McLaneTerm

mclanelabs.com

User Manual

2018 McLane Research Laboratories, Inc., Rev.17.L.07

Tel: +1 (508) 495-4000
Skype: mclane_research
mclane@mclanelabs.com

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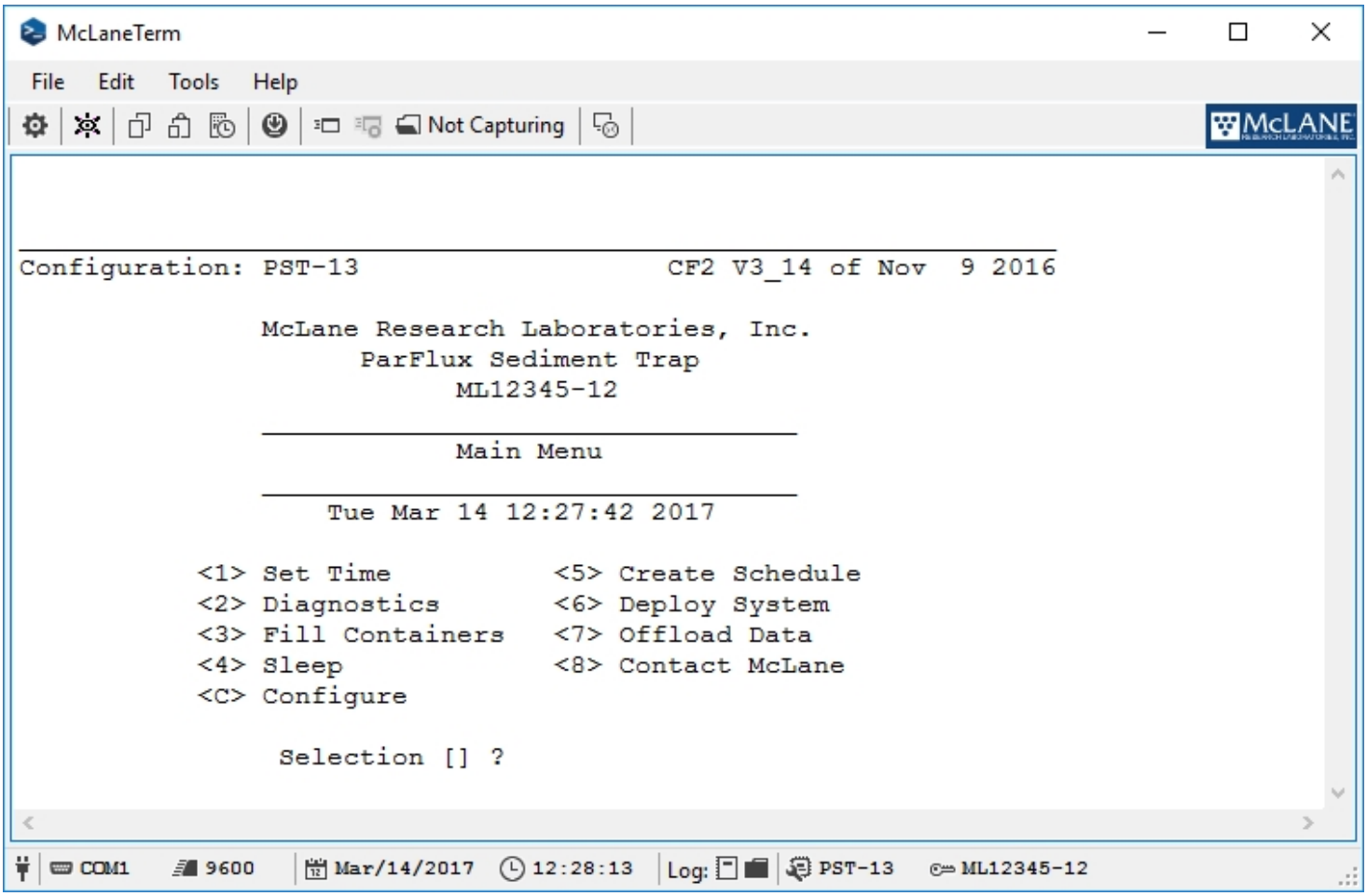
Getting Started

McLaneTerm is a terminal emulation program used to communicate with serial McLane instruments.
With McLaneTerm, you can interact with your McLane instrument's text based interface while it is connected to a serial port on your computer or through a Remote Access connection over the Internet.



Installing

McLaneTerm is a multiplatform application designed to run on Microsoft Windows and Mac OSX.

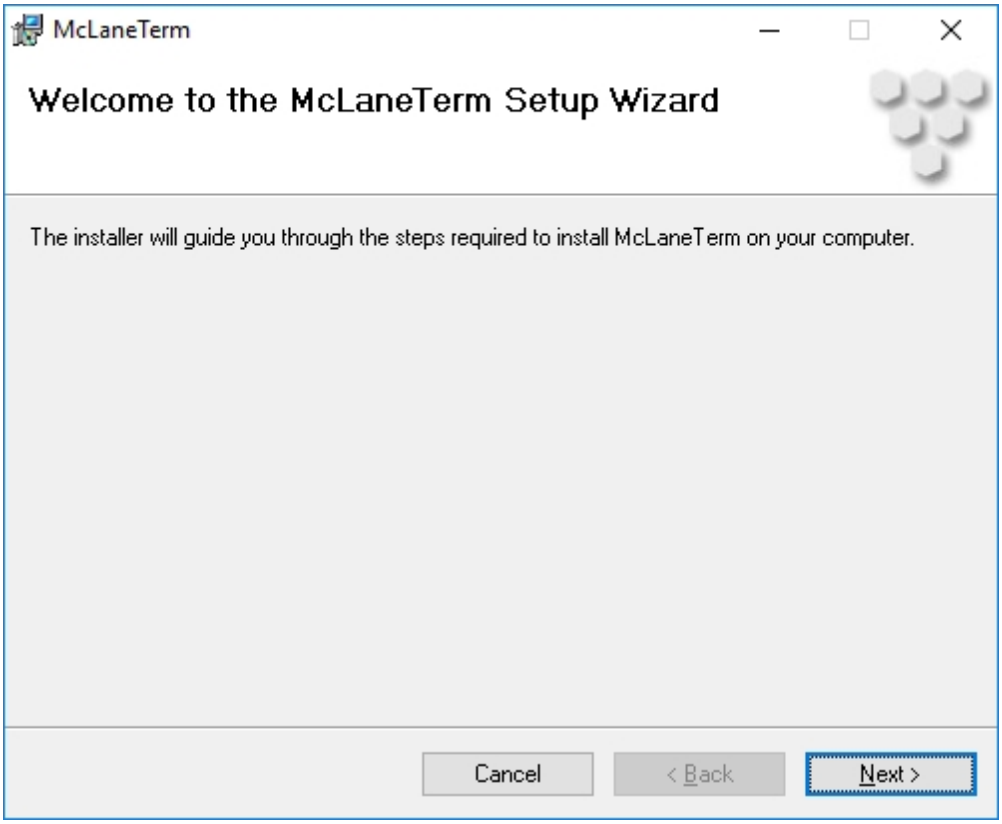
Installing content:
Windows
Mac

Windows

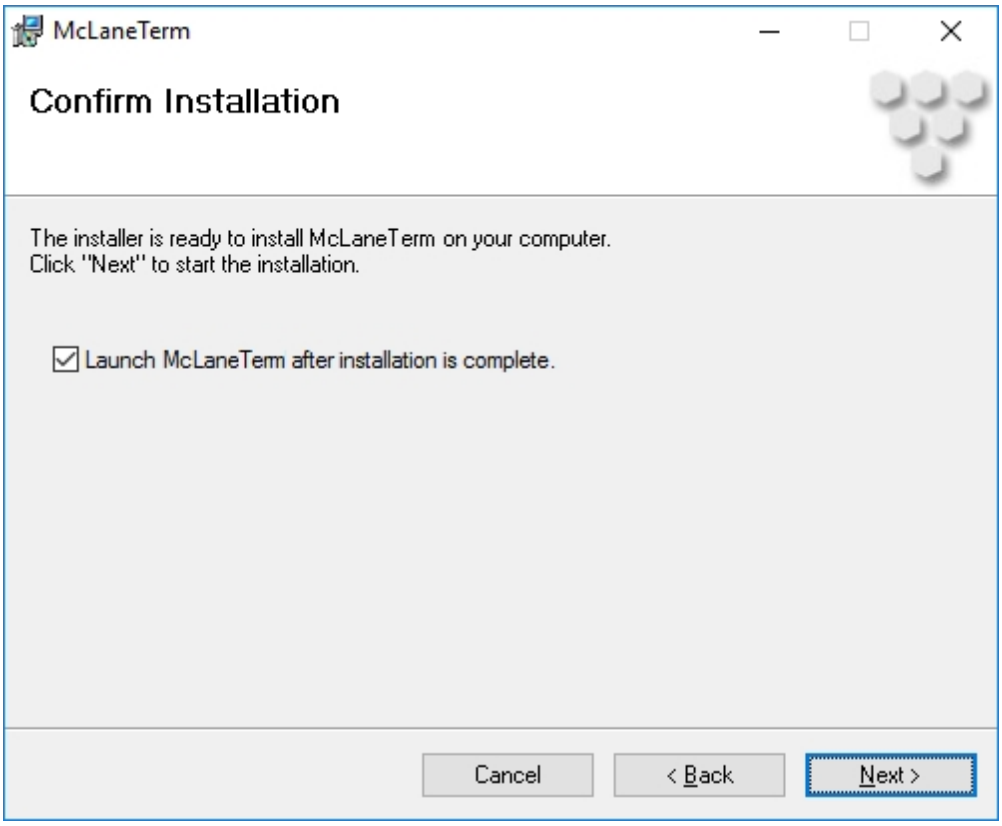
To install McLaneTerm, double-click the file: McLaneTerm.msi

