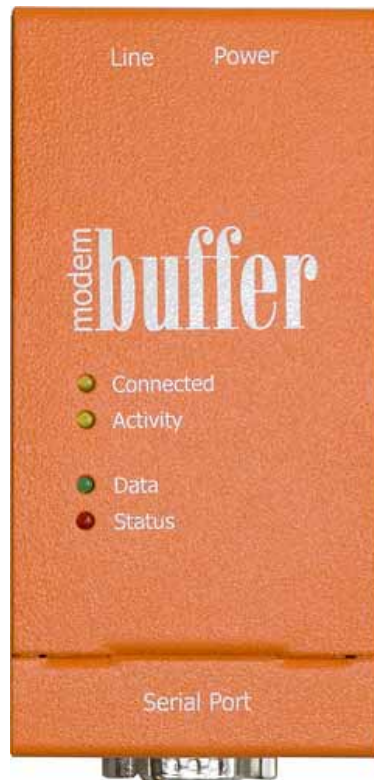




ModemBufferUtility Manual



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Version 1.0.4 and above

Issue 01

Document History

Issue	Date	Comments
01	08-Apr-04	Initial Release. Version 1.0.4

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Overview

The ModemBufferUtility provides a user friendly way of setting up a ModemBuffer. All settings are displayed with information in an html style form.

In addition to register editing, the utility allows the saving of ModemBuffer configurations, plus the ability to use a template that will highlight the fields that need changing. This greatly simplifies bulk programming of ModemBuffers.

The utility can communicate with the ModemBuffer via direct serial, dial-up modem, or TCP/IP connection.


A 32-bit Windows operating system is required, and an installed and working modem.

Installation and Usage


Installation

Installation uses the standard Windows® setup procedure.


Just double click the "`setup_modembufferutility.exe`" application and follow the on-screen prompts.

The program shortcut will appear in a group off Programs: "Scannex / ModemBuffer Utility" - 

Usage

The utility provides two display views: Standard and Advanced. Switch between the two views with the menu option "ModemBuffer / Advanced" or by clicking the toolbar icon .

Connecting to the ModemBuffer

The first step is to connect to the ModemBuffer. Use the menu option "Connection / Connect", or press the toolbar icon .

Connect to ModemBuffer

You have the choice of three connection methods:

- 1) Modem Dial-up
- 2) Direct Serial debug
- 3) Direct TCP/IP

Modem Dial-up

Ensure you have a working modem installed in your PC first.

Choose the dial-up connection to use. If you wish to create a new connection specifically for configuring ModemBuffers, press the "New" button and follow the Windows' Wizard to create a new connection. Since the tool allows you to dial to any number using one connection, it is helpful to name the new connection "ModemBufferUtility" for easy identification later.

To override the connection's telephone number, username, and password enter values in the appropriate fields of the dialog. The username and password are those entered in the ModemBuffer and provide authentication at the PPP (PAP or CHAP) level. The factory shipped defaults for these are "**user**" and "**password**".

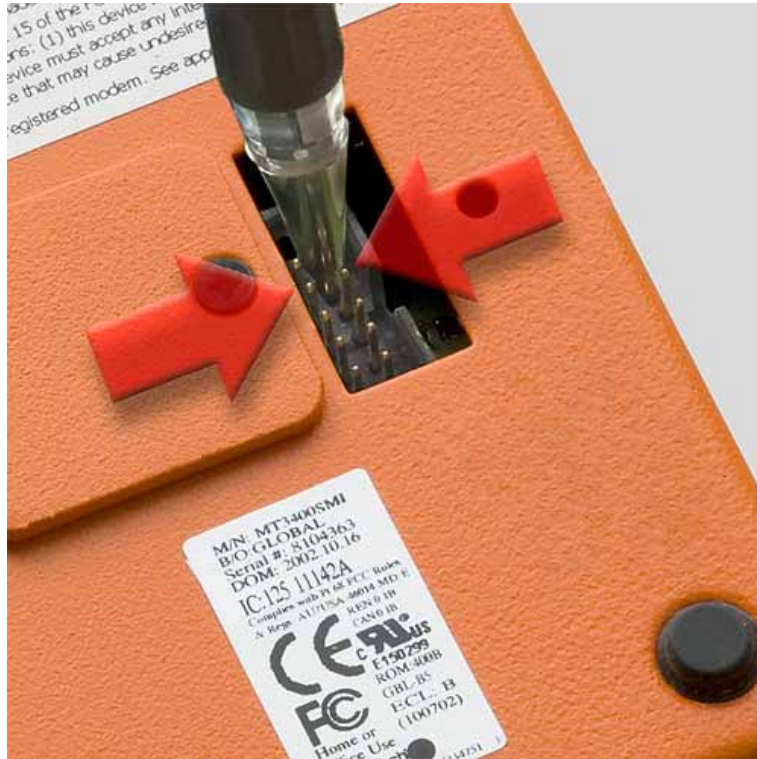
Pressing the "Dial" button will proceed to the dialling phase. If successful you will be connected to the ModemBuffer and asked for the terminal password. This terminal password is separate from the PPP username and password. The factory default for the password is "**secret**".

Direct Serial debug

If you need to access the ModemBuffer directly through the serial port, use the "Direct Serial debug" option. This mode is especially useful for diagnosing PPP connection issues as the serial debug mode includes extra debug information that is otherwise unavailable. However, this mode requires a physical intervention with the ModemBuffer.

Before clicking the "Connect" button, serial debug mode must be enabled on the ModemBuffer. Unscrew the small cover underneath the ModemBuffer, and short out the second two pins from the end furthest from the serial connector. A ball point pen does the trick nicely (it is also okay to short the top pins furthest away from the serial connector).

Warning: Shorting other pins may result in a reboot and the loss of any stored data.



If this procedure has been followed correctly the red and green LEDs will alternately flash.

When the LEDs are flashing, select the COM port and click the "Connect" button in the utility's dialog box. Serial debug mode does *not* require any further passwords.

Direct TCP/IP

If the ModemBuffer is connected in some other means, or if it has RADiO dialled back into your PC, you can use the "Direct TCP/IP" option.


Enter the host name or address and click "Connect". When connected you will be asked for a password. The factory default is "**secret**". (See the section "Recovering Lost Passwords".)

Standard View

The standard view shows the register settings in HTML format within the application's own browser.


Within standard view there are two main sub-views: the Status and the Registers.

Status

Use the menu option "ModemBuffer / Status", or click the toolbar icon  to obtain the status.

The ModemBuffer will be interrogated and the status information displayed in HTML form.

Registers


Use the menu option "ModemBuffer / Registers", or click the toolbar icon  to obtain the registers.

The internal registers will be retrieved from the ModemBuffer and displayed in an HTML form.

Scroll through the form, making any adjustments required, and at the bottom click the "Send to ModemBuffer" button to submit the changes to the ModemBuffer and program the registers.



Loading Registers


A register set, or template, can be loaded from disk and displayed within the Register HTML form. The settings can be checked, updated, and submitted to the ModemBuffer.

Use the menu option "ModemBuffer / Load Registers", or click the toolbar icon  to select a file to load.

Default templates have been provided for email, FTP, and FTP with notifications setups. Each template will highlight the fields you need to review before sending to the ModemBuffer.

Saving Registers

Immediately after retrieving the current register settings from the ModemBuffer (using the Registers  option), you can save the settings to disk for backup. These settings are stored in plain ASCII text, and can be edited with Notepad, and loaded using the Load Registers  option.

Either use the menu option "ModemBuffer / Save Registers" or click the toolbar icon .

Warning: If you retrieve the registers and then make changes within the form without submitting the form to the ModemBuffer those changes are **not** stored. Only the original settings, as received from the ModemBuffer, are actually saved.

For details on creating highlighted templates for bulk programming, see the subsequent sections.

Recovering Lost Passwords

If you have lost the password and need to gain access to the ModemBuffer there is a failsafe mode:

- Power off the ModemBuffer
- Disconnect the serial port from the ModemBuffer
- Power up the ModemBuffer
- Connect to the ModemBuffer within 10 minutes. Within this time-frame it will accept any password.

Advanced View

The advanced view provides a simple terminal emulation, allowing direct communication with the ModemBuffer. This is especially useful for retrieving diagnostic data, or for debugging PPP connections through the serial-debug method.

The left pane is the terminal window. Select the panel with the mouse and type. For example, typing "HELP" and pressing return should show the ModemBuffer help screen.


The middle and right panels are only displayed if you are connected through the serial-debug mode. The middle panel is for modem interrogation. Type in a command in the top edit box (such as "ATI6?" and press the "Send" button). Modem responses appear in the memo field below.

Finally, the right hand panel shows event information. Events are produced when the ModemBuffer begins dialling, answers a call, or establishes PPP connections. This information is extremely useful in diagnosing connection problems.

Note: All three memo boxes have a right-mouse-click context menu that allows for copying to the clipboard and clearing the memo.

Other commands


Diagnostics to Clipboard

This command, menu “ModemBuffer / Diagnostics to Clipboard” or icon , will request the status, registers, and diagnostic information from the ModemBuffer and place the information on the clipboard for pasting into another application.

The clipboard text is available in RTF or plain text. If you paste into an RTF aware application (like Wordpad or Microsoft Word) then the colours of the diagnostic information are preserved. However, you can also paste the text straight into Notepad, or an email client.

This information is essential in diagnosing problems.

Disconnect

Pressing the disconnect icon , or using the menu “Connection / Disconnect” will terminate the current connection. The exact action depends on the connection method:

Modem Dial-up

The utility will hang up the connection and release the modem.

Serial debug

The utility will request the ModemBuffer to quit the debug mode (send the “BYE” command), and releases the serial port.

TCP/IP

Simply disconnects the current TCP/IP terminal session. The actual connection is left alone (whether that is an inbound modem connection, or LAN connection).

Creating Templates

Once the register set is saved from the utility, the ASCII text file can be edited using any text editor, such as Notepad.

When loading the register file, the application looks for the special text “;**” (semicolon-star-star) and will highlight any register in yellow that has this text. For example, if you have a standard template which only needs the ModemBuffer box name to be different for each of 100 ModemBuffers, edit the register file and append ;** on the r100= line. When that file is loaded, the r100 line will be highlighted.

File locations

The template and register files are stored in a subdirectory under the utility's directory. If the utility was installed in “C:\Program Files\Scannex\ModemBufferUtility”, then the settings will be in “C:\Program Files\Scannex\ModemBufferUtility\Settings\v1.00”.

The final subdirectory reflects the main version number of the parameter set, *not* the firmware version. Should a firmware version provide a radically different, or extended set of parameters, the parameter version number will increase.

Files will have the extension .MBR (ModemBuffer Registers).