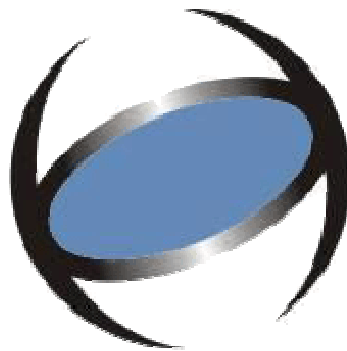


Bematech Virtual Serial Driver Setup



BemateCH

Virtual Serial Driver for Bematech
MP-4000 TH POS Printers

Summary

1. Introduction	1
1.1 Supported Printer Models	1
1.2 Supported Operating Systems	1
1.3 Glossary	1
2. Installation/Uninstallation	2
2.1 Running Installation Program.....	2
2.2 Running the uninstall utility	3
3. Device Port Configuration	4
3.1 Modifying serial port settings	5
3.1.1 Setting the basic parameters	6
3.1.2 Settings the advanced parameters	6
3.2 Modifying Bematech Virtual Serial Port Driver settings	7
3.2.1 Setting a parallel port as the target device	7
3.2.2 Setting an USB port as the target device.....	8
3.2.3 Setting a network port as the target device	8
3.3 Verifying driver details.....	9
4. Information for the programmer	9
5. References.....	11

1. Introduction

Bematech Virtual Serial Driver Setup is a utility that allows the user to install the Virtual Serial Driver for Bematech MP-4000 TH POS Printers.

This software can be used to set and use the USB, Ethernet and Parallel interface by the serial communication mode.

To obtain the Bematech Virtual Serial Driver, please visit the Bematech webpage at www.bematech.com.

IMPORTANT: To use Bematech Virtual Serial Driver with USB interface you must update printer's firmware to version 2.0 or greater

1.1 Supported Printer Models

Bematech Virtual Serial Driver can be used only with MP-4000 TH Printer

1.2 Supported Operating Systems

Bematech Virtual Serial driver can be installed on a computer running Windows XP with SP2/ WEPOS and Windows Vista 32 bits

1.3 Glossary

This section explains the meaning of some important terms which will be mentioned throughout the document. These terms are described on the table below, presented in alphabetical order.

Term	Description
Virtual Port	Bematech Virtual Serial Port Driver translate serial requisitions to USB, Ethernet and parallel port requests

2. Installation/Uninstall

This section explains how to install the Bematech Virtual Serial Port Driver.

2.1 Running Installation Program

- 1) Initialize the Bematech Virtual Serial Port Driver installation program. The only pre-requisite to install the software is to be using a Windows XP with SP2 / WEPOS or Windows Vista (32 bits only). Press "Next" button.



Figure 1 - Initial install window

- 2) The installation program will allow the user to change the installation location, if necessary. (Figure 2).



Figure 2 - Changing installation folder

- 3) During installation, the following message will appear. Click the "Continue Anyway" button.



Figure 3 - Confirming Driver Installation

- 4) The image below indicates that the installation finished successfully. The next section explains how to configure the port for use.



Figure 4 - Installation Finished Successfully

2.2 Running the uninstall utility

- 1) Initialize the Bematech Virtual Serial Driver uninstall utility. This can be done in two ways:
 - a. Go to Start > All Programs > Bematech > MP-4000 TH > Virtual Serial Driver > Uninstall
 - b. Open the Control Panel in Start > Settings > Control Panel. Double-click "Add or Remove Programs". Select "Bematech Virtual Serial Driver 1.0" and then click the "Change/Remove" button.

- 2) A window will appear asking to confirm the removal of the driver. Click "Yes". See Figure 5.



Figure 5 - Uninstall confirmation window

- 3) At the end of the uninstall process the window on Figure 6 will appear. Click "OK" to finish the uninstall procedure.



Figure 6 - Uninstall finished successfully

3. Device Port Configuration

This section explains how to set the Bematech Virtual Serial Port Driver configuration. Configurations can be accessed on the device's "Properties" window. In order to open this window, follow the steps below:

- 1) Run the "Device Manager" on Start > Programs > Bematech > MP-4000 TH > Virtual Serial Driver.

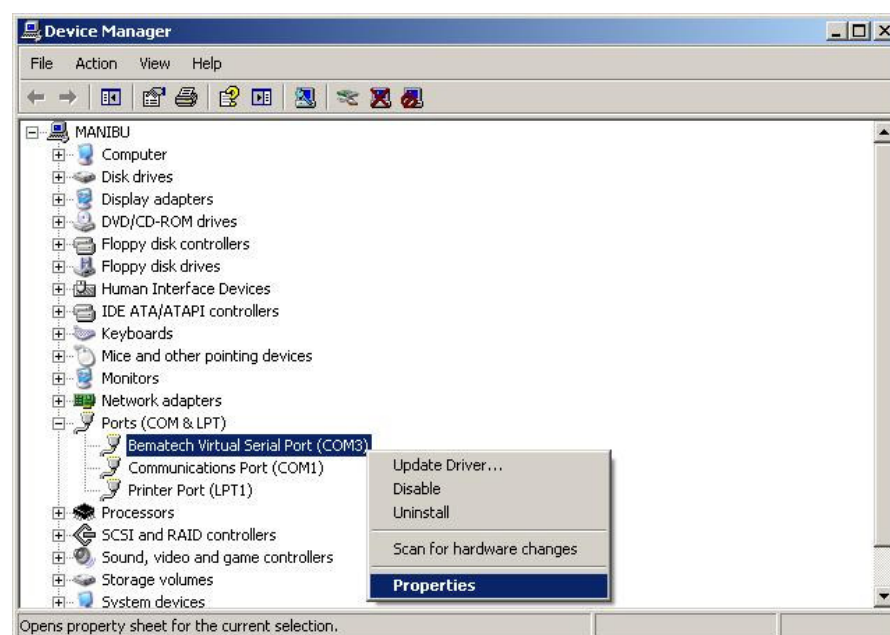


Figure 7 - Opening the "Properties" window

- 2) Open the "Ports (COM & LPT)" tree, right-click the "Bematech Virtual Serial Port (COM3)" device and click "Properties", as showed on Figure 8



Figure 8 - The "Properties" window

NOTE: The port number used in this manual is COM3, but it might be different on each system.

3.1 Modifying serial port settings

The "Port Settings" tab contains configuration of a generic serial port, such as baud rate, data bits and flow control. In this tab it is possible to change the serial port number.

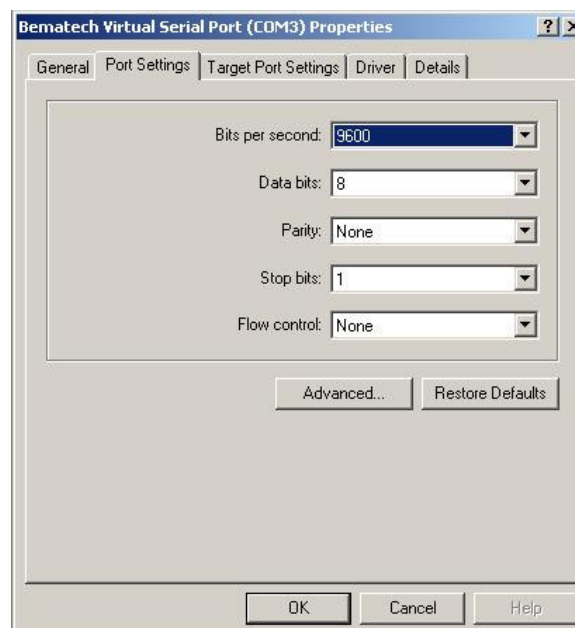


Figure 9 - Serial "Port Settings" tab

3.1.1 Setting the basic parameters

In order to change the basic parameters showed on Figure 9, proceed as indicated:

- 1) Set the properties, such as "Bits per second" or "Data bits", to the desired values
- 2) Click the "OK" button.

3.1.2 Settings the advanced parameters

The advanced parameters are the FIFO buffer's size and the port number. In order to change these properties follow the steps below:

- 1) Open the "Advanced Settings" window by clicking the "Advance" button.
- 2) Change the buffer's size on the sliders, or the port number on the "COM Port Number" drop-down menu.
- 3) Click the "OK" button to apply the changes.

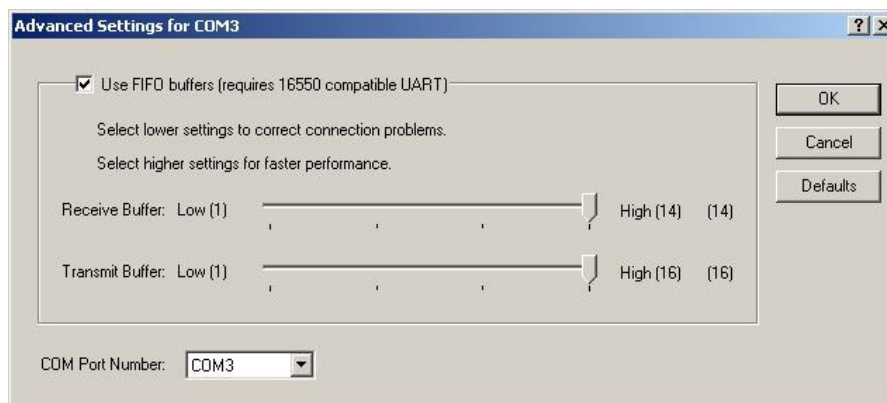


Figure 10 - Advanced Settings window

WARNING: if the port number is changed, it is STRONGLY recommended that the device is disabled and enabled again due to the behavior of the Microsoft DLL that handles the "Port Settings" tab. It was noticed that on Windows Vista the port may not be accessible by using an account different from the Administrator account, until the device is reloaded. This behavior occurs with any serial port, and not only with the Bematech Virtual Serial Port.

