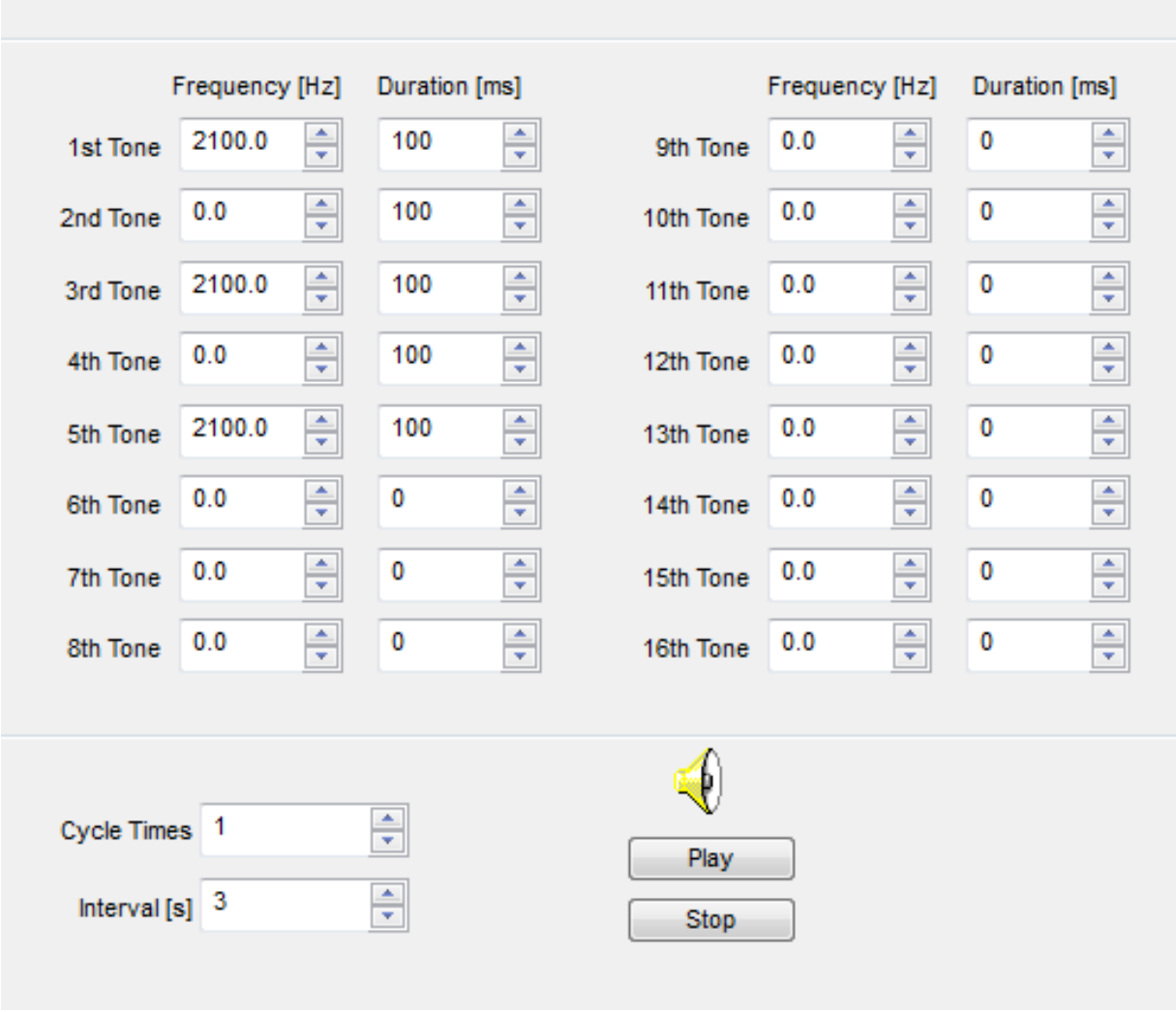
Call Type
This feature allows the user to select a call type for the call member that was selected in the Call column.

- For a group contact selected in the call list, available options include Group Call and Message.
- For a private contact selected in the call list, available options include Private Call, Message, Call Alert, Radio Check, Remote Monitor, and Revive and Kill.

Text Message
Allows the user to select a Quick Text. The selection for these messages comes from Text Messages.

This option is available only when the Call Type is set to Message.

User Defined Tone



This option allows users to set the frequency and duration of each alert tone. After setting is done, users can click Play to listen to the tone. Please note that users can set 8 alert tones at most.

Frequency [Hz]

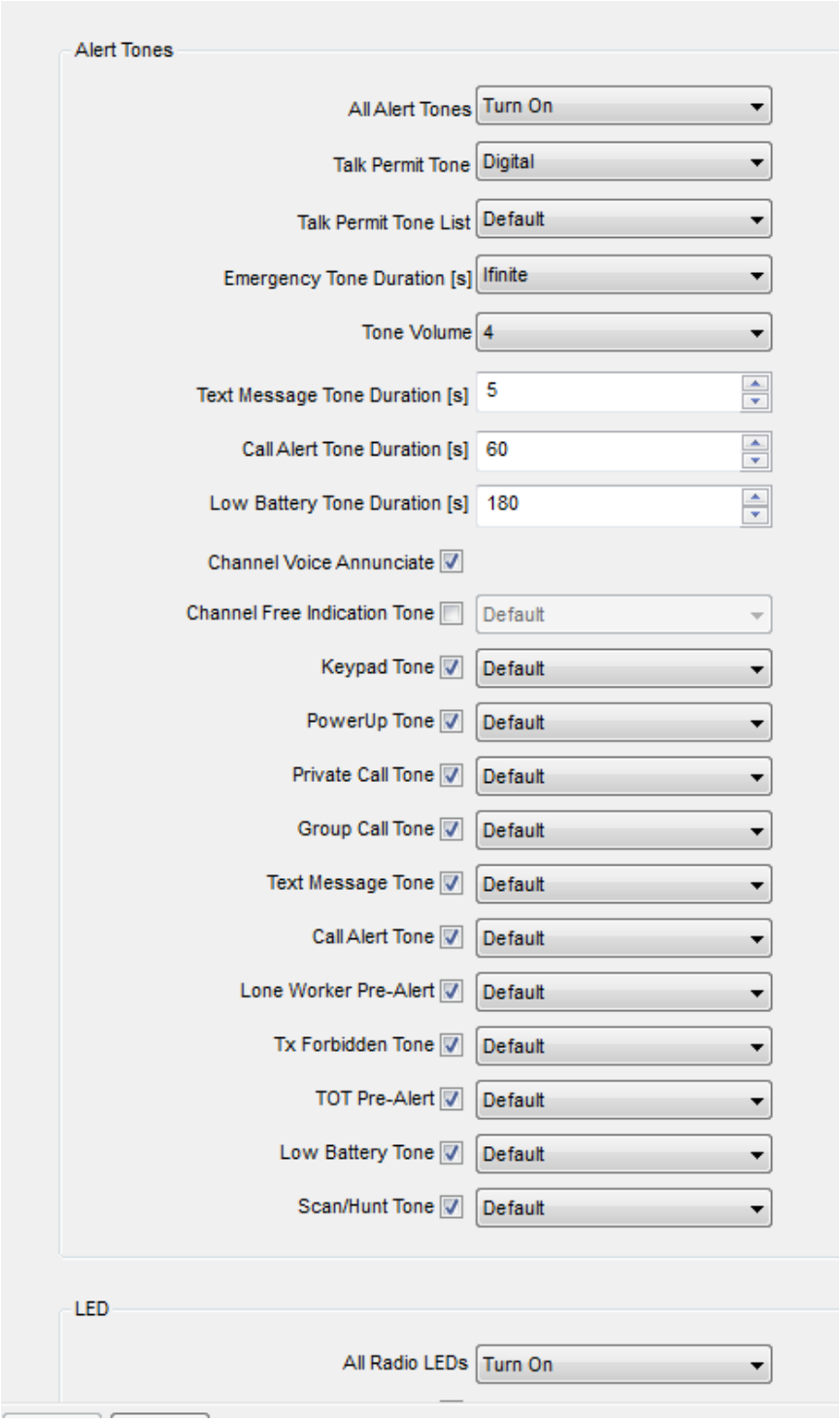
This option allows users to set the frequency of each alert tone. Range of 400.0 – 2500.0 in .1 Hz increment. A value of 0 will disable that tone

Duration [ms]
This option allows users to set the duration of alert tone. Range of 0 – 2550 ms in 10 ms increments.

Cycle Times
To set the how many cycles the alert tone will sound. Range is 1 – 255 in steps of 1.

Interval [s]
When user defined tone is selected, this option allows users to define the interval of sounding the alert tone. Range of 0 – 120 seconds

UI Indication



ALERT TONES

All Alert Tones

This option allows users to decide whether the radio shall operate in silent/non-silent mode. If user chooses *Silent On*, the radio will remain silent with no alert tones throughout radio operation.

Talk Permit Tone

This option allows users to configure whether to emit an alert tone upon a PTT press on current channel.

Option Description

- Disable: There will be no tone alert when PTT is pressed.
- Digital Only: There will be a tone alert when PTT is pressed on digital channel.
- Analog Only: There will be a tone alert when PTT is pressed on analog channel.
- Digital &Analog: There will be a tone alert when PTT is pressed on both analog and digital channel

Emergency Tone Duration

This option allows users to set the duration of emergency tone.

Tone Volume

This parameter allows you to set the tone volume of the radio in the Conventional mode. You can adjust it from 1 to 8.

Text Message Tone Duration

This option allows users to set the duration the alert tone is played when the Text Message Alert Tone is set to Repetitive. If set for infinite, the text message alert tone will continuously sound until the user cancels the alert indication.

Call Alert Tone Duration
This option allows users to configure the call alert tone sound duration for the radio decoding of the digital/MDC selective call alert. If set for infinite, the call alert tone will continuously sound until the user cancels the call alert indication. Low Battery Tone Duration
This option allows users to Configures the Low Battery tone sound duration for the radio when the radio's low battery threshold is reached while a call is being received, or while the radio is in idle mode.

Channel Voice Annunciate
This option allows the channel number to be annunciated.

Channel Free Indication Tone
This feature sounds an alert tone when a voice call ends. It also sounds when the voice call is interrupted on the current channel, for example, by interruptions caused by a third radio making an impolite call or sending an emergency alarm. However, this tone does not sound if the interruption is caused by a corrupted radio signal. Voice calls include Group Call, Private Call, All Call, and Emergency Call. A voice call ends when the user of the calling radio releases the Push-To-Talk (PTT) button, regardless of hang time. This feature alerts the receiving radio that the channel is available for him/her to respond producing a smoother flow of conversation. This alert tone does not sound at the end of a Remote Monitor transmission, or during Priority Scan when the voice call ends while the radio is sampling the priority channel(s). This is a radio-wide feature.

Keypad Tone
This option allows users to configure whether to emit an alert tone when pressing any keypads (includes topkey, sidekey and frontkey).

Power Up Tone
This option allows users to set whether the radio will sound a tone when it is powered up.

Private Call Tone
This option allows users to configure whether to emit an alert tone when receiving a private call.

Group Call Tone
This option allows users to configure whether to emit an alert tone when receiving a group call.

Text Message Tone
This option allows users to configure whether to emit an alert tone when receiving a text message

Call Alert Tone
This option allows users t o set whether the radio will sound a tone when an alert call is received.

Lone Worker Pre-Alert Tone
If enabled this alert is sounded at a pre-defined time before the user must 'call in'; failure to call would cause the radio to enter emergency modes.

Tx Forbidden Tone
If enabled and the tone sounds, it means you are not connecting to the repeater.

