

**CS1000 AND CS1001 PROGRAMMING
REFERENCE MANUAL**

FM HANDHELD TRANCEIVER

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Version 1.00

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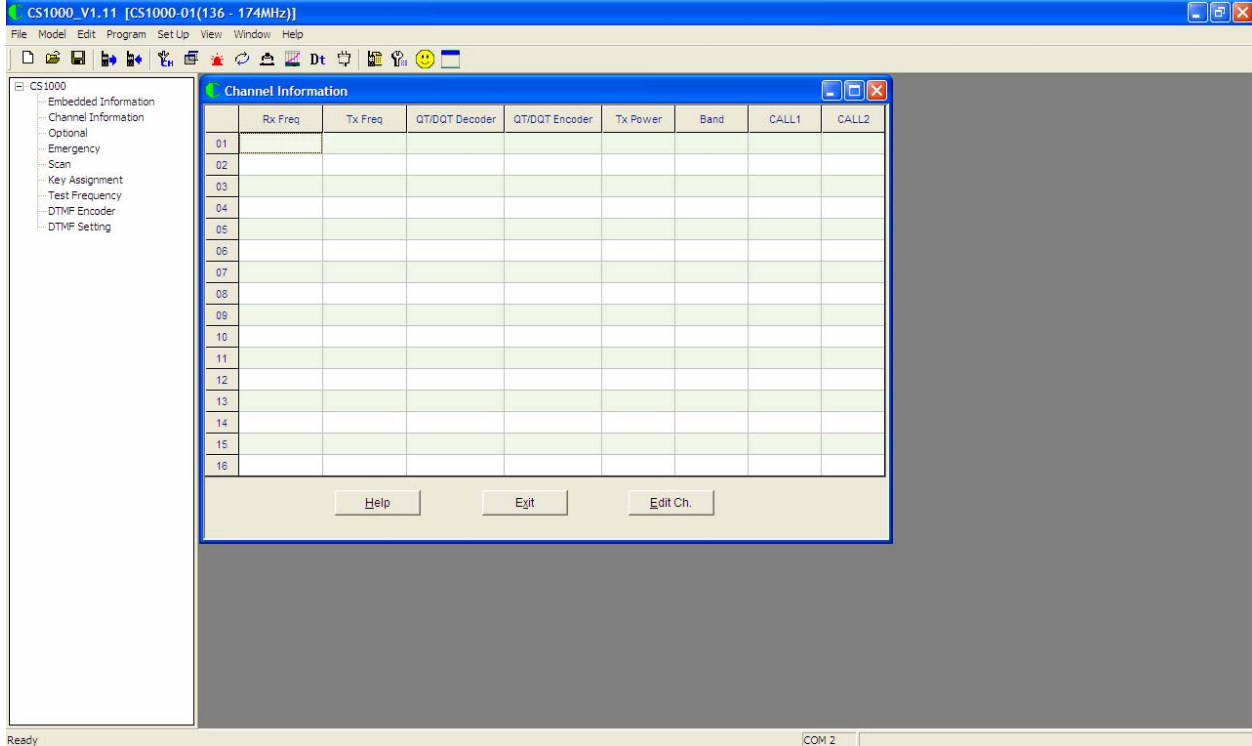
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Opening Screen



When you first double click the CS1000 shortcut on your desktop, the following screen appears. The following things should be noted:

1. At the bottom of the screen it shows COM 2. This is the serial port you use for programming. This could be changed by the setup menu to any Communication Port between 1 and 16. Only the active Communications Ports can be used. The active ports will be indicated by the Communication Port numbers black and the inactive Communication Port numbers grey.
2. At the top of the screen on the left side you will see a version number of this software. At the time this page was written the version was 1.11.
3. At the top of the screen on the left side you will see the frequency of the radio. This version is set for 136-174 MHz (VHF). There is also a version set for 420-470 MHz (UHF)
4. You can edit the various parameters by clicking on a screen in the edit pull-down menu or the summary of edit screens on the left.
5. Towards the top of the screen you will see a set of 17 Icons. The functions of the Icons from left to right are as follows:
 - a. New
 - b. Open
 - c. Save
 - d. Read From Radio
 - e. Write From Radio
 - f. Edit Channel Parameters
 - g. Optional
 - h. Emergency

- i. Scan
- j. Key Assignments
- k. Tuning Frequency
- l. DTMF
- m. Communication Setting
- n. Select Radio Model
- o. Tuning Model
- p. Tuning Data Table
- q. Debug

CS1000 Pull-Down Menus

File Pull Down Menu

New

This function clears all data currently shown in the window and restores the program's default values.

Open

The open function reads a data file that is saved on a hard disk drive, then transfers the data to your computer memory. You can edit the transferred data file, write it to the transceiver, or print it out.

Close All

This function closes the existing data file that is open without saving it.

Save

The Save function stores the created or revised data file to the drive, path, and file name previously selected. Data files have ".dat" as their file extension.

Save As

The Save As function saves the current file to the drive, path, and file name that you specify, allowing you to rename or redirect the file to a new location. Data files have ".dat" as their file extension.

Print

The Print function redirects and prints the programming data. The data may have been created, loaded from a disk, or read from the transceiver.

Print Review

When you choose this command, the main window will be replaced with a "Print Preview" window. One or two pages will be displayed in the format in which they will be printed. The Print Preview tool bar offers options to view either one or two pages at a time, move back and forth through the document, and zoom in and out of pages.

Print Setup

This function will allow you to change the characteristics of the printing such as printing portrait or landscape.

Recent File

This section shows the recent files that were previously accessed using this program.

Model Pull-Down Menu

Model Information

Allows you to set the programming screen to CS1000-01, which is for VHF 136-174 MHz or model CS1000-02 which is for UHF 420-470 MHz.

Radio Information

This item will only work with a programming cable attached to the CS-1000 and the radio turned on. This item indicates the model number (CS1000-01 or CS1000-03), the frequency available for the radio, and the software version of the code inside the radio.

Edit Pull-Down Menu

Embedded information

Allows you to write a personal message for each radio. It can be used to identify the owner of the radio or possibly the function of the radio. This screen also allows you to set read and write password protection.

Channel Information

Sets the per channel information such as receive and transmit frequency, receive and transmit CTCSS tones or DCS codes, etc.

Optional

Programs various miscellaneous parameters such as the type of voice annunciation, timeout timers, squelch level, battery save, etc.

Emergency(A)

Has the various types of parameters for the different emergency conditions such as man down, lone worker, etc.

Scan

Contains the various parameters for setting the scan features.

Key Assignments

Sets the definition for the three software defined switches. Each switch can be used for two different functions depending on the length of time the switch is depressed.

Test Frequency

Used for calibration. See separate alignment reference manual for calibration procedures.

DTMF Encoder

Used for storing DTMF sequences. Each sequence can be up to 16 characters long and each character can be the numbers 0 – 9, A,B,C,D,*,#.

DTMF Settings

Sets up the various parameters needed for DTMF Paging.

Program Pull-Down Menu

Read From Radio

Transfers data from the radio to the PC program. This function does not store the data in a PC file. To use this function the radio must be operational and the programming cable must be connected between the PC and the radio.