The installer program will guide you through the setup process with the following screens:

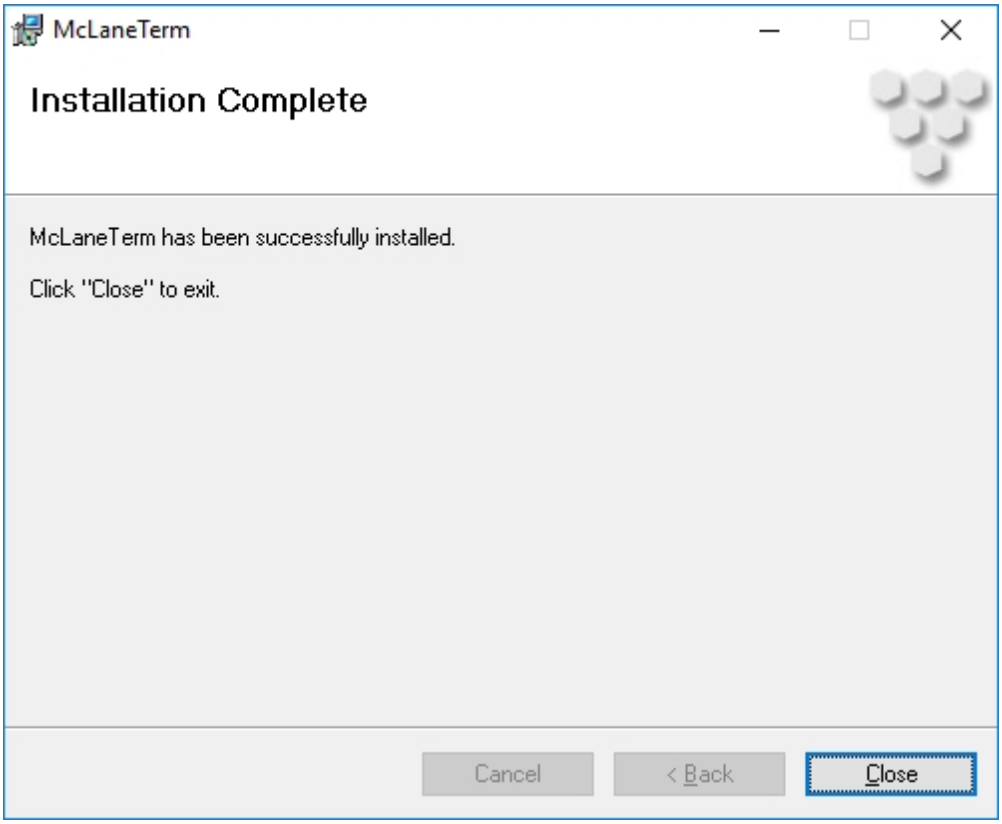
1. Welcome Screen. Click Next to proceed.



2. Confirm Installation. Use the checkbox to determine if McLaneTerm should be launched after installation.



3. Installation Complete. Click Close to finish the setup process.

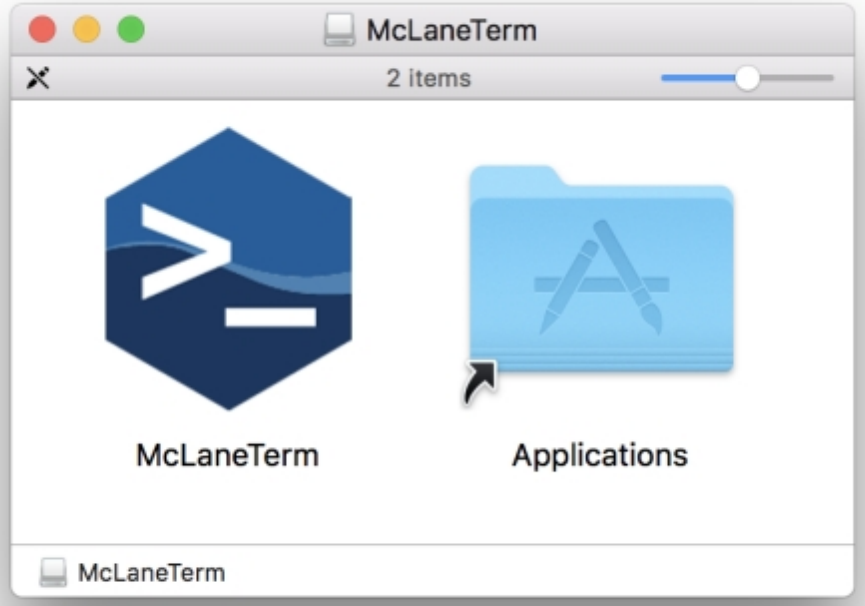


Mac

In order for McLaneTerm to run under OSX, the Mono framework must be installed. The latest version of the Mono framework can be downloaded from: http://www.mono-project.com

To install McLaneTerm, double-click the file: McLaneTerm.dmg

Drag the McLaneTerm icon into the Applications folder:



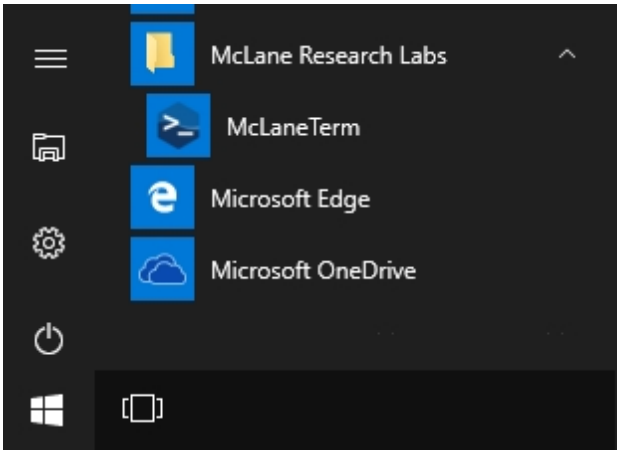
Launching

After installation is complete, McLaneTerm can be accessed from the operating system's interface.

Launching content:
Windows
Mac

Windows

Open McLaneTerm using the desktop shortcut or start menu link created during installation.



Mac

Open McLaneTerm from the corresponding icon in the Applications folder in Finder.

