

IBM NetVista Kiosk 4835-120

Printer Setup & Configuration

Version 4.5
Based on Kiosk Printer Driver Release v1.04
Aug 1, 2001

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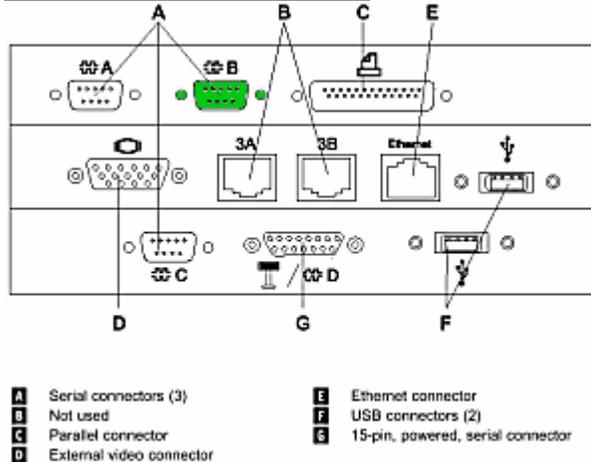
Overview:

Our Kiosk printer is designed primarily for being used as printing devices in public access terminals. One of the main features of this printer is the patented presenter module that prevents the document from being exposed to the customer until the whole document is printed and separated. The printer can be downloaded online with firmware, default parameters, logotypes, and character fonts.

The NetVista Kiosk thermal printer ships with the following defaults:

COM Port =	COM2	(Not displayed on test print)
Physical Port =	Serial Port B	(See Figure 1)
Baud Rate =	57,600	('57' on test print)
Handshaking =	XON/XOFF	('3' on test print)
Data Bits =	8	
Parity =	None	('0' on test print)

Figure 1: Physical Port Location



Printer Specifications:

Print Data

Printing method:	Direct, thermal print.
Resolution:	8 pixels/mm, 0.125 mm/pixel
Print speed:	Up to 50 mm per second
Examples:	
– 80mm:	length 100 mm, portrait: ~ 3.4 seconds
– 112mm:	length 210 mm, landscape: ~ 8 seconds
Print window width:	
80mm:	72 mm (576 pixels)
112mm:	104 mm (832 pixels)

Basic Functions

Basic character set:	IBM Character Set II
National characters:	13 substitute sets
Bar codes:	EAN8/13, (UPC-A), and Code 39
Others:	On-line load of firmware, default-parameters, character sets, and logotypes to flash PROM.
Drivers available:	Windows 95/98, Windows NT 4.0. and Windows 2000
Fonts:	Factory installed standard Arial 10, 12, 15 CPI proportional and 25 CPI fixed. User defined character fonts can be installed for a total of 8 font addresses.
Graphics:	
80mm	576 pixels per line, (203 pixels/inch)
112mm	832 pixels per line, (203 pixels/inch)

Step 1: Verify Printer Settings

The Kiosk Printer settings may have been changed inadvertently. Before using the Kiosk Printer, print a test page following the steps below to identify the printer's current settings:

1. Switch OFF the printer.
2. Ensure that the Print Head is down using the Print Head Handle (**See Figure 2**).
3. Ensure that the Paper Release Lever is in the default, vertical position (**See Figure 3**).
4. Press and hold the green Paper Advance Button (**See Figure 2**).
5. Switch the power on and continue to hold the paper advance button for at least 5 seconds or until the cutter has cycled and then release the paper advance button. This action produces a printout with technical data and the current settings.
6. Wait until printing stops. Save this printout for use in changing the settings.
7. Once the test print has completed, switch OFF the printer again, wait 5 seconds then switch the power back on. This will exit the printer test mode, and return to normal operation.

