Introduction

This program gives you the ability to monitor traffic sent to mobile data terminals (MDT's) using Motorola's MDC-4800 protocol.

Features of this program

- Uses the sound card to acquire the data to decode, doesn't require the use of a data slicer. Just plug the discriminator output of your scanner into the microphone or line-in input of your sound card and away you go.
- An "MDT" window displays received MDT traffic the same way it appears on the terminal to which it was sent.
- An "Active Terminals" window shows all of the terminals to which data has been sent since the program was last started. You can select a terminal from this list to see the last 30 messages sent to that terminal.
- A "Messages" window displays summary information of only the traffic you want to see, configurable via rules you setup.
- The raw ASCII MDT data that the program is interpreting can be viewed in a separate window and also captured to disk.
- A machine running MDT Monitor with a scanner can act as a server to other machines running MDT Monitor which don't have scanners connected to them.   The MDT data decoded by the machine with the scanner is sent to all of its MDT Monitor clients.

Please send comments, suggestions, and bug reports to me at **gordone@jps.net**.

Main Form

The main MDT Monitor window is composed of three smaller windows, a Messages window, an Active Terminals window, and an MDT window.

The Messages window: This window, located at the top of the MDT Monitor window, displays summary information of MDT traffic received which matches rules you setup.   Click on an item in the window to see the full text in the MDT window or double-click on an item to have the full text displayed in a separate window.

The Active Terminals window: This window, located in the lower-left portion of the main window, contains a list of terminals to which MDT traffic has been sent since the program was last started in the first column and user-defined aliases associated with those terminals in the second column.   Click on a terminal number to see the traffic sent to the terminal most recently in the MDT window. Double-click on a terminal number to assign an alias to the terminal (or to edit an alias associated with a terminal).

The MDT window: This window, located in the lower-right portion of the main window, is used to display traffic sent to MDT's.   If a terminal is selected in the Terminals window the MDT window displays the last 30 messages sent to that terminal (or the last 30 messages sent to all terminals if <all> is selected).   If an line is selected in the Messages window the MDT window displays the full text of the traffic associated with the line selected.

File Menu

Load Profile: Loads a profile created with the **Save Profile** or **Save Profile As** menu item.

Save Profile: Saves user-defined rules, terminal aliases, program settings, window dimensions, and window positions to a file which can be loaded using the **Load Profile** command or by naming the profile on the command-line when the program is invoked.

Save Profile As: Same as **Save Profile** but allows you to name the file to which the profile information is saved.

Capture To File: Starts the capturing of received MDT traffic to a disk file.   When you click on this menu item you will be asked whether or not the hex representation of the received data should be also written.   The data is written with no processing or formatting.   For formatted output you can setup a user-defined rule.

Stop Capturing: Stops the capturing of data started by the **Capture To File** menu item.

Exit: Exits the program.   If a profile is loaded it's saved automatically before the program exits.

View Menu

Raw Data Window: Displays received traffic in a separate window.   After clicking on this menu item you'll be able to have the hex representation of the data displayed by clicking on the new window's View menu and selecting **Display Hex**.

Toolbar: Determines whether the toolbar is displayed at the top of the window.

Status Bar: Determines whether the status bar is displayed at the bottom of the window.

Options: Contains options used to control the way the program behaves, such as specify the number of lines to save in the Messages window, the width of text to display in the MDT window, etc.

Actions Menu

Assign Terminal Alias: Allows you to specify aliases for terminal numbers.   You can also assign aliases by double-clicking on a terminal number in the **Active Terminals** window.

Hold MDT: Freezes the MDT window display so that you can read its contents without it continuing to scroll.   You can also click on the "hand" toolbar icon to hold the MDT window.

Monitor MDT's: When checked the program processes digitized audio and decodes it.

Configure Menu

Rules: Allows you to setup custom rules that the program will check each time traffic is received.   You can setup custom rules to have summary information displayed in the Messages window, display traffic in a separate window when traffic containing specified text is seen, log specific traffic to files, etc.

Help Menu

Help Topics: Displays the help topics associated with MDT Monitor.

About MDT Monitor: Displays information about the program, including version number.

Setting Up Rules

Rules allow you to specify what events should occur when traffic matching the criteria you specify is received.   Rules can be setup to trigger based on the terminal/alias number to which traffic is addressed or based on text contained in the message sent.   You can have rules display messages in a pop-up window, write a message to the Messages window, write the received traffic to a file, etc.

To setup rules click on **Rules** in the **Configure** menu.   This will open up a window used to view, add, edit, and delete rules.   To setup a new rule click on the **New Rule** button at the bottom of the window. This will open a window that looks like this:

Name of rule: In this field enter a short description of the rule.   This will be displayed in the previous window that lists all of the rules setup.

When a message arrives that meets the following conditions:

> **Sent to matches:** Enter in this field text that should be compared to the terminal number or alias to which traffic is being sent.   See below for notes on how to specify your match criteria.

> **Message body matches:** Enter in this field text that should be compared to the text of the received traffic. See below for notes on how to specify your match criteria.

Perform these actions:

> **Do not process further rules:** Check this checkbox to specify that the program should not continue processing any other rules below this one (in the **Configure Rules** window) after checking this rule.

> **Display message in pop-up window:** Check this checkbox to have matching traffic displayed in a separate pop-up window.

> **Log message in Messages window:** Check this checkbox to have entries added to the Messages window when matching traffic is received.

> **Log Message to file:** Check this checkbox to have matching traffic logged to a file.

Specifying your search criteria:

To specify the terminal number/alias or message body text to use in comparisons to received data you should follow the following guidelines:

- Put asterisks (*) around text if you want the rule to trigger when that text is contained in data received (or if in the **Sent to matches** field whenever the terminal number/alias contains the text).
- You can use a question mark (?) to represent any character ("*te?t*" would match "text" and "test").
- You can use the number sign/pound symbol (#) to represent any number ("*te#t*" would match "te1t", "te2t", but not "test").
- You can enclose a list of characters in brackets ([and])   to represent a single character in that list

("*s[ae]t*" would match "sat", and "set" but not "sit").

- You can enclose a list of characters in brackets ([and]) and begin the list with an exclamation point (!) to represent a single character not in the list ("*s[!ae]t*" would match "sit" but not "sat" and "set").
- When specifying a list of characters in brackets you can use constructs like [a-m] to represent a single character from one character to another.   [a-m] would match any character from a to m in the alphabet.
- When comparing your text to the data received the comparison is done in a non-case sensitive manner, to "test" would match "TEST" and "TesT".
- To match the characters *, ?, [, and], enclose them in brackets ([and]).

Some example rules:

- Entering "6502" in the **Sent to matches** field would only match MDT traffic sent specifically to terminal number/alias 6502.
- Entering "65*" in the same field would match traffic sent to any terminal number/alias beginning with "65".
- Entering "*message from*" in the **Message body matches** field would match MDT traffic containing the text "message from".
- Entering "*4[24]JO*" in the same field would match MDT traffic containing 42jo and/or 44jo.