

MDC-1200 Encode Setup and Operation

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MDC-1200 Encode Setup and Operation

1.0 General

This document is intended to assist technical staff with the setup and operation of the MDC-1200 Encode feature included in the IP-223 version 4.300 and C-Soft version 4.300. This document describes the steps required to setup MDC-1200 Encode in the IP-223 and C-Soft and MDC-1200 Encode operation in C-Soft Runtime.

2.0 MDC-1200 Encode Setup Overview

Telex's C-Soft application interfaces with IP-223 Adapter Panel(s) enabling the user to design an MDC-1200 Encode and Decode signaling system.

Available MDC-1200 Encode message types are:

ANI
Call Alert
Radio Check
Status Request
Select Call
Radio Disable
Radio Enable
Remote Monitor
Emergency

Available MDC-1200 Decode message types are:

ANI
Call Alert
Select Call
Emergency
Status Message
Text Message

2.1 MDC-1200 System Configuration Overview

To **configure an MDC-1200 System**, do the following:

1. Activate the **MDC-1200 feature** on the IP-223, see “Activate MDC-1200” on page 8.
2. Enable **MDC-1200** in the IP-223, see “Enable MDC-1200” on page 9.
3. Create system **filters**, see “Create Filters” on page 11.
4. Set up a **user ID** list, see “Set Up the User ID List” on page 12.
5. Set up a **group ID** list, see “Set Up a Group ID List” on page 13.
6. Set up a **status ID** list, see “Set Up Status ID List” on page 16.
7. Set up a **text message** list, see “Set Up Text Message List” on page 17.
8. Create the **MDC-1200** system, see “Create MDC-1200 System” on page 17.
9. Set up the **Per Line Parameters**, see “Set Up Per Line Parameters” on page 25.
10. Set up the **Signaling Parameters**, see “Set Up Signaling Parameters” on page 26.
11. Add the **UI Element** button, see “Add MDC-1200 UI button” on page 28.
12. Set up the **options**, see “Add MDC-1200 UI button” on page 28.
13. Set up the **Select button**, see “Add a Select Button to the Console” on page 29.
14. Set up an **Active Emergency** button, see “Add an Active Emergency Window Button to the Console” on page 31.

3.0 MDC-1200 Encode Setup

3.1 Activate MDC-1200

The Additional Feature Access window, shown in Figure 1, is used to activate the MDC-1200 Encode/Decode feature in the IP-223 for MDC-1200 Encode operation,. A hash code is used to activate the feature. Hash codes are allocated specific to individual IP223s, based on serial number, and are not transferable.

NOTE: Contact Telex Radio Dispatch Sales, to obtain an MDC-1200 hash code.

To **activate the MDC-1200 Encode/Decode feature**, do the following:

1. Open the **IP-223 configuration webpage**.
2. Click **Additional Feature**.
The Additional Feature Access window appears.
3. Enter the **hash code** to enable MDC-1200 Encode/Decode.
4. Click **Submit**.
The configuration is temporarily saved to the IP-223.
5. Click **Save to EEPROM**.
The EEPROM window appears.
6. Click **Save Parameters**.
The configuration is permanently saved to the IP-223.



FIGURE 1. Additional Feature Access Window

3.2 Enable MDC-1200

The Per Line Setup window, shown in Figure 2 is used to enable the desired line(s), once the MDC-1200 Encode/Decode feature has been activated.

To **enable the MDC-1200 Encode/Decode on a specific line**, do the following:

1. Click **Per Line Setup**.
The Per Line Setup window appears.
2. Click the **Line Select** button for the line you are configuring
3. In the Signaling Setup section, select the **MDC Decode** check box.
4. Select the **MDC Encode** check box.
5. Click **Submit**.
The Per Line Setup configuration is temporarily saved to the IP-223.
6. Click **Save to EEPROM**.
The EEPROM window appears.

7. Click **Save Parameters**.

The configuration is permanently saved to the IP-223. The IP-223 is now available to perform MDC-1200 Encode and Decode on the selected line.

MDC Decode MDC Encode

Signaling Setup

Fleetsync Decode Fleetsync Encode MDC Decode MDC Encode

Tone Type: None

Digit Duration: 100 ms

Pause Duration: 100 ms

Group Digit: A

ANI Suffix:

Interdigit Duration: 0 ms

Preamble Duration: 100 ms

Repeat Digit: E

ANI Decoder #:	ANI Call Type:	ANI Call Format:
1	None	
2	None	
3	None	
4	None	
5	None	
6	None	
7	None	
8	None	
9	None	
10	None	
11	None	
12	None	
13	None	
14	None	
15	None	
16	None	

Submit

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FIGURE 2. Per Line Setup—Signaling Setup

4.0 C-Soft Designer MDC-1200 Encode Setup

After the MDC-1200 is enabled in the IP-223 C-Soft must be set up for MDC-1200 Encode operation by creating the individual system components, adding them to the MDC-1200 system, and finally, setting up system options to control the accessibility and operation of the MDC-1200 Dispatch window in C-Soft Runtime.

4.1 Create Filters

The **Filter List Setup** window, shown in Figure 3, is used to create and delete filters. Filters are used to organize groups and users within the system.

Up to 30 filters can be created.

To **create a filter**, do the following:

1. While in C-Soft Designer, select **Edit |Edit Filters** from the menu bar.
The Filters List Setup window appears.
2. In the Filter List Setup field, **enter a name** for the filter.
3. Click **Add Filter**.
The filter is added to the list of filter names.

4.1.1 Remove a Filter

To **remove a filter from the list**, do the following:

1. Select the **desired filter** from the list.
2. Click **Delete Filter**.
The filter is deleted.
3. Click **OK**.
The window closes.

4.1.2 Delete a Filter

To **delete all filters from the list**, do the following:

1. Click **Clear List**.
The list is deleted.
2. Click **OK**.
The window closes.

NOTE: If you accidentally click the clear list button and did not want to delete the entire list, then click **Cancel** and reopen the window.

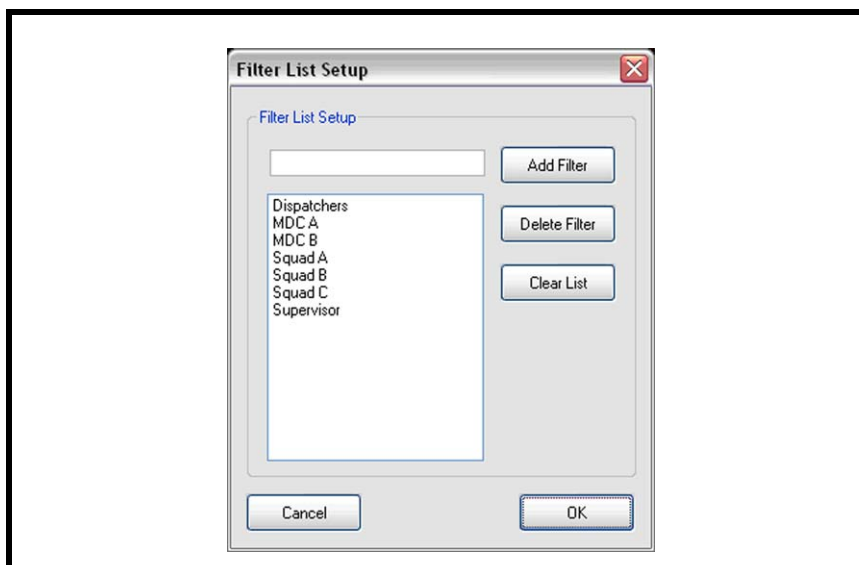


FIGURE 3. Filter List Setup Window

4.2 Set Up the User ID List

The **User ID List** window, shown in Figure 4, is used to configure a list of user IDs to include in your system.

Up to 5,000 *User IDs* are allowed in the list.

To **set up an individual user**, do the following:

1. While in C-Soft Designer, select **Edit|Edit User ID** from the menu bar.
The User ID List window appears.
2. In the Name field, enter the **alias** for the unit you want to add.
3. In the User ID field, enter the **4-digit user ID** in hexadecimal format (up to 16 characters).
4. From the Type drop down menu, select **MDC-1200**.
5. Click **Close**.
The user ID list is saved.

4.2.1 TX Inhibit Check Box

The **TX Inhibit** check box is used to prevent a console operator from transmitting to a user, but still allow the user ID to be aliased when receiving from the user.

To **prevent a console operator from transmitting to a user**, do the following:

- > From the User ID List, select the **TX Inhibit** check box.
The specified user ID is blocked from appearing in the System List in C-Soft Runtime; however, the console operator can manually enter the ID to make a call.

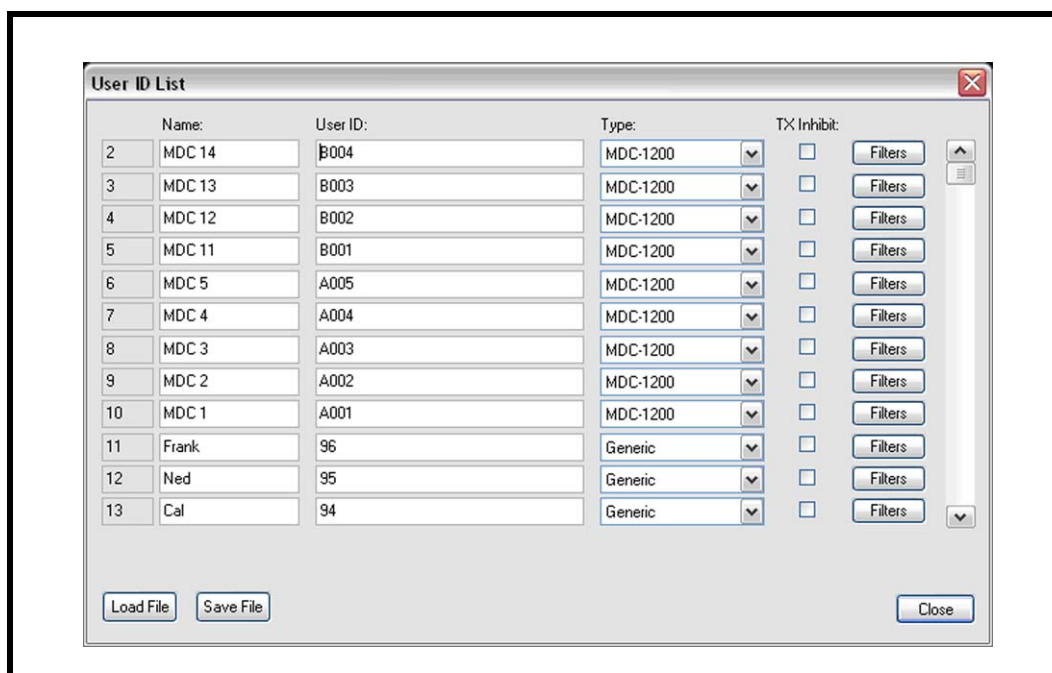


FIGURE 4. User ID List Window

4.2.2 Assign a Filter to a User ID

To **assign the user ID to a filter**, do the following:

1. Click **Filters**.
The Select Filters window appears.
2. From the Select Filters list, select the **filter(s)** you want to assign the user ID with.
3. Click **OK**.
The window closes and the filters are assigned to the user ID.