Figure 2: Location of Paper Advance Button

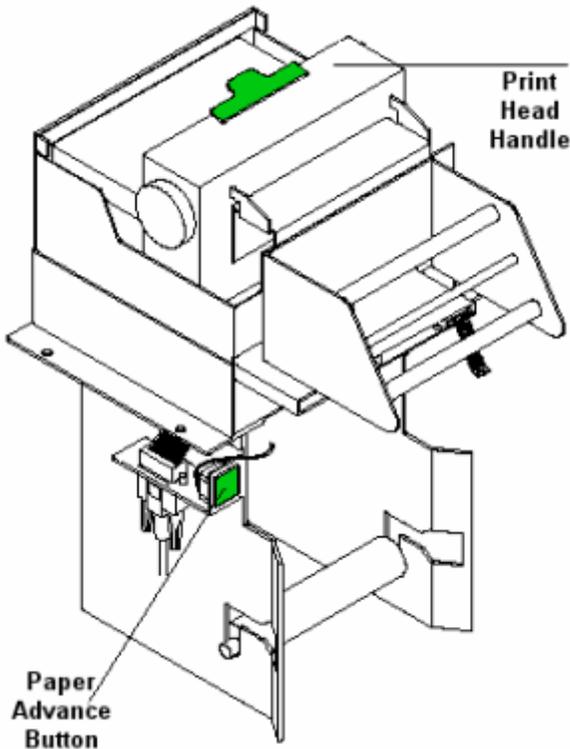


Figure 3: Paper Release Lever Location

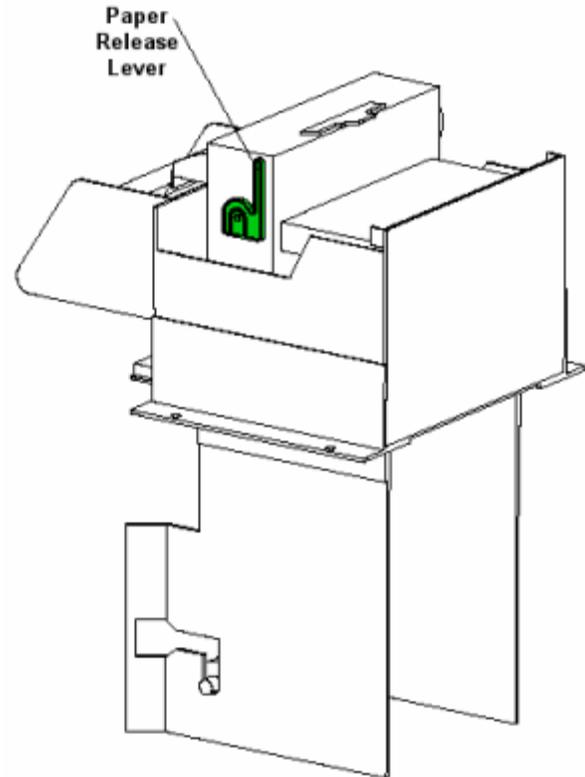


Figure 4: Sample Test Print - Default Settings

```

TTP5200
SWC728 Boot ver 1.4
Firmware SWC908-250 000310

Swecoin AB,
Box 545
192 05 SOLLENTUNA
SWEDEN

www.swecoin.se

Burntime 498 micro seconds
Printer width 104 byte/line

Max logo space 6143
256 kByte RAM
Installed character sets
0: TTP 5000 Font
1: 10 CPI Arial
2: 12 CPI Arial
3: 15 CPI Arial
4:
5:
6:
7:

Startup parameter settings:
n1 Printer Width: 112
n2 Char param: 0
n3 Character set: 0
n4 Not used: 0
n5 Language: 0
n6 Baud rate: 57
n7 Data bits: 8
n8 Parity: 0
n9 Handshaking: 3
n10 TOF markmax Fix: 128
n11 TOF markmin: 24
n12 Burn time: 5
n13 CR function: 0
n14 Page length n1: 3
n15 Page length n2: 32
n16 Line spacing: 0
n17..n32 Tab stop pos(10cpi):
 4, 8, 12, 16, 20, 24, 28, 32,
36, 40, 44, 48, 52, 56, 60, 64,
n33 Windows mode 1
n34 Min page len n1 3
n35 Min page len n2 32
n36 Auto cut aft FF 1
n37 Variable length 18
n38 ToF paper 0
n39 Presenter mtr on 0
n40 Landsc. width n1 6
n41 Landsc. width n2 144
Eject mtr calibrate 50

Logotypes loaded
No. Xsize Ysize Name

```

Highlighted Area Legend:

Printer Width - 60, 80 or 112 mm
Baud Rate - 1200, 2400, 4800, 9600,
19200, 38400 or 57600
Data Bits - 8 (Fixed)
Parity - 0 = None, 1 = odd, 2 = even
Handshaking - 2 = Hardware, 3=XON/XOFF

(Note: Only underlined digits should be used.)

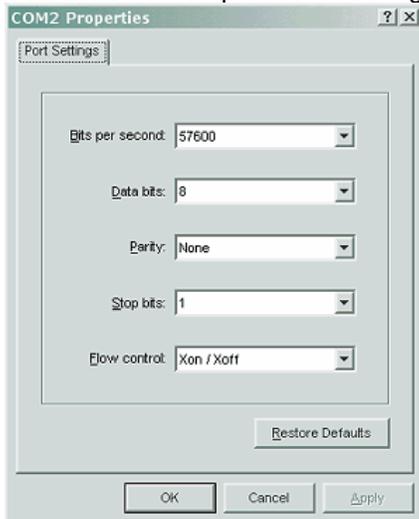
Step 2: Windows Port Settings

Microsoft Windows assigns default settings to COM2, which differ from that which is set on the Kiosk Printer. Therefore, prior to using the printer, you must correctly adjust the Port settings within Windows to match those that were provided in the test print from the printer.

Once the Windows Port settings are properly configured to match those set in the Kiosk Printer, you may proceed with installation of the appropriate drivers.