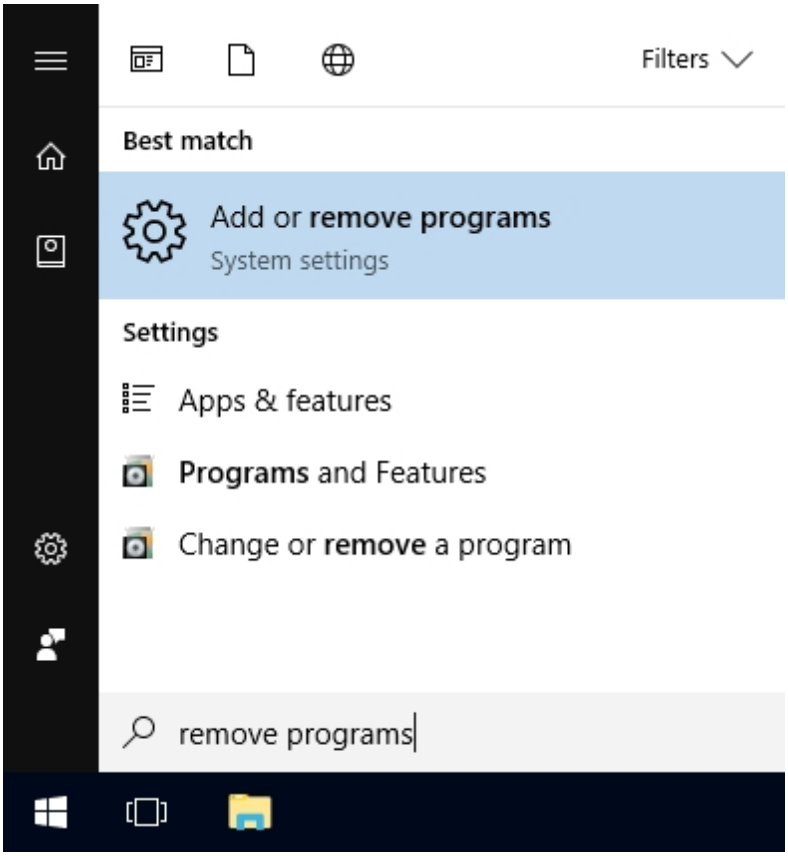
Uninstalling

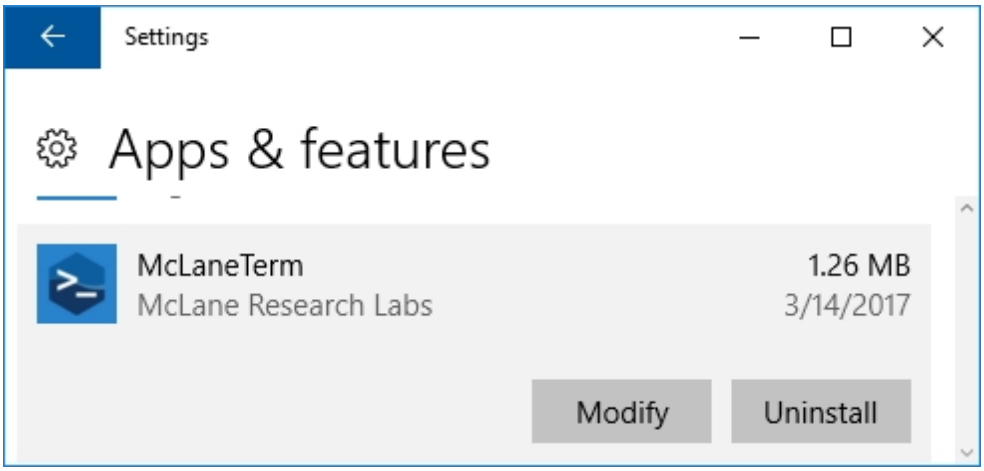
McLaneTerm can be easily removed from the operating system.

Uninstalling content:
Windows
Mac

Windows

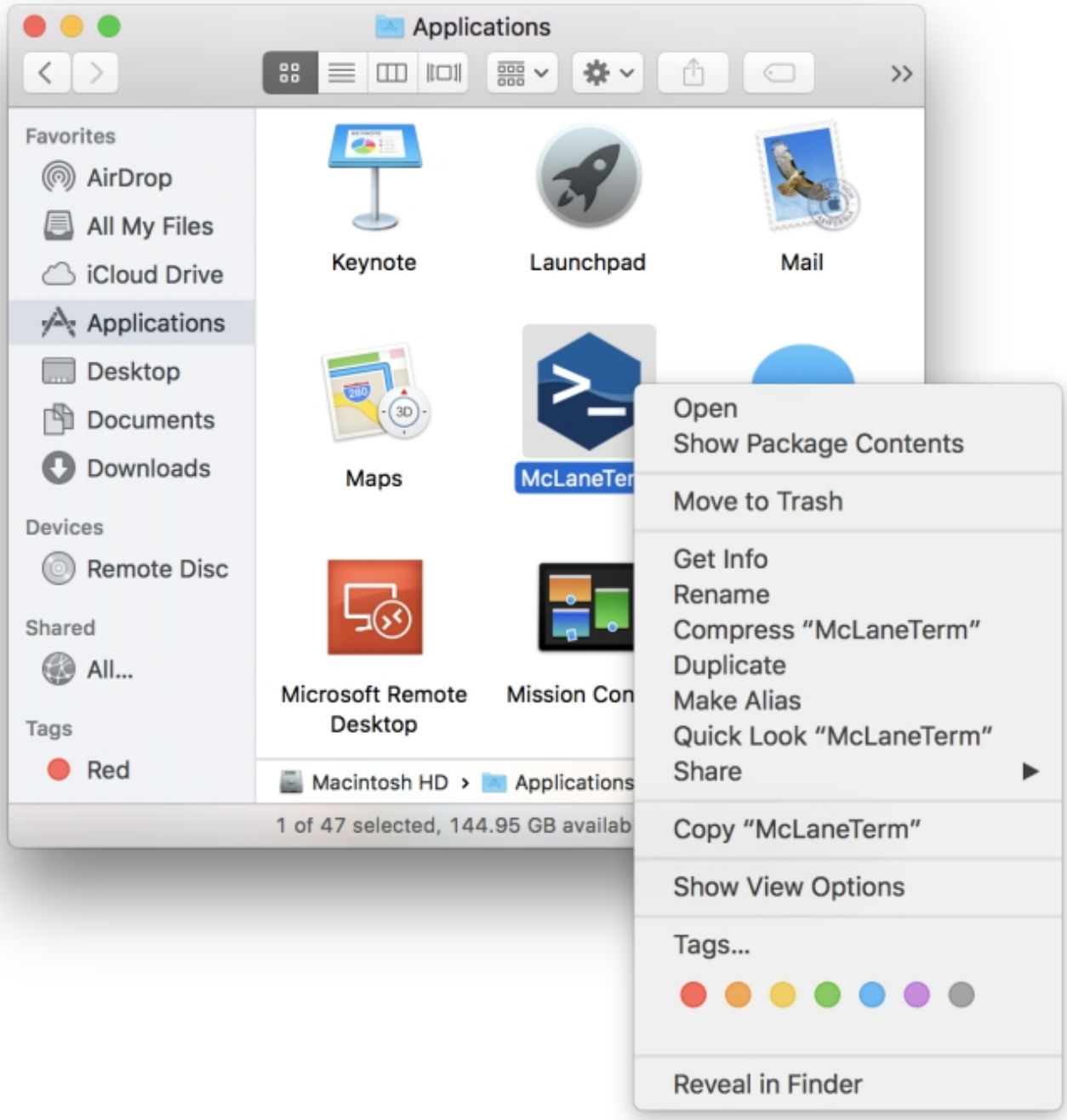
To remove McLaneTerm from your computer, open the Add or Remove Programs Link in the Control Panel and click the Uninstall button.





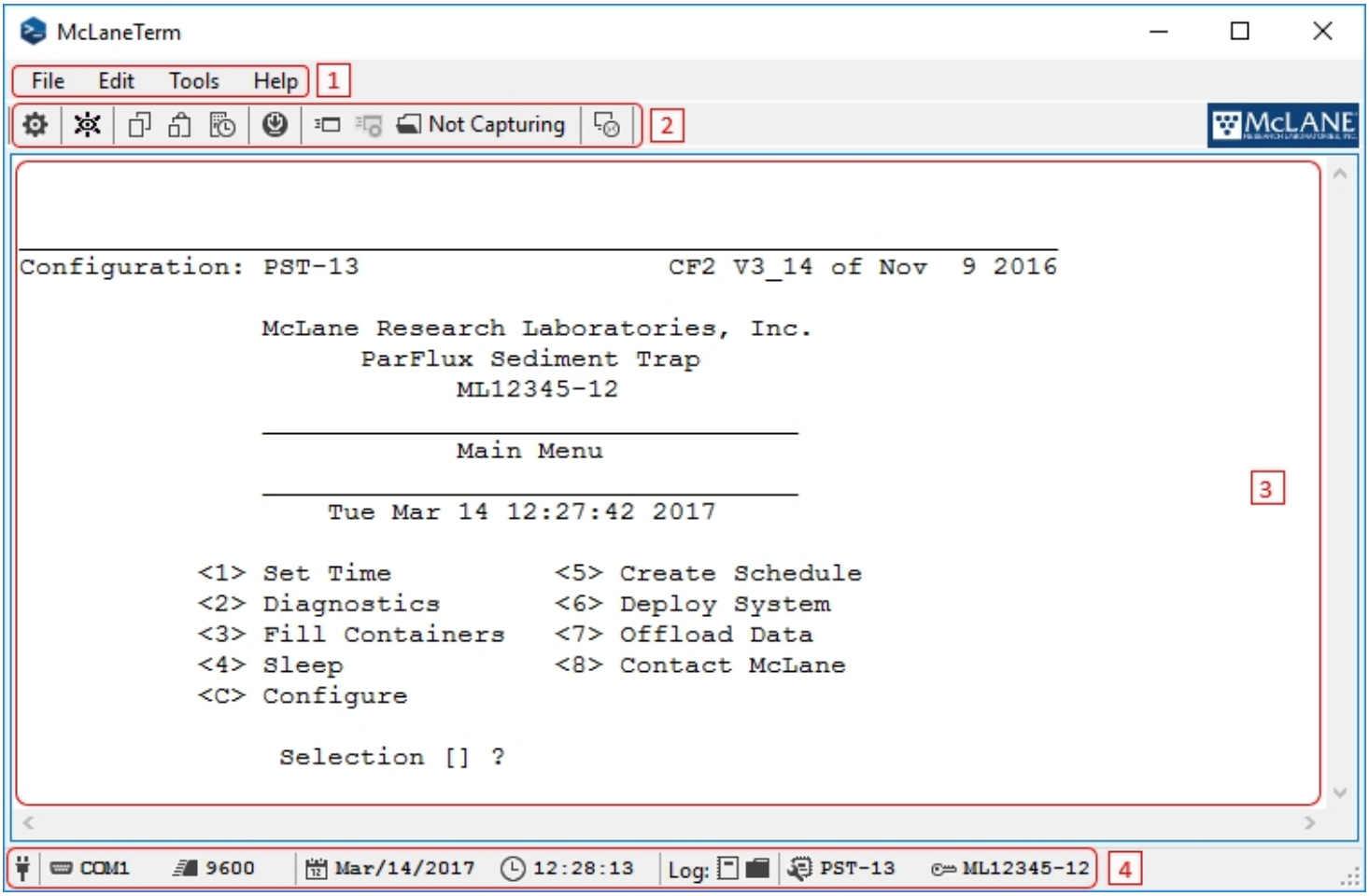
Mac

To remove McLaneTerm from your computer, right-click the corresponding icon in the Applications folder in Finder and select Move to Trash.