TOT Pre-Alert
This option allows users to configure whether to emit an alert tone in the TOT Pre-Alert prior to the expiry of the time out timer.

Low Battery Tone
This option allows users to configure whether to emit a warning tone when the radio's low battery threshold is reached.

Scan/Hunt Tone
This parameter decides whether the radio will sound when the scan start.

LED

All radio LED's
This option allows users to enable/disable all LED indications.

Low Battery LED
This option decides whether the LED lights when the battery voltage is low.

Tx LED
This option decides whether the LED lights during transmitting signals.

Rx LED
This option determines whether the LED lights during receiving signals.

Scan LED
This option decides whether the LED lights in Scan mode or Roam mode.

BACKLIGHT

Backlight Mode
This option allows users to enable/disable backlight. Backlight can bring convenience for operation in case of insufficient light.

Option	Description

- Timed: The backlight will be off automatically upon expiration of the Backlight Time if there no over the air activities and any user initiated activities from radio (include PTT, channel/volume knob, programmable buttons and keypads press) .

- Enable: The backlight remains illuminating until the radio is powered off.
- Disable: The backlight is disabled. [This option is available only for portables and mobiles with display.]

Keypad Trigger Method
When the backlight is turned off upon the backlight time, whether to execute the function of the first keypad input.

Option Description

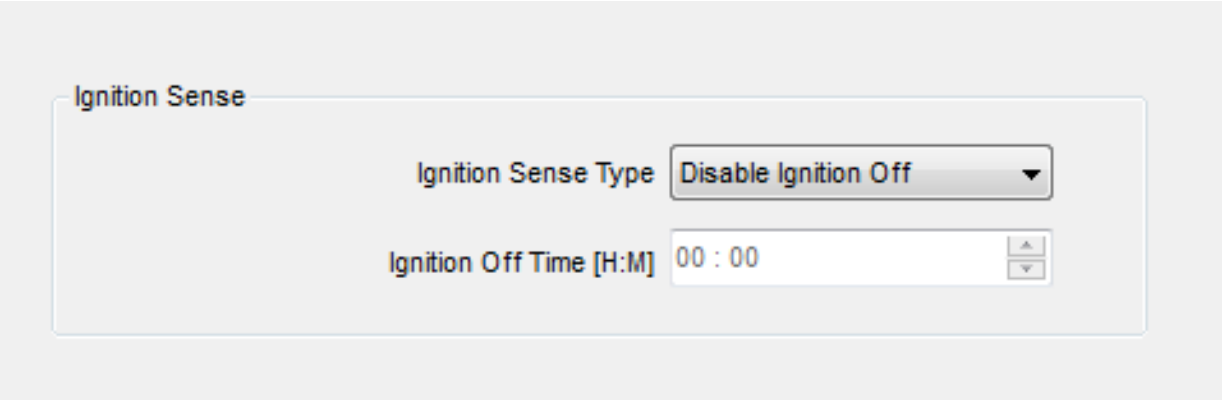
- Only Light
- Light and Action

Backlight Time[s]
The backlight will be off automatically upon expiration of the time set here.

VOLUME

Voice Volume Adjust Step
This parameter allows users to set the adjust step of voice volume. The range is 1, 2 or 4

Accessories



IGNITION SENSE

Ignition Sense Type

This option allows users to select whether the radio will be turned On or Off using car's ignition sense or the Power On/Off key.

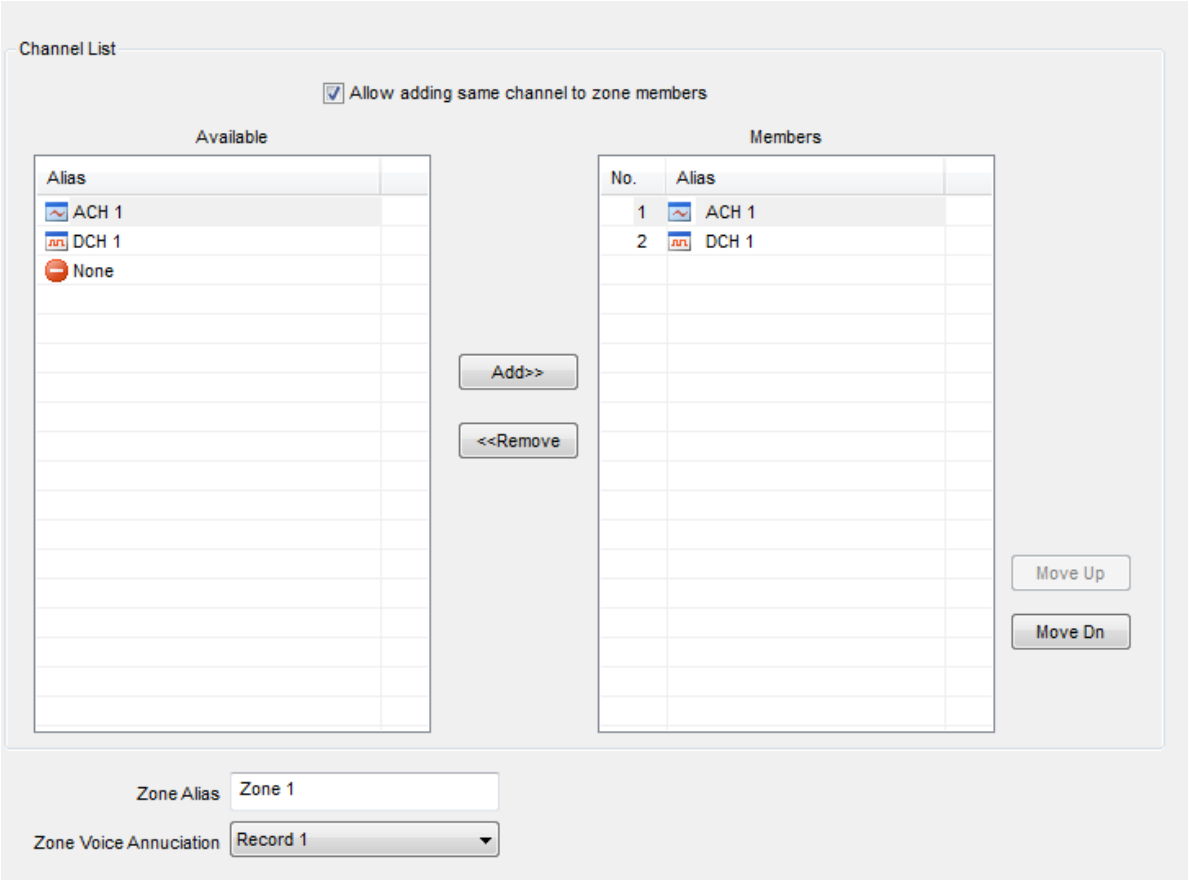
Option Description

- Ignition or Switch: The radio powers on or off by following either the Power On/Off key or ignition sense.
- PTT Disable: Loss of ignition sense disables the radio's PTT key.
- Disable Ignition Off: The radio powers on by following the ignition sense or power button. The radio will power off only by power button.

Ignition Off Time [H:M]

This control allows the user to set the delay time that the radio will be turned off after loss of ignition sense. For example, if users set the time as 01:23, and vehicle's engine is switched off at 12:00, the radio will be turned off automatically at 13:23.

ZONES



This option allows users to organize channels conveniently. Each zone can support up to 999 channels. If more than one zone is programmed into the terminal , the user can change the zone via the programmable keys or menu (if the zone menu option is checked and zone programmable buttons is set in CPS). Available options under Zone are:

Zone Alias

The Zone alias allows the user to define a unique name for each Zone. The maximum length is 16 characters (digits, symbols, English letters or Chinese characters).

Available

The table displays the available channels for a user to add channels to a zone. Available channels are related to the channels in the radio.

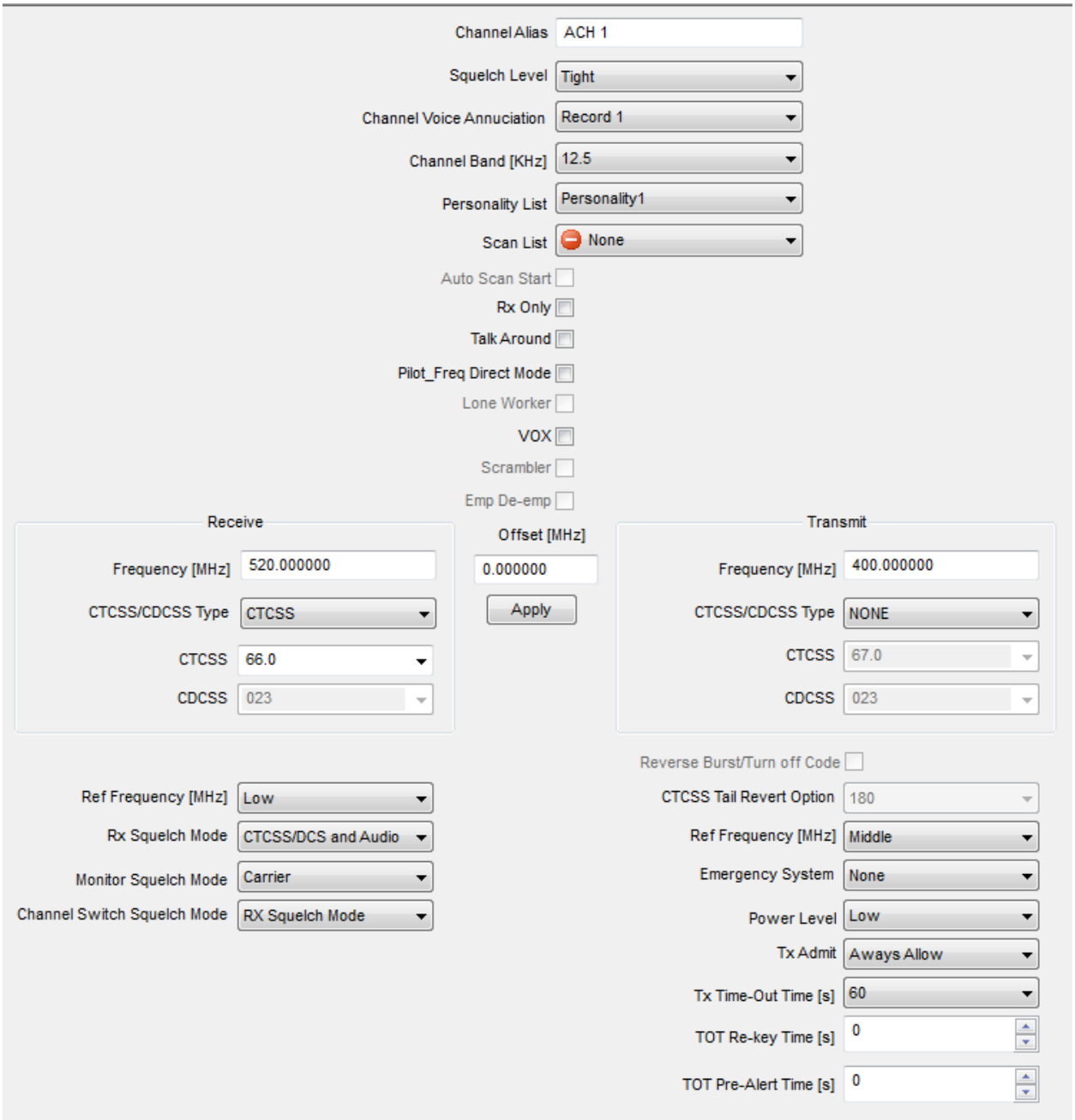
Members

The table displays existing channels in the current zone. These channels which may not be programmed come from the Available channel list on the left.

Allow adding same channel to zone members

This parameter allows the user to add the same channel to more than one zone.