4.2.3 Remove the User ID From a Filter

To **remove the user ID from the filter**, do the following:

1. Click on the highlighted **filter** to deselect it.
2. Click **OK**.
The deselected filter is no longer assigned to the user ID.

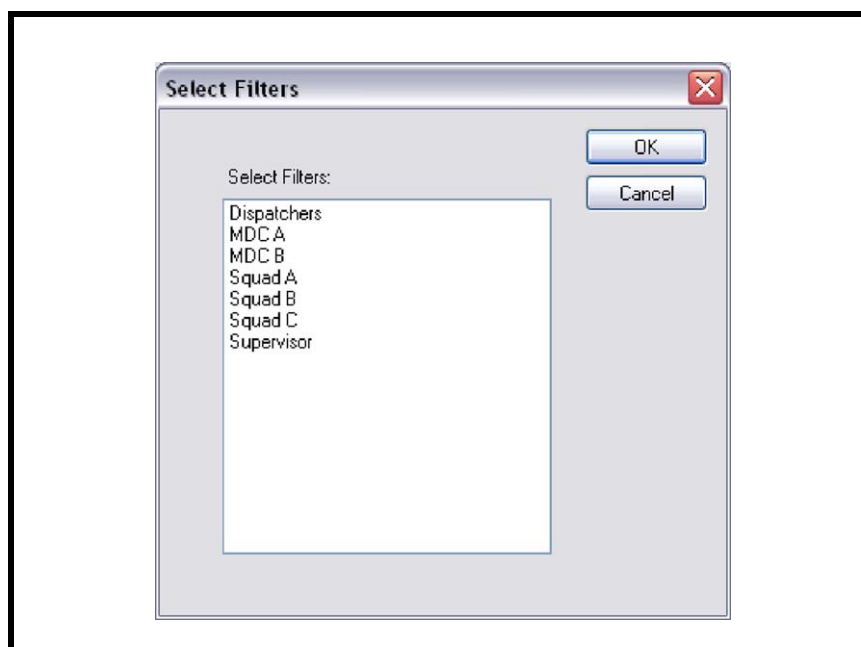


FIGURE 5. Select Filters Window

4.3 Set Up a Group ID List

The **Group ID List** window, shown in Figure 6, is used to configure a list of Group IDs to include in your system

Up to 5000 *Group IDs* are allowed in the list.

To **set up MDC-1200 group**, do the following:

1. While in C-Soft Designer, select **Edit|Edit Group ID List** from the menu bar.
The Group ID List window appears.
2. In the Group field, enter the **alias for the group** (up to 16 characters).
3. In the group ID field, enter the **group's ID**. (3 hexadecimal digits)
4. From the Type drop down menu, select **MDC-1200**.
5. Click **Close**.
The group ID list is saved.

4.3.1 TX Inhibit Check Box

The **TX Inhibit** check box is used to prevent a console operator from transmitting to a user, but still allow the user ID to be aliased when receiving from the user.

To **prevent a console operator from transmitting to a user**, do the following:

- > From the User ID List, select the **TX Inhibit** check box.
The specified user ID is blocked from appearing in the System List in C-Soft Runtime; however, the console operator can manually enter the ID to make a call

4.3.2 Color Code Group Calls

To **color code calls received from a group**, do the following:

1. Select the **Set Color** check box for all groups you want to color.
The Set Color button is active.
2. Click **Set Color**.
The Color window appears.
3. Select a **color** from the color picker window.
4. Click **OK**.
The Group and Group ID fields are colored using the selected color.

4.3.3 Assign a Group ID to a Filter

To **assign the group ID to a filter**, do the following:

1. Click **Filters**.
The Select Filters window appears.
2. From the Select Filters list, select the **filter(s)** you want to assign the group ID with.
3. Click **OK**.
The window closes and the filters are assigned to the group ID(s).

4.3.4 Remove a Group ID from a Filter

To remove a group ID from a filter, do the following:

1. Click the highlighted **filter** to deselect it.
2. Click **OK**.

The Group ID List window closes and the deselected filter is no longer assigned to the user ID.

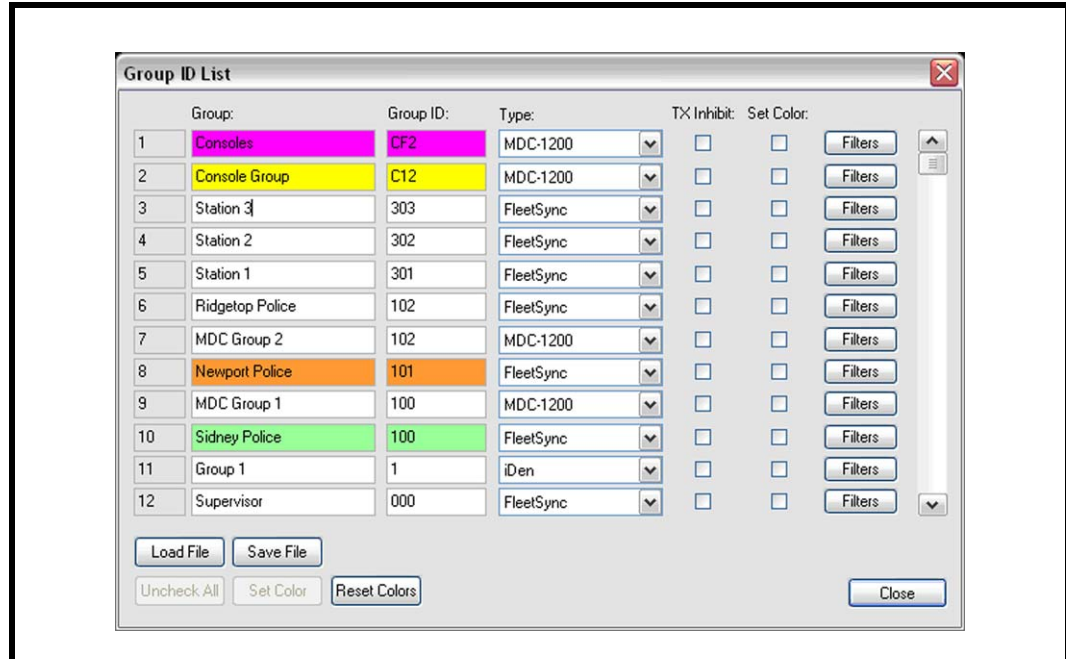


FIGURE 6. Group ID List Window

4.4 Set Up Status ID List

The Status Message ID List window, shown in Figure 7, is used to configure status messages and status IDs that can be received by the console.

To **set up a Status ID list**, do the following:

1. While in C-Soft Designer, select **Edit|Edit Status Message ID List** from the menu bar. *The Status Message ID List window appears.*
2. In the Status Message field, enter an **alphanumeric status message** (up to 32 characters).
3. In the Status ID field, enter the **MDC-1200 Status ID** (between 1 and 16 [decimal] digits).
4. Click **Close**.

NOTE: The Password Protected check boxes are not used for MDC-1200 statuses.

4.4.1 Color Code Status Calls

To **color code all calls bearing a specific status**, do the following:

1. Select the **Set Color** check box for all status IDs you want to color. *The Set Color button is active.*
2. Click **Set Color**. *The Color window appears.*
3. From the color palette, select a **color**.
4. Click **OK**. *All selected Status IDs are colored using the selected color.*

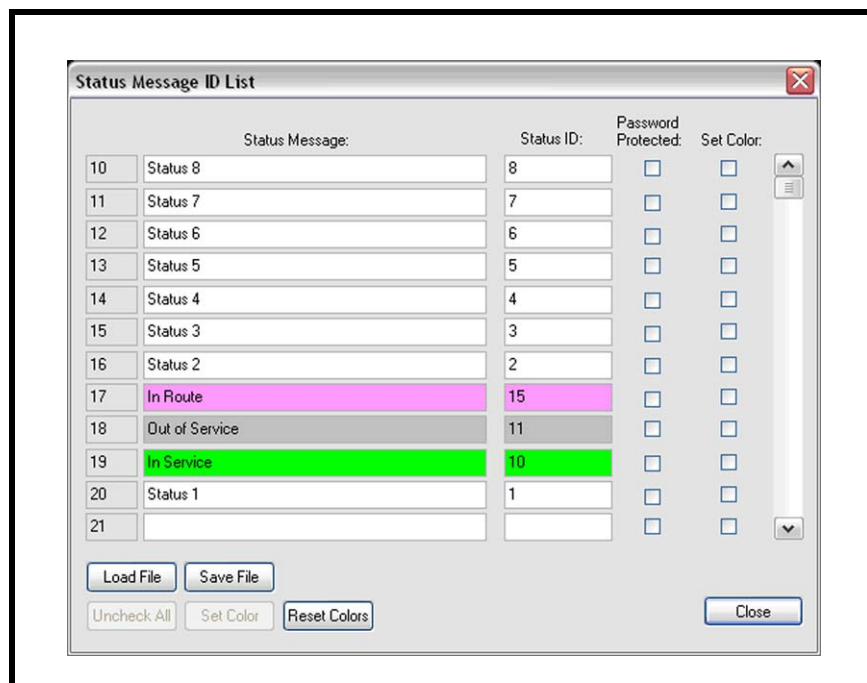


FIGURE 7. Status Message ID List

4.5 Set Up Text Message List

The **Text Message ID List** window, shown in Figure 8, is used to configure a list of text messages or text message IDs that can be received by the console.

This list can contain up to *500 text messages*.

To **configure text messages and text messages IDs**, do the following:

1. While in C-Soft Designer, select **Edit|Edit Text Message ID List** from the menu bar.
2. In the Text Message field, enter a **Text message** (up to 48 characters).
3. In the Text ID field enter an **MDC-1200 ID** (between 1 and 16 [decimal] digits).
4. Click **Close**.

The text message list is saved.