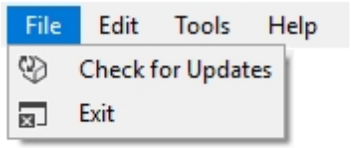
Understanding the UI

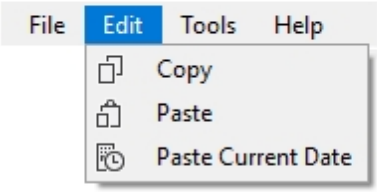
The main window in McLaneTerm has 4 sections (Main Menu, Toolbar, Terminal Window and Status Bar).

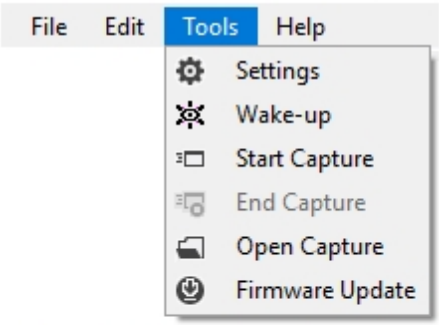


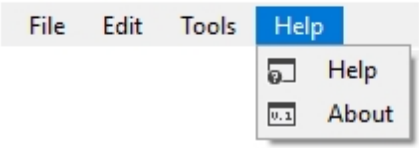
1. Main Menu:

All McLaneTerm functions can be accessed from the Main Menu and sub menus.

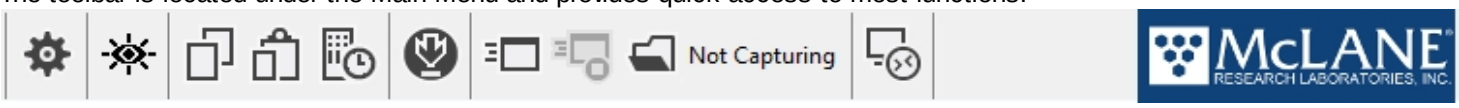






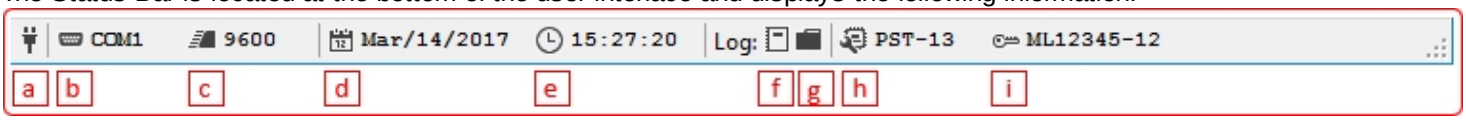


2. Toolbar:
The toolbar is located under the Main Menu and provides quick access to most functions.



3. Terminal Window:
The Terminal Window is the serial communication interaction portion of McLaneTerm. All text and control characters entered here will be sent to the connected instrument and all serial data returned from the connected instrument will be displayed.

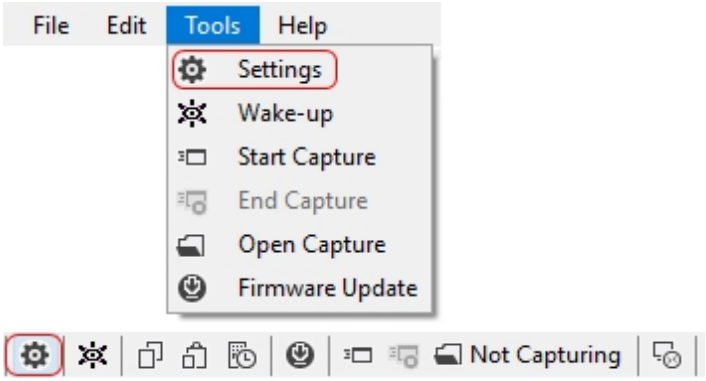
4. Status bar:
The Status Bar is located at the bottom of the user interface and displays the following information:



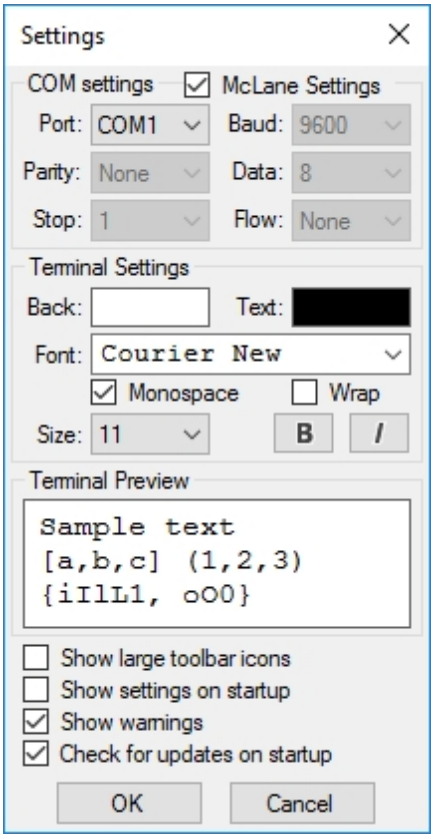
a. Connection Status. Displays when serial communication is established.
b. Serial Port Name.
c. Baud Rate.
d. Instrument Date. Displays the date reported by the connected instrument when available.
e. Instrument Time. Displays and counts the time reported by the connected instrument when available.
f. Open Session Log file. Click to open the text log file for the current session.
g. Open Log folder. Click to display all session log files.
h. Instrument Configuration. Displays the configuration string reported by the connected instrument when available.
i. Instrument Serial Number. Displays the serial number reported by the connected instrument when available.

Settings

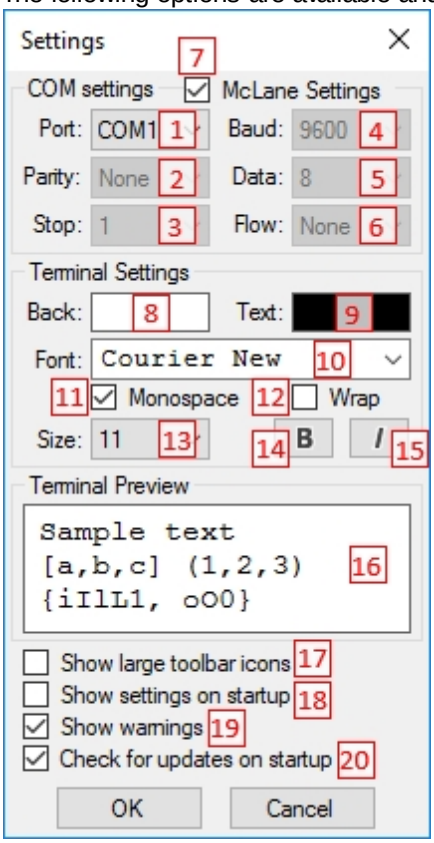
McLaneTerm settings are controlled from a centralized window which can be accessed from the Tools Menu or the Toolbar:



Clicking the Settings button will display the Settings Window as shown next:



The following options are available and can be controlled from the Settings Window:



1. Serial port name. All installed serial ports will be displayed in the drop-down.
2. Serial parity control. The drop-down will contain: None, Odd and Even.
3. Serial Stop Bits. The drop-down will contain: 1 and 2.
4. Serial Baud Rate. The drop-down will contain: 1200, 2400, 9600, 19200, 38400, 57600, 115200.
5. Serial Data Bits. The drop-down will contain: 7 and 8.

6. Serial Flow Control. The drop-down will contain: None, Hardware and Software.
7. Serial McLane Settings. This option resets and locks all serial settings to the McLane instrument default. The baud rate can still be changed.
8. Terminal Window Background Color. Click to open a color picker to choose the terminal window background color.
9. Terminal Window Text Color. Click to open a color picker to choose the terminal window text color.
10. Terminal Window Font. The drop-down will contain samples of the installed fonts for the terminal window.
11. Terminal Window Monospace Font Filter. When checked, filters the Font drop-down to only display the installed mono-spaced fonts.
12. Terminal Window Text Wrap. When checked, wraps overflown horizontal text on the terminal windows to the next line.
13. Terminal Window Font Size.
14. Terminal Window Font Modifier: Bold.
15. Terminal Window Font Modifier: Italic.
16. Terminal Window Preview. Displays the selected visual settings as they would show in the terminal window.
17. Show Large Toolbar Icons.
18. Show Settings on Startup. When checked, displays the settings window every time McLaneTerm is launched.
19. Show Warnings. Enables system warnings when checked.
20. Show for Updates on Startup.

In order to save changes made in the Settings window, you must click the OK button. Clicking Cancel will return all settings to their previous states.

All settings controlled from the Settings window are saved across sessions, along with the main window size and position.