Analog Channels



COMMON

Channel Alias

The channel alias allows the user to define a unique name for each

channel. The maximum length is 16 characters (digits, symbols, English letters or Chinese characters).

Squelch Level
Filters incoming signals that are not strong enough to produce a clear transmission, thereby eliminating unwanted noise. This feature adjusts the squelch threshold of an incoming transmission. This feature can be toggled between tight or normal squelch, via a short or long programmable button press (Tight/Normal Squelch) or Squelch (Utilities Menu). This is a channel-wide feature.

Option Description

- Normal: Unmutes the incoming transmission with a normal signal strength.
- Tight: Unmutes the incoming transmission with a weak signal strength.

Channel Voice Annunciation
This feature is no longer available.

Channel Band [KHz]
Sets the channel bandwidth for the Transmit and Receive frequencies to either 12.5,25. This is a channel-wide feature.

Personality List
The personality list allows the user to configure conventional functions including Signaling Type, PTT, Encode and Decode, etc. Each list allows the user to configure a group of specific parameters. The radio allows user to store and invoke up to 16 groups of customized parameters. Select a preset personality list to export the channel settings to the current channel. Please refer to the Personality section for details.

Scan List
Associates a Scan List to this conventional channel. All the members on

this list will be scanned during a scan operation. Any available Scan List can be selected. Selecting the None option disables scanning (including Auto Scan) on this channel. This is a channel-wide feature.

Auto Start Scan
This option allows the radio to begin scanning automatically when user switches to current channel .

Rx Only
The option prohibits any transmitting operation on current channel, while the receiving operation remains as usual.

Talk Around
This option allows radio the ability to communicate when the repeater is:

- Not Available
- Out of Range
- Down for Service

When this is selected either using the programmable button or radio menu, the radio uses the current channels receive frequency as it's transmit frequency. This will allow other radios in repeater mode to receive transmissions from the Talk Around operated radio.

Pilot_Freq Direct Mode

Lone Worker
This feature enables Lone Worker on the radio. The Lone Worker feature prompts an emergency to be raised if there has been no user activity for a predefined time. The Response Time resets with user activity. The Reminder Time begins when the Response Time expires. The Reminder Time determines how long it takes the radio waits before raising the emergency. User activity is defined as activation of any radio button or of the channel selector. This is a channel-wide feature.

VOX
This option allows users to set whether to enable the VOX function on the current channel. When enabled, this function allows users to speak into the radio directly without pressing PTT key.

Scrambler
This option allows the user to enable the Scrambler feature. This technology can invert the frequency spectrum at transmitting party to make the signal unintelligible to unwanted parties, so as to achieve communication privacy.

Emp De-Emp
This feature can enhance audio clarity. Pre-emphasis is applied to filter the TX signals and de-emphasis is applied to filter the RX signals.

Offset
This option allows users to configure the transmit frequency, by adding the value in the receive frequency and the value in the offset option.

RECEIVE

Frequency[MHz]
Sets a frequency (in MHz) on which the signal is received for the current channel. This is a channel-wide feature. Per the FCC Part 90 Certification, the radio should only be used between 400-470 MHz. The radio will work outside the certified frequencies.

CTCSS/CDCSS Type
This option allows users to configure the current channel with a specific RX CTCSS/DCS type. When the radio receives the signal, it will distinguish whether the received signal is CTCSS or DCS, and check out whether it matches the predefined CTCSS/DCS for the current channel before processing.

CTCSS
This option allows users to define RX CTCSS for the current channel. The CTCSS is a sub-audible tone transmitted along with the carrier for the current channel. The radio will unmute when the received signal's CTCSS matches the CTCSS value set here. User can select a certain value from the drop-down list or input a valid value.

CDCSS
This option allows users to define RX DCS for the current channel. The DCS is a sub-audible code transmitted at a rate of 134.4 bit/s along with the carrier for the current channel. The radio will unmute when the received signal's DCS matches the DCS value set here. User can select a certain value from the drop-down list or input a valid value.

Ref Frequency [MHz]
Selects the Reference Frequency used when receiving on the current channel. The reference frequency can be shifted to allow the radio to operate on channel frequencies that would otherwise be blocked by internally generated spurious signals. Internally generated spurious signals would appear as silent carriers on certain channel frequencies. Shifting the reference frequency allows these permanent signal carrier to be shifted to unused frequencies so that the desired channel frequencies can still be used. This is a channel-wide feature.

Rx Squelch Mode
This option defines the decoding condition for receiving a call at current channel, it provides a privacy communication. This feature is valid for current channel only.

Option Description

- CTCSS/CDCSS and Audio: After an incoming call is successfully decoded, receiving carrier and the correct CTCSS/CDCSS conditions shall cause the radio speaker to unmute.

- Audio: After an incoming call is successfully decoded, receiving carrier shall cause the radio speaker to unmute.
- CTCSS/CDCSS: Both carrier and CTCSS/CDCSS conditions must be satisfied for the radio to unmute.
- Carrier: The radio will unmute when carrier is detected.

Monitor Squelch Mode
This option defines the condition for the radio to unmute when the programmed Monitor key is pressed.

Option Description

- Carrier: The radio can unmute upon carrier match.
- CTCSS/CDCSS: The radio can unmute upon match of both CTCSS/CDCSS and carrier. The user may switch the mode from CTCSS/CDCSS to Carrier.

Channel Switch Squelch Mode
This option decides the squelch mode in presence of channel change.

Option Description

- RX Squelch Mode: After the channel is changed, the radio switches to RX Squelch Mode.
- Monitor Squelch Mode: After channel is changed, the radio switches to Monitor Squelch Mode.

TRANSMIT

Frequency [MHz]
Sets a frequency (in MHz) on which a signal is transmitted for the current channel. This is a channel-wide feature. Per the FCC Part 90 Certification, the radio should only be used between 400-470 MHz. The radio will work outside the certified frequencies.

CTCSS/CDCSS Type

This option allows users to configure the current channel with a specific TX CTCSS/CDCSS type. The selected CTCSS/CDCSS will serve as a encoding criterion for the current channel.

Option Description

- None: Causes the radio to not transmit CTCSS/CDCSS codes while radio transmitting on the current channel.
- CTCSS: Causes the radio to transmit CTCSS codes while radio transmitting on the current channel.
- CDCSS: Causes the radio to transmit DCS codes while radio transmitting on the current channel.
- DCS Invert: Causes DCS signals to be inverted before they are transmitted from the radio, while operating on the current channel.

CTCSS

This option allows users to define TX CTCSS that is transmitted along with the carrier for the current channel. The receiver can only receive calls upon CTCSS match. Users can select a certain value from the drop-down list or input a valid value.

CDCSS

This option allows users to define TX DCS that is transmitted along with the carrier for the current channel. The receiver can only receive calls upon DCS match. Users can select a certain value from the drop-down list or input a valid value.

Reverse Burst/Turn off Code

If enabled, when on a CTCSS channel, the radio will send CTCSS reverse burst before ending TX, or when on a DCS channel, the radio will send DCS turn off code before ending TX. The revert phase can be set in If enabled, when on a CTCSS channel, the radio will send CTCSS reverse

burst before ending TX, or when on a DCS channel, the radio will send DCS turn off code before ending TX.The revert phase can be set in CTCSS Tail Revert Option .

CTCSS Tail Revert Option

This option allows users to eliminate the squelch tail at the end of transmission. The squelch tail is eliminated through a process of phase inversion at the end of reception of a CTCSS transmission. User can set the phase used for this to either 120 degrees or 180 degrees.

Ref Frequency [MHz]

Selects the Reference Frequency used when transmitting on the current channel. The reference frequency can be shifted to allow the radio to operate on channel frequencies that would otherwise be blocked by internally generated spurious signals. Internally generated spurious signals would appear as silent carriers on certain channel frequencies. Shifting the reference frequency allows these permanent signal carrier to be shifted to unused frequencies so that the desired channel frequencies can still be used. This is a channel-wide feature.

Emergency System

This option can associate a defined analog emergency system to the current channel.

Power Level

This option allows users to set the TX power level for current channel. User can toggle between high and low, via a short or long programmable key press or menu (if checked in menu). Available as High, Medium, and Low.

Tx Admit

This option defines the response from the transmitter upon PTT press on the current channel, in order to prevent the user transmitting on channels that are already in use.

Option Description

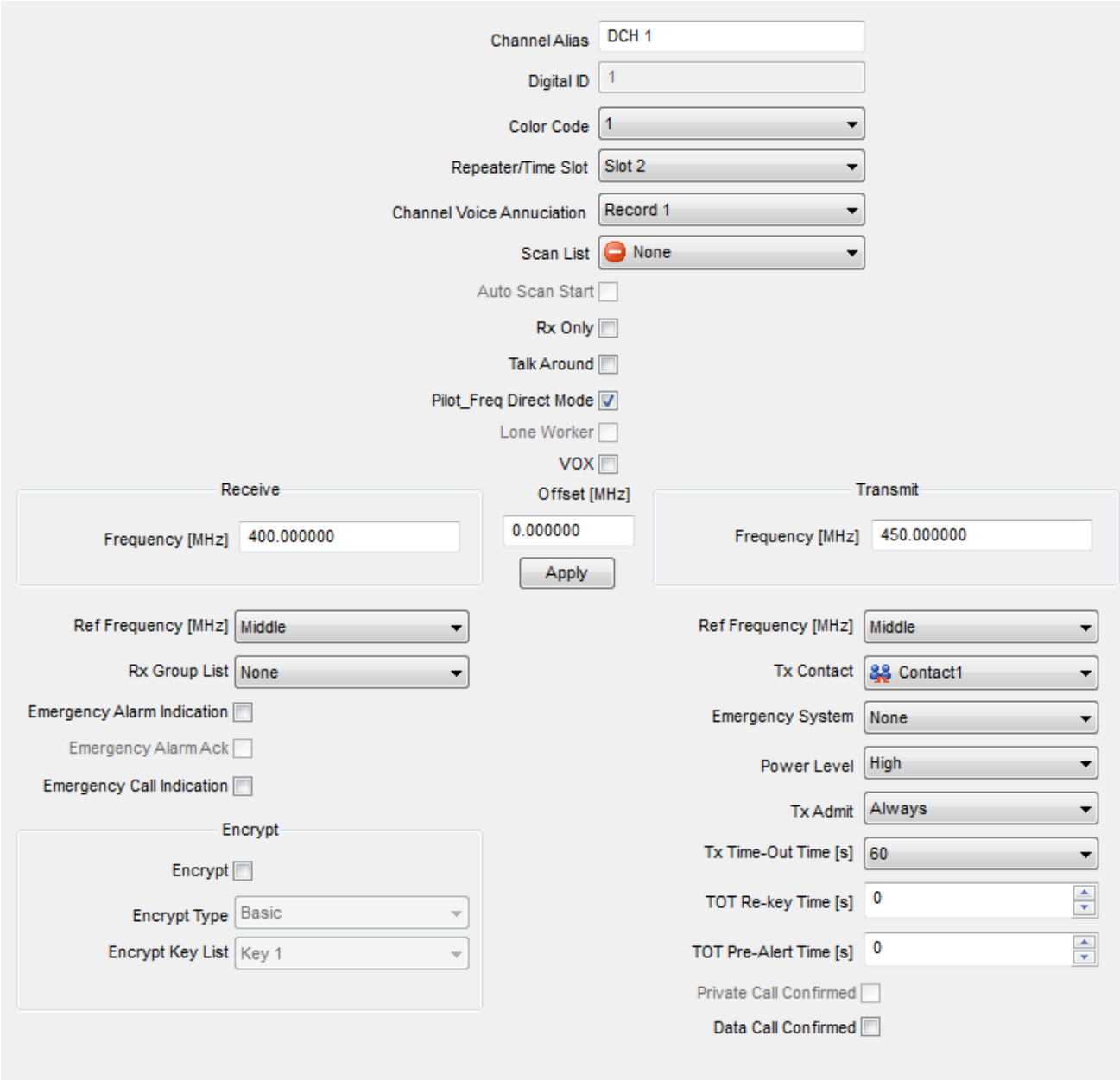
- Never Allow:The user can not transmit all the time.
- Always Allow: The user can transmit all the time.
- Channel Free: The radio can transmit only if the channel is free.
- CTCSS/CDCSS matched:The radio allows transmission upon CTCSS/CDCSS match.
- Audio:After an incoming call is successfully decoded,The radio can transmit.