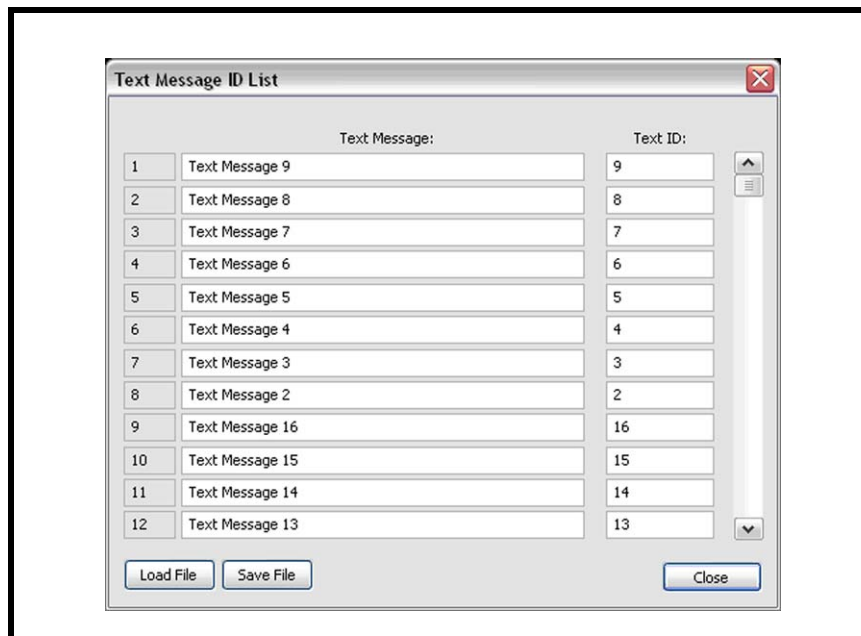


FIGURE 8. Text Message ID List

4.6 Create MDC-1200 System

Once MDC-1200 is enabled, and the filters and ID lists completed, the MDC-1200 system is compiled using the Edit System List window, shown in Figure 10. Systems are created, edited, and saved in this window. New Systems can be copied from an existing file or automatically built using the Auto Build System option. All systems appear in the System list.

Systems are stored in a user-named .xml file. In order to use the MDC-1200 feature, the system list .xml file must contain at least one (1) system.

Up to *200 systems* can be created.

The default system file name is: *SystemList.xml*.

To **create a new MDC-1200 system**, do the following:

1. While in C-Soft Designer, select **Edit|Edit System** from the menu bar.
The Edit System List window appears. The system list is empty.
2. While in the Edit System List window, select **System|New System** from the menu bar.
The New System window appears.
3. In the System Name field, enter the **name of the system**.
4. From the System Type drop down menu, select **MDC-1200**.
5. Click **OK**.
The new system appears in the system list. Empty Filter, Status, and Text Message entries are added automatically and act as folders for any filters, statuses, or text messages you add to the system during creation.

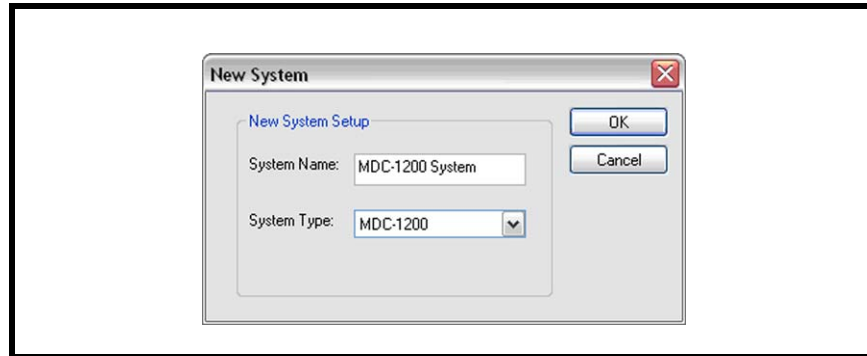


FIGURE 9. New System Window

4.7 New System List Window

The **New System List** window, shown in Figure 10, is used to build the system. System components, Filters, Statuses, Text Messages, Groups, and Units, are added to the system list by selecting the desired component type from the Component Type drop down menu.

The following rules apply to system components:

- Filters can be added to the System or Filters folder
- Statuses can be added to the System or Statuses folder
- Text Messages can be added to the System or Text Messages folder
- Groups can only be added to the System folder.
- Units can be added to the System folder or the Group to which the unit belongs.
 - If a unit is added to a group, the user is shown as a child of the group in C-Soft Runtime's MDC-1200 Dispatching window. This helps to track and organize users in the call list.

4.7.1 Display List of Components

To **select a component type to display in the System Components list**, do the following:

- > From the System Components drop down menu select a **component type**.
The list populates with all available components of the specified type.

NOTE:

- Only groups and units of type MDC-1200 can be added to an MDC-1200 system.
- All filters, statuses, and text messages configured in the .veg file appear in the list.

4.7.2 Add Components To the System

To **add a component to the system**, do the following:

1. While in the system component list of your choice, select the **desired component's** check box(es).
OR
Click **Select All**, to select all components in the system component list.

NOTE: Click **Deselect All** to deselect all components in the list.

2. In the system list, select the **destination system's** check box.
3. Click **Add to List**.
The component is added to the selected system in the list.

4.7.3 Remove Components From the System

Filters folders, Status folders, and Text Message folders can not be removed from the system, however, individual system components i.e filters, statuses, text messages and groups, can be removed from the system list.

To **remove a component from the system list**, do the following:

1. Select the checkbox of the **component you want to remove**.
2. Click **Remove From List**.
The selected components are removed from the system list.

4.7.3.1 Example: System With no Components Added

The **Edit System List** window example in Figure 10 shows a system with no filters added.

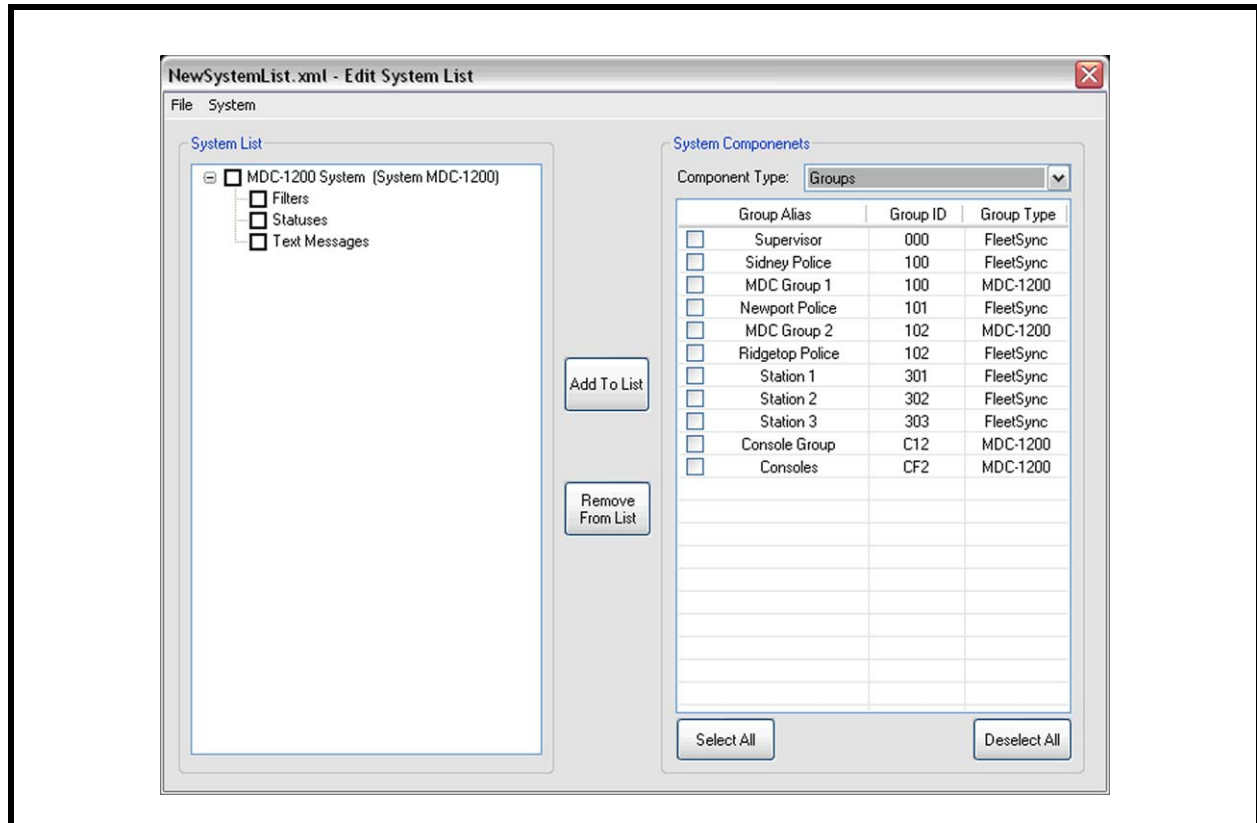


FIGURE 10. New System List Window—No Components Added

4.7.3.2 Example: System With Filters Added

The **Edit System List** window example in Figure 11 shows a system with filters added.

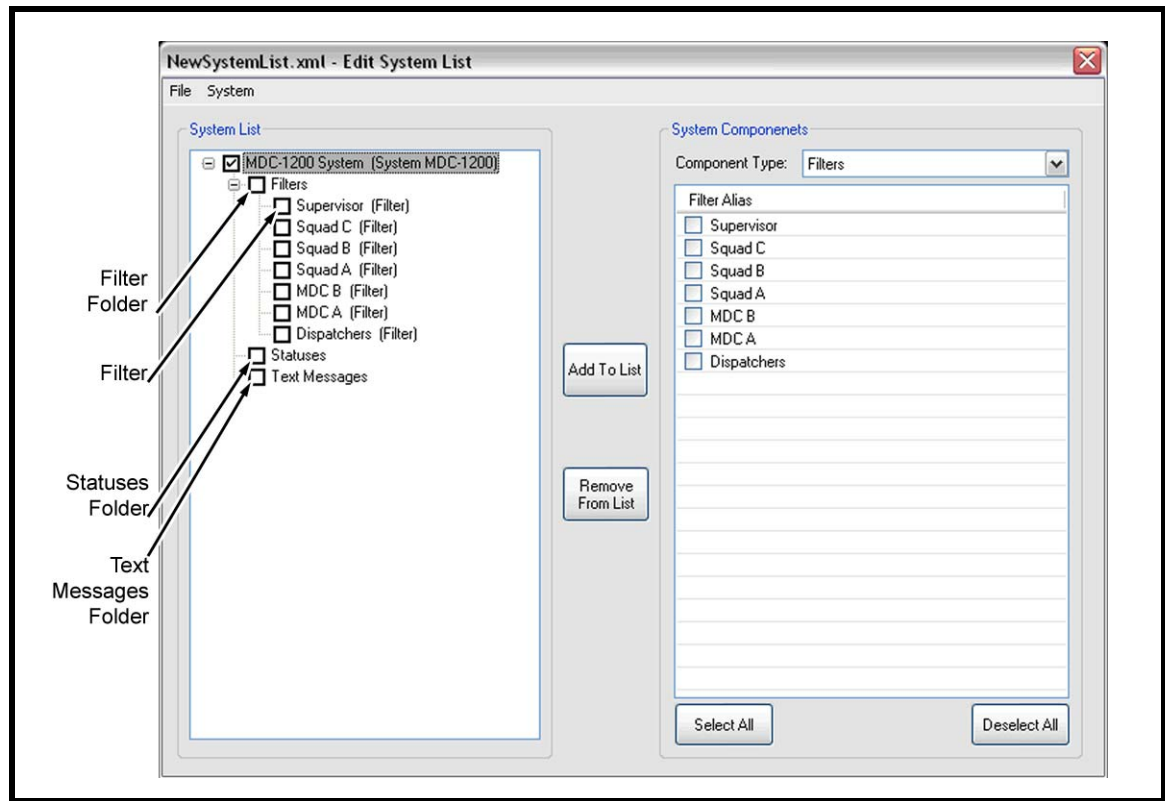


FIGURE 11. Edit System List Window—Filters Added

4.7.3.3 Example: System With Groups Added

The Edit System List window example in Figure 12 shows a system with groups added.