Windows 2000 (SP1)

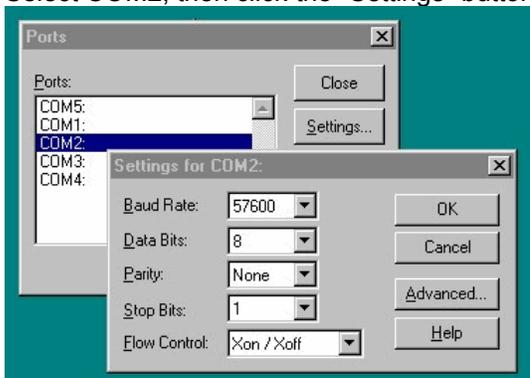
- Ensure that you are logged onto the system with Administrator privileges
- Click on Start - Settings - Printers to open the Printers Folder.
- Click on File - Server Properties
- Click on the tab for "Ports"
- Select COM2 and press the "Configure Port" button.



- Adjust each setting to match those provided on the Printer Test Page.
- Click the "Apply" button
- Click "OK"

Windows NT 4.0 (SP6)

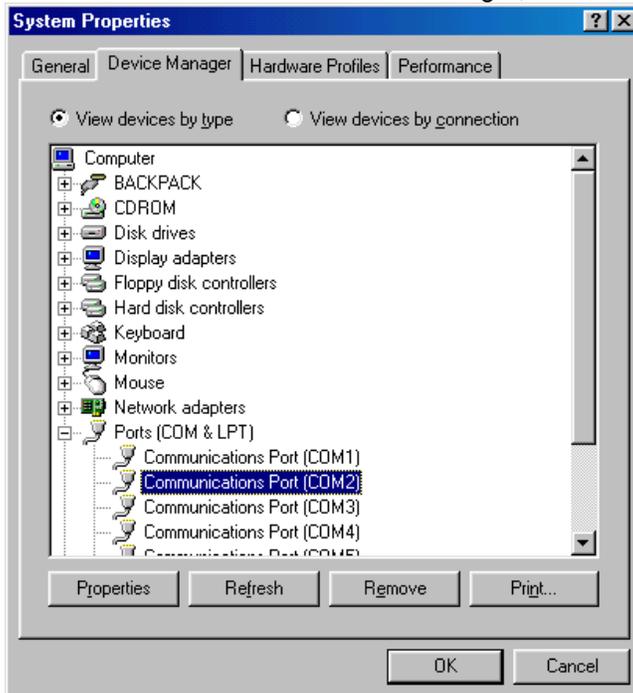
- Ensure that you are logged onto the system with Administrator privileges
- Click on Start - Settings - Control Panel
- Double click on "Ports"
- Select COM2, then click the "Settings" button



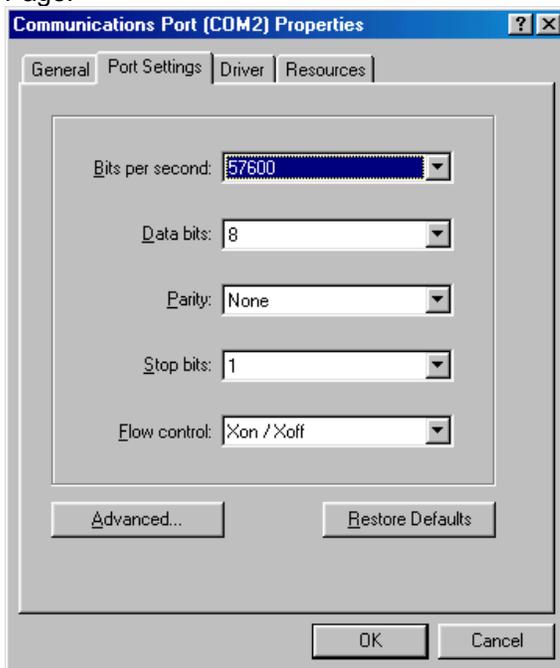
- Adjust each setting to match those provided on the Printer Test Page.
- Click "OK"
- Click "Close"

Windows 98 Second Edition

- Click on Start - Settings - Control Panel
- Double click on the "System" icon, and then click the "Device Manager" tab.
- Locate the Ports section of Device Manager, and then click "Communications Port (COM2)" in the list.



- Click the "Properties" button
- Click on the "Port Settings" tab and ensure that all of the settings match the values on the Printer Test Page.



- Click "OK".
- Click "OK".

Step 3: Windows Printer Drivers

To properly install the printer drivers available for the Kiosk Printer, please ensure that the procedure below is followed precisely.

Download the latest drivers:

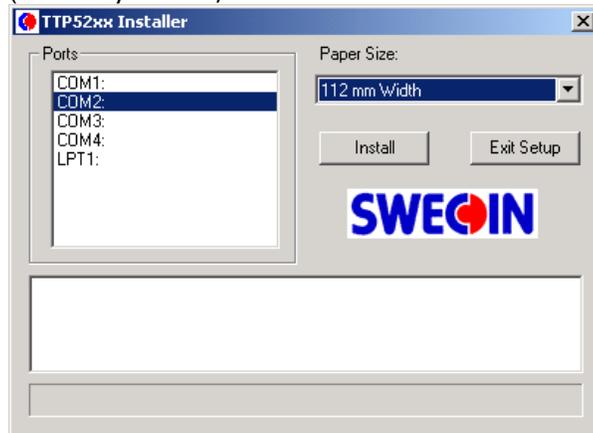
<http://www2.clearlake.ibm.com/store/support/html/kiosk.html>