Tx Time-Out Time [s]
The Time-Out Timer (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 one radio. The user may set smaller time-outs for busier channels. This is a channel-wide feature.

TOT Re-key Time [s]
This option defines the amount of time that the radio waits on a channel after the Time-Out Timer (TOT) expires (which stops the radio transmission) and before the user is allowed to transmit again.

TOT Pre-Alert Time [s]
This option allows users to define a duration an alert will be given before terminating the transmission.

Digital Channel



Channel Alias

The channel alias allows the user to define a unique name for each channel. The maximum length is 16 characters (digits, symbols, English letters or Chinese characters).

Digital ID
This option allows users to define a unique digital id for each channel. The Digital ID is a number you assign to a user or a radio that uniquely defines it.

Color Code
Color code is used to identify a system. User who wish to communicate with each other are assigned with the same color code. A radio ignores the channel activity which does not match the preset color code in this field, as it is assuming the activity belongs to other system. In a case where there are multiple systems (with different color codes set between the multiple digital channels), the user can turn on the Scan operation, that allows the radio to listen to activities across multiple systems.

Repeater/Time Slot
TDMA scheme is applied to divide the 12.5KHz channel into two consecutive slots. Either slot can be used for communication or data transfer.

Channel Voice Annunciation
This feature is no longer available.

Scan List
Associates a Scan List to this conventional channel. All the members on this list will be scanned during a scan operation. Any available Scan List can be selected. Selecting the None option disables scanning (including Auto Scan) on this channel. This is a channel-wide feature.

Auto Start Scan
This option allows the radio to begin scanning automatically when user switches to current channel .

Rx Only
The option prohibits any transmitting operation on current channel, while the receiving operation remains as usual.

Talk Around
This option allows radio the ability to communicate when the repeater is:

- Not Available
- Out of Range
- Down for Service

When this is selected either using the programmable button or radio menu, the radio uses the current channels receive frequency as it's transmit frequency. This will allow other radios in repeater mode to receive transmissions from the Talk Around operated radio.

Pilot_Freq Direct Mode

Lone Worker
This feature enables Lone Worker on the radio. The Lone Worker feature prompts an emergency to be raised if there has been no user activity for a predefined time. The Response Time resets with user activity. The Reminder Time begins when the Response Time expires. The Reminder Time determines how long it takes the radio waits before raising the emergency. User activity is defined as activation of any radio button or of the channel selector. This is a channel-wide feature.

VOX
This option allows users to set whether to enable the VOX function on the current channel. When enabled, this function allows users to speak into the radio directly without pressing PTT key.

Offset
This option allows users to configure the transmit frequency, by adding the value in the receive frequency and the value in the offset option.

RECEIVE

Frequency[MHz]
Sets a frequency (in MHz) on which the signal is received for the current channel. This is a channel-wide feature. Per the FCC Part 90 Certification, the radio should only be used between 400-470 MHz. The radio will work outside the certified frequencies.

Rx Group List
This option associates an available RX Group List to the current channel. In presence of any activity that match the talkgroup ID in the RX Group List , the radio unmutes and allows radio user to respond and talkback within the defined Group Call Hang Time.

If None is selected, the radio will only decode the talkgroup ID if it is as identical to what is set in the TX Contact Name. The radio will not be able to decode any group call when the TX Contact Name is set to None.

Emergency Alarm Indication
This option allows users to set whether audio and visual indication is given by the radio when an emergency alarm is received. The setting is available for the current channel only.

Emergency Alarm Ack
This option determines whether to acknowledge an emergency alarm automatically when an emergency alarm request is decoded.

Emergency Alarm Indication
This option determines whether to give an audio and visual indication when an emergency call is received.

TRANSMIT

Frequency [MHz]
Sets a frequency (in MHz) on which a signal is transmitted for the current channel. This is a channel-wide feature. Per the FCC Part 90 Certification, the radio should only be used between 400-470 MHz. The radio will work outside the certified frequencies.

Ref Frequency [MHz]
Selects the Reference Frequency used when transmitting on the current channel. The reference frequency can be shifted to allow the radio to operate on channel frequencies that would otherwise be blocked by internally generated spurious signals. Internally generated spurious signals would appear as silent carriers on certain channel frequencies. Shifting the reference frequency allows these permanent signal carrier to be shifted to unused frequencies so that the desired channel frequencies can still be used. This is a channel-wide feature.

Tx Contact
This option allows users to select a regular contact for the current channel. The radio sends a call to this contact if the user presses PTT in standby mode. However, after a group call is received, pressing PTT within the Group Call Hang Time can talkback to the group, but not initiate a new call.

Option Description

- Private Call contact
- Group Call contact
- All Call
- None: The user is prevented from initiating a call with PTT in standby mode on the channel.

Emergency System
This option associates a defined digital emergency system to the current channel.

Power Level
This option allows users to set the TX power level for current channel. User can toggle between high and low, via a short or long programmable key press or menu (if checked in menu). Available as High, Medium, and Low.

Tx Admit
This option prevents the user from transmitting on channels that are already in use.

Option Description

- Always Allow: The user can transmit all the time.
- Channel Free: The radio can transmit only if the channel is free.
- Color Code Free: The radio can transmit only when the channel is free or the color code is not matched.

Tx Time-Out Time [s]
The Time-Out Timer (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 one radio. The user may set smaller time-outs for busier channels. This is a channel-wide feature.

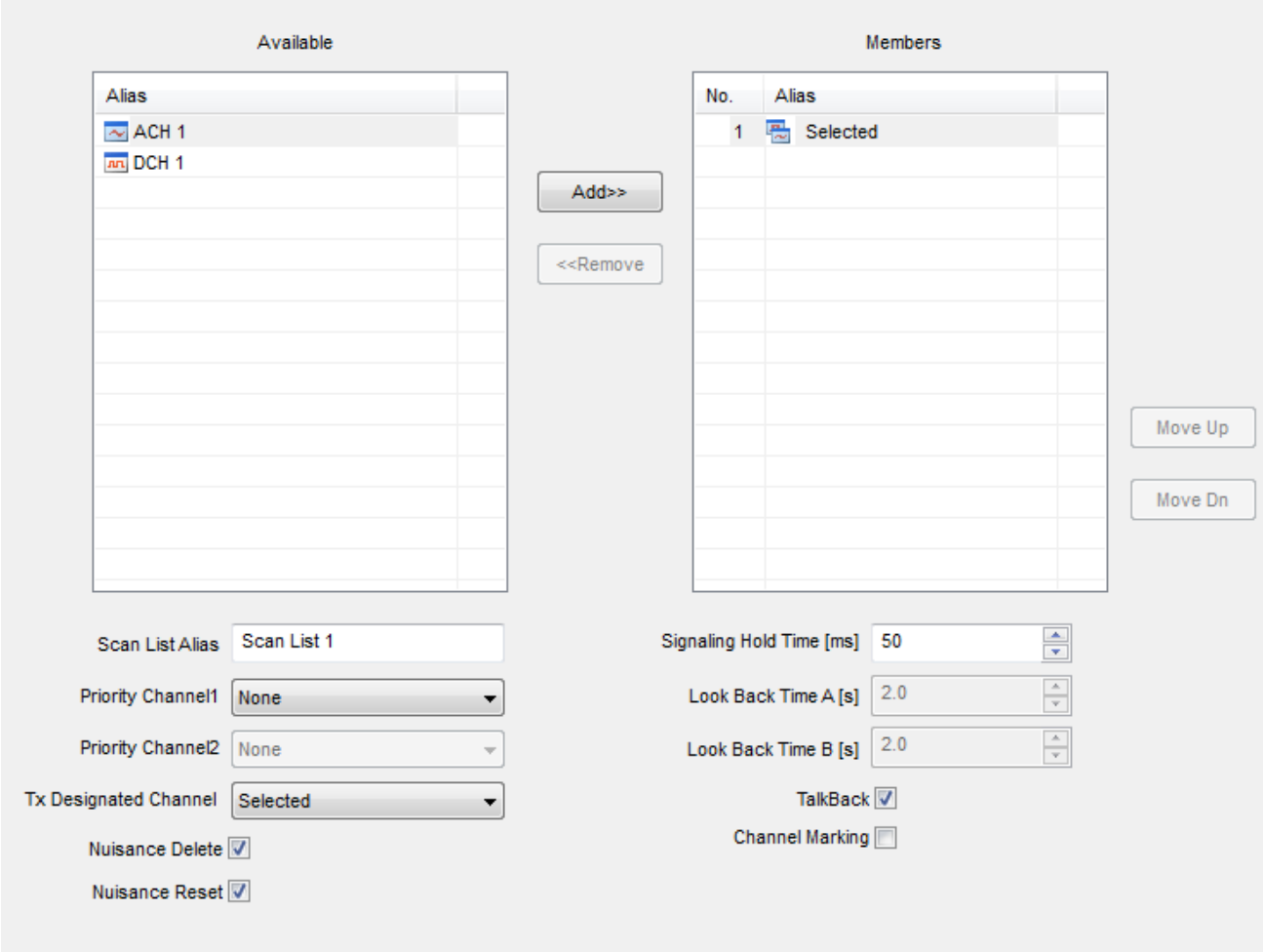
TOT Re-key Time [s]
This option defines the amount of time that the radio waits on a channel after the Time-Out Timer (TOT) expires (which stops the radio transmission) and before the user is allowed to transmit again.

TOT Pre-Alert Time [s]
This option allows users to define a duration an alert will be given before terminating the transmission.

Private Call Confirmed
This option configures whether the radio sends a confirmed private call request when user is trying to initiate a private call.

Data Call Confirmed
This feature enables individual packets in data calls (e.g. Text Message) on the current digital channel to be confirmed on the Data Link level.

SCAN



The Scan feature allows the radio user to listen to the communication activities on other channels. Scan List is a group of channels under monitoring. Users can add or delete the list according to your actual requirements. A maximum of 250 scan lists can be created and there must be at least one list. Each scan list can contain a maximum of 32 members.

Available

The Available Channels list shows all available channels that can be added into the Scan list. All channels configured in Digital channel [portable and mobile radios only] and Analog channel list will appear in the Available Channels list.

Members
The list shows the scan list members. Users can add a channel (analog or digital) from the Available channels list into the scan list. Each scan list can contain a maximum of 32 members. During scanning, the radio detects activities on these channels.

Scan List Alias
This option allows users to set the alias for the scan list. User may enter up to a maximum of 16 English or Chinese unicode characters.

Priority Channel 1
This option allows users to select a channel in the scan list as Priority Channel 1. If only Priority Channel 1 is set, 50% of a radio's scans are on Priority Channel 1 during scanning. If Priority Channel 2 is set to *None*, scans for Priority Channel 1 are reduced from 50% to 25%.

Option Description

- None: No channel is set as Priority Channel 1. If Priority Channel 2 is available, scans for Priority Channel increased to 50%.
- Selected: Select the channel on which the radio enters Scan mode as Priority Channel 1.
- CH XX: Select a channel in the scan list as Priority Channel 1.