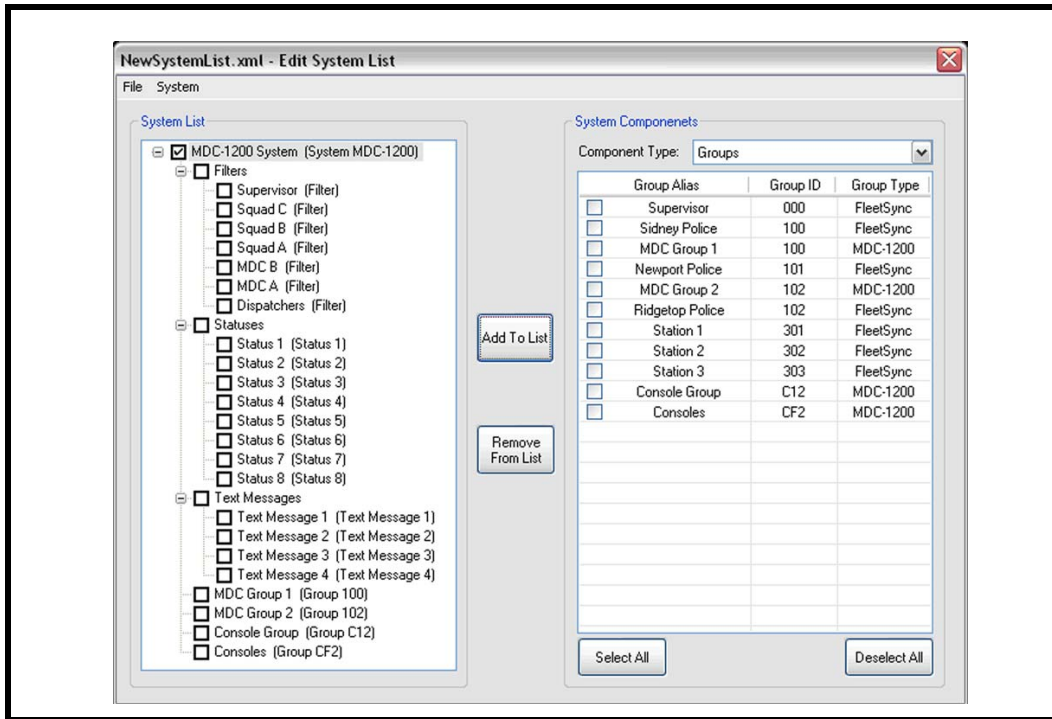


FIGURE 12. New System List Window—Groups Added

4.7.3.4 Example: System With Units Added

The Edit System List window example in Figure 13 shows a system with units added.

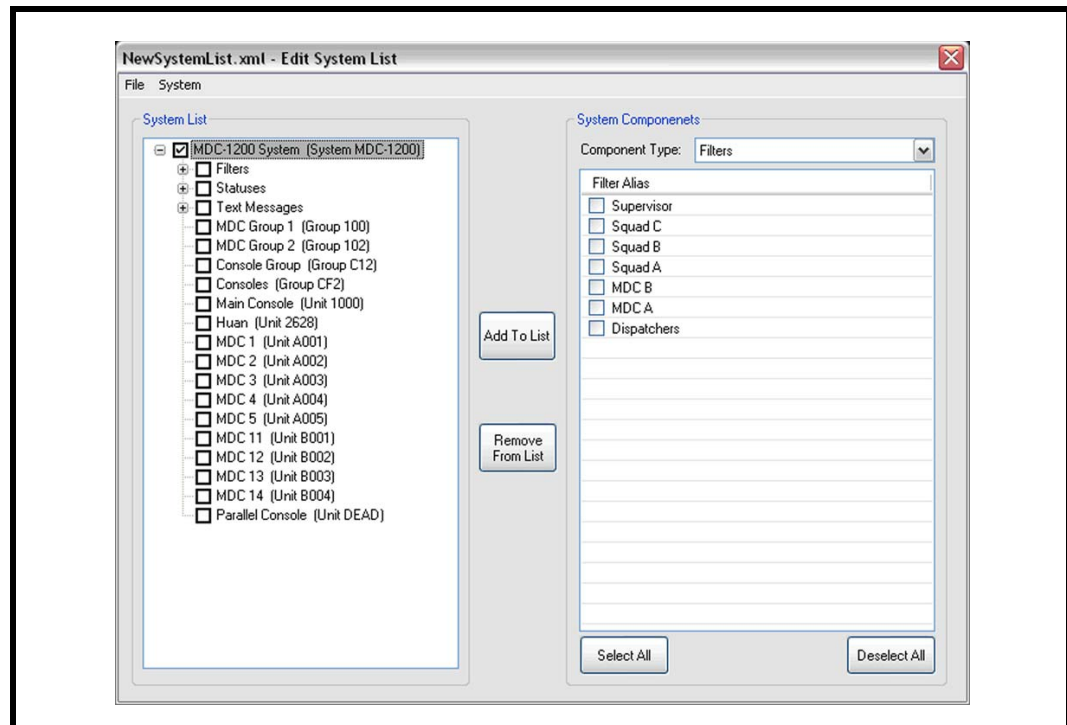


FIGURE 13. New System List—Units Added

4.7.4 Save the .xml File

Once all components are added to the system, the system list .xml file must be saved.

To **save the .xml file**, do the following:

- > While in the Edit System List window, select **File|Save** from the menu bar.
The Save As window appears.

NOTE: If the Set as Default XML Filename check box is selected, see Figure 14, the file name of the file being saved is stored in the System List Filename field in the Global Parameters window. C-Soft Runtime uses the file name stored in the System List file name to determine which system list .xml file to read from, when Runtime is started.

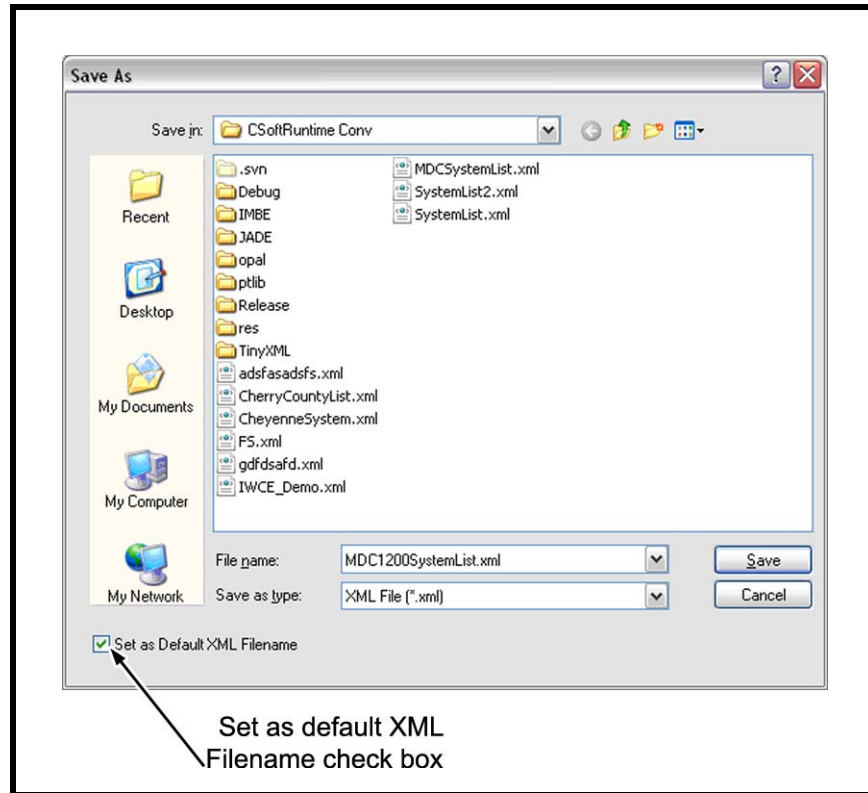


FIGURE 14. Save As Window

4.8 Set Up Per Line Parameters

The **Per Line Parameters** window, shown in Figure 15, is used to set up the line type, Multicast Address, and port numbers.

To **set up the per line parameters**, do the following:

1. While in C-Soft Designer, select **Edit|Setup Per line Parameters** from the menu bar. *The Per Line Parameters window appears.*
2. From the Line Type drop down menu, select **Telex**.
3. In the Line Name field, enter a **name for the line**.
4. In the Rx Multicast Address field, enter the **same Rx Multicast Address** as configured on the IP-223 for that line.
5. In the Tx Multicast Address field enter the **same Tx Multicast Address** as configured on the IP-223 for that line.
6. In the Base Radio IP field, enter the **IP Address of the base radio**.

The screenshot shows the 'Per Line Parameters' window with a table of 10 lines. Each line has a Line Number, Line Type, Line Name, RX Multicast Address, Rx Port, TX Multicast Address, TX Port, Base Radio IP, TTL, and Packet Delay. There are also buttons for Options, Freqs, Signal Setup, and SIP for each line. An 'Echo Packets Enable' checkbox is present for each line. An 'AutoFill' button is at the bottom.