Files available:

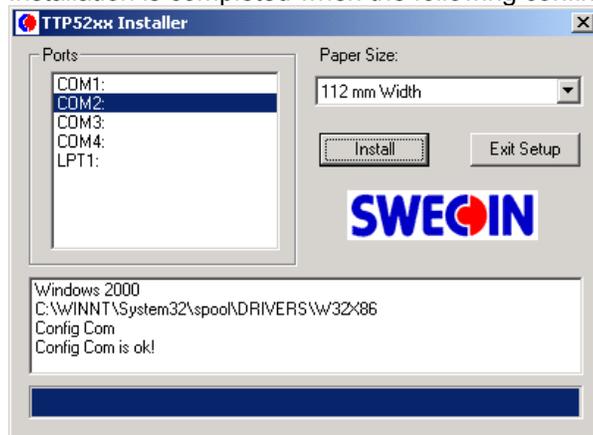
Kiosk Printer Drivers	Windows Drivers with support for Windows 2000 Professional, Windows 98 and Windows NT 4.0.
Setup Utility	Printer setup (firmware) configuration utility (TTP Editor). This utility is only needed for custom configurations or to correct printer settings that are not at appropriate default values.
OPOS Drivers	Not available at this time.
JavaPOS	Not available at this time.

Installing Windows Drivers:

1. Download and extract the latest drivers from the website listed above. By default these files will extract to the *C:\swecoin\bin* directory.
2. Launch the installation program "TTP52Installer"
3. Select the appropriate COM Port and Printer Width for your kiosk.
(Note: By default, the Kiosk Printer will be on COM2)



4. Click the "Install" button.
5. Installation is completed when the following confirmation appears in the status window:



6. Click the "Exit Setup" button to close the installation program.
7. You should verify that the Printing Preferences are set for the appropriate paper size. Follow the instructions below for the Operating System that you are using.

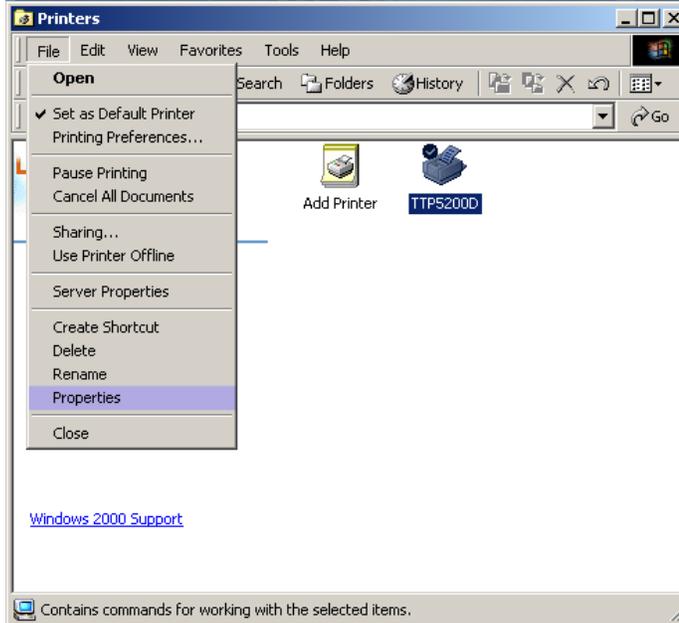
Uninstalling Windows Printer Drivers

1. To uninstall the Windows printer drivers, simply open the Printers Folder, and delete the appropriate Printer icon.
2. Reboot the system.
3. Done

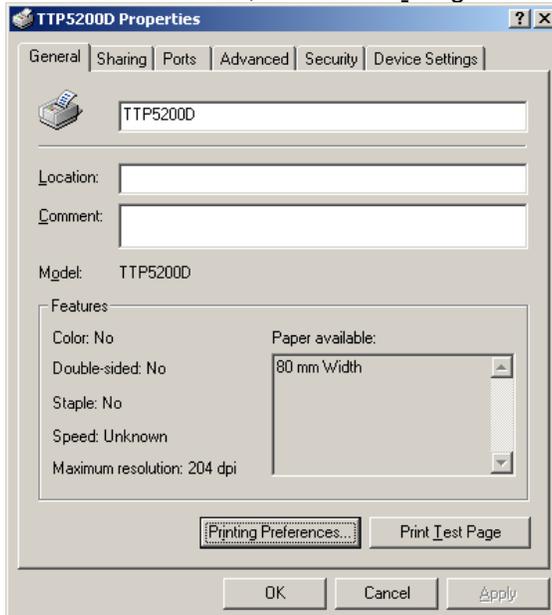
Verify Printing Preferences in Windows 2000 Professional:

(Skip to instructions for [Windows NT](#) / [Windows 98](#))