Priority Channel 2
This option allows users to select a channel as Priority Channel 2. During scanning, 25% of a radio's scans are on Priority Channel 2 if user has defined also a Priority Channel 1. But if Priority Channel 1 is set to *None* , scans for Priority Channel 2 will be increased to 50% .

Option Description

- None: No channel is set as Priority Channel 2.

- Selected: Select the channel on which the radio enters Scan mode as Priority Channel 2.
- CH XX: Select a channel as Priority Channel 2.

Tx Designated Channel
This option allows users to select a channel as the scan Designated Tx Channel. The radio transmits on this channel if user presses the PTT key during scanning, with the scan talkback options disabled. However, if the scan talkback is enabled, radio will talkback during scan landed, and transmit on scan Designated Tx Channel when in idle scan (not landed).

Nuisance Delete
To temporarily remove an unwanted nuisance channel from the scan list in hang time. The removed channel will not be scanned in subsequent scanning, but it will be restored into the scan list when radio is restarted.

Nuisance Reset
This option is used to re-instate a channel, temporarily deleted using the nuisance channel delete option. Channels will automatically be re-instated when the radio power is cycled.

Signaling Hold Time [ms]
Sets the amount of time that the radio waits on an analog scan list channel when a carrier signal of sufficient amplitude is detected on the channel. This pause allows the radio time to decode the analog system signaling data. If the decoded information is incorrect, the radio reverts to scan.

Look Back Time A [s]
When a Priority channel is set, if the channel from which a call is received during Single scan or Multi scan is not a Priority channel, the radio still checks for calls from the Priority channel at the pre-set intervals while scanning is paused. This operation is called Look

Back.Look Back Time A is the interval at which Look Back operates while no carrier is being received on the Priority channel.

Look Back Time B [s]
When a Priority channel is set, if the channel from which a call is received during Single scan or Multi scan is not a Priority channel, the radio still checks for calls from the Priority channel at the pre-set intervals while scanning is paused. This operation is called Look Back.Look Back Time B is the interval at which Look Back operates while a carrier is being received on the Priority channel but Signaling is unmatched.

Talkback
This option allows users to determine whether the radio is able to talkback on the landed channel activity. If this feature is disabled, the radio transmits on the channel selected in Scan TX Mode.

Option Description

- Checked: The radio will transmit on the landed channel if the user presses PTT during the scan landing state; The radio will transmit on the channel selected in Scan TX Mode if the user presses PTT during the idle scan (non landing state).
- Unchecked: The radio will transmit on the channel selected in Scan TX Mode during scan landing state.

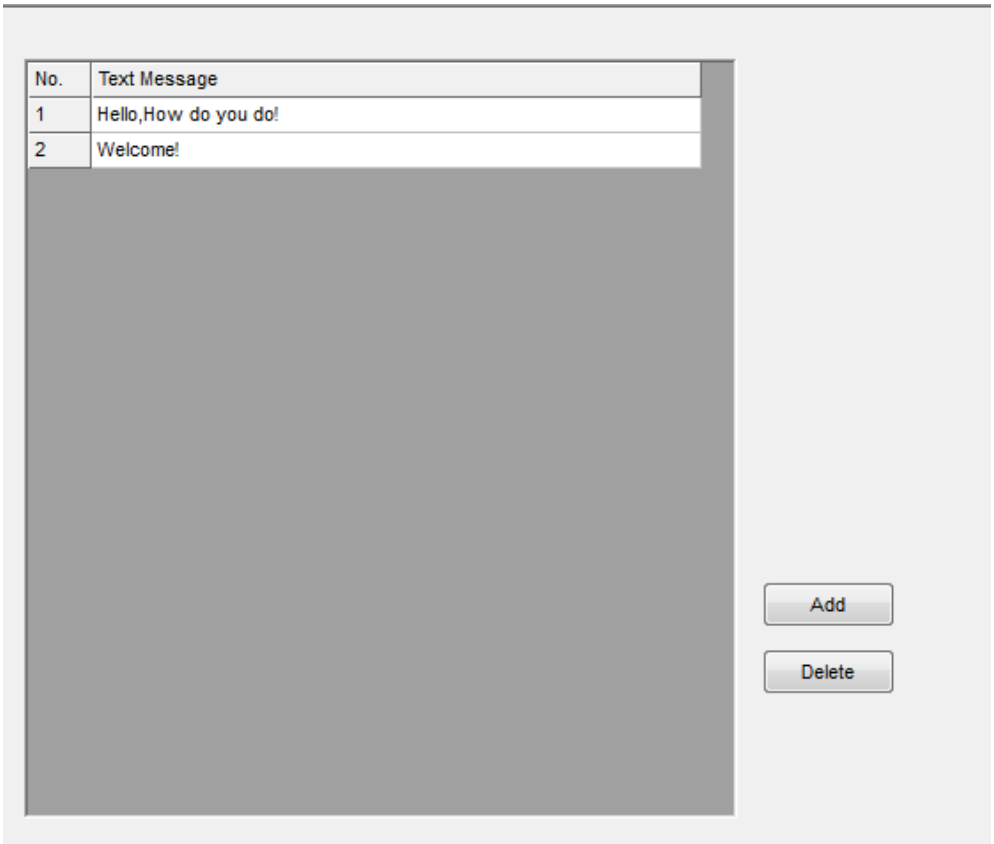
Channel Marking
This feature is used to mark channels that have mismatching CTCSS/CDCSS (for analog channels), or mismatching CC or ID (for digital channels). The radio only detects whether a carrier is present on the marked channel during next scan process. If a carrier is present on the marked channel, the counter increases a step, and the radio will go to the next channel for detecting. Otherwise, the counter resets and the

radio will check all conditions to see whether CTCSS/CDCSS (for analog channels), or CC and ID (for digital channels) is correct next time. If the counter counts up to ten (10), the radio will clear this mark and check all conditions.

Option Description

- Checked: Radio marks mismatching channels automatically during scan.
- Unchecked: Radio does not mark mismatching channels automatically during scan.

Text Messages



Message service include quick text and status message, This option allows users to define some frequently used texts as Quick Text, which can be used to create a short text message quickly. A maximum of 50 messages may be added to the Quick Text message list. For a Display model radio, the user can send access the Text Message feature via the Text Messages menu or a short or long programmable button press assigned to Text Message.

Input Text Message

A user may enter up to a certain amount of characters, i.e. 70 or more depending on the radio models. Valid characters are alphanumerics, spaces and special characters. The user can send the text message by assigning a short or long programmable button press (Text Message) or access the Text Messages feature via the Text Messages Menu feature.

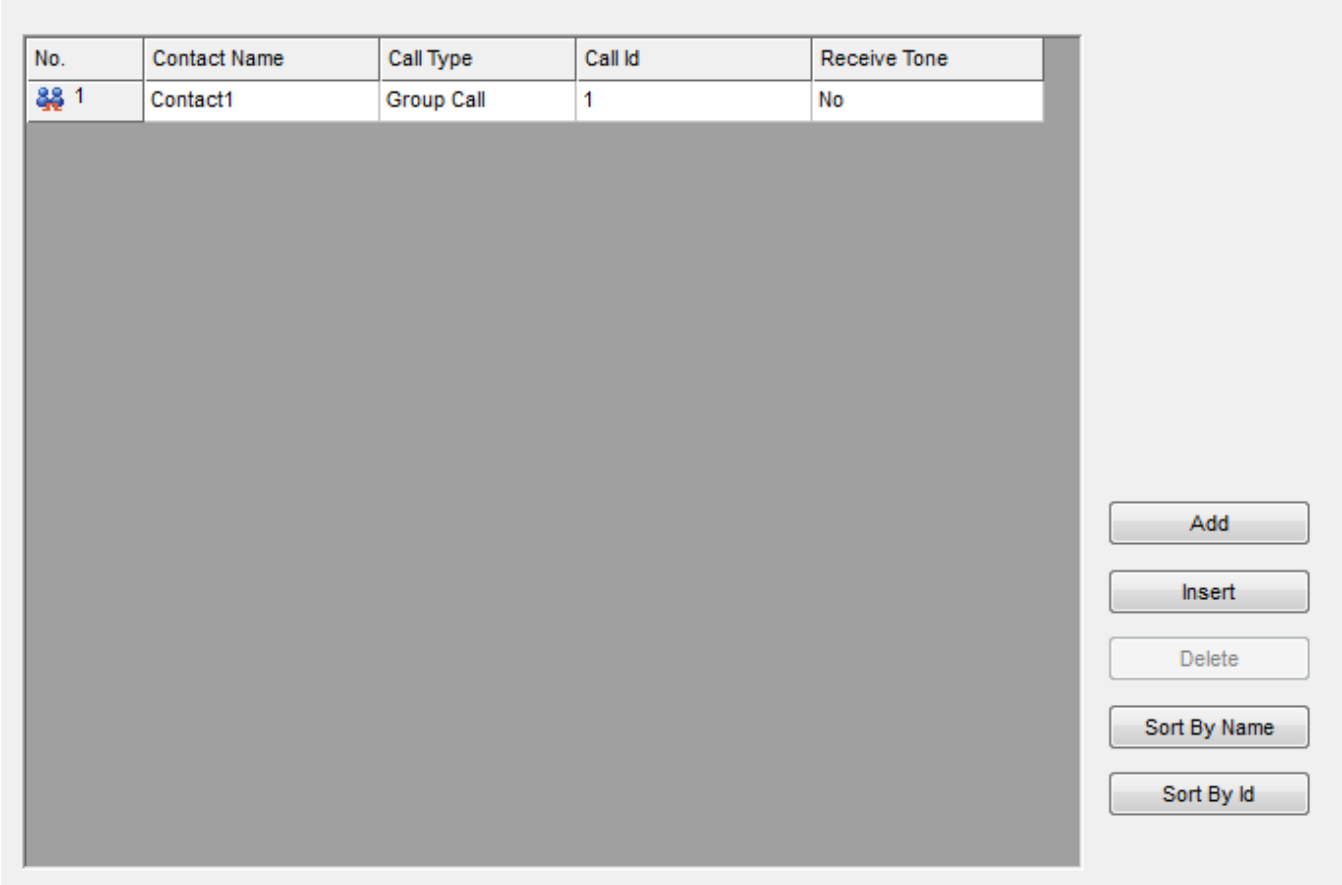
Add

This option allows users to add a new messages. The maximum of 50 messages can be added.

Delete

Click the Delete button to delete the current message from the Quick Text list.

Contacts



Contact list shows contact information saved in the radio, users can select target radio or a group of radios depending on the call type and call ID. The user may access this list via a short or long programmable key press or via the Contacts Menu. From the list, the user can make a call or other functions if supported. Users can add or delete contact members from the list. The list may include up 65535 contacts, and must include at least one contact. Users can add or delete contact members from the list. The list may include up to 65535 contacts, and must include at least one contact. Deleting a contact already associated to a digital channel will cause TX Contacts Name of the channel to be *None* .

Contact Name

Users can set name for each contact. Users may enter up to 16 English or Chinese Unicode characters at maximum.

Call Type

To list the call types for selection

Option	Description

- All Call: A call from an individual radio to all radios in the system. All Calls do not communicate through special timeslots or channels within the system. All Call will only be authorized to the users who play supervisory roles. This feature is very useful when a supervisor needs to communicate with all the users on a logical channel, rather than just a particular group or individual.
- Private Call: A call between two individual radios.
- Group Call: A call from an individual radio to a group of radios.