Line Number	Line Type	Line Name	RX Multicast Address	Rx Port	TX Multicast Address	TX Port	Base Radio IP	TTL	Packet Delay	Options	Freqs	Signal Setup	SIP
1	Telex	Fire Department	225. 8 . 11 . 79	1055	225. 8 . 11 . 79	1073	0 . 0 . 0 . 0	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1054	0 . 0 . 0 . 0	1254							
2	Telex	Sidney Police	225. 8 . 11 . 22	9005	225. 8 . 11 . 22	10005	0 . 0 . 0 . 0	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1055	0 . 0 . 0 . 0	1255							
3	Telex	Newport Police	225. 8 . 11 . 70	8999	225. 8 . 11 . 70	9999	0 . 0 . 0 . 0	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1056	0 . 0 . 0 . 0	1256							
4	Phone	Phone Line	225. 8 . 11 . 81	20011	225. 8 . 11 . 81	1257	172. 19 . 72 . 111	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1057	0 . 0 . 0 . 0	1257							
5	Disabled	16kb Vocoder	225. 8 . 11 . 81	1058	225. 8 . 11 . 81	1258	0 . 0 . 0 . 0	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1058	0 . 0 . 0 . 0	1258							
6	Telex	MDC Line 2	225. 8 . 11 . 75	11072	225. 8 . 11 . 75	11054	0 . 0 . 0 . 0	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1059	0 . 0 . 0 . 0	1259							
7	Disabled	iDen	225. 8 . 14 . 81	1075	225. 8 . 14 . 81	1275	172. 19 . 60 . 67	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1060	0 . 0 . 0 . 0	1260							
8	Telex	MDC Line	225. 8 . 11 . 22	9000	225. 8 . 11 . 22	10000	0 . 0 . 0 . 0	2	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1061	0 . 0 . 0 . 0	1261							
9	Phone	Tech Support Phone	225. 8 . 11 . 81	5002	225. 8 . 11 . 81	1262	172. 19 . 50 . 125	1	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1062	0 . 0 . 0 . 0	1262							
10	Telex	Telex Line	225. 8 . 11 . 22	9002	225. 8 . 11 . 22	10002	0 . 0 . 0 . 0	1	10	Options	Freqs	Signal Setup	SIP
		Echo Packets Enable:	0 . 0 . 0 . 0	1063	0 . 0 . 0 . 0	1263							

FIGURE 15. Per Line Parameters

4.9 Set Up Signaling Parameters

The **Signaling Parameters** window, shown in Figure 16, is used to assign the line's system type and specify the name of the system.

To **set up an individual line for MDC-1200 Encode**, do the following:

1. From the Per Line Parameter window, click **Signal Setup** for the line to configure.
The Signaling Parameters window appears.
2. From the System Type drop down menu, select **MDC-1200**.
3. In the System Name drop down menu, select the **MDC-1200 system** you want to assign to the line.
4. (Optional) Select the **Display All Calls** check box to indicate all calls received by the console on this line display in C-Soft Runtime.

NOTE: If not selected, only voice calls, call alerts, select calls, etc., sent to the console's user ID or group ID display.

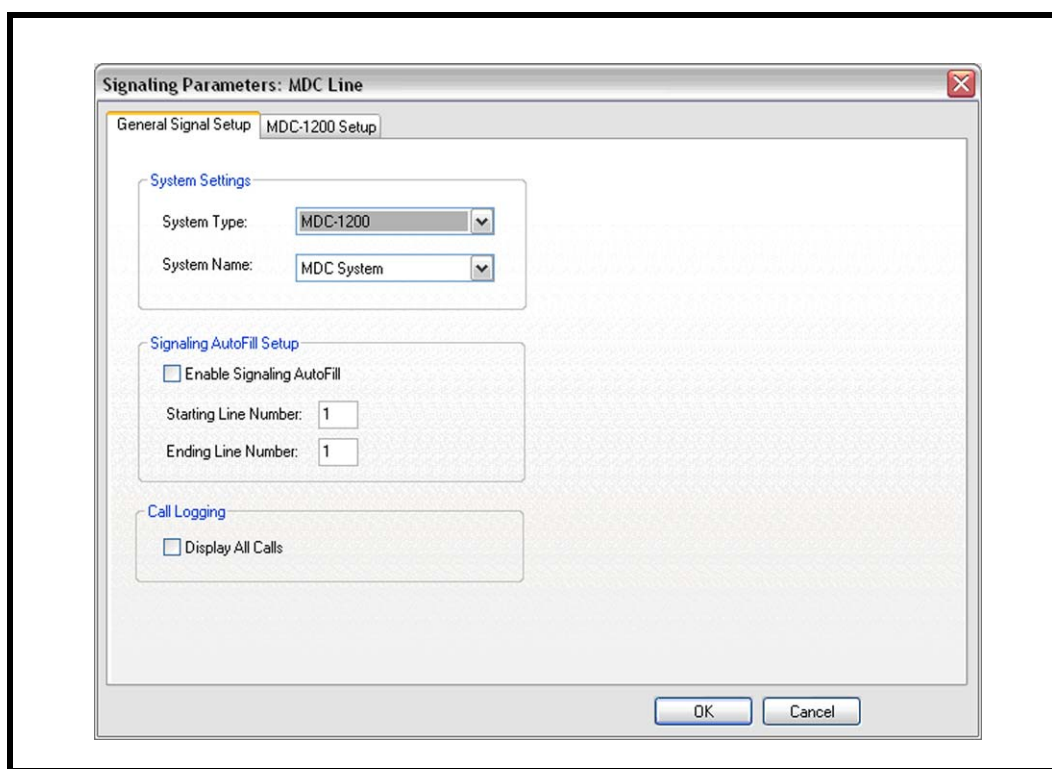


FIGURE 16. Signaling Parameters—General Signal Setup Page

5. Click the **MDC-1200 Setup** tab.
The MDC-1200 Setup page appears.
6. In the Group ID field enter a **3-digit hexadecimal group ID**.
7. In the Unit ID field, enter a **4-digit hexadecimal console ID**.

NOTE: The group ID and Unit ID fields do not accept the digit F. In MDC-1200 protocol, F is used as a wildcard and is used to create custom call groups.

- From the PTT ID Options drop down menu, **select an option**:

None - No PTT ID is sent when transmitting from C-Soft.

Pre Only - The PTT console ID is sent before the voice stream begins.

Post Only - The PTT console ID is sent after the voice stream ends.

Pre and Post - The PTT console ID is sent both before the voice stream begins and after the voice stream ends.

- (Optional) Select the **Allow Broadcast Call** check box to indicate the console operator can make call alerts, select calls, etc. to the entire system from C-Soft Runtime.

NOTE: When not selected, the console operator can not make a call to the entire system (User ID *FFFF*)

- (Optional) Select the **Only Display Filters** check box to indicate only filters appear in the MDC-1200 Dispatching window's system list in C-Soft Runtime.

NOTE: The filter display option is used to organize how filters, groups, and users display in C-Soft Runtime.

- Click **OK**.

- From the Per Line Parameters window, click **OK**.

The Per Line Parameters window closes.

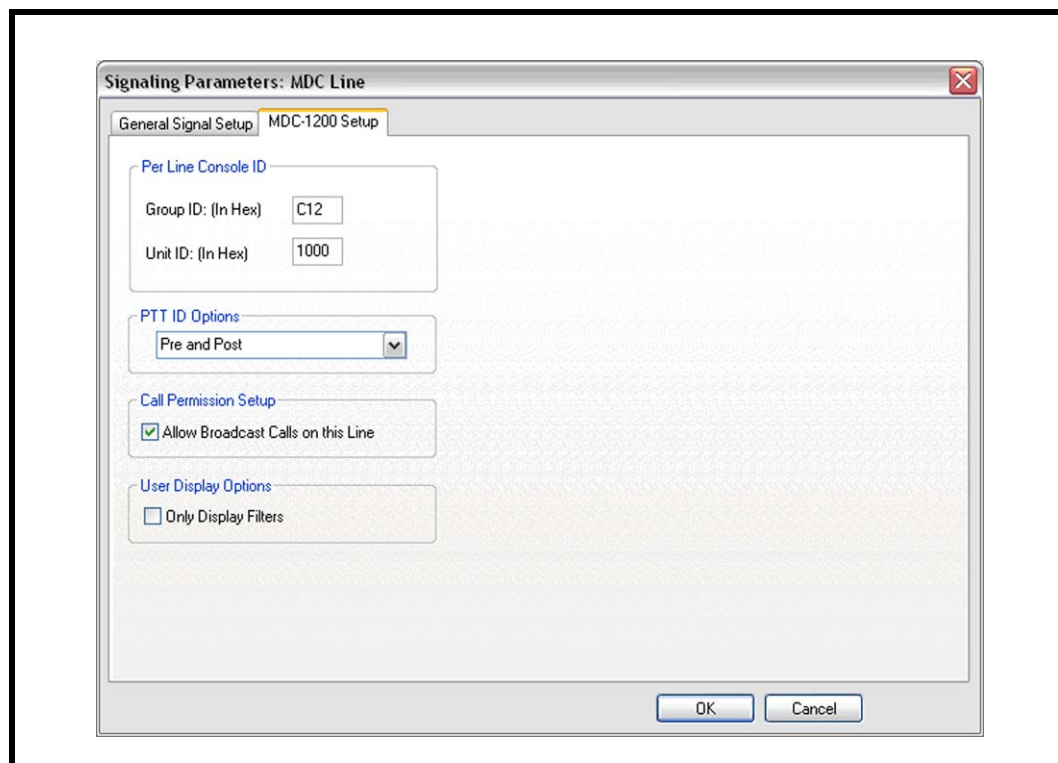


FIGURE 17. Signaling Parameters—MDC-1200 Setup Page

4.10 Add MDC-1200 UI button

An MDC-1200 button is used to access the MDC-1200 system while in C-Soft Runtime.

To **add an MDC-1200 UI button**, do the following:

1. While in C-Soft Designer, select **Insert|Add UI Button** from the menu bar.
A None button appears on the console.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **MDC-1200 Window**.
The MDC-1200 Setup tab appears.
5. Click the **MDC-1200 tab**.
The MDC-1200 Setup page appears.
6. In the Timeout field, enter the **length of time**, in seconds, for the console to wait before displaying a status message.

NOTE: If the console operator attempts to send a status request, radio check, radio enable, radio disable and the radio does not respond within the configured amount of time a message, *No Response*, appears in the status bar.

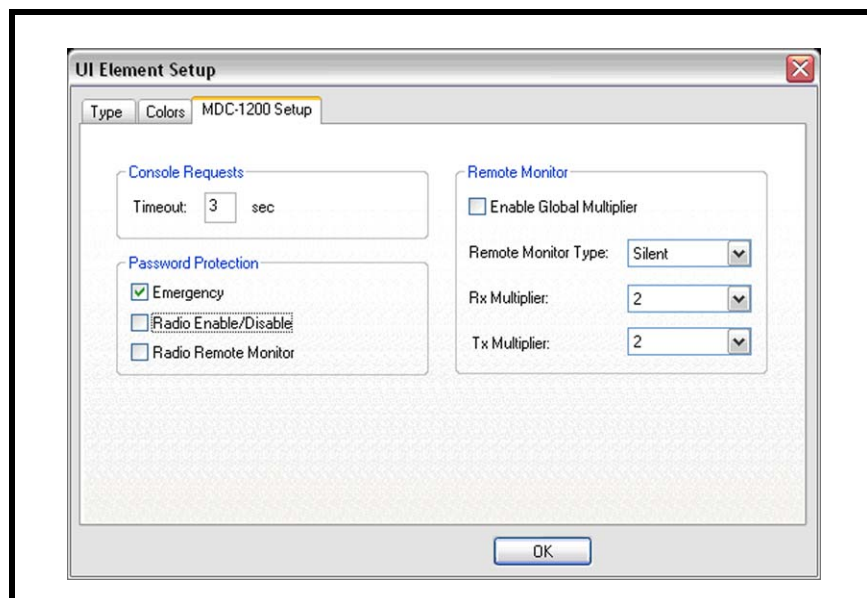


FIGURE 18. UI Element Setup—MDC-1200 Setup

7. From the Password Protection group box, select a **message type** check box(es).

NOTE: The Password Protection group box indicates the console operator is prompted to enter the supervisor password before the selected message type can be sent.