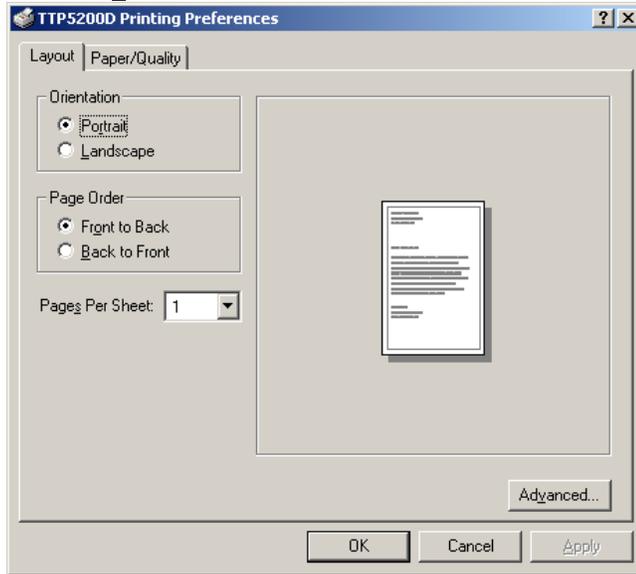
1. Follow the instructions above for “[Installing Windows Drivers](#).”
2. Click on the new printer to highlight it, then click on “File”, then “Properties”



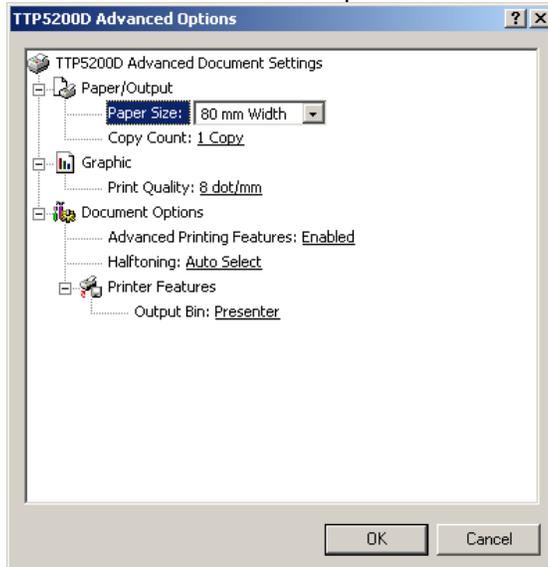
3. On the “General” tab, click the “Printing Preferences...” button.



4. Click “Advanced...”

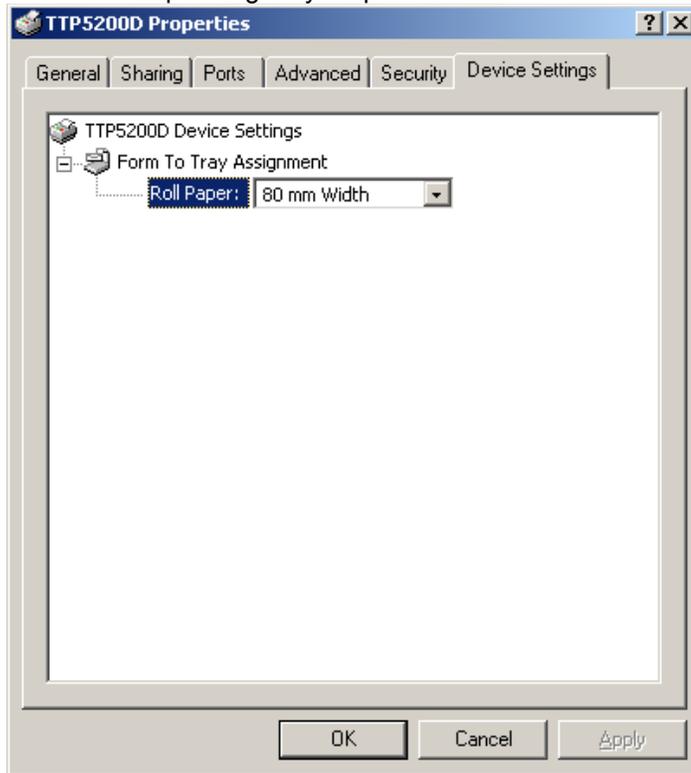


5. Ensure that the value for “Paper Size:” is set to **80mm** or **112mm** depending on your printer.

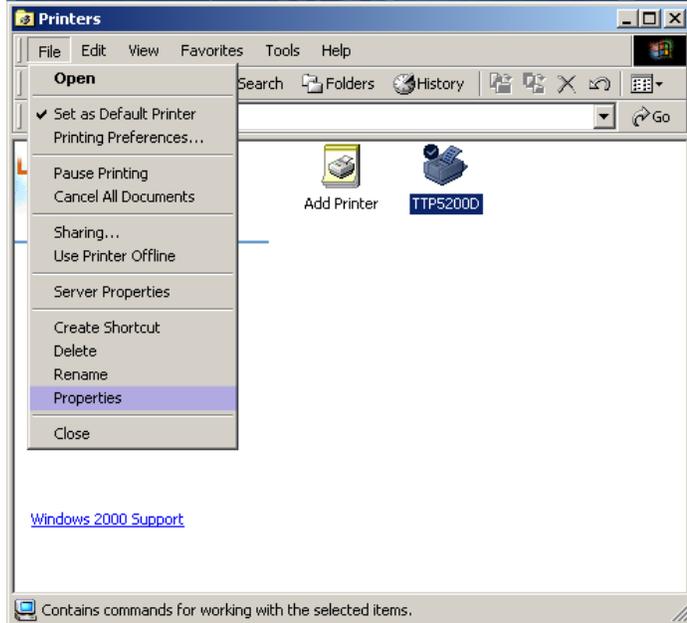


6. Click “Ok”

- Click on the “Device Settings” tab and ensure that the “Paper Size” value is correctly set to **80mm** or **112mm** depending on your printer.