Call Id

This allows users to set an ID for each digital call member. This ID is used to identify and communicate with a target radio or group of radios depending on the call type. There are three call types (Group Call, Private Call, All Call). The meaning of the call type's ID is explained as follows:

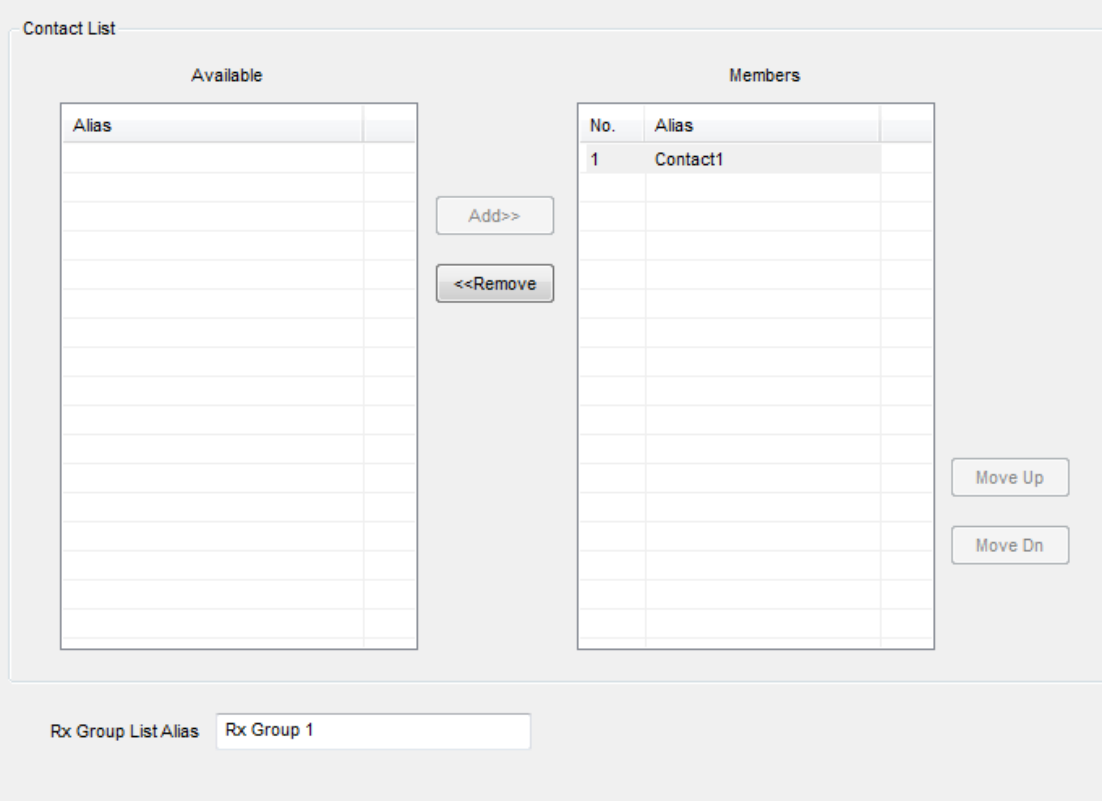
Option	Description

- Group Call ID-This ID is used to identify a particular group.
- Private Call ID-This ID is the Radio ID of the target radio [portable and mobile radios only].
- All Call ID-This has a fixed ID of 16777215 (value is not editable).

Receive Tone

This alert tone sounds on the receiving radio prior to unmuting during a Private Call, Group Call, or All System Call. This is to notify the user that the radio is unmuting. This feature is set on a per-call basis.

Rx Group List



RX Group List is helpful to receive more than one group call on a digital channel. Users may create up to 250 Rx Group Lists, each with up to 32 groups. Users can also delete these Rx Group Lists, but keep 1 Rx Group List at least. A **RX Group List** can be associated to a digital channel.

Rx Group List Alias

Users can set alias for each Rx Group List . Users may enter up to 16 English or Chinese unicode characters at maximum.

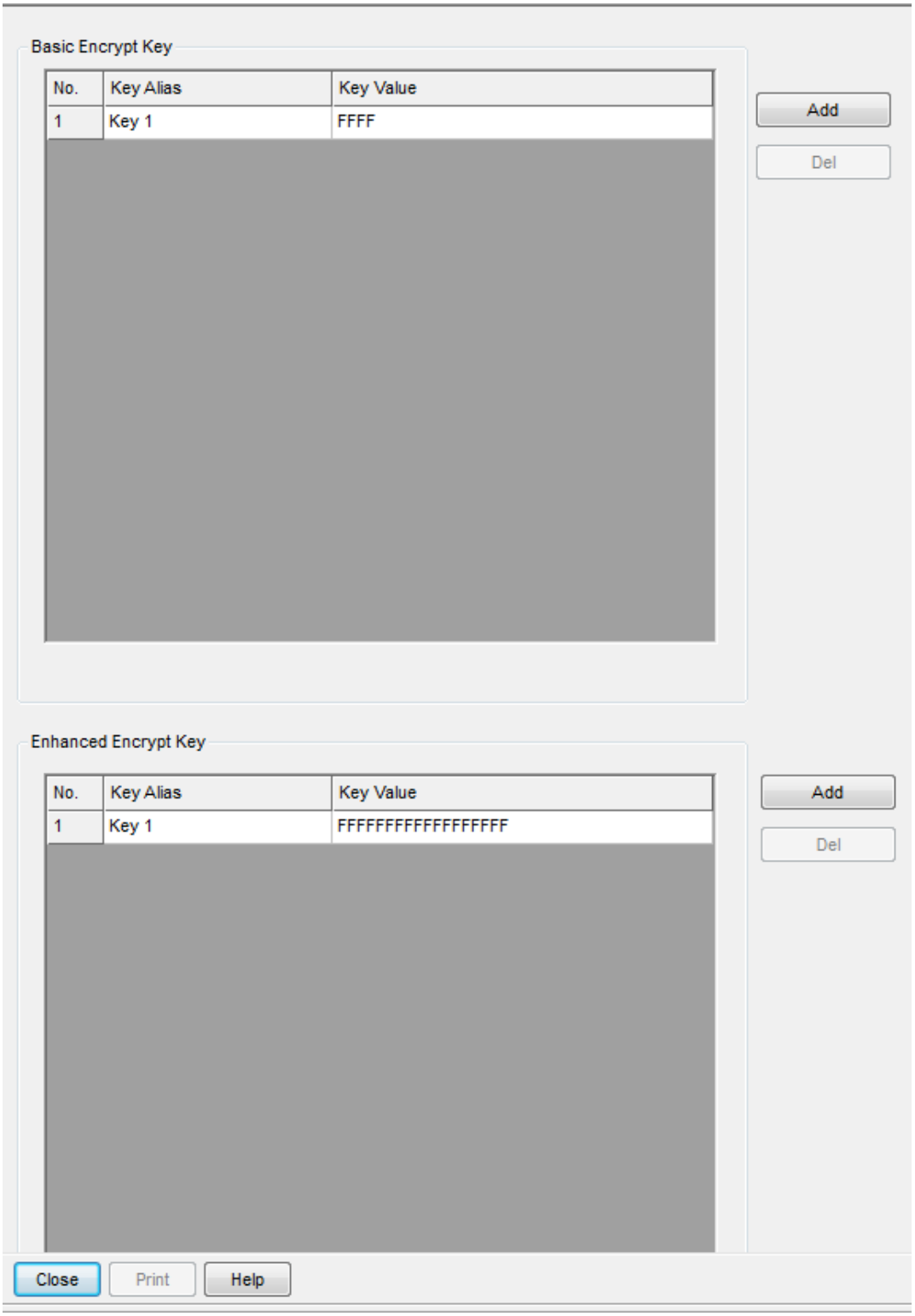
Available

The Available list shows all the *Group Call* that are set in the Contact. Users can add any members in the Available list to the Rx Group List on the right with the Add button.

Members

The Members list shows all members of the current RX Group List . If this RX Group List is associated with a channel, the radio can receive any call that is included in the Members list. Each RX Group List may contain up to 16 members. In other words, users can add a maximum of 16 contacts to the Members list.

Encryption


Basic Encrypt Key
No.
Key Alias
Key Value
1
Key 1
FFFF
Add
Del
Enhanced Encrypt Key
No.
Key Alias
Key Value
1
Key 1
FFFFFFFFFFFFFFFF
Add
Del
Close
Print
Help

This option allows the user to enable the Encrypt feature. This technology can facilitate secret communication using a key to make the audio signal or data inaccessible to anyone except those possessing the same key, so as to achieve communication privacy.

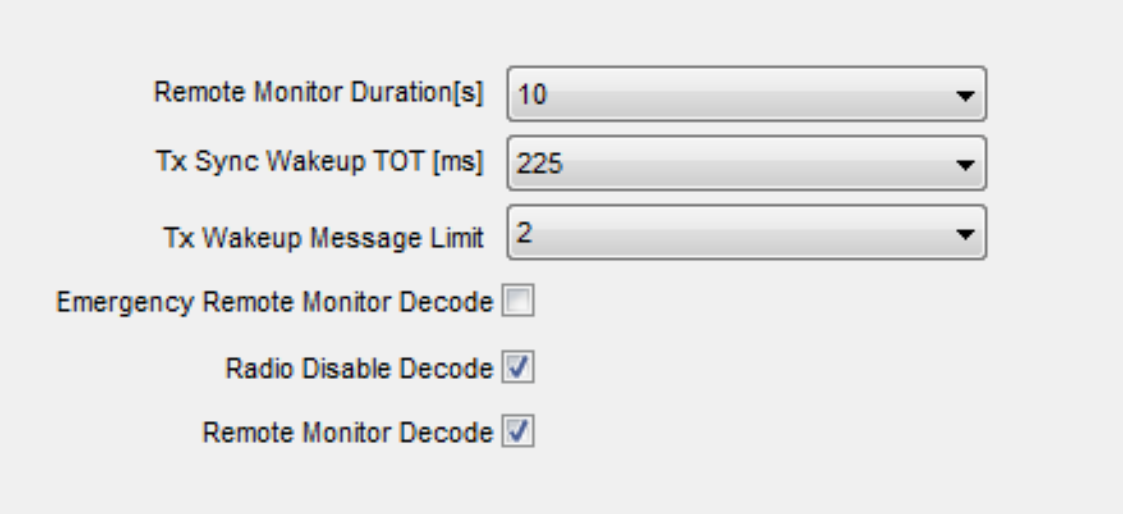
Key Alias

Each key can be accompanied with an alias, composed of digits, symbols, English letters or Chinese characters.

Key Value

This option decides the exact value of key. Its length is subject to the Encrypt Key Length.

Emergency Signaling Configuration



Allows the radio to receive and process a Radio Disable command sent from another radio to remotely disable it. This feature helps to block usage of stolen or lost radios. This is a radio-wide feature.

Remote Monitor Duration [s]
Sets the duration that the target radio can be remotely monitored. This is a radio-wide feature.

Tx Sync Wakeup TOT [ms]
This feature adjusts the value of the timer that begins immediately after a message is sent to wake up the repeater. The timer is stopped when the radio receives a repeater sync signal. If the timer expires before receiving a repeater sync signal, the radio sends another message to wake up the repeater. The number of messages is determined by the TX Wakeup Message Limit, after which the repeater is assumed to be out of range. This is a radio-wide feature.