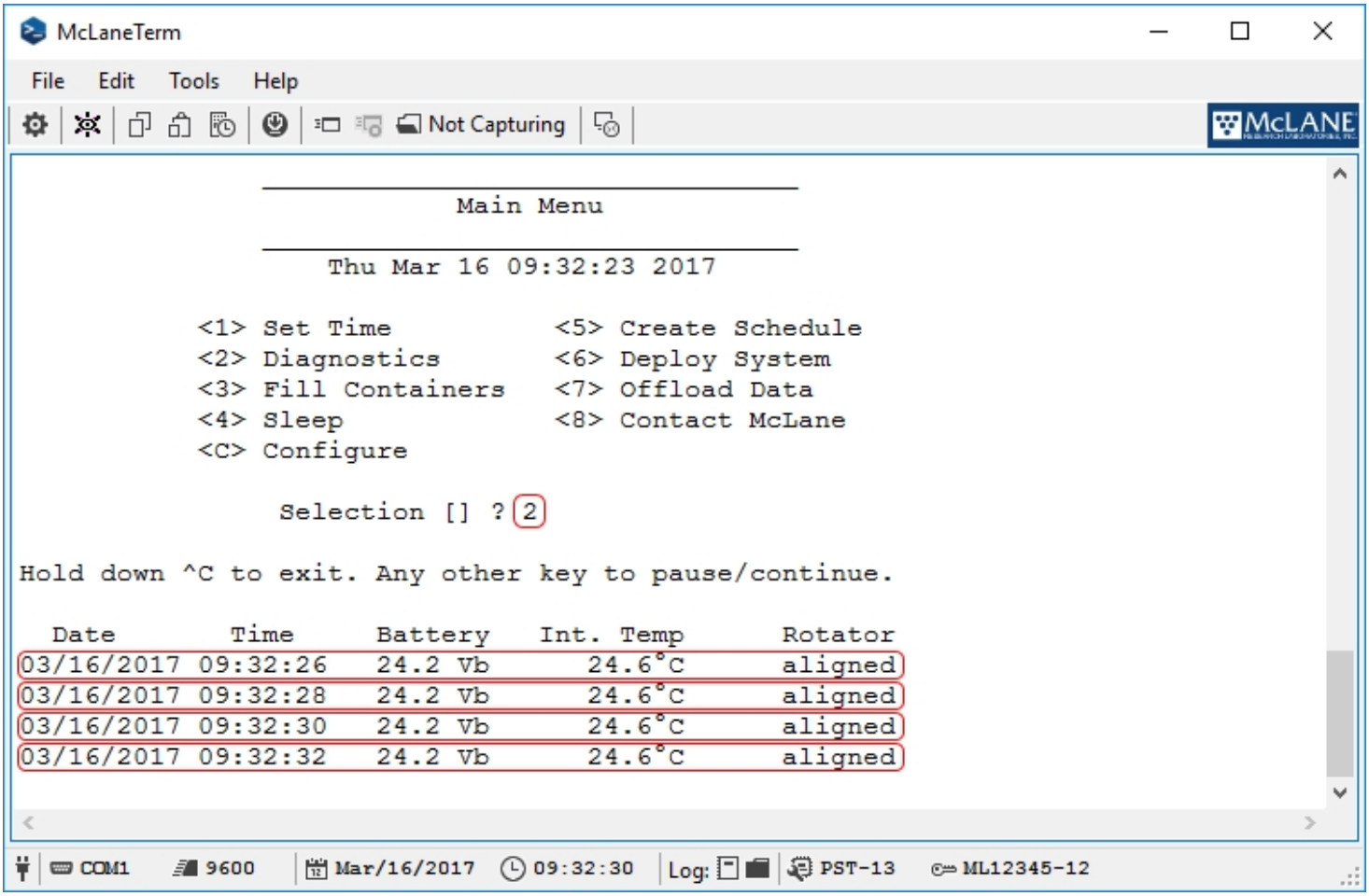
Using the Terminal Window

All text entered into the Terminal window is forwarded immediately to the connected instrument using the serial communication parameters defined in the Settings window. McLaneTerm does not echo typed characters in the Terminal Window and only displays information streamed by the connected device.

Using the Terminal Window content:
Entering text
Copying and Pasting Text

Entering text

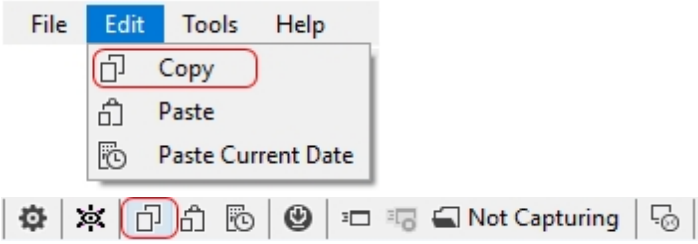
Under normal operation, text typed in the Terminal Window will be displayed when an instrument is connected. McLaneTerm will also display all serial data sent by the connected instrument independent of user interaction.
In the example shown next, 2 was typed in the terminal window and sent to the connected instrument; in return, the instrument began streaming diagnostic information.



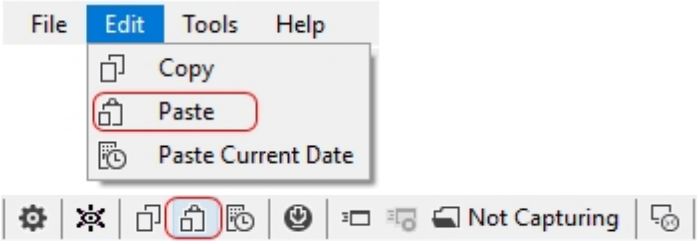
Copying and Pasting Text

McLaneTerm forwards all control characters to the connected instrument, including Ctrl+C and Ctrl+V. As a consequence, copying and pasting text in the Terminal Window is achieved using the following options:

1. Copy:
Can be accessed from the Main Menu and Toolbar. If there is no text selected in the Terminal Window, all content is copied to the Clipboard. If a selection is made, only the selected text is copied.



2. Paste:
Can be accessed from the Main Menu and Toolbar. All text content on the Clipboard is sent to the connected instrument.



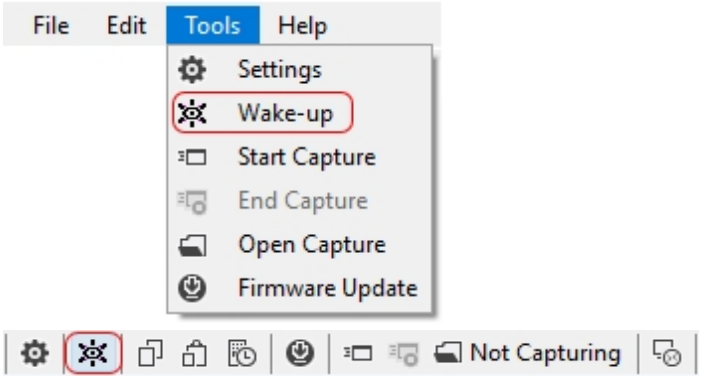
Using Commands

McLaneTerm can send a wake-up command and paste formatted date and time to the connected McLane instrument.

Using Commands content:
Wake-up
Paste Date/Time

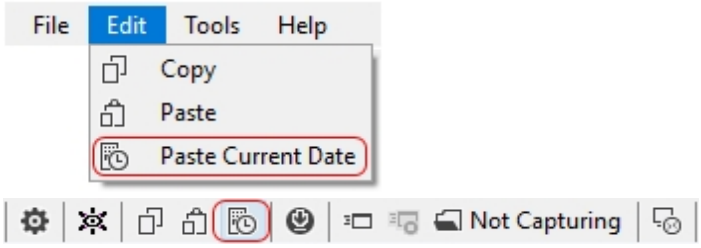
Wake-up

As an alternative to using the Terminal Window and typing the wake-up character (Ctrl+C), you can use the Tools Menu or the Toolbar to wake-up your connected McLane instrument.

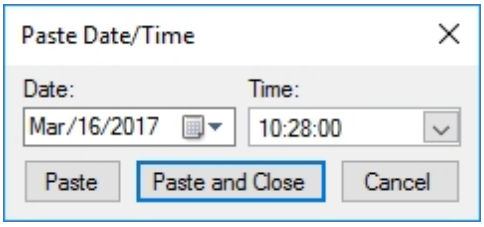


Paste Date/Time

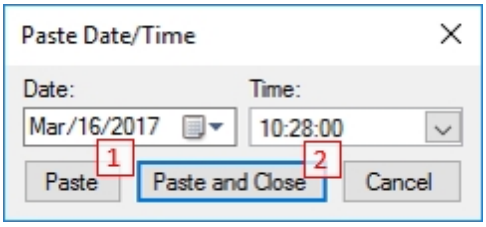
The Paste Date/Time function in the Edit Menu and Toolbar sends the current date and time to the connected McLane instrument.