8. (Optional) From the Remote Monitor group box select the **Enable Global Multiplier** check box to indicate the global multiplier is used in conjunction with the Rx and Tx multipliers.

9. From the Remote Monitor Type drop down menu, select **one of the following options**:

Non-Silent - Radio flashes TX LED to indicate it is transmitting.

Silent - Radio does not indicate it is transmitting.

9. a. From the Rx Multiplier drop down menu, **select an option** to configure the length of time the radio receiving the remote monitor command is unable to receive calls after transmitting.

0-0 - Feature inhibited.

1-1 - Multiplier not applied, or multiplier of 1, if used in conjunction with global multiplier.

2-2 - Multiply by 2.

3-3 - Multiply by 3.

EXAMPLE: If the radio is configured to receive calls six (6) seconds after transmitting the remote monitor command and the Rx Multiplier drop down menu is set to 3-3 then the total time is 18 seconds (6x3).

9. b. From the Tx Multiplier drop down menu, **select an option** to configure the length of time the radio receiving the remote monitor command transmits after receiving.

0-0 - Feature inhibited.

1-1 - Multiplier not supplied, or multiplier of 1, if used in conjunction with global multiplier.

2-2 - Multiply by 2.

3-3 - Multiply by 3.

EXAMPLE: If the radio is configured to transmit for six (5) seconds after receiving the remote monitor command and the Tx Multiplier drop down menu is set to 2-2 then the total time is 10 seconds. (5x2).

4.11 Add a Select Button to the Console

The **Select Button Setup** page, shown in Figure 19, is used to configure the MDC-1200 Select button's behavior. Each MDC-1200 line requires a Select button. While in C-Soft Runtime, these buttons are used to perform several different actions when receiving a select call or a call alert.

To **add a Select button**, do the following:

1. While in C-Soft Designer, select **Insert|Add UI Button** from the menu bar.
A None button appears on the console.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Select**.
The Select Button Setup tab appears.
5. Click the **Select Button Setup** tab.
The Select Button Setup page appears.
6. (Optional) From the Annunciation of Select Call group box, select the **Blink Select Button** check box.

NOTE: The Blink Select Button indicates the Select button blinks blue when the console receives a select call or blinks purple when the console receives a group call on the line.

7. From the Annunciation of Select Call group box, select **one of the following options**:
No Beep - When selected, the console does not play any tones when a select call is received.
Beep for X seconds -When selected, the console plays the select call alert tone for the amount of time configure in the seconds field.
Beep Until PTT -When selected, the console plays the select call alert tone until the user transmits on the line that received the select call.
8. (Optional) From the Annunciation of Call Alert group box, select the **Blink Select Button** check box.

NOTE: The Blink Select Button indicates the Select button blinks orange when the console receives a call alert.

9. From the Annunciation of Call Alert group box, select **one of the following options**
No Beep - When selected, the console does not play any tones when a call alert is received.
Beep for X seconds -When selected, the console plays the call alert tone for the amount of time configured in the seconds field.
Beep Until PTT -When selected, the console plays the call alert tone until the user transmits on the line that received the call alert.

NOTE: The DTMF Digits for Select Call and Action on Select Call fields are not used for MDC-1200 Encode set up.

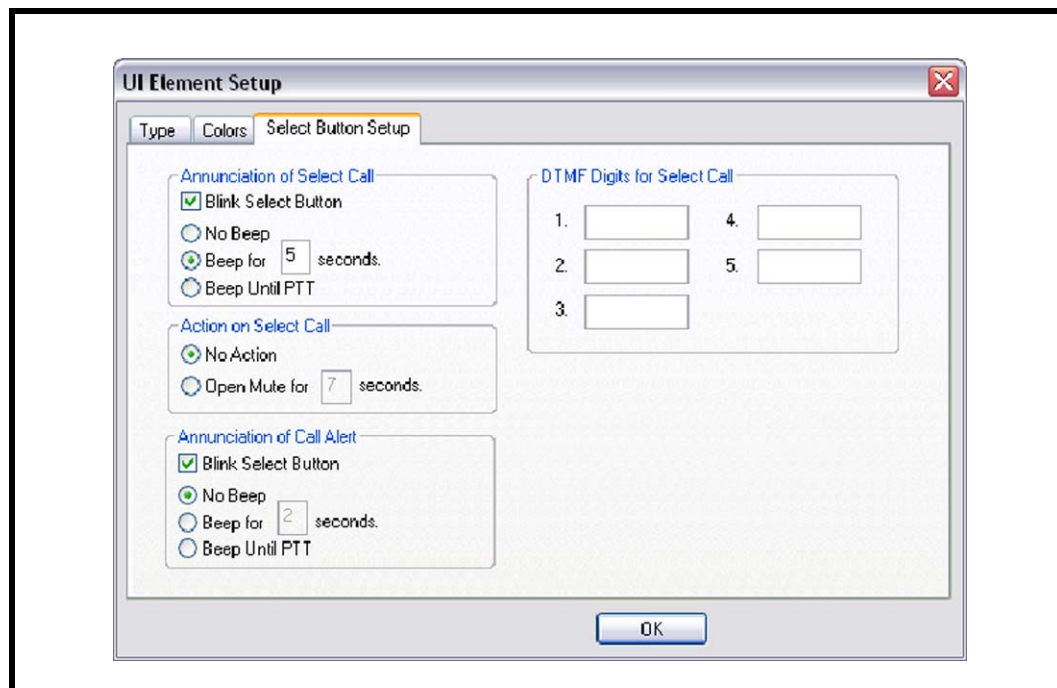


FIGURE 19. UI Element Setup—Select Button Setup Page

4.12 Add an Active Emergency Window Button to the Console

An **Active Emergency Window** button is required to acknowledge and resolve MDC-1200 emergencies. When the Active Emergency button is clicked while in C-Soft Runtime, the Active Emergency window appears. The window automatically appears if an emergency call is received.

To add an **Active Emergency Window** button, do the following:

1. While in C-Soft Designer, select **Insert|Add UI Button** from the menu bar.
A None button appears on the console.
2. Right-click the **None** button.
A shortcut menu appears.
3. From the shortcut menu, select **Properties**.
The UI Element Setup window appears.
4. From the UI Element drop down menu, select **Active Emergency Window**.
The Active Emergency Window button is configured.

4.13 Save the .veg File

Once the console lines have been configured for MDC-1200 in C-Soft Designer, the file must be saved.

To save a **.veg file**, do the following:

1. Select **File|Save** from the menu bar.
The Save As window appears.
2. Save the **C6200F_Default .veg file** in the same directory as csoftruntime.exe.

5.0 MDC-1200 Encode Operation

After configuring the IP-223 and C-Soft for MDC-1200 Encode, C-Soft Runtime is ready to operate. The MDC-1200 Window button is used to open the MDC-1200 Dispatching window.

5.1 MDC-1200 Dispatching Window Overview

The **MDC-1200 Dispatching** window, Figure 20, allows console operators to send MDC-1200 messages to radio users, as well as display messages received on the selected MDC-1200 line.

The MDC-1200 Dispatching window contains a System Type drop down menu, System list, Status Bar and a Message Type group box. The Selected Items page contains a Manual Select group box. The History page contains Call Details and Call History View group boxes.

5.1.1 System Type Drop Down Menu

The **System Type** drop down menu contains a list of all MDC-1200 systems available in the currently loaded .xml file. The names in the system list are based on which lines the user has selected. Once a system is selected from the menu, the system displays in the System list.

Up to *200 systems* can be listed.

5.1.2 System List

The **System List** displays the currently selected MDC-1200 system in a hierarchical format. The system name is the first item to appear in the list with filters, groups, and units without groups displayed beneath the system item. The System list allows the console operator to select the recipient(s) for an MDC-1200 message. Once a component is selected, information related to it appears in the Selected Items and History pages.

System List icons appear as follows:



Filter Icon

Indicates the component is a filter. Console operators cannot make calls to a filter. Filters contain the groups and units added during the C-Soft Designer configuration process.

NOTE: Filters cannot be selected.



Deny Icon

Indicates the console operator is unable to make a call to this component. This icon appears if the console operator is unable to make broadcast calls.



Allow Icon

Indicates the user is able to make calls to this component.

To **send a data message directly to a component from the system list**, do the following:

1. Right-click a **component** in the System list.
The component flyout menu appears.
2. From the flyout menu, select a **data message type**.
The data message is sent.

5.1.3 Message Type Group Box

The **Message Type** group box contains eight (8) buttons used to send the specified message to a selected item. For more information about the message types, see “Sending MDC-1200 Messages” on page 37.

5.1.4 Status Bar

Once a message is sent, the **Status Bar** displays a status bar message. The status bar message indicates the recipients of the data message and confirmation of transmission.

Some messages (Radio Check, Status Request, Radio Disable/Enable and Remote Monitor), are acknowledged by the distant terminal. Timely acknowledgements, or failures, of these messages also display in the Status Bar.