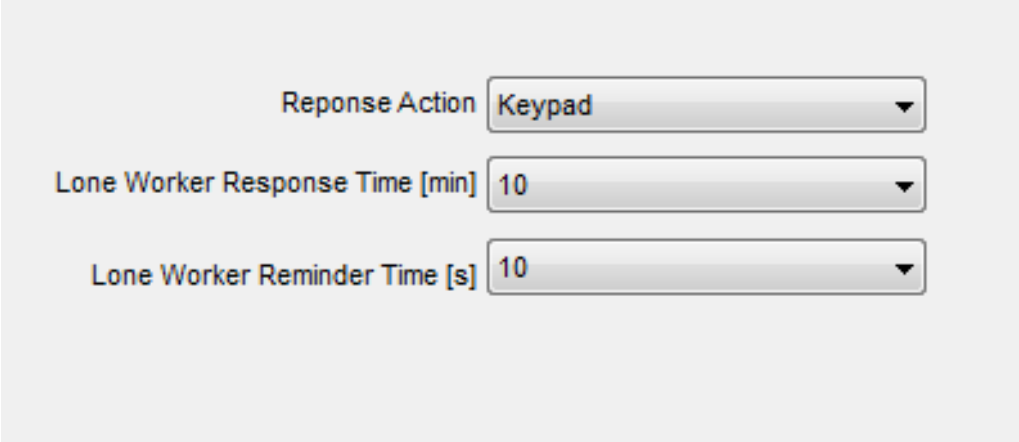
Tx Wakeup Message Limit
This feature sets the number of messages sent to wake up the repeater. Setting a higher number improves the success rate of waking up the repeater. This is a radio-wide feature.

Emergency Remote Monitor Decode
After an emergency alarm is initiated, this feature allows the radio to receive and process Remote Monitor commands sent from another radio for the duration specified in Remote Monitor Duration. This is an exceptional case of Remote Monitor Decode whereby the radio is able to decode Remote Monitor command even if the Remote Monitor Decode feature is disabled but only for the duration as specified in Remote Monitor Duration. This is a radio-wide feature.

Radio Disable Decode
Allows the radio to receive and process a Radio Disable command sent from another radio to remotely disable it. This feature helps to block usage of stolen or lost radios. This is a radio-wide feature.

Remote Monitor Decode
Allows the radio to receive and process Remote Monitor command sent from another radio. This command instructs the receiving radio to activate its microphone and transmitter for the duration specified in Remote Monitor Duration. A call is silently set up on this radio and its transmission controlled remotely without any indication given to the receiving radio user. This is a radio-wide feature.

Lone Worker



Lone worker is system that allows a person to work alone but if the worker does not press a button at a specified time, the radio sends out an emergency alarm.

Response Action
The Emergency mode will be triggered off when the user fails to make any of the following operations during the Lone Worker Response Time.

Option	Description

- Key Pad: Press any button of radio.
- Voice Tx: Use the radio to transmit any voice.

Lone Worker Response Time [min]
This timer is part of the Lone Worker feature. It determines how long the radio waits since the last user activity before it begins sending reminders. User activity is defined as activation of any radio button, or activation of the channel selector. This is a radio-wide feature.

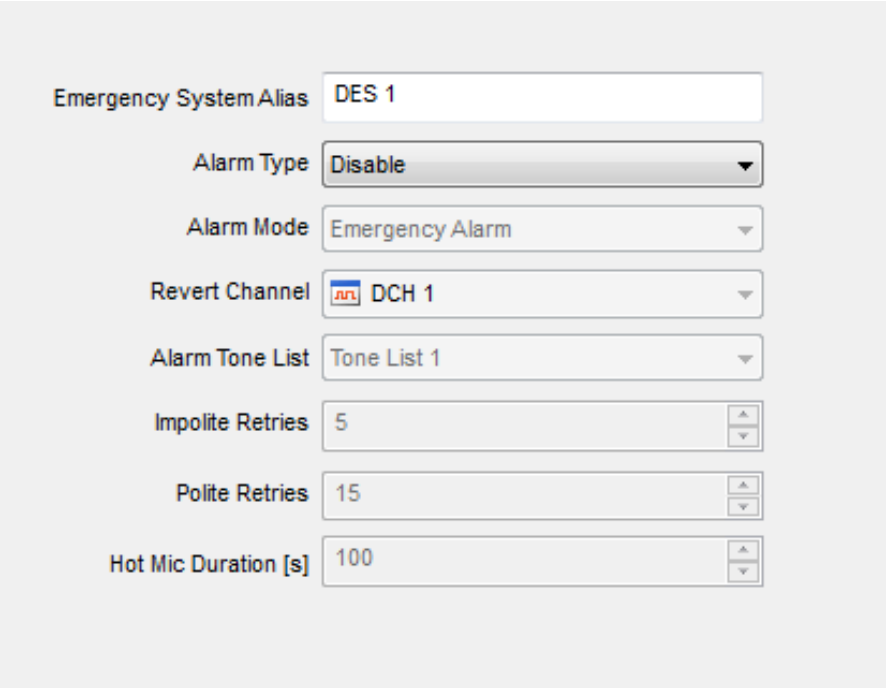
The Lone Worker Reminder Time must be shorter than the Lone Worker Response Time.

Lone Worker Reminder TIme [s]

This timer is part of the Lone Worker feature. It determines how long the radio waits since the Response Time has expired before raising the emergency. User activity is defined as activation of any radio button, or activation of the channel selector. This is a radio-wide feature.

The Lone Worker Reminder Time must be shorter than the Lone Worker Response Time.

Digital Emergency



A Digital Emergency system(DES) is a signaling protocol used by the radio for communication during emergency when the radio is in Digital Mode. A maximum of 32 Digital Emergency systems can be created.

Emergency System Alias
Users can set alias for each emergency system. English or Chinese characters are valid, in the list in Emergency System in Digital Channel.

Alarm Type
An alarm is a non-voice signal that triggers an alert indication on another radio. This feature specifies the behavior of the initiating radio's alarm when the emergency button is pressed.

Option Description

- Disabled:The radio is unable to transmit an alarm signal.
- Regular: The radio transmits an alarm signal and provides audio and visual indication that it is in Emergency mode.

- Silent: The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. In addition, it will not unmute to any received audio.
- Silent w/ Voice: The radio transmits an alarm signal but gives no audio or visual indication that it is in Emergency mode. The radio then unmutes to qualified channel activity.

Alarm Mode

Defines the radio’s behavior when the radio's emergency button is pressed.

Option Description

- Emergency Alarm: The radio sends an emergency alarm and exits the emergency mode. This alarm is a non-voice signal that triggers an alert indication on another radio.
- Emergency Alarm w/ Call:An emergency alarm is sent, after which an emergency call can be transmitted by pressing the Push-To-Talk (PTT) button.
- Emergency Alarm w/ Voice to Follow :This option enables the Hot Mic feature, allowing for the programming of the Hot Mic related features, i.e. Hot Mic Duration. An emergency alarm is sent and the microphone is activated for an emergency call. Voice is transmitted without the need to press the Push-To-Talk (PTT) button.

Revert Channel

This is the channel used for digital emergency alarm or voice. Any single site digital channel may be set as the Revert Channel, including the channel indicated by the radio's channel selector.

Option Description

- Selected: The current channel where the emergency is activated. [This option is available only when user hasn't check RX Only and the channel's TX Contact Name is *Group Call* .]
- Available channel: All channels in the Digital Channel list with TX Contacts Name set as *Group Call* are available (RX Only channels are excluded for revert channel selection.) User can choose a channel as Revert Channel from a maximum of 4000 available channels.

This option is not available if the Emergency Type is set to Disable.

When an emergency revert channel is set to *Rx Only*, the CPS will automatically change the revert channel to next available channel in the channel list. If there is no longer any channels in the channel list or all available channels in the channel list are set to *Rx Only*, then this option will be set to *None* automatically.

When the user checks *Selected* here and modifies any channel as *RX Only* or the channel's TX Contact Name is not *Group Call*, the first channel in this list will be the default Revert Channel. If no channel can match its requirement, *None* will be its default value.

Alarm Tone List
This option allows users t o select a defined tone list for the radio that will sound when an alarm is received.

This option is not available if the Alarm Type is set to **Disable/ Silent / Silent w/ Voice** .

Impolite Retries
An impolite transmission is a transmission that occurs even when there is activity on the current channel. The radio tries a number of impolite transmissions to get an acknowledgement and then goes on to try a

number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm impolitely.

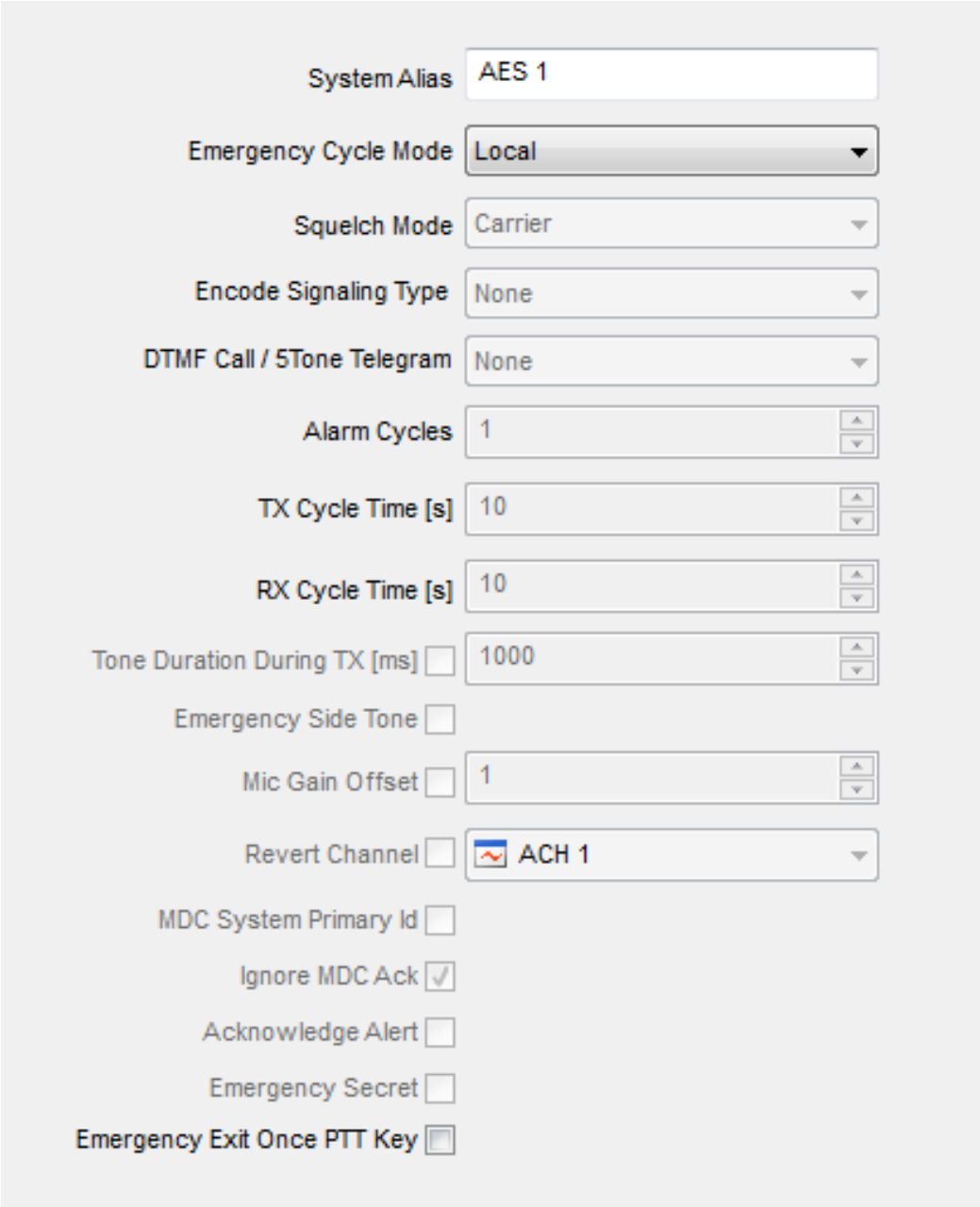
Polite Retries

A polite transmission is a transmission that occurs only when the current channel is free of activity. The radio tries a number of impolite transmissions to get an acknowledgement before trying a number of polite transmissions. This feature sets the number of attempts to transmit an emergency alarm politely.

Hot Mic Duration [s]

This option defines the length of time for each emergency call transmission during emergency process (hands free transmission).

Analog Emergency



An Analog Emergency system(AES) is a signaling protocol used by the radio for communication during emergency when the radio is in Analog Mode. A maximum of 4 Analog Emergency systems can be created.

System Alias
Users can set alias for each emergency system. English or Chinese characters are valid, in the list in Emergency System in Digital Channel.

Emergency Cycle Mode
This feature is Disabled/Forever/Limited Number of Cycles/Local Emergency by clicking the cursor on the associated combo box.

Option Description

- Disabled
- Forever
- Limited Number of Cycles
- Local

Squelch Mode
This drop down combo box is used to select the required signalling squelch mode needed to unmute the receiver when the radio is in the emergency mode of operation. The options are the available radio squelch modes.

Option Description

- Carrier
- CTCSS/CDCSS
- Speaker Off

Encode Signaling Type
This option defines the available signaling system in Transmit status.

Option Description

- None.
- DTMF
- 5Tone

- MDC

DTMF Call/5Tone Telegram
This option box is used to select DTMF Call or 5Tone available telegrams will be sent when the radio transmits in emergency mode.

Option Description

- Available dtmf call list If Encode Signaling Type is set to DTMF.
- Available telegrams If Encode Signaling Type is set to 5Tone.

This option is not available if Emergency Cycle Mode is set to Local.
This option is not available if Encode Signaling Type is set to None or MDC.

Alarm Cycles
This option defines the number of cycles that emergency alarm will sound.

Tx Cycle Time [s]
This option defines the duration of cycle for each emergency call transmission during emergency process.

Rx Cycle Time [s]
This option defines the duration of cycle for when receive a emergency call during emergency process.

Tone Duration During Tx [ms]
This option box is used to select if the emergency tone will be sent or not during the emergency transmit duration. When enabled, the called radio will hear the emergency tone.

Energency Side Tone
If enabled, in emergency state, while the radio sending the emergency

tone for remote radio to receive, this emergency could be heard in local radio.

Mic Gain Offset

The emergency mic gain option is enabled/disabled by clicking the cursor on this check box.This feature is intended to increase the microphone sensitivity and allow it to pick up conversation (etc.), over a larger area.

Using the drop down combo box, the gain can be set from 1 to 4, in steps of 1.

Revert Channel

This option box is used to define a specific channel as the emergency channel.

If the emergency button is activated, the radio will revert to the emergency channel and remain on it, until the emergency is cancelled.

Option Description

- Selected: The current channel where the emergency is activated. (This option is available only when user hasn't check RX Only .)
- Available channel: All channels in the Analog Channel list are available (RX Only channels are excluded for revert channel selection.)

MDC System Primary ID

This option box is used to select which signalling will be sent when the radio transmits in emergency mode when TX Signal System of the emergency channel is set to MDC. When selected, the MDC will be transmitted in emergency mode, or the one of DTMF telegram will be sent.

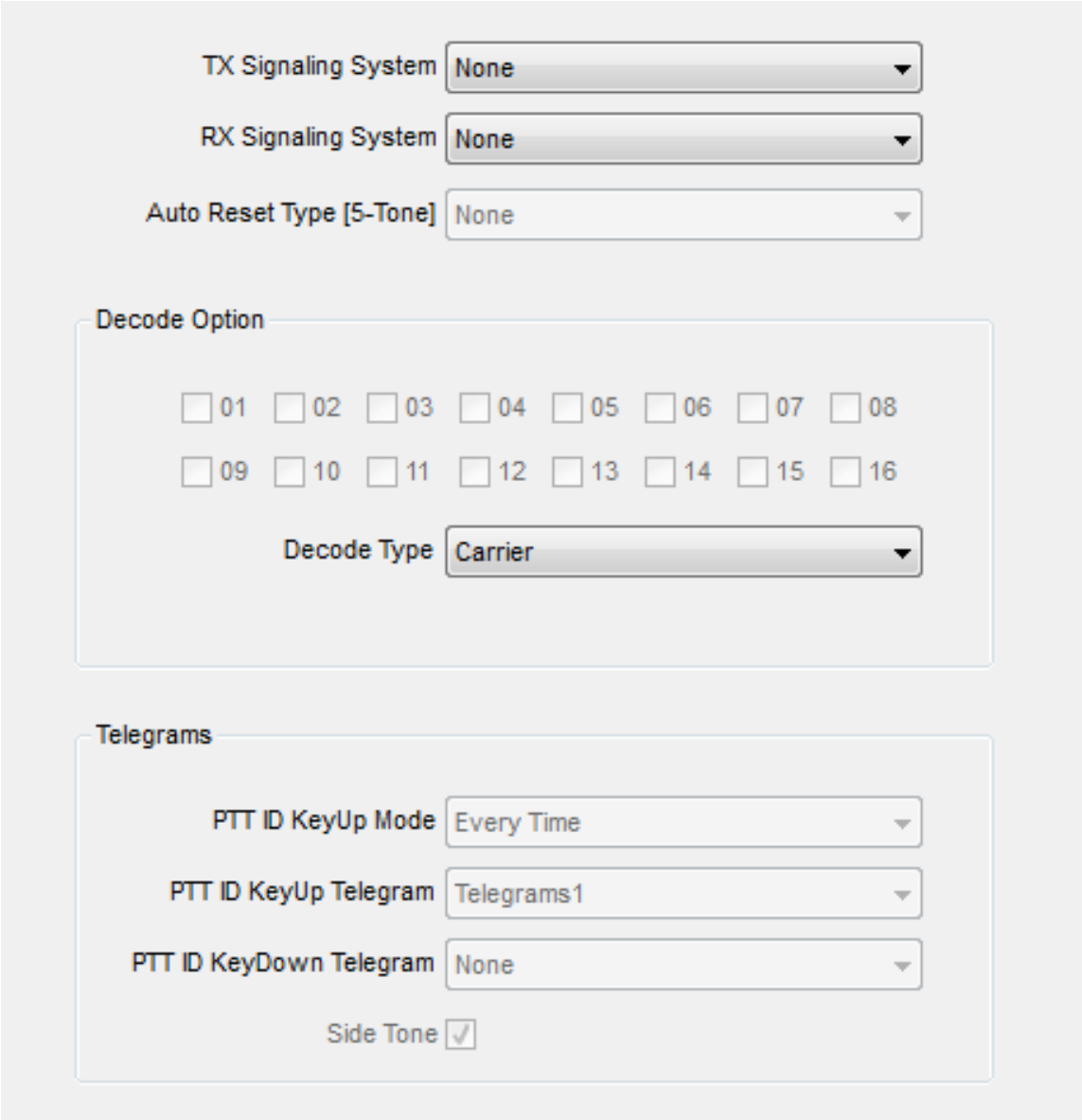
Ignore MDC Ack
This option ignore or not the mdc ack when the radio transmits MDC in emergency mode.

Acknowledge Alert
This option box is used to select if the Ack Alert will be heard or not when receiving the ack from the called radio.

Emergency Secret
Selecting this will cause that all radio alerts, LED, and side tones will be disabled, when the emergency button is pressed and the radio enters emergency operating mode.

Emergency Exit Once PTT key
If checked, emergency mode will exit when the user press the PTT key.

Personality



This option allows users to select a personality as the feature parameters for analog channels (personality 1 ~ 16).

SYSTEMS

Tx Signaling System

This option defines the available signaling system in Transmit status

Option Description

- None
- DTMF 1 - 4
- 2 Tone 1 - 4
- MDC 1 - 4
- 5 Tone

Rx Signaling System
This option defines the available signaling system in Receive status.

Option Description

- None
- DTMF 1 - 16
- 2 Tone 1 - 16
- MDC 1 - 4
- 5 Tone

Auto Reset Type [5-Tone]

DECODE OPTIONS

Check Boxes 1 - 16
For DTMF and Two Tones, the system can decode multiple sets of conditions. The checked boxes indicate which decode definitions should be decoded

For MDC and 5 Tone, only one set of conditions can be decoded and the checked boxes are not used.

Decode Type
Indicates when decoding the above protocols, if you should also decode CTCSS/CDCSS to make it a valid decode.

TELEGRAMS

PTT ID KeyUp Mode
This drop-down list box defines when, if at all, a telegram will be sent when the PTT is pressed.

Option Description

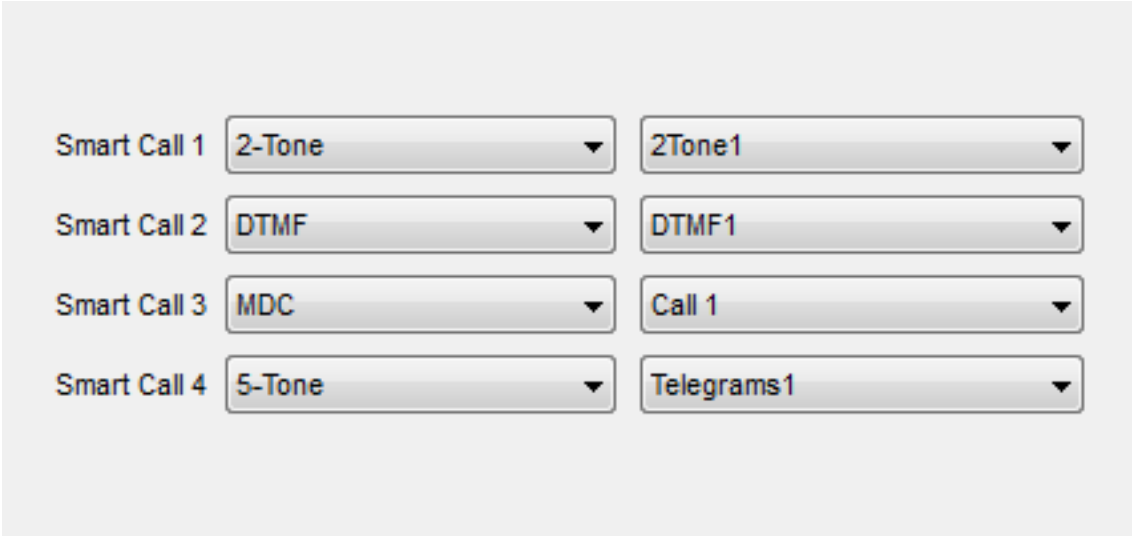
- Once Only: A telegram will be sent on the first activation of the PTT button when a call is instigated. This is dependent on the radio not being in Auto Reset Mode, or if it is in auto-reset mode, no telegram is transmitted when PTT is pressed (this caters for the situation whereby auto-reset mode is entered via the Forced Monitor mode).
- Every PTT: If this option is selected, then a defined telegram is sent every time the PTT button is pressed.
- Forbid: If disabled no telegram will be transmitted when PTT is pressed.

PTT ID KeyUp Telegram
Available when PTT Key-up Encode Type is set to Telegram. Select the required telegram, which is sent when the PTT is pressed

PTT ID KeyDown Telegram
Enabling this option will result in a defined telegram being sent when the PTT is released

Side Tone
If enabled, you could hear the tone of the telegram being sent out.

Smart Call



This part allows users to configure available contacts for analog call (Smart Call 1 ~ 4):

Signaling Type

This parameter defines the signaling type of shortcut call.

Option Description

- None
- DTMF 1 - 16
- 2 Tone 1 - 16
- MDC 1 - 4
- 5 Tone

Call List

This parameter defines the desired call list.