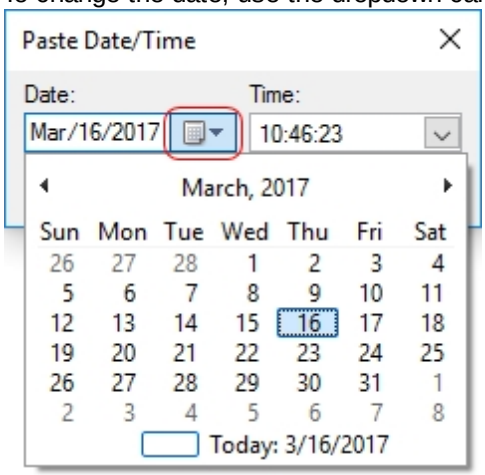
The Paste Date/Time Dialog sends your computer's current date and time to the connected instrument. A special date and time can also be selected.



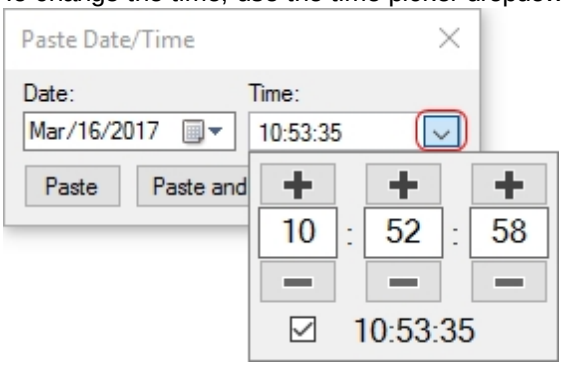
By default, the Paste Date/Time Dialog contains your computer's current date and time. Clicking the Paste button (1) will send the displayed date and time to the connected instrument and leave the Dialog open so multiple dates/times can be entered consecutively. The Paste and Close button (2) will close the Paste Date/Time dialog after sending the selected value to the connected instrument.



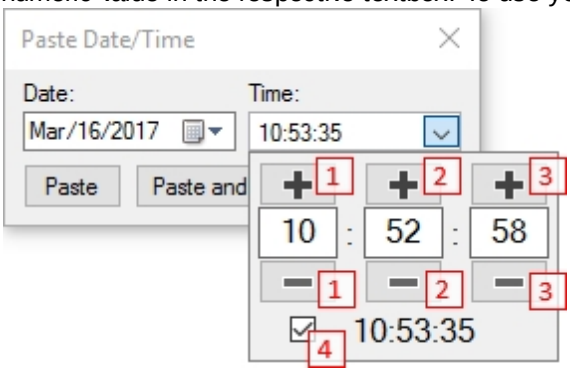
To change the date, use the dropdown calendar to choose the year, month and day.



To change the time, use the time-picker dropdown to choose the hours, minutes and seconds.



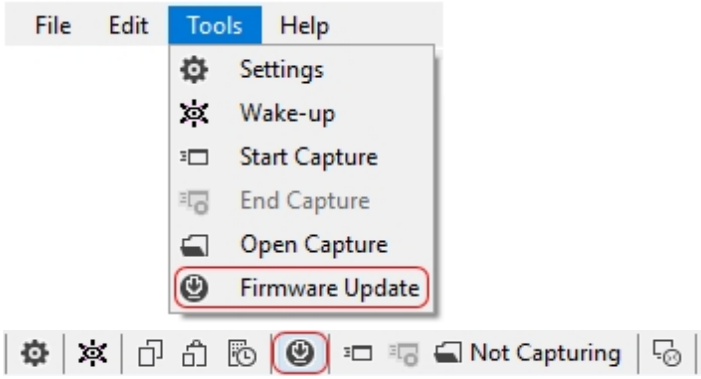
Changing the time can be done by using the (+) and (-) buttons for hours (1), minutes (2) and seconds (3), or by entering the numeric value in the respective textbox. To use your computer's current time click the checkbox (4).



Firmware Update

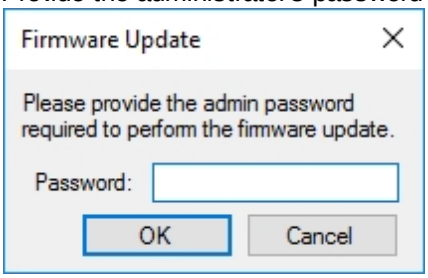
McLaneTerm can be used to update the firmware on your connected McLane instrument.
In order to flash new firmware to a connected instrument, you will need a compatible Firmware installation file. Contact McLane for Firmware updates.

The Firmware update function can be launched from the Tools Menu or the Toolbar.

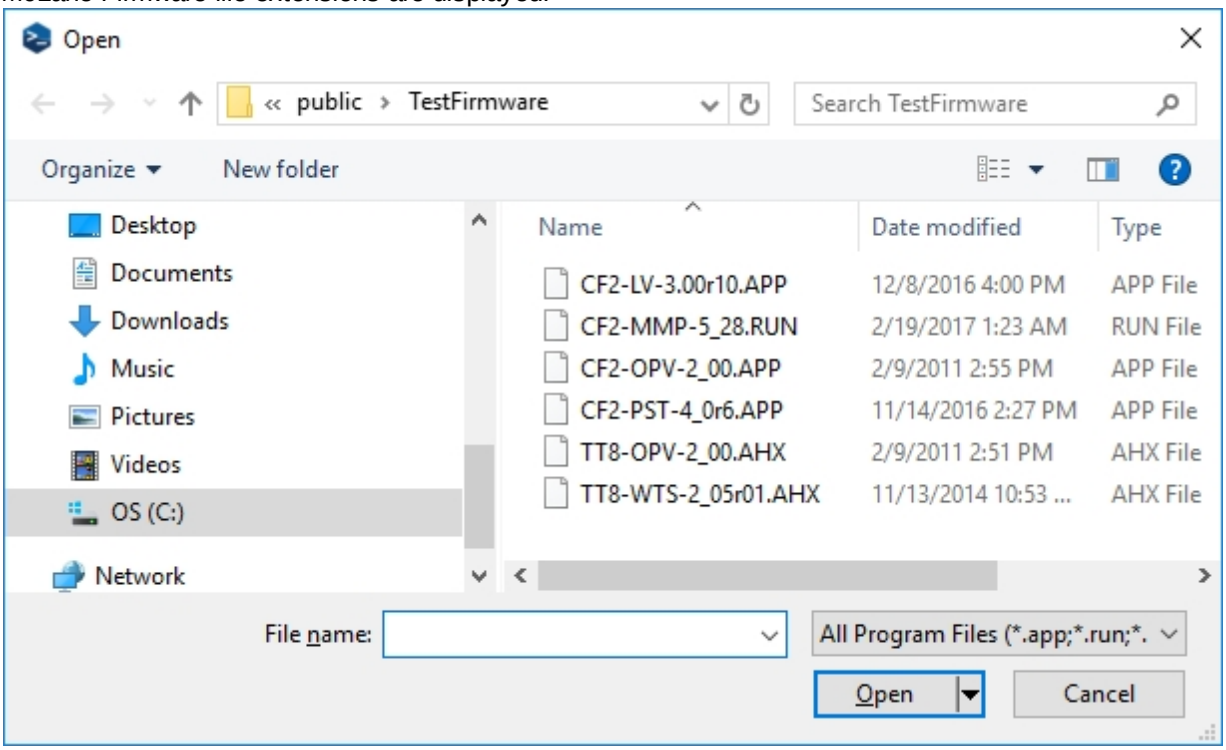


Firmware Update contains the following steps:

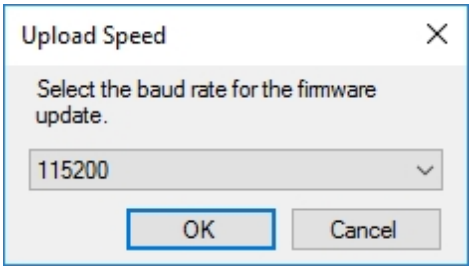
1. Admin Password:
Provide the administrator's password required to initiate the firmware update. Contact McLane for Firmware compatibility.



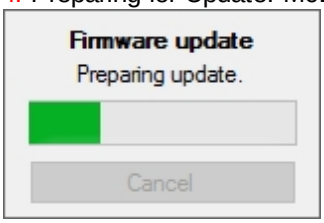
2. Choose the Firmware binary file compatible with the connected McLane instrument from the file browser dialog. Only valid McLane Firmware file extensions are displayed.



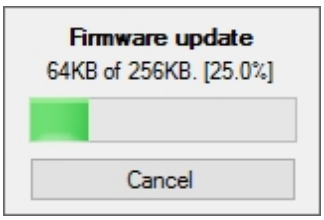
3. Choose the Firmware upload baud rate. On inconsistent connections, the baud rate can be lowered to minimize the potential for transfer errors. This dialog will always default to the highest baud rate supported. The Firmware upload baud rate dialog displays for instruments that allow the baud rate change only.



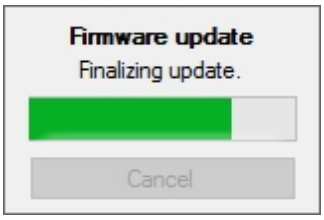
4. Preparing for Update. McLaneTerm checks the Firmware file and prepares it for uploading to the connected instrument.



5. File Transfer. The Firmware file is transfered to the connected instrument and the progress bar tracks the transfer process.



6. Finalizing Update. McLaneTerm checks the connected instrument for a successful update and attempts to return to the Main Menu.