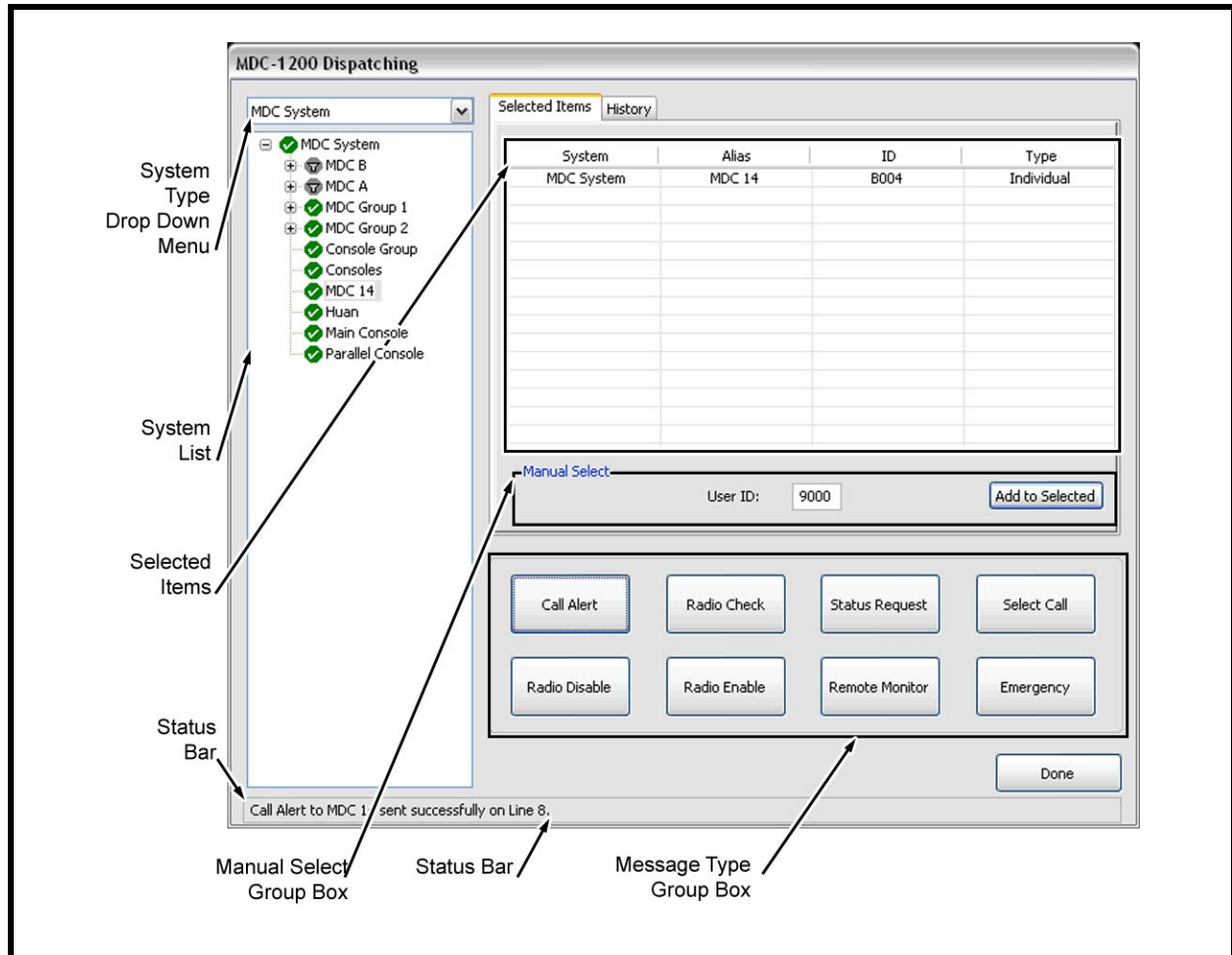


FIGURE 20. MDC-1200 Dispatching Window—Selected Items Page

5.1.5 Selected Items Page

The Selected Items page, shown in Figure 20, displays the targets for the current message to be sent. Components selected from the System list appear in the Selected Items list.

5.1.5.1 Selected Items List

C-Soft uses the **Selected Items** list to determine which users should be sent the selected data message(s). Only one (1) item from a system can be selected at a time, but one (1) item from each system in the System list drop down can be selected.

Up to 200 component IDs can be selected at one (1) time.

To **add an item to the Selected Items list**, do the following:

- > In the System list, select a **component**.
The ID appears in the Selected Items list.

To **remove an item from the Selected Items List**, do the following:

1. Right-click on the **ID** to be removed.
The Properties menu appears.
2. From the Properties menu, click **Remove Item**.
The item disappears from the list.

5.1.5.2 Manual Select Group Box

The **Manual Select** group box allows users to place calls and send status and text messages to system users not listed in the System list.

To **send a message to a manually entered ID**, do the following:

1. In the User ID field, enter an **MDC-1200 ID** in hexadecimal format:
 - Enter an ID from 0001 to DFFF, to call an individual user.
OR
 - Enter an ID from 000 to FFF, to call a group.
OR
 - Enter FFFF, to place a system call.
2. Click **Add to Selected**.
The ID is added to the Selected Items list.

5.1.6 MDC-1200 History Page

The **MDC-1200 History** page, shown in Figure 21, displays all MDC-1200 calls and data messages received by the console during the current session. Unlike other C-Soft call history windows, the MDC-1200 history window displays calls from parallel console positions.

5.1.6.1 History List

The **History** list displays the MDC-1200 call log for the current session. This History list acts in same manner as Per Line Call History and supports Status, Group, and Call to Console color coding. The maximum number of calls displayed in this list is configured in C-Soft Designer, in the Global Call History Parameters window's Per Line Call History Window Line field. The History list is cleared when C-Soft Runtime is closed.

5.1.6.2 Call Details Group Box

The **Call Details** group box displays additional call information for the selected call entry in the History list. The group box displays the calling ID (user receiving the call) for all call types, the status for status messages, status requests and radio checks, and the text message for text messages.

5.1.6.3 Call History View Group Box

The **Call History View** group box controls which call entries display in the History list.

To **display all MDC-1200 calls received**, do the following:

- > Select the **All Lines** check box.

The list populates with all calls received by the console this session.

To **display only calls received on the currently selected line(s)**, do the following:

- > Select the **Selected Line** check box.

Only call received on the selected line appear.

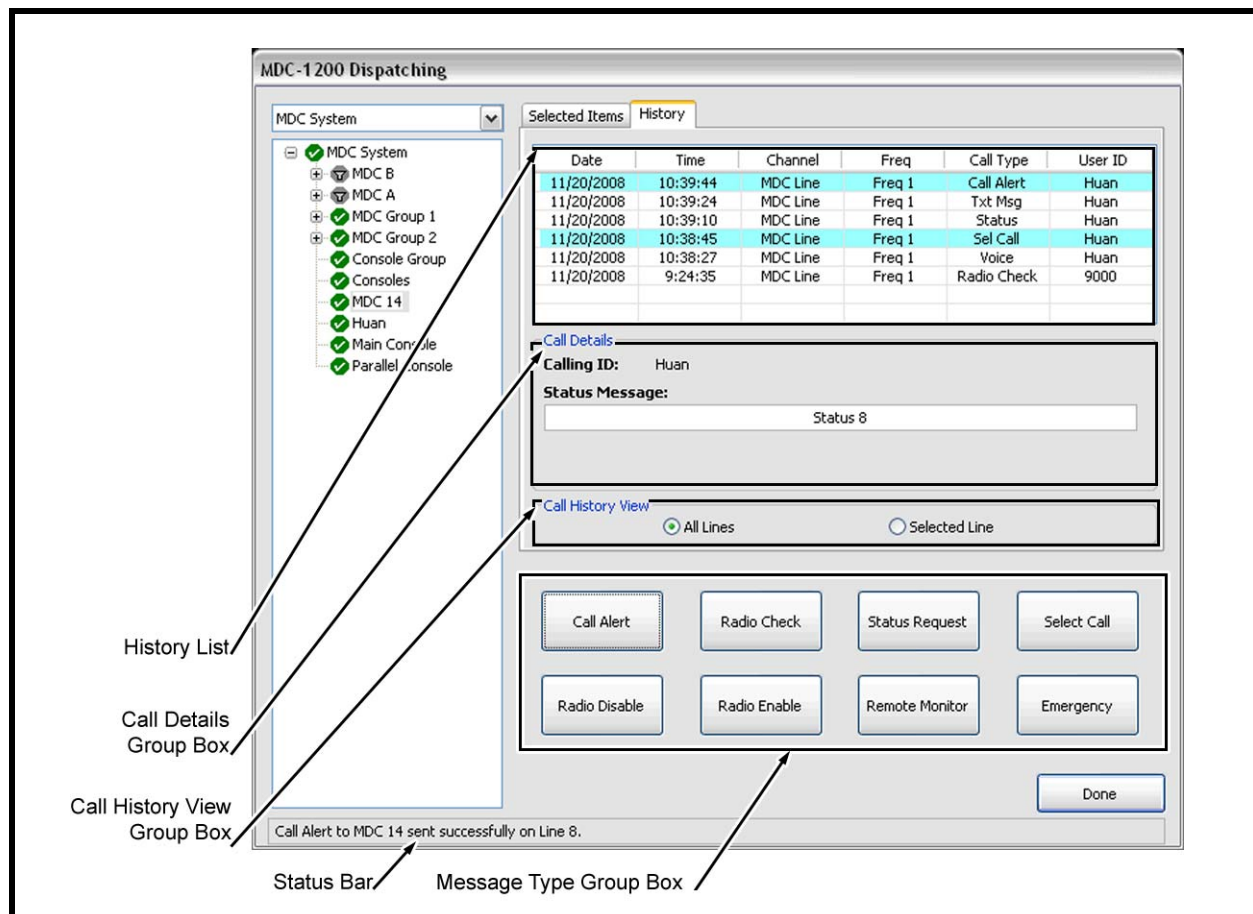


FIGURE 21. MDC-1200 Dispatching—History Page

5.2 Sending MDC-1200 Messages

C-Soft supports sending nine (9) different types of MDC-1200 messages.

Available options are: *ANI, Call Alert, Radio Check, Status Request, Select Call, Radio Disable, Radio Enable, Remote Monitor, and Emergency.*

5.2.1 ANI

The **ANI** (Automatic Number Identification) is transmitted from the C-Soft console to the receiving radio with all transmissions. The ANI, in this case, is the C-Soft console's ID. ANIs can be sent Pre or Post PTT. ANIs are sent whenever the Main PTT, InPTT, Crosspatch PTT, PTT Talkback, or Spacebar key is pressed.

5.2.2 Call Alert

To **send a call alert**, do the following:

1. From the system list, select the **unit ID** to send the alert message to.
The item is added to the selected items list.
OR
From the system list, select the **group** to send the alert message to.
The item is added to the selected items list.
2. Click **Call Alert**.
The call alert message is sent and the receiving radio performs its call alert actions.

5.2.3 Radio Check

A **Radio Check** can only be sent to an individual unit.

To **send a radio check to a unit**, do the following:

1. In the system list, select a **unit ID** to send the radio check message to.
The highlighted item is added to the selected items list.
2. Click **Radio Check**.
 - *If the selected radio is able to respond, Acknowledge appears on the line's Select button, the Per Line Call History window, and in the item list on the History Page. The status bar and the item list in the History window display a success status bar message.*
 - *If the radio is unable to respond within the configured time allowed, the status bar displays a failure message. No Response appears on the line's Select button, the Per Line Call History window and the list on the History page.*

NOTE: For more information about response time see, "Add MDC-1200 UI button" on page 28.

5.2.4 Status Request

A **Status Request** can only be sent to an individual unit.