Write To Radio

Transfers data from the PC program to the radio. This function does not read the data in a PC file. To use this function the radio must be operational and the programming cable must be connected between the PC and the radio.

Setup Pull-Down Menu

Communication Port

Sets up the communication port that connects the PC to the radio. This program allows you to select COM 1 through COM 16. Only the active ports in the PC can be enabled. Active ports will be shown by being highlighted compared to non active ports.

View Pull-Down Menu

Tool Bar

The tool bar at the top of the screen allows the 17 Icons to be displayed and used. These Icons provide a shortcut to the use of the program.

Status Bar

The status bar at the bottom of the screen shows the communication port being used and shows various messages as the Icons are accessed.

Window Pull-Down Menu

Cascade

Shows the open screens in a cascade fashion. That means all the open screens are overlapping each other.

Horizontal Tile

Shows the open screens as horizontal tiles.

Vertical Tile

Shows the open screens as vertical tiles.

Help Pull-Down Menu

About

Shows the version number of the program.

Programming The CS1000

Introduction To Programming the CS1000

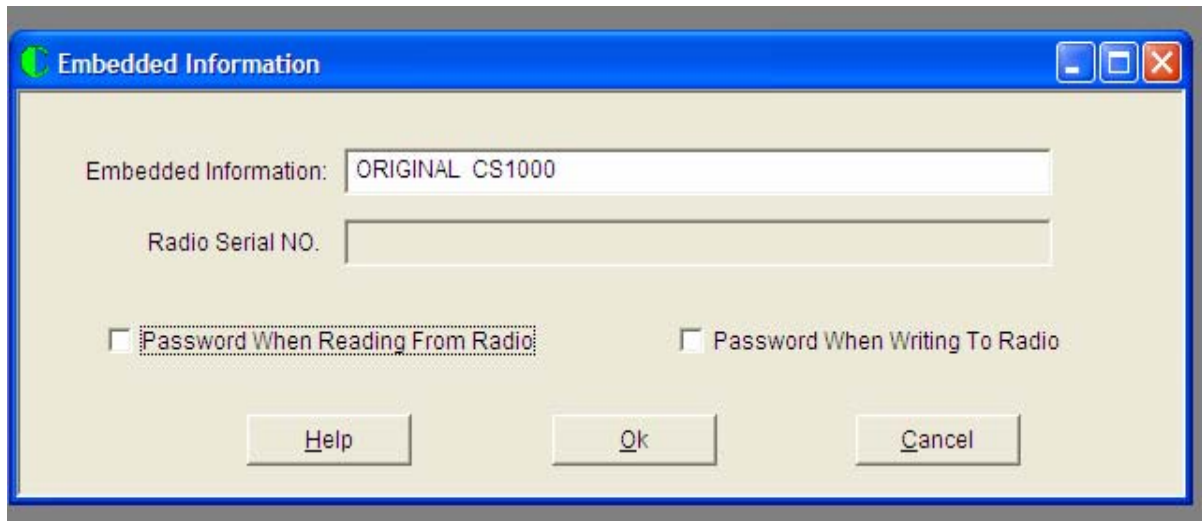
This manual gives a comprehensive description of all the parameters in the radio. However this is a reference manual and to make your life easier we provide examples and sample data files as a short-cut to programming the radio. This manual should only be used under the following circumstances:

1. You are bored have nothing better to read.
2. You are anal and have to know exactly how everything works.
3. You have a sleep disorder and need something to put you to sleep.

Changing the parameters on the various screens does not save the parameters just programmed. The data will only be saved if you write the data to the radio using the "Write To Radio" from the program pull down menu or you use the "Save" or "Save As" from the file pull-down menu.

Embedded Information Screen

The following screen shows the embedded information:



Embedded Information

This field is used to remind the dealer the purpose of the radio. This message can consist of up to 32 characters.

Radio Serial NO.

This field is put in by the PC program and cannot be altered by the dealer. Each radio has a unique serial number embedded into its firmware and this field displays that serial number. Version 1.11 of the PC program does not support this feature.

Password When Reading From Radio

To prevent unauthorized users from seeing the contents of the radio a password can be used to protect its contents. When this field is checked a prompt appears asking the dealer to enter a password.

Password When Writing To Radio

To prevent unauthorized users from modifying the contents of the radio a password can be used to protect the radio from being modified. When this field is checked a prompt appears asking the dealer to enter a password.

Help

Pressing this key brings up a help menu. Version 1.11 of the PC program does not support this feature.

OK

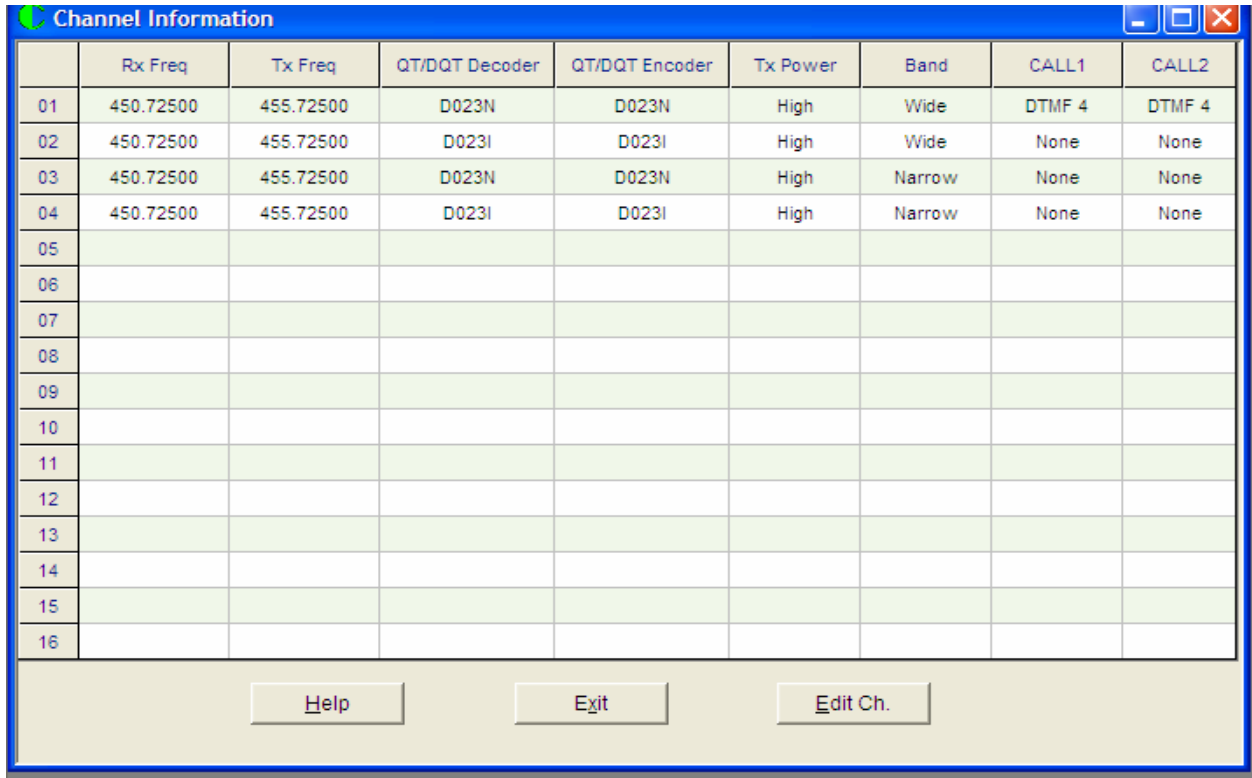
Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the Radio or to a PC data file, the data will be lost when the PC program is exited.