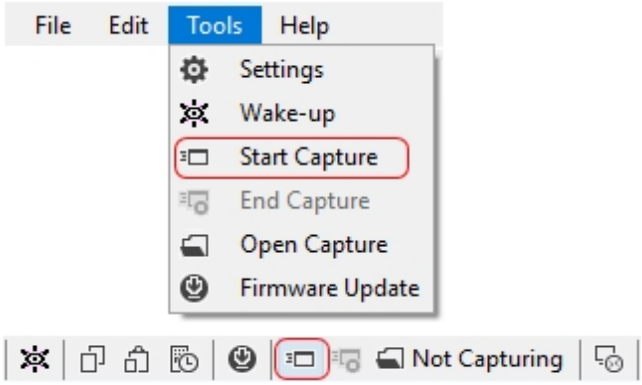
Creating a Capture File

With McLaneTerm, you can capture content from the Terminal Window and save it to a file. All Capture functions can be found on the Tools Menu and Toolbar.

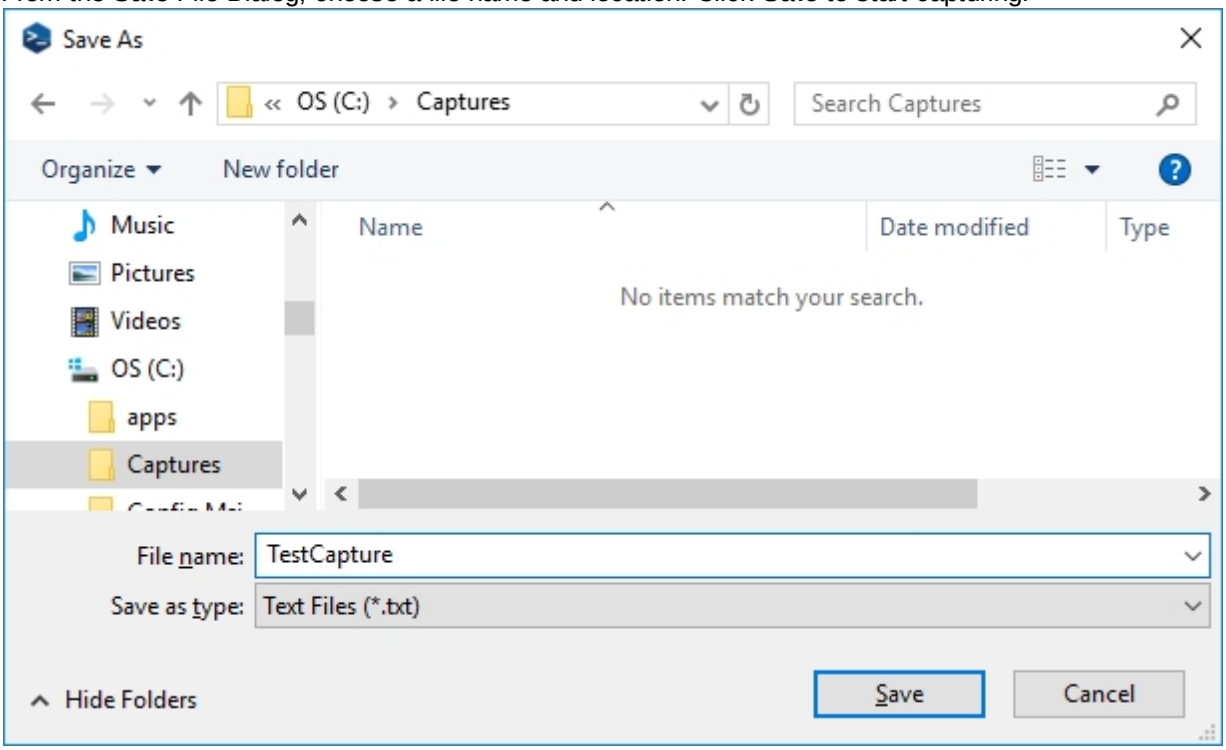
Creating a Capture File content:
Start Capture
Stop Capture
Open Capture

Start Capture

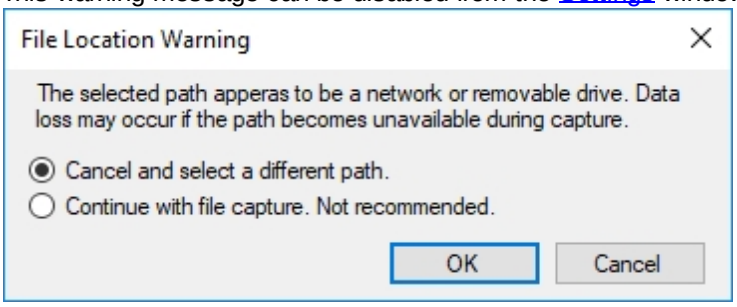
Start Capture:



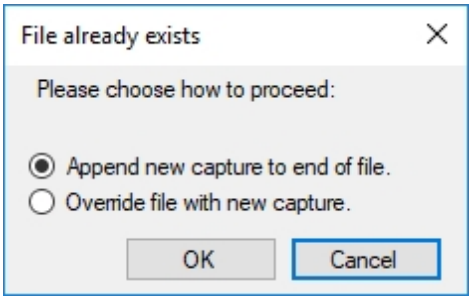
From the Save File Dialog, choose a file name and location. Click Save to start capturing.



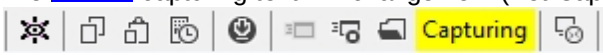
If choosing a network or removable storage drive, McLaneTerm will ask for confirmation.
This warning message can be disabled from the Settings window.



If choosing a preexisting file, McLaneTerm will ask if the file should be overwritten or content should be appended.

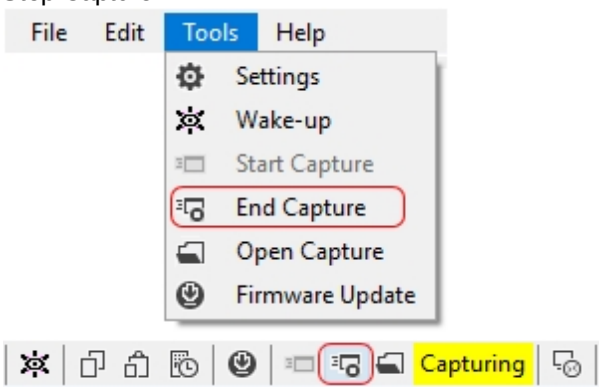


The Toolbar capturing text will change from (Not Capturing) to (Capturing) and be highlighted yellow.



Stop Capture

Stop Capture:

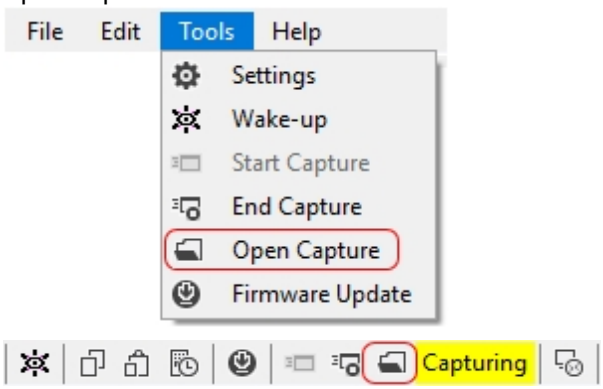


The Capture File is released for editing.

The Toolbar capturing text will change from (Capturing) to (Not Capturing).

Open Capture

Open Capture File:



The capture file is opened using your computer's default application for handling text files.

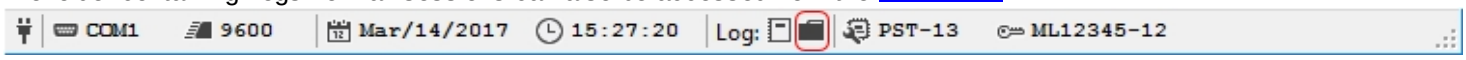
You can open the capture file even during an active capture.