To reload the device, follow the steps below:

- 1) Repeat the steps to get to open the port properties.
- 2) Click "Disable"
- 3) The system will ask for confirmation to disable the device. Click "Yes".
- 4) Click "Enable"

3.2 Modifying Bematech Virtual Serial Port Driver settings

The “Target Port Settings” tab contains configurations related to the target port. In this tab it is possible to set the desired output device, which will be the virtual port interface target.

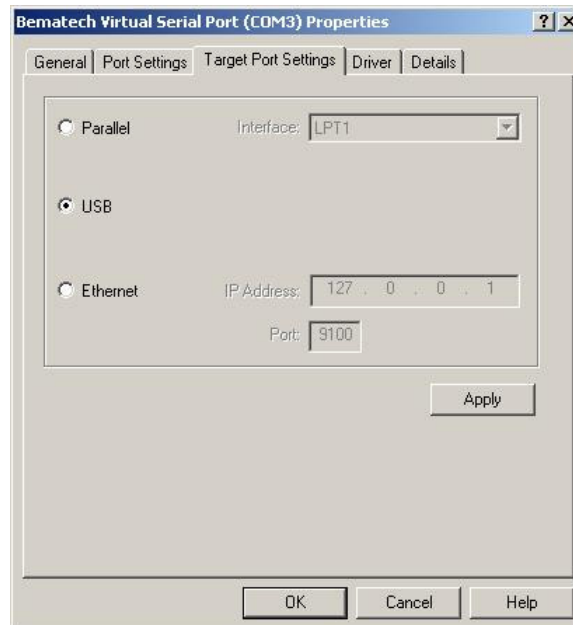


Figure 11 - Bematech Virtual Serial Port settings

3.2.1 Setting a parallel port as the target device

- 1) Select the “Parallel” option
- 2) The “Interface” drop-down menu will be enabled (Figure 12). Select the desired LPT port
- 3) Click the “Apply” button

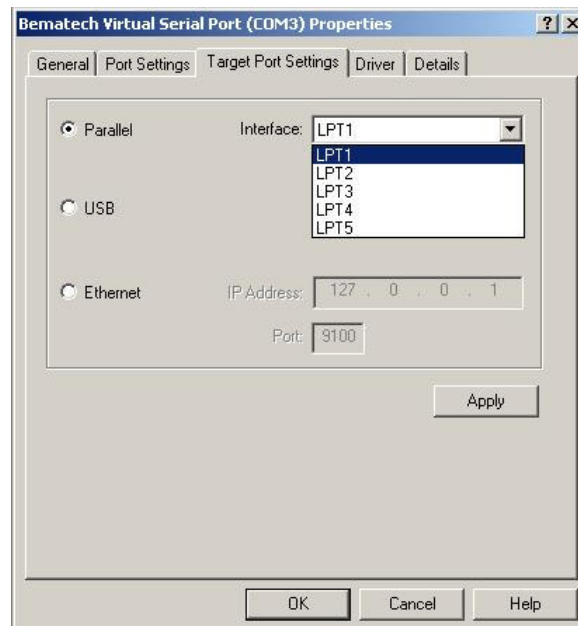


Figure 12 - Setting target to parallel port

3.2.2 Setting an USB port as the target device

- 1) Select the "USB" option. The system will automatically select and use the first USB printer available
- 2) Click the "Apply" button.