- Click “OK”.
- You should now be back to the Printers folder, with your new printer installed
- Click on the new printer to highlight it, then click on “File”, then “Properties”



- On the “General” tab, click the “Print Test Page” button.

12. The test page should look as follows:



```

Congratulations!

If you can read this
information, you have
correctly installed
your TTP5200D on
KIOSK2.

The information below
describes your
printer driver and
port settings.

Submitted Time:
11:01:41 AM 6/19/2001
Machine name:
KIOSK2
Printer name:
TTP5200D
Printer model:
TTP5200D
Color support: No
Port name(s): COM2:
Data format: RAW
Share name:
Location:
Comment:
Driver name:
UNIDRV.DLL
Data file:
TTP5200D.GPD
Config file:
UNIDRVUI.DLL
Help file:
UNIDRV.HLP
Driver version: 5.00
Environment:
Windows NT x86

Additional files used
by this driver:

C:\WINNT\System32\spoc
(5.00.2149.1)

C:\WINNT\System32\spoc

C:\WINNT\System32\spoc
(1.20.2000)

This is the end of
the printer test
page.
```

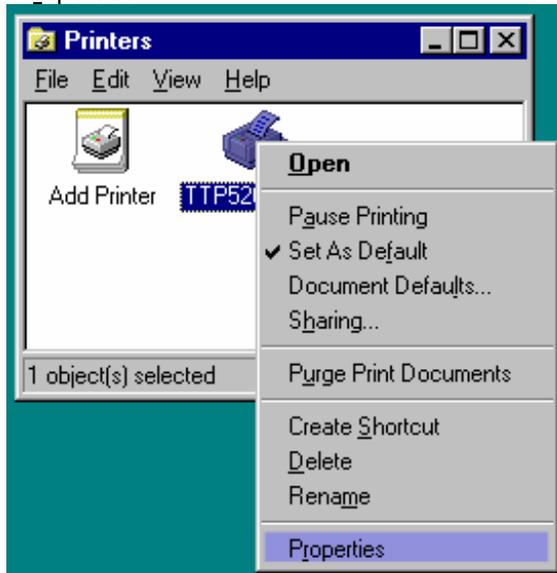
13. If the test page does not print properly, refer to the troubleshooting section below to resolve, or remove the printer, reboot the kiosk, then install the printer drivers again using the steps above.

14. Done

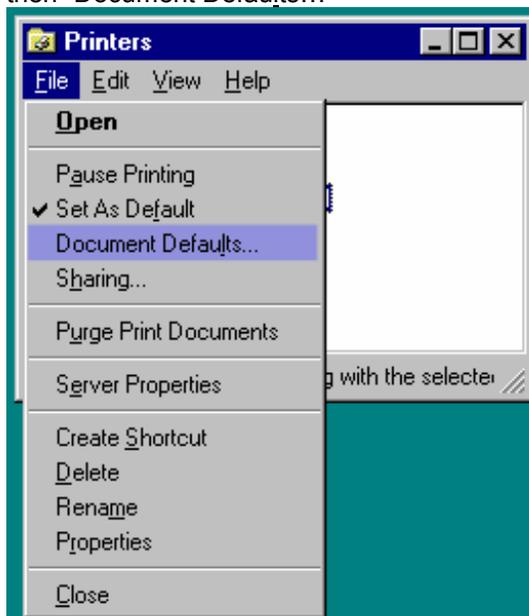
Verify Printing Preferences in Windows NT:

(Skip to instructions for [Windows 2000](#) / [Windows 98](#))

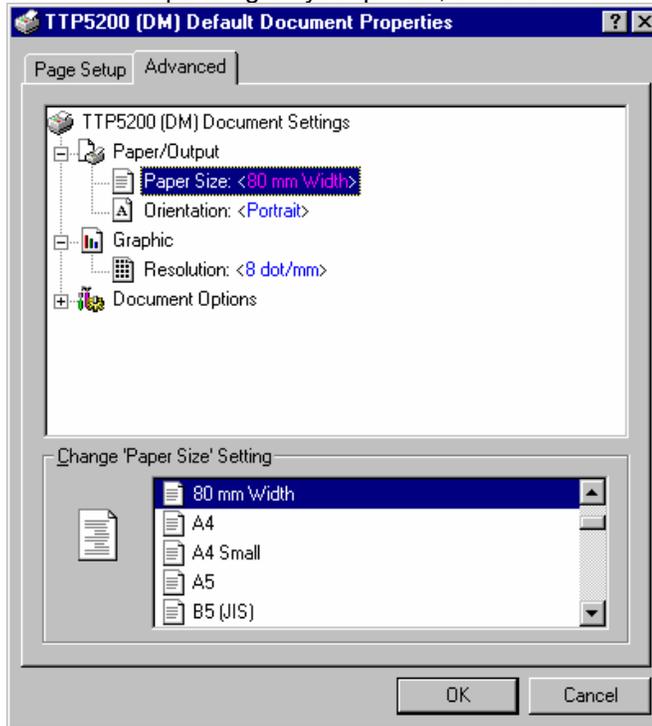
1. Follow the instructions above for "[Installing Windows Drivers](#)."
2. Open the Printers Folder and click on the new printer to highlight it, then click on "File", then "Properties"