Session Log

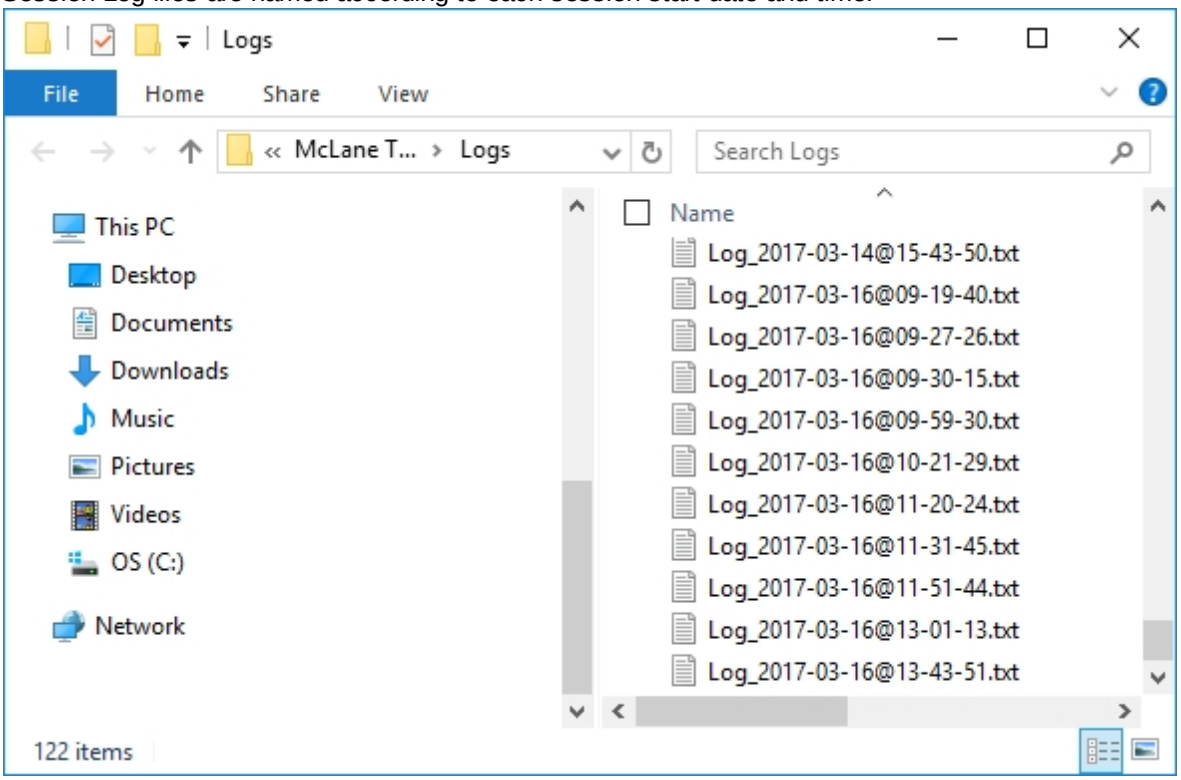
Along with the user chosen Capture File, McLaneTerm will maintain a Session Log with all the content from the Terminal Window.

The Session Log can be accessed from the Status Bar.

The folder containing Logs from all sessions can also be accessed from the Status Bar.



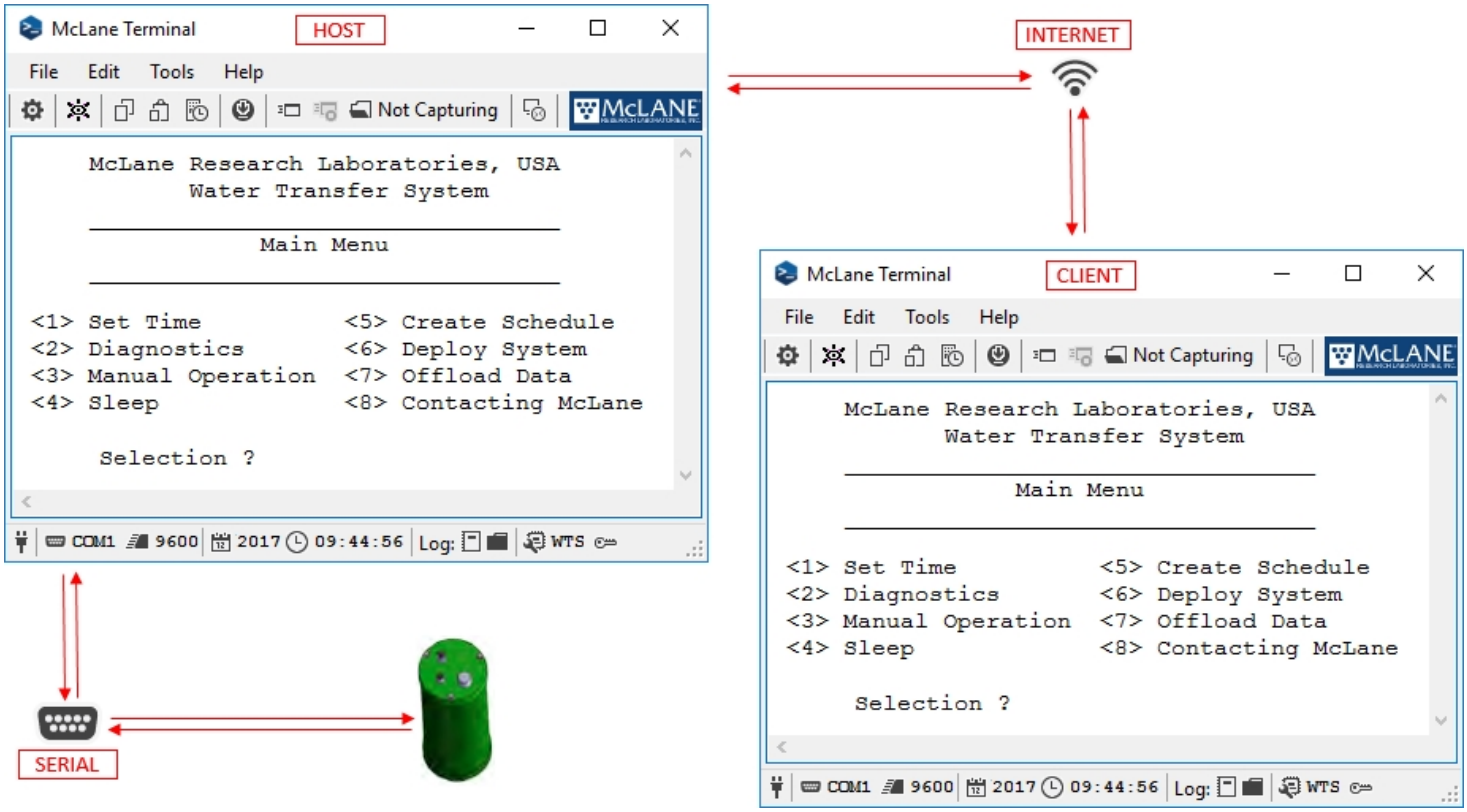
Session Log files are named according to each session start date and time.



Using a Remote Terminal Session

McLaneTerm can connect to a McLane instrument remotely over an Internet connection.

For Remote Access, you will need:
- One instance of McLaneTerm connected to your instrument's serial port on a computer with an active Internet connection. (Host). See the instrument's user manual for serial port connection instructions.
- One instance of McLaneTerm running on a computer with an active Internet connection. (Client).

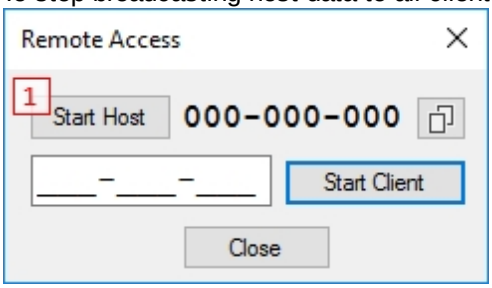


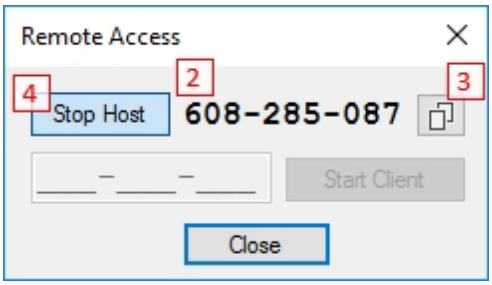
Using a Remote Terminal Session content:
Host Mode
Client Mode

Host Mode

Starting and stopping a Host:
The Remote Access dialog can be opened from the Toolbar.

In the Remote Access dialog, click the Start Host button (1). The Host ID (2) will be needed to initiate communication with a client.
Clicking the Copy button (3) will place the Host ID in your computer's clipboard.
To stop broadcasting host data to all clients, click the Stop Host button (4). All connected clients will be disconnected.





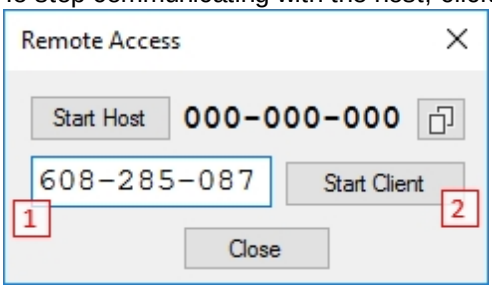
When running in Host mode, the Toolbar in McLaneTerm will display the word: "Host" followed by the number of connected

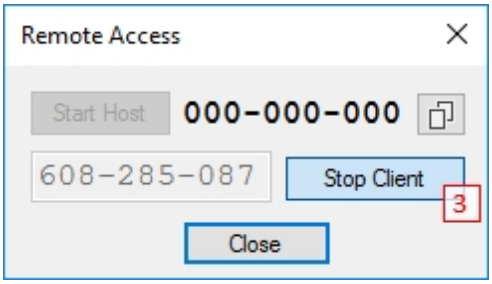
clients. This text will update automatically as client connections are opened and closed.

Client Mode

Starting and stopping a Client:
The Remote Access dialog can be opened from the Toolbar.

In the Remote Access dialog, enter the Host ID from the connected host (1) and click the Start Client button (2).
To stop communicating with the host, click the Stop Client button (3).





When running in Client mode, the Toolbar in McLaneTerm will display the word: "Client", all local serial communication will be stopped and you will not be able to open Settings and Firmware Update.