Cancel

Pressing this key allows you to not save the parameters you just programmed.

Channel Information Screen

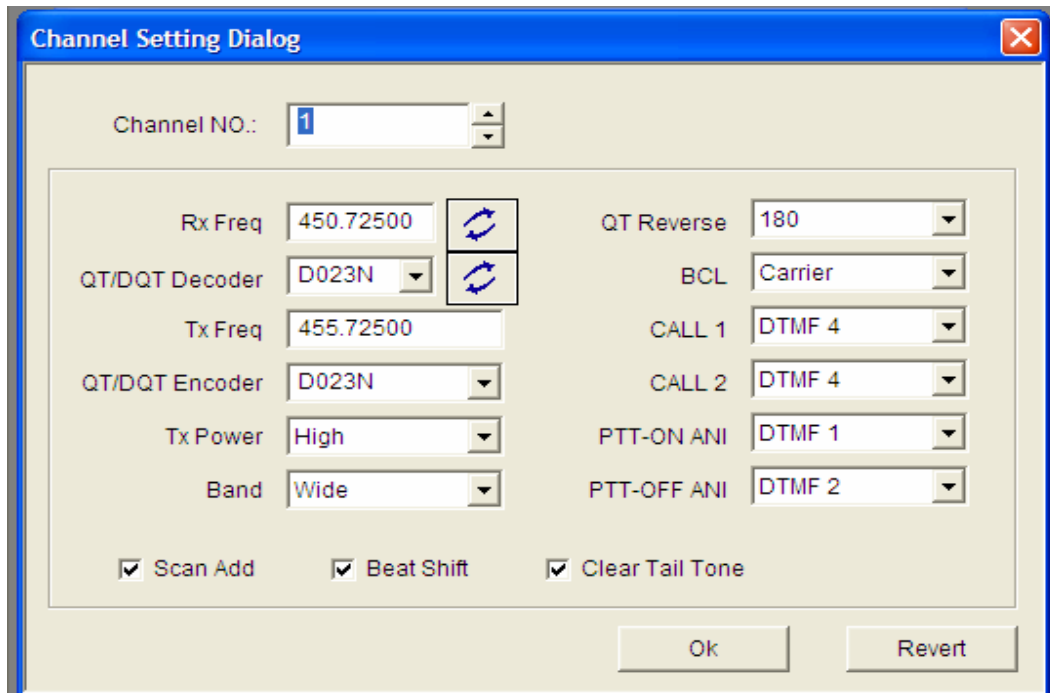
When the channel information tab from the edit pull down menu is accessed, the following screen appears. This is a summary of the programming of all sixteen channels.



	Rx Freq	Tx Freq	QT/DQT Decoder	QT/DQT Encoder	Tx Power	Band	CALL1	CALL2
01	450.72500	455.72500	D023N	D023N	High	Wide	DTMF 4	DTMF 4
02	450.72500	455.72500	D023I	D023I	High	Wide	None	None
03	450.72500	455.72500	D023N	D023N	High	Narrow	None	None
04	450.72500	455.72500	D023I	D023I	High	Narrow	None	None
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								

Help Exit Edit Ch.

To edit a channel, press the Edit Ch. button on the bottom of the screen. When pressed the screen on the next page appears.



Channel NO.

This is the channel number that you want to edit. It can be between 1 and 16 for this model and it corresponds to the channel switch on the top of the radio.

Rx Freq

This is the receiver frequency. It must be a valid frequency for the radio selected. For the CS1000-01 the allowable frequency range is 136.00000 MHz to 174.00000 MHz and for the CS1000-03 the allowable frequency range is 420.00000 MHz to 470.00000 MHz

QT/DQT Decoder

This specifies the allowable CTCSS or DCS codes the unit will be using for receiving. The allowable codes are as follows:

CTCSS CODES			
67.0	94.8	131.8	186.2
69.3	97.4	136.5	192.8
71.9	100.0	141.3	203.5
74.4	103.5	146.2	210.7
77.0	107.2	151.4	218.1
79.7	110.9	156.7	225.7
82.5	114.8	162.2	233.6
85.4	118.8	167.9	241.8
88.5	123.0	173.8	250.3
91.5	127.3	179.9	254.1

DCS CODES

023	071	134	223	306	411	503	631	734
025	072	143	226	311	412	506	632	743
026	073	152	243	315	413	516	654	754
031	074	155	244	331	423	532	662	
032	114	156	245	343	431	546	664	
043	115	162	251	346	432	565	703	
047	116	165	261	351	445	606	712	
051	125	172	263	364	464	612	723	
054	131	174	265	365	465	624	731	
065	132	205	271	371	466	627	732	

Tx Freq

This is the transmitter frequency. It must be a valid frequency for the radio selected. For the CS1000-01 the allowable frequency range is 136.00000 MHz to 174.00000 MHz and for the CS1000-03 the allowable frequency range is 420.00000 MHz to 470.00000 MHz.

QT/DQT Encoder

This specifies the allowable CTCSS or DCS codes the unit will be using for transmitting. The allowable codes are as follows:

CTCSS CODES

67.0	94.8	131.8	186.2
69.3	97.4	136.5	192.8
71.9	100.0	141.3	203.5
74.4	103.5	146.2	210.7
77.0	107.2	151.4	218.1
79.7	110.9	156.7	225.7
82.5	114.8	162.2	233.6
85.4	118.8	167.9	241.8
88.5	123.0	173.8	250.3
91.5	127.3	179.9	254.1

DCS CODES

023	071	134	223	306	411	503	631	734
025	072	143	226	311	412	506	632	743
026	073	152	243	315	413	516	654	754
031	074	155	244	331	423	532	662	
032	114	156	245	343	431	546	664	
043	115	162	251	346	432	565	703	
047	116	165	261	351	445	606	712	
051	125	172	263	364	464	612	723	
054	131	174	265	365	465	624	731	
065	132	205	271	371	466	627	732	

Tx Power

The parameter determines if the transmitter power is going to be high or low. High power is defined as 5 watts for VHF and 4 watts for UHF. Low power is defined as 1 watt for both VHF and UHF.

Band

This parameter selects either wide band or narrow band. Wide band is defined as 25 KHz spacing and narrow band is defined as 12.5 KHz spacing.

QT Reverse

This parameter is used for CTCSS encoding and tells the transmitter that when the transmission has ended, its time to send a special phase reversed signal so the receiver will shut off the audio so a squelch tail is not heard. The choice for phase reversal is either 180 degrees or 120 degrees.

BCL

This is the busy channel lockout parameter. If enabled it tells the transmitter not to transmit until the specified condition goes away. The two conditions are Carrier and QT/DQT. If the parameter is disabled, then the transmitter will transmit unconditionally when the PTT button on the side of the radio is pressed.