To **request a status from a unit**, do the following:

1. In the system list, select a **unit ID** to send the alert message to.
The highlighted item is added to the selected items list.
2. Click **Status Request**
 - *If the selected radio is able to respond, the units' current status appears on the line's Select button, the Per Line Call History window, and in the list on the History page. The status bar and the item list in the History window display a success message.*
 - *If the radio is unable to respond within the configured time allowed, the Status bar displays a failure message. No Response appears on the line's Select button, the Per Line Call History window and in the list on the History page.*

5.2.5 Select Call

To **send a Select call**, do the following:

1. In the system list, select a **unit ID** to place the select call to.
The highlighted item is added to the selected items list.
OR
In the system list, select a **group** to place the select call to
The highlighted item is added to the selected items list.
2. Click **Select Call**
The select call message is sent and the receiving radio is able to perform select call action.

5.2.6 Radio Disable

NOTE: This feature can be password protected. See “Add MDC-1200 UI button” on page 28.

To **send a radio disable command**, do the following:

1. In the system list, select the **unit** to be disabled from the system list
The highlighted item is added to the selected items list.
2. Click **Radio Disable**.
The disable radio message is sent and the radio no longer functions. A message response displays in the history log, on the line's Select button and in the status bar.
OR
If a password is required, the password window appears.
3. In the Password window, enter the **user name** and **password** (if required).

5.2.7 Radio Enable

NOTE: This feature can be password protected. See “Add MDC-1200 UI button” on page 28.

To **send a radio enable command**, do the following:

1. In the system list, select the **unit** you want to enable for use.
The unit is added to the selected items list.
2. Click **Radio Enable**.
The radio enable message is sent. Response to the message is displayed as a message in the History list, on the line’s Select button and in the status bar.
OR
If a password is required, the password window appears.
3. In the Password window, enter the **user name and password** (if required).

5.2.8 Remote Monitor

NOTE: This feature can be password protected. See “Add MDC-1200 UI button” on page 28.

To **key up the microphone of a radio remotely**, do the following:

1. In the system list, select a **unit ID** you want to monitor.
The unit is added to the selected items list.
2. Click **Remote Monitor**.
The message is sent and C-Soft begins to receive audio from the selected unit.
The radio continues to transmit until it times out.
OR
If a password is required, the password window appears.
3. Enter the **user name and password** (if required).

5.2.9 Emergency

To **send an emergency**, do the following:

1. In the system list, select the **unit ID** to send the emergency alert to.
The highlighted item is added to the selected items list.
OR
In the system list, select the **group** to send the emergency alert to.
The highlighted item is added to the selected items list.
2. Click **Emergency**.
The emergency message is sent, initiating the receiving radio to perform its emergency actions.

NOTE: Emergency messages are broadcast calls and as such, are received by all MDC-1200 enabled devices (radio terminal or console), monitoring the appropriate frequency. Therefore, no response is expected from the receiving units.

5.3 Receiving MDC-1200 Messages

C-Soft supports receiving six (6) different types of MDC-1200 messages.

Available messages are: *ANI*, *Call Alert*, *Select Call*, *Emergency*, *Status Message*, and *Text Message*.

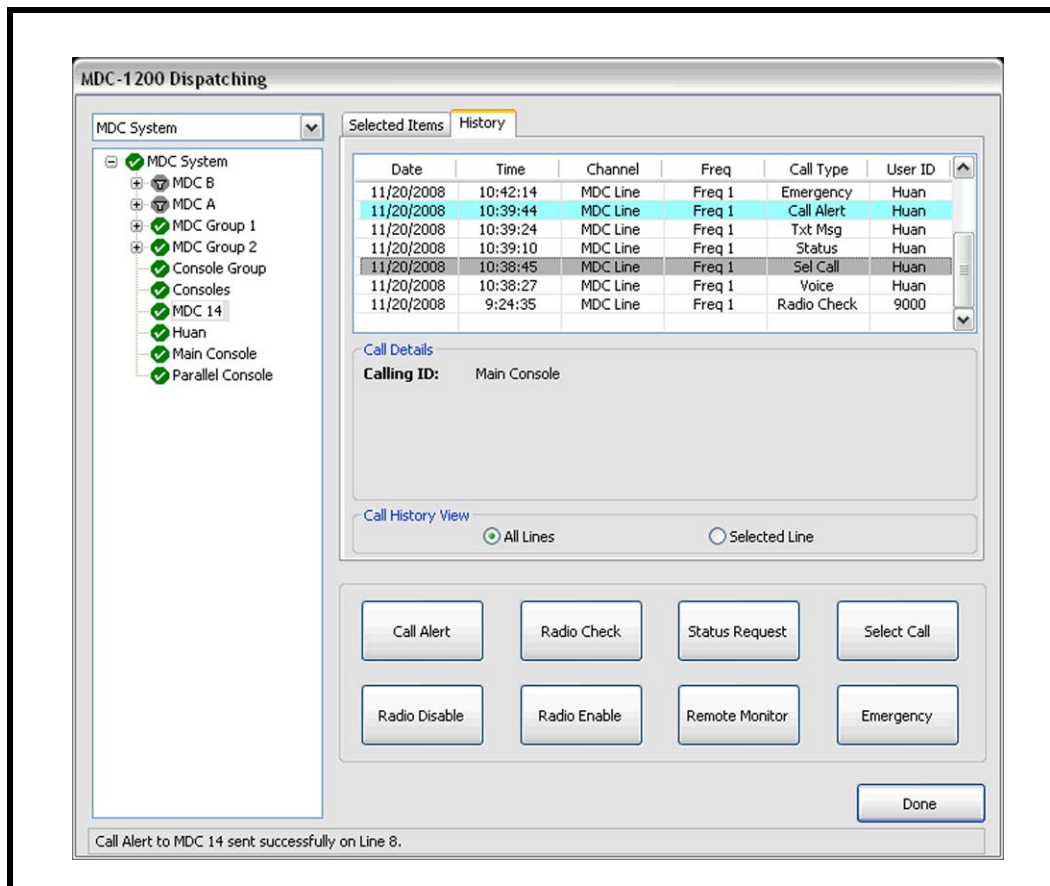


FIGURE 22. MDC-1200 Dispatching—History Page with Select Call

5.3.1 ANI

The **ANI** received from an MDC-1200 radio displays on the MDC-1200 dispatching window's History list and the receiving line's Per Line Call History window when a voice call is received in C-Soft. The call type, *Voice*, displays in the History list. The receiving ID's alias (or ID if the alias is not available) displays on the receiving line's Select button.

5.3.2 Call Alert

A **Call Alert** received from an MDC-1200 radio displays in the MDC-1200 Dispatching window's History list and in the receiving line's Per Line Call History window. The call type, *Call Alert*, displays in the History list. The received ID's alias (or ID if the alias is not available) displays on the receiving line's Select button.

The Select button also performs the Annunciation of Call Alert options. For more information, see "Add a Select Button to the Console" on page 29.

5.3.3 Select Call

A **Select Call** received from an MDC-1200 radio displays in the MDC-1200 Dispatching window's History list and in the receiving line's Per Line Call History window. The call type, *Select Call*, displays in the History list. The received ID's alias (or ID if the alias is not available) displays on the receiving line's Select button.

The Select button also performs the Annunciation of Select Call options. For more information, see "Add a Select Button to the Console" on page 29.

5.3.4 Emergency

An **Emergency**, received from an MDC-1200 radio, automatically opens the Active Emergency window. See Figure 23. The call type, *Emergency*, displays in the History list. The received ID's alias (or ID if the alias is not available) displays on the receiving line's Select button. The Select button blinks red and plays the Emergency alert tone.

To **clear the emergency**, do the following:

- > From the Active Emergency window, click **Clear**.
The alert tones stop playing, the color of the emergency event changes and the Active Emergency window changes from red to orange.

To **acknowledge the emergency**, do the following:

- > From the Active Emergency window, click **ACK**.
The alert tones stop playing, the color of the Select button stops blinking, the emergency is removed from the Active Emergency window, and an emergency acknowledgement message is sent back to the radio that initiated the emergency.

NOTE: Emergency messages are broadcast calls that are received by all MDC-1200 enabled devices (radio terminal or console), monitoring the appropriate frequency.

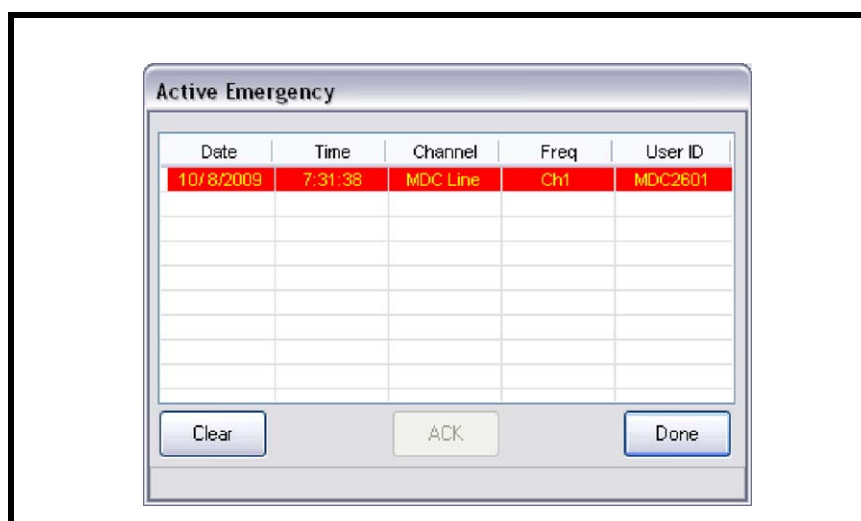


FIGURE 23. Active Emergency Window

5.3.5 Status Message

A **Status Message** received from an MDC-1200 radio displays in the MDC-1200 Dispatching window's History list and in the receiving line's Per Line Call History window. The call type, *Status*, displays in the History list. The received ID's alias (or ID if the alias is not available) and status alias (or status ID if the alias is not available) are also display on the receiving line's Select button.

To **view the status history**, do the following:

- > From the History list, click a **status entry**.
The status alias/ID appears in the call details group box of the History page.

5.3.6 Text Message

A **Text Message**, received from an MDC-1200 radio displays in the MDC-1200 Dispatching window's History list and in the receiving line's Per Line Call History window. The call type, *Txt Msg*, displays in the History list. The received ID's alias (or ID if the alias is unavailable) and *Text Message* appears on the receiving line's Select button.

To **view the text message**, do the following:

- > From the History list, click a **text message entry**.
The text message appears in the call details group box of the History page.

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Document Title: MDC-1200 Encode Setup and Operation		
Document Number: AN-DISPATCH-043		
Revision	Change Description	Date
A	Initial Release	12-DEC-2008
B	Update brand, format and new document number.	01-OCT-2009

Suggestions or comments:

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