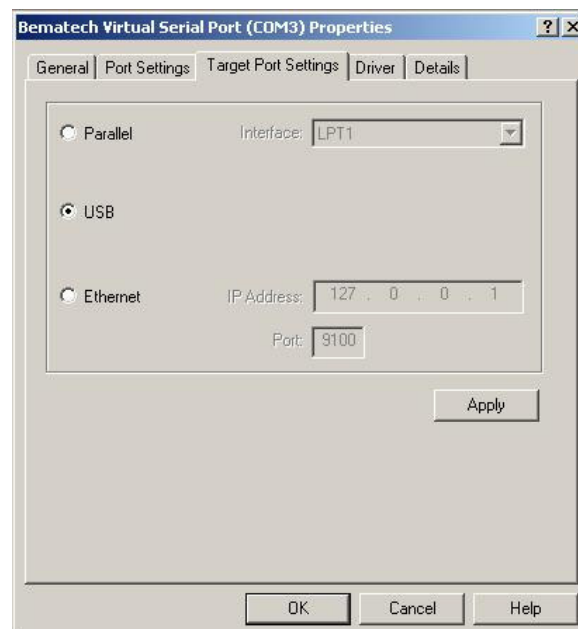


Figure 3 - Setting target to USB port

3.2.3 Setting a network port as the target device

- 1) To use a network printer, select the "Ethernet" option.
- 2) The "IP Address" and "Port" fields will be enabled (Figure 14). Insert the corresponding IP address and port:

3) Click the "Apply" button.

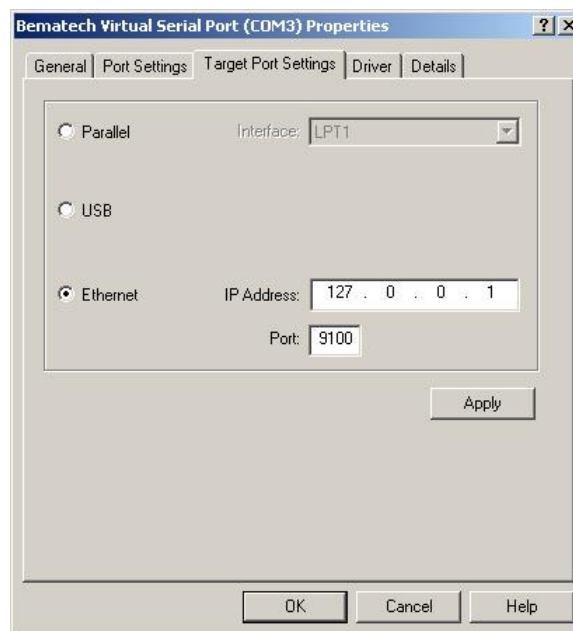


Figure 4 - Setting target to Ethernet

3.3 Verifying driver details

The driver details can be verified at the "Driver" and "Details" tabs. See Figure 15

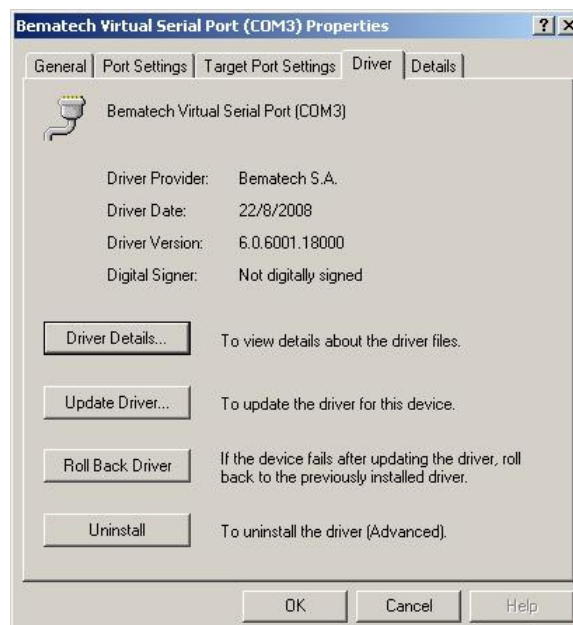


Figure 5 - "Driver" tab

4. Information for the programmer

The table 1 and 2 contains the support status of each function of the Win32 API. It also contains the API Communication Functions related to communicating with a serial port.

Table 1 - Win32 API

Function Name	Is supported?
CreateFile	Yes
CloseHandle	Yes
WriteFile	Yes
ReadFile	Yes
DeviceIoControl	Yes

Table 2 - Communication Functions

Function Name	Is supported?
BuildCommDCB	Yes
BuildCommDCBAndTimeouts	Yes
ClearCommBreak	No
ClearCommError	Yes
CommConfigDialog	Yes
EscapeCommFunction	No
GetCommConfig	Yes
GetCommMask	Yes
GetCommModemStatus	Yes
GetCommProperties	Yes
GetCommState	Yes
GetCommTimeouts	Yes
GetDefaultCommConfig	Yes
PurgeComm	No
SetCommBreak	No
SetCommConfig	Yes
SetCommMask	Yes
SetCommState	Yes
SetCommTimeouts	Yes
SetDefaultCommConfig	Yes
SetupComm	No
TransmitCommChar	No
WaitCommEvent	No

5. References

For further update of Bematech Virtual Serial Driver, visit
<http://www.bematech.com>