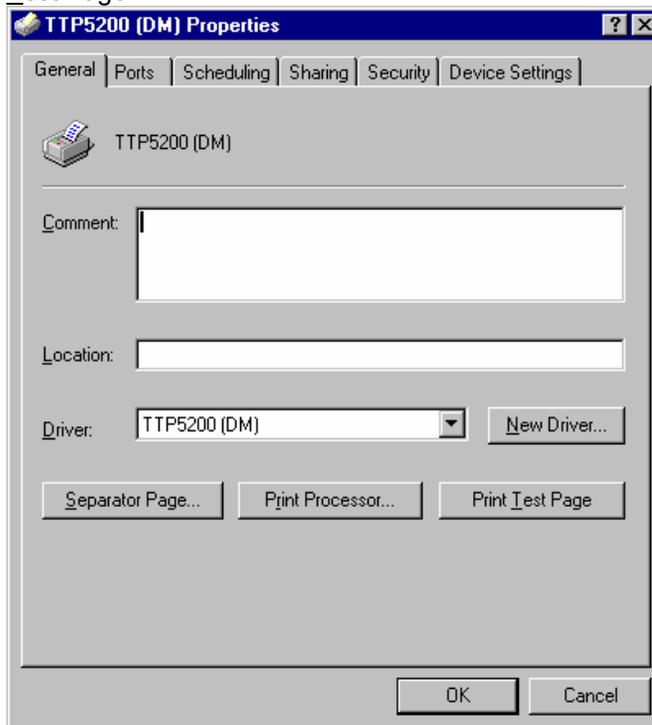
3. Click on the "Device Settings" tab, and ensure that the "Roll Paper" value is correctly set to **80mm** or **112mm** depending on your printer.
4. Return to the Printers Folder and click on the new printer to highlight it, and then click on "File", then "Document Defaults..."



- Click on the “Advanced” tab, and again verify that the “Paper Size” value is correctly set to **80mm** or **112mm** depending on your printer, and the other values are as shown below:



- Click “Ok”
- Click on the new printer to highlight it, then click on “File”, then “Properties”, then click on “Print Test Page”



8. The test page should look as follows:



Congratulations!

If you can read this information, you have correctly installed your TTP5200 (DM) on KIOSK0.

The information below describes your printer driver and port settings.

Machine Name:
KIOSK0
Printer name:
TTP5200 (DM)
Printer model:
TTP5200 (DM)
Color support: No
Port name(s): COM2
Data format: RAW
Share Name:
Driver name:
RASDD.DLL
Data file:
TTPCOMP.DLL
Config file:
RASDD01.DLL
Driver version: 4.01
Environment:
Windows NT x86

Files used by this driver:

C:\WINNT\System32\spoc
(1.18.2000)

C:\WINNT\System32\spoc
(4.00)

C:\WINNT\System32\spoc
(4.00)

C:\WINNT\System32\spoc

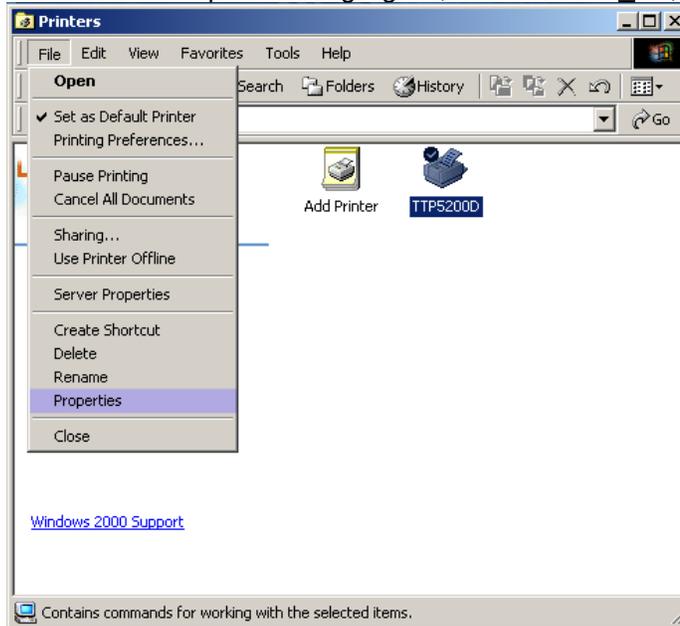
This is the end of
the printer test
page.