Call 1

If one of the function keys is programmed as Call 1, then anytime that key is pressed the radio will send out the specified DTMF code. To use this function, first program the DTMF sequences on the DTMF Encoder screen and then set the relevant DTMF parameters on the DTMF Setting screen. This function could be used to activate a phone patch or a horn honker.

This function is on a per channel basis. That means pressing the Call 1 key can have different results depending on which channel the channel selector switch is on.

Call 2

If one of the function keys is programmed as Call 2, then anytime that key is pressed the radio will send out the specified DTMF code. To use this function, first program the DTMF sequences on the DTMF Encoder screen and then set the relevant DTMF parameters on the DTMF Setting screen. This function could be used to activate a phone patch or a horn honker.

This function is on a per channel basis. That means pressing the Call 2 key can have different results depending on which channel the channel selector switch is on.

PTT-ON ANI

This function is used to send a DTMF code anytime the PTT button is pressed. It is used to identify who transmitted the last call. To use this function, first program the DTMF sequences on the DTMF Encoder screen and then set the relevant DTMF parameters on the DTMF Setting screen.

PTT-OFF ANI

This function is used to send a DTMF code anytime the PTT button is released. It is used to identify who transmitted the last call. To use this function, first program the DTMF sequences on the DTMF Encoder screen and then set the relevant DTMF parameters on the DTMF Setting screen.

Scan Add

If this box is checked, then the channel specified by the current position of the channel selector switch will be added to the scan list.

Beat Shift

If this box is checked, then the frequency of the radio's microprocessor will be shifted slightly. This is to eliminate beats on the receive frequency caused by radiated R.F. from the microprocessor.

Clear Tail Tone

If this box is checked and CTCSS is used for encoding, then when the PTT is released the radio will reverse the phase of the CTCSS either 180 degrees or 120 degrees, depending on how the QT Reverse parameter is programmed. If DCS is used for encoding then the radio will transmit a 134.4 Hz sine tone for 180ms. If this box is unchecked, then when the PTT is released the CTCSS or DCS will be immediately turned off.

OK

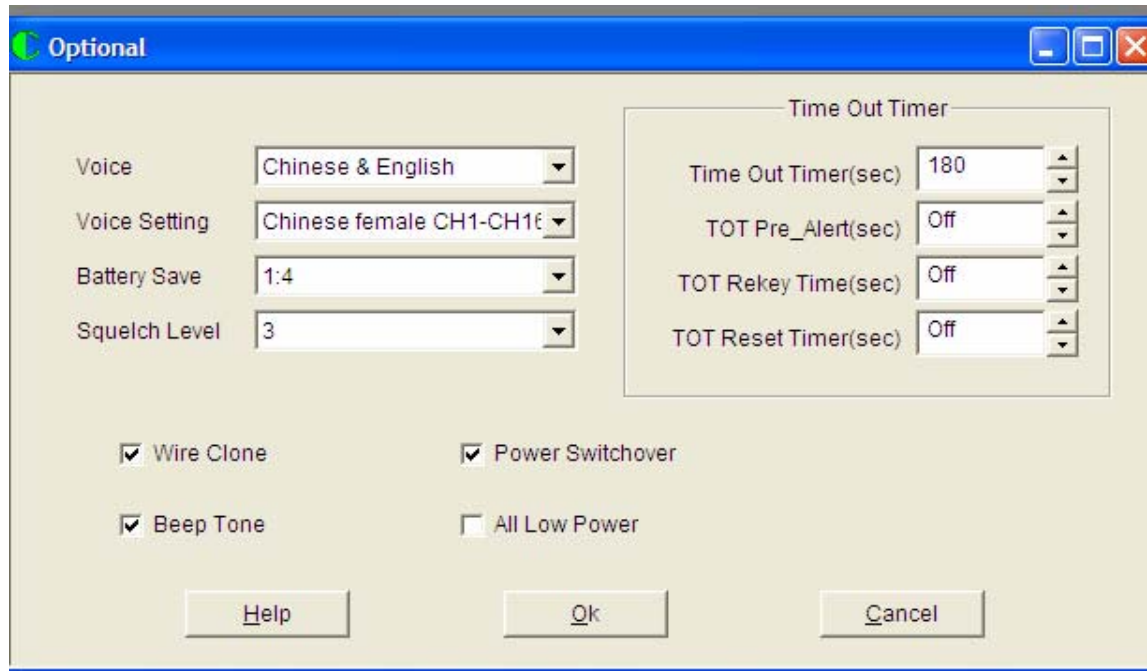
Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the radio or to a PC data file, the data will be lost when the PC program is exited.

Revert

Pressing this key allows you to not save the parameters you just programmed. The parameters will revert to what was programmed before.

Optional Screen

When the optional tab from the edit pull down menu is accessed, the following screen appears:



Voice

This gives you the following four choices of the possibilities for the voice prompt as follows:

1. Disable
2. Chinese
3. English
4. Chinese & English

Voice Setting

If you set the voice to Disable, then the following choice is available for voice prompt:

1. Off

If you set the voice to Chinese, then the following five choices are available for voice prompt:

1. Off
2. Chinese Male 1- 16
3. Chinese Male Channel 1 – Channel 16
4. Chinese Female 1 -16
5. Chinese Female Channel 1 – Channel 16

If you set the voice to English, then the following five choices are available for voice prompt:

1. Off
2. English Male 1 -16
3. English Male Channel 1 – Channel 16
4. English Female 1 – 16
5. English Female Channel 1 – Channel 16

If you set the voice to English & Chinese, then the following nine choices are available for voice prompt:

1. Off
2. Chinese Male 1- 16
3. Chinese Male Channel 1 – Channel 16
4. English Male 1 -16
5. English Male Channel 1 – Channel 16
6. Chinese Female 1 -16
7. Chinese Female Channel 1 – Channel 16
8. English Female 1 – 16
9. English Female Channel 1 – Channel 16

If you use Chan Annunciation Enable programmable key then the user will be able to select the list of possible annunciation features defined by the Voice parameter.

Battery Save

The radio automatically goes into battery save mode during standby operation. In this mode the radio will selectively turn off some of the electronics intermittently to reduce the battery consumption and extend the battery life. This function is not active in the scan mode. The following four choices are available for battery save:

1. Disable. This disables any battery save features
2. 1:1. The radio is off for 200 mS and on for 144 mS
3. 1:2. The radio is off for 200 mS and on for 288 mS
4. 1:4. The radio is off for 200 mS and on for 592 mS

Squelch Level

The Squelch Level is an analog reference level number that the radio's CPU uses to set the internal squelch threshold. You can preset the squelch level or allow the user to change the squelch level using one of the programmable keys. The range is from 0 which is open to 9 which is tight.

Time Out Timer (Sec)

The Time Out Timer is the maximum period of time that the radio is allowed to transmit continuously. When the programmed time expires, the radio generates a warning tone and stops transmitting. The range is off and 30 seconds to 300 seconds in increments of 30 seconds

TOT Pre-Alert (Sec)

The Time Out Timer Pre-Alert is the number of seconds the alert tone will sound before the Time Out Timer times out. The range is off and 1 to 10 seconds in increments of 1 second.

TOT Rekey Time (Sec)

This is the minimum before time the radio can transmit again after the Time Out Time has been exceeded. The range is off and 1 to 60 seconds in increments of 1 second.

TOT Reset Timer (Sec)

This is the minimum "wait" time required between transmissions that will reset the Time Out Timer. The range is off and 1 to 15 seconds in increments of 1 second.

Wire Clone

If this box is checked, then the wire clone feature of this radio is enabled. When enabled, the radio can be programmed by copying data from other radio.

Beep Tone

This feature is used to control beeps used for power on, busy, and so on. If selected, the beep will sound when needed. If not selected, the beeps will never sound.

Power Switchover

If this box is checked, then one of the programmable switches can be used to control the power. If this box is not checked, then the power will be controlled by the Tx Power parameter on the channel screen.

All Low Power

If this box is checked, then all channels will be set to low power. If this box is not checked, then the power will be controlled by the Tx Power parameter in the channel screen or one of the programmable switches.

Help

Pressing this key brings up a help menu. Version 1.11 of the PC program does not support this feature.

OK

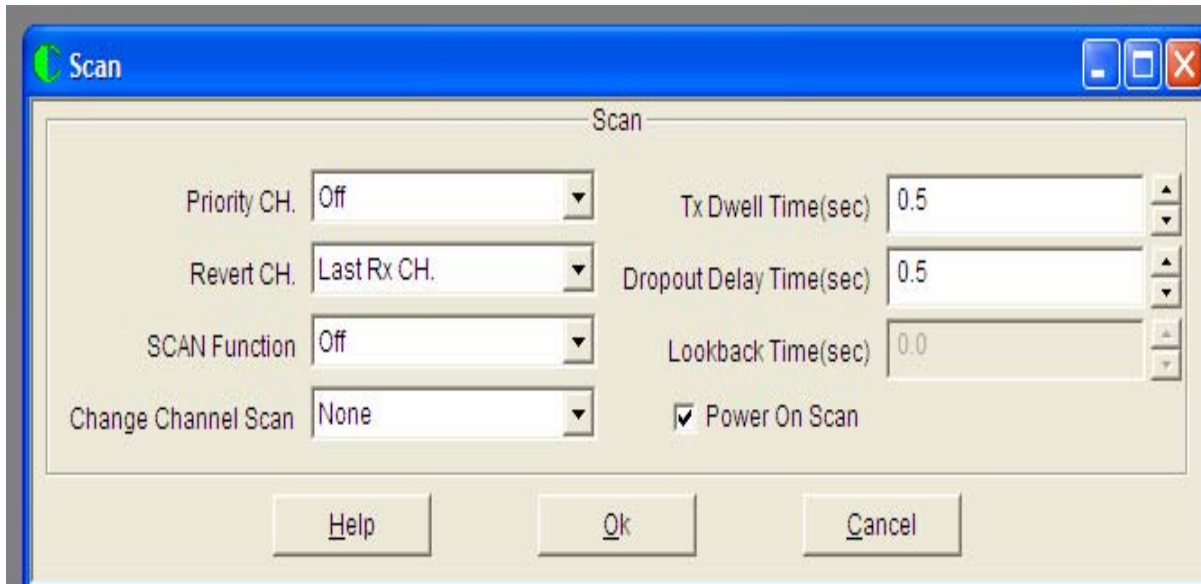
Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the radio or to a PC data file, the data will be lost when the PC program is exited.

Cancel

Pressing this key allows you to not save the parameters you just programmed.

Scan Screen

When the scan tab from the edit pull-down menu is accessed, the following screen appears:



Scan Function

This feature is used to enable or disable the scan function. If set to "On" the feature is enabled and if set to Off the feature is disabled. If this feature is enabled, then you can get into the scan mode automatically by enabling the Power On Scan feature or by pressing a programmable key. The scan function only works if there are two or more channels enabled.

Priority Channel

The purpose of a priority channel is to occasionally go back and see if there is any traffic on that channel even if it is locked on another non priority channel. The priority channel can be off or set to any of the valid channels. If set to a valid channel, the radio at a specific time interval will check the traffic on the priority channel and if it exist will lock on to that channel.

Revert Channel

This option is used to define which channel the radio will transmit on after landing on a channel in scan mode. The following choices are available:

1. Selected Channel

Selecting this option will cause the radio to transmit on the channel specified by the channel selector switch when the PTT switch is pressed.

2. Selected Channel + Current Channel

If the radio is not locked on to a channel, then selecting this option will cause the radio to transmit on the channel specified by the channel selector switch when the PTT switch is pressed. If the radio is locked on to a channel, then selecting this option will cause the radio to transmit on that current channel when the PTT switch is pressed.

3. Last Rx Channel

If this option is selected, then the radio will transmit on the last channel received that is part of the scan list when the PTT switch is pressed.

4. Last Tx Channel + Current Channel

If the radio is not locked on to a channel, then selecting this option will cause the radio to transmit on the last channel it transmitted that was part of the scan list when the PTT switch is pressed. If the radio is locked on to a channel, then selecting this option will cause the radio to transmit on that current channel when the PTT switch is pressed.

Change Channel Scan

If “none” is selected, then scanning would not be affected when you change the channel number during scan mode.

If “Scan Current” is selected, then changing to another channel will add that channel to the scan list until power is turned off and then on. If that channel is already in the scan list, then this operation will have no effect.

If “Exit Scan” is selected, then changing to another channel will exit the scan mode.

Tx Dwell Time(sec)

This is the time from the end of transmitting to the time scanning automatically resumes. It has a value of .5 seconds to 5.0 seconds in .5 seconds increments.

Dropout Delay Time(sec)

This is the time from the end of a received call to the time scanning automatically resumes. It has a value of .5 seconds to 5.0 seconds in .5 seconds increments.

Lookback Time(sec)

When a Priority channel is set, and the radio is not currently looking at the priority channel, then this parameter is the time interval the radio will look back at the priority channel. It has a value of 0 to 5.0 seconds in 1 second increments.

Power On Scan

When this parameter is selected, the scan will start automatically when the radio is turned on.

Help

Pressing this key brings up a help menu. Version 1.11 of the PC program does not support this feature.

OK

Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the radio or to a PC data file, the data will be lost when the PC program is exited.

Cancel

Pressing this key allows you to not save the parameters you just programmed.

Emergency Screen

When the emergency tab from the edit pull down menu is accessed, the following screen appears:

Emergency Type	Emergency Alert	Emergency Squelch Mode	Carrier
Emergency Cycle	Loop	Emergency Tx Cycle Time(sec)	1
Switch Debounce Time(ms)	100	Emergency Rx Cycle Time(sec)	1
Emergency Revert Ch.	Current CH.	Emergency Encode Telegram	None
Lone Work Time(m)	1	Man-down Delay Time(sec)	1
Lone Worker Remind(sec)	1	Man-down Remind(sec)	1
Lone Worker Reset Mode	Any Key		

Lone Worker Man-down Power On Man-down Secret Emergency

Help Ok Cancel

Emergency Type

There are four different emergency types as defined below. The radio can get into an emergency condition by either pressing the preprogrammed emergency key, timeout from a lone worker condition, or a Man Down activation. The Man Down activation is not available in the CS1000 but can be obtained on special order.

1. Emergency Alert

When an emergency condition becomes active, the emergency alarm will be heard on the radio's speaker and the red led on the radio will quickly blink. It will not transmit.

2. Send ENI & Background Tone

When an emergency condition becomes active, the ENI (Emergency Number Identification) and background sound will be sent out during the time the radio is transmitting. On the expiration of the Emergency Cycle, the radio will go back to a receive mode.

3. Send ENI & Alert Tone

When an emergency condition becomes active, the ENI (Emergency Number Identification) and alert tone will be sent out during the time the radio is transmitting. On the expiration of the Emergency Cycle, the radio will go back to a receive mode.

4. Emergency & send ENI & Alert Tone

When an emergency condition becomes active, the emergency alarm will be heard on the radio's speaker and the ENI (Emergency Number Identification) and alert tone will be sent out during the

time the radio is transmitting. On the expiration of the Emergency Cycle, the radio will go back to a receive mode.

Emergency Cycle

If the parameter is set for “loop”, then the emergency condition specified above will last forever or until the user turns off the radio or manually cancels the emergency before it goes back to receive mode. If the parameter is set for a value between 1 and 255, then that number represents the times the units will cycle in the emergency mode before it goes back to the receive mode.

Switch Debounce Time(ms)

This feature is used to prevent accidental operation of the emergency button by setting a time for which the emergency button must be held pressed before the radio will recognize it as a valid key press and enter the emergency mode of operation. The time can be set from 100 ms to 6300 ms in increments of 100 ms.

Emergency Revert Ch

This parameter is used to define a specific channel as the emergency channel. If an emergency condition is activated, the radio will revert to the emergency channel and remain on that channel until the emergency is cancelled. The choice is the current channel or a specified channel.

Lone Work Time(m)

This parameter defines the time period after which the radio will sound the Lone Worker alert. The Lone Worker must respond to this alert, by pressing any button, within the time period set by the Lone Worker Reminder Time, otherwise the radio will go into emergency operation. Once a button is pressed the timer is reset. This operating mode may be enabled/disabled by the user if a button has been programmed for Lone Worker. This timer can be set from 1 to 255 minutes in increments of 1 minute.

Lone Worker Remind(sec)

This timer is used to set the time period for which the Lone Worker alert will sound. After this period the radio will go into the emergency mode of operation. This timer can be set from 0 to 255 seconds in increments of 1 second.

Lone Worker Reset Mode

This parameter is used to determine how the user will reset the Lone Worker Timer so the radio does not go into an emergency alarm mode. If the parameter is set to “Any Key”, any key pressed on the radio will reset the timer. If the parameter is set to “Reset Key”, then only one of the three preprogrammed keys set as a reset key will work.

Lone Worker

Selecting this option allows you to put the radio in the Lone Worker mode. If this option is selected, then the Lone Worker mode can be entered by programming one of the keys for Lone Worker.

If the Lone Worker mode has been activated and the alert sounds, the user must press any radio button or reset lone worker key within the preset time, otherwise the radio will enter the emergency mode of operation.

Man Down Delay Time(sec)

This timer is used to set the time period after which the Man Down Reminder alert will be sounded. The timer will be active when the radio has been horizontally or inversely positioned and reset when the radio has been vertically positioned. This operating mode may be enabled/disabled by the user if a button has been programmed for Man-down. This timer can be set from 1 to 255 seconds in increments of 1 second. This optional feature is not currently available in the Model CS1000. Please contact the factory if you would like to inquire about this feature.

Man Down Reminder(sec)

This timer is used to set the time period for which the Man Down alert will sound. After this period the radio will go into the emergency mode of operation. This timer can be set from 0 to 255 seconds in 1-second steps. This optional feature is not currently available in the Model CS1000 Please contact the factory if you would like to inquire about this feature.

Man Down

Selecting this parameter enables the Man Down Feature. If the feature is not selected then Man Down cannot be used in this radio. When this feature is enabled, the feature can then be selected manually by programming one of the switches for the man down feature or enabling the “Power On Man Down” parameter. This optional feature is not currently available in the Model CS1000. Please contact the factory if you would like to inquire about this feature.

Power On Man-Down

When this parameter is selected, this feature will be active when power is on. This optional feature is not currently available in the Model CS1000. Please contact the factory if you would like to inquire about this feature.

Emergency Squelch Mode

This parameter is used to select the required signaling squelch mode needed to un-mute the receiver when the radio is in the emergency mode of operation. The three available modes are:

1. Speaker Off. The receiver will always be muted during an emergency operation.
2. Carrier Squelch. The receiver will un-mute whenever carrier is present.

3. QT/DQT. The receiver will un-mute whenever the proper QT/DQT is matched with the selected channel.

Emergency Tx Cycle Time(sec)

This parameter defines how long the radio will be in transmit mode during the emergency cycle. Its value is between 1 and 255 seconds in increments of 1 second.

Emergency Rx Cycle Time(sec)

This parameter defines how long the radio will be in receive mode during the emergency cycle. Its value is between 1 and 255 seconds in increments of 1 second.

Emergency Encode Telegram

This parameter selects one of the 12 possible preprogrammed DTMF sequences to be sent out in case of an emergency and the applicable "Emergency Type" parameter is set to send out ENI (Emergency Number Identification).

Help

Pressing this key brings up a help menu. Version 1.11 of the PC program does not support this feature.

OK

Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the radio or to a PC data file, the data will be lost when the PC program is exited.

Cancel

Pressing this key allows you to not save the parameters you just programmed.

Key Assignment Screen

When the Key Assignment tab from the edit pull-down menu is accessed, the following screen appears:

The screenshot shows a dialog box titled "Key Assignment". At the top, there is a "Hold Time(ms)" field with a value of "100". Below this, there are three sections for key assignments: "Top Key", "UP Key", and "DOWN Key". Each section contains two dropdown menus: "Hold" and "Press". All dropdown menus are currently set to "NO". At the bottom of the dialog, there are three buttons: "Help", "Ok", and "Cancel".

There are three buttons on the radio that are programmable for different functions. Each button has the capability of having two separate functions, determined by how long the button is pressed. The length of time the button has to be pressed for the second feature is determined by the dealer. The list below gives the possible features and the reasons for the features. The user must be informed by the dealer the function of each key.

Hold Time(ms)

This function is for configuring the valid time to activate the programmed hold key settings. When the time of pressing the key is more than the hold time, the hold key will be valid else the press key is valid. Normally you should set the hold time to more than one second otherwise it is hard to determine if it's a press key or a hold key.

Chan Annunciation Enable

Press this programmable key to switch between different languages and modes of voice announcements and hear channel number being selected. The radio has the ability to be in the voice announcement mode without using the key to select the mode.

This radio does not have a LCD display to indicate the channel it is on. The selector switch does have markings so it is possible to visually determine the channel selected. However, if it is dark it is difficult to see the channel marking so an audible feedback is an ideal way to determine the channel you moved the selector switch to.

The choices for the annunciation are English Male Channel 1 through Channel 16, English Male 1 through 16, English Female Channel 1 through Channel 16, English Female 1 through 16, Chinese Male Channel 1 through Channel 16, Chinese Male 1 through 16, Chinese Female Channel 1 through Channel 16, Chinese Female 1 through 16 and off.

The reason for all the choices of the audible feedback is because the committee that designed the radio could not decide which is the ideal format for voice announcement so it let the dealers make their own selection.

Talkaround

This is an alternate action switch. Press for talkaround and press again for repeater mode. When the radio is in talkaround, the transmitter frequency is set to the receive frequency.

Normal operation of these types of products is through repeaters to extend the range of transmission. If you set the mode to talkaround you talk around the repeater and start communicating directly with another radio. This is useful when the two handheld radios are reasonably close to each other or you do not want everyone to hear you.

Call 1

Pressing this key sends a preprogrammed DTMF code. The dealer can select one of twelve different codes.

This is a paging feature that is used to contact individual radio or sometimes to set off certain type of alarm products. When you set it for a DTMF code the other radio has to be able to receive that DTMF code. Not all radios have the ability to respond to DTMF paging.

Call 2

Pressing this key sends a preprogrammed DTMF code. The dealer can select one of twelve different codes.

This is a paging feature that is used to contact individual radio or sometimes to set off certain type of alarm products. When you set it for a DTMF code the other radio has to be able to receive that DTMF code. Not all radios have the ability to respond to DTMF paging.

Lone Worker

This is an alternate action switch. Press to enable the lone worker function and press again to disable the lone worker function.

The purpose of this function is to call for help if the person holding this radio does not press a key on the radio every so often. Once the radio is set for the Lone Worker mode, a timeout timer is started. At the end of this time an alarm on the radio will sound telling the user to press either the Lone Worker reset key or any key, depending how the unit is preprogrammed. If the user does not press the appropriate key soon after the radio starts to alarm, the radio will go into the Emergency mode defined by the Emergency Screen parameters.

Emergency Call

Pressing the key designated as “Emergency Call” will cause the radio to go into the Emergency mode defined by the Emergency Screen parameters.

This key has a similar function as the Lone Worker mode. The biggest difference is the user must press a key to start this function versus the lone worker where not doing something starts the function. This could be used in situations where you want someone to know there is an emergency but talking over the radio might jeopardize the safety of the user.

Cancel Emergency Call

Pressing this key stops the emergency mode and puts the radio in the receive mode.

This key would normally be pressed if the emergency alarm condition is resolved or the emergency alarm key has been pressed by accident.

Man Down Switch

When the preprogrammed Man-down key is pressed, the radio enters Man Down mode. An alert tone will sound after the radio has been horizontally or inversely positioned for a defined period of time. If the radio continues in that adverse position, the radio will automatically enter the emergency mode. Press this key again to exit Man Down mode. This optional feature is not currently available in the Model CS1000. Please contact the factory if you would like to inquire about this feature.

Scan

This is an alternate action switch. Pressing the key the first time starts the scan and pressing it again stops the scan.

The purpose of the scan function is to allow the user to monitor multiple channels and stop at the channel that is active. This would be useful for a supervisor who needs to monitor the activity among different groups of users.

The scan function requires the user to program a scan list. This is a list of the channels that you want to scan. If during the scan, the system acquires an active channel, the system will stop at that channel until the activity on that channel disappears. There is a time delay from the time the signal will disappear until the system will start scanning the next channel. If the channel becomes active before the system starts to actually change the channel, then that channel will become active again.

It is possible to select one of the channel as a priority channel. When a priority channel is selected, then when the system scans, the priority channel will be checked at every other scan. As an example, let's assume you have three channels and the first one is a priority channel. The scan sequence will be channel 1, channel 2, channel 1, channel 3, channel 1, channel 2, and so on. As part of the priority scan, there is a “look back” function. If the system stays at a non priority channel, then every so often, defined as the look back period, the system will check the priority channel to determine if there is any activity. If there is activity on the priority channel, the system will lock into the priority channel until the activity on the priority channel disappears.

When the radio goes from the scan mode to the transmit mode, the following options are available

1. Selected Channel

Selecting this option will cause the radio to transmit on the channel specified by the channel selector switch when the PTT switch is pressed.

2. Selected Channel + Current Channel

If the radio is not locked on to a channel, then selecting this option will cause the radio to transmit on the channel specified by the channel selector switch when the PTT switch is pressed. If the radio is locked on to a channel, then selecting this option will cause the radio to transmit on that current channel when the PTT switch is pressed.

3. Last Rx Channel

If this option is selected, then the radio will transmit on the last channel received that is part of the scan list when the PTT switch is pressed.

4. Last Tx Channel + Current Channel

If the radio is not locked on to a channel, then selecting this option will cause the radio to transmit on the last channel it transmitted that was part of the scan list when the PTT switch is pressed. If the radio is locked on to a channel, then selecting this option will cause the radio to transmit on that current channel when the PTT switch is pressed.

Nuisance Delete

Pressing this key deletes the current channel that has activity. If the radio is scanning and is not stopped at a channel then this key does nothing.

The purpose of this key is to delete scan channels that have noise on them or other erroneous transmissions. This prevents the scanning from always stopping at a channel that has no meaning. Once you quit the scan mode and then enable it again this deleted channels comes back. You cannot delete a priority channel from the scan list.

Power Level

This alternate action switch selects between high power and low power.

By selecting low power you minimize the radio frequency energy and the magnetic energy from the radio. It also helps in battery life and it prevents people far away from hearing you.

Monitor Momentary

Pressing this switch enables the user to hear all activity. Releasing the switch puts the radio back in normal mode and only the radio messages with the proper CTCSS or DCS code will be heard.

Normally the user will only hear messages with the proper CTCSS or DCS codes. This is to prevent the user from fatigue by hearing all messages sent to everybody. This switch bypasses that protection and allows the user to hear all traffic on that channel as long as the key is pressed.

Monitor

This is an alternate action switch. Pressing the key the first time enables the Monitor mode and pressing it again disables the Monitor mode. When it is enabled, all the activity on that channel will be heard. When it is disabled, only the activity with the proper CTCSS or DCS codes will be heard.

The technician who is trying to maintain the system mostly uses this feature. It allows the technician to hear all the traffic on the channel and determine where there are problems.

Squelch Off Momentary

Pressing this switch disables the squelch and allows the user to hear the weakest signal possible.

Releasing the switch puts the radio back in normal mode and only a message with the proper CTCSS or DCS code will be heard.

By turning off the squelch the user can hear a weaker signal than if the squelch was already enabled. This is both a diagnostic tool and a feature. If the transmitter from the originating user is weak and does not get past the squelch, then disabling the squelch will allow the user to hear weak signals.

Squelch Off

This is an alternative action switch that when enabled will disable the squelch and allow the user to hear a very weak signal. When this switch is disabled, the squelch is enabled and will prevent the user from hearing noisy signals.

This feature should only be used if the user is working on the fringe of available signal strength and is necessary to hear everything even if the channel is very noisy.

Lone Worker Reset

If set to the Lone Worker mode, then pressing this key will stop the alarm and reset the timeout timer.

While the user can wait to press the key to stop the alarm on the radio, pressing the key at anytime will reset the Lone Worker Timeout Timer.

Help

Pressing this key brings up a help menu. Version 1.11 of the PC program does not support this feature.

OK

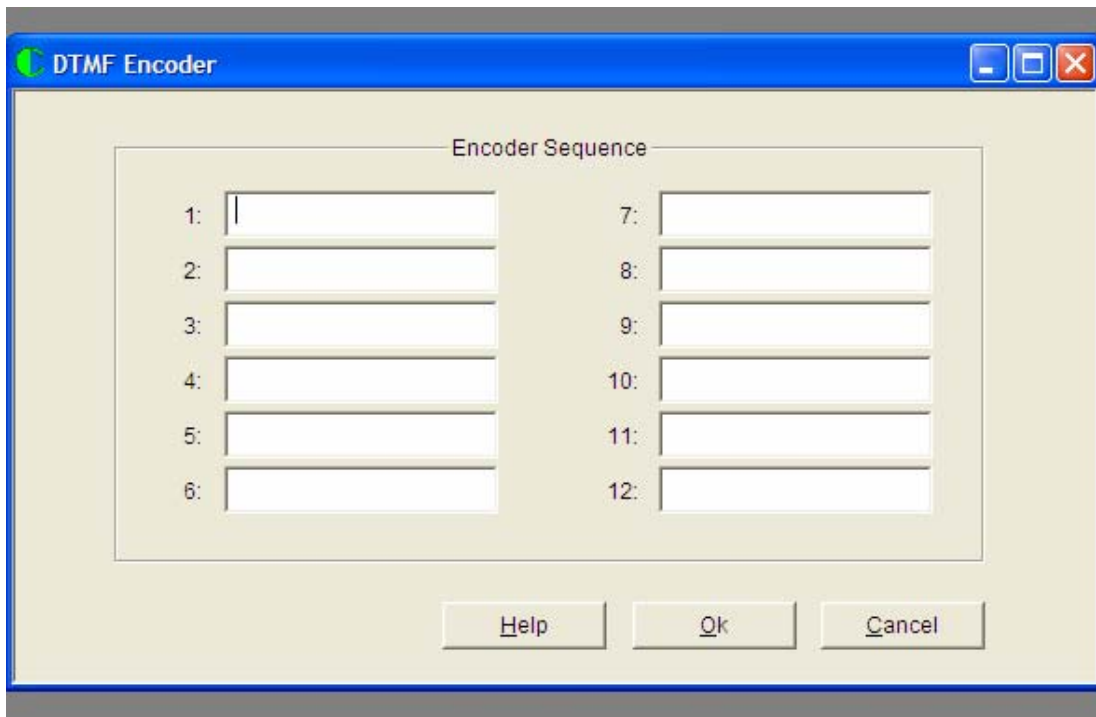
Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the radio or to a PC data file, the data will be lost when the PC program is exited.

Cancel

Pressing this key allows you to not save the parameters you just programmed.

DTMF Encoder Screen

When the DTMF Encoder tab from the edit pull down menu is accessed, the following screen appears:



The CS1000 supports up to 12 DTMF Call lists. Each list can be enabled or disabled by entering the code into the list. Each call list can be sent out by CALL1 button, CALL 2 button, Emergency Call, pressing the PTT, or releasing the PTT. These features has been defined in the Channel Information screen and Emergency screen.

Each call list can use the following characters:

0,1,2,3,4,5,6,7,8,9, A, B, C, D, *, #.

There are up to 16 characters in each call list.

The letter D can be defined either as the DTMF D character or a time delay. If a time delay then its range is 10 mS to 2550 mS in increments of 10 mS.

Help

Pressing this key brings up a help menu. Version 1.11 of the PC program does not support this feature.

OK

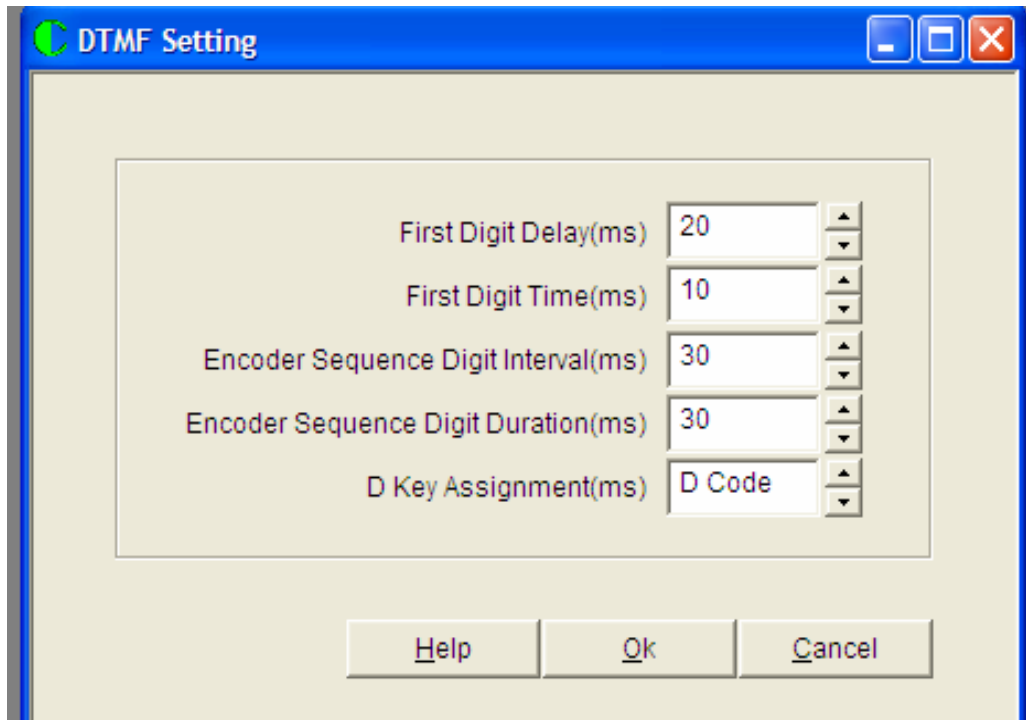
Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the radio or to a PC data file, the data will be lost when the PC program is exited.

Cancel

Pressing this key allows you to not save the parameters you just programmed.

DTMF Setting Screen

When the DTMF Setting tab from the edit pull down menu is accessed, the following screen appears:



First Digit Delay(ms)

Select the amount of time between the PTT being pressed and first digit of the DTMF call list is sent. This time allows the receiving radio to stabilize before receiving data.

First Digit Time(ms)

This feature extends the time of the first digit. This allows the receiving party to receive the first digit if they are in a sleep mode, battery save mode, or scan mode. The first digit will be the sum of the time specified in this parameter and the Encoder Sequence Digit Duration parameter.

Encoder Sequence Digit Interval(ms)

Selects the amount of time the radio waits between DTMF digits. It can be set from 30 to 1000ms in increments of 10ms.

Encoder Sequence Digit Duration(ms)

Selects the amount of time that a DTMF tone is transmitted for a single digit. It can be set from 30 ms to 2540 ms in increments of 10 ms.

D Key Assignment

Allows the “D” symbol to either be used a DTMF D or as a pause between characters in the DTMF call list. If used as a pause, its range is between 10 ms and 2550 ms in 10 ms increments.

Help

Pressing this key brings up a help menu. Version 1.11 of the PC program does not support this feature.

OK

Pressing this key allows you to save the parameters you just programmed. Until the data is saved to the radio or to a PC data file, the data will be lost when the PC program is exited.

Cancel

Pressing this key allows you to not save the parameters you just programmed.