9. If the test page does not print properly, refer to the troubleshooting section below to resolve, or remove the printer, reboot the kiosk, then install the printer drivers again using the steps above.
10. Done

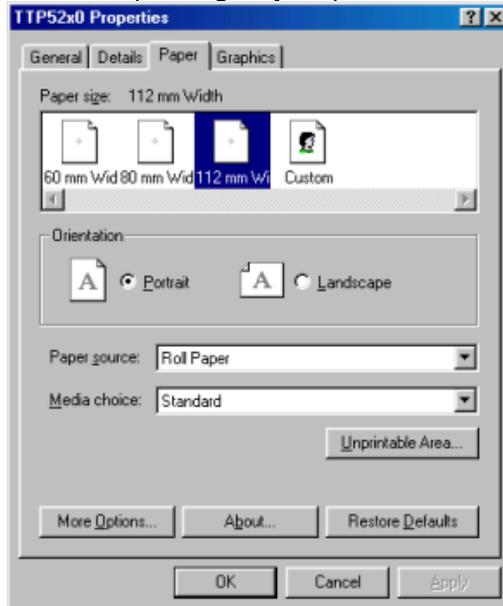
Verify Printing Preferences in Windows 98:

(Skip to instructions for [Windows 2000](#) / [Windows NT](#))

1. Follow the instructions above for “[Installing Windows Drivers](#).”
2. Open the Printers Folder and click on the new printer to highlight it, then click on “File”, then “Properties”
3. Click on the new printer to highlight it, then click on “File”, then “Properties”

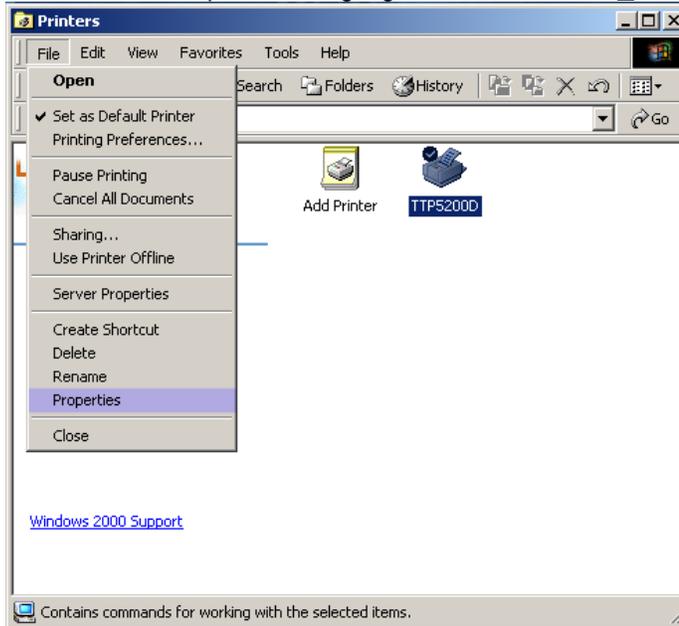


4. Click on the “Paper” tab and then ensure that the value for “Paper Size:” is set to **80mm** or **112mm** depending on your printer.



5. Click “Ok”

6. You should now be back to the Printers folder, with your new printer installed
7. Click on the new printer to highlight it, then click on "File", then "Properties"



8. On the "General" tab, click the "Print Test Page" button.
9. The test page should look as follows:



```

Congratulations!
If you can read
this information,
you have correctly
installed your
TTP52x0.

The information
below describes
your printer
driver and port
settings.

Printer name:
TTP52x0
Printer model:
TTP52x0
Driver name:
TTP52xx.drv
Driver version:
4.00
Color support: No
Port name:
COM2:
Data format:
RAW

Files used by this
driver:
TTP52xx.dll
unidrv.hlp

C:\WINDOWS\SYSTEM\i
(4.00.950)

C:\WINDOWS\SYSTEM\
(4.90.3000)

This is the end of
the printer test
page.

```

Step 4: Testing the Printer

To test for proper operation of the Kiosk Printer, follow the steps below:

1. First ensure that the paper is loaded properly, is the correct paper and the hardware is functioning correctly by printing a Printer Test Page. See "[Step 1: Verify Printer Settings](#)" for instructions on generating a Printer Test Page.
2. The printer "Setup Utility", otherwise referred to as the "TTP Editor" communicates directly with the printer. This is the best place to test for proper communication. To test using the TTP Editor, follow the steps in the "[Using the Printer Setup Utility \(TTP Editor\)](#)" section below to "[Configure TTP Editor to communicate with Printer](#)" and then "[Test Communications Settings](#)". If the communications test is successful in the TTP Editor, we know that the hardware, interface and settings are correct.
3. You can also test the printer using the TTP Editor by printing a "Printer Graphics Test Print". To print this test print, select it from the "Tools" menu in the TTP Editor. The output should look like the example shown in **Figure 5** below.
4. Another good test is from DOS. Simply open a Command Window in DOS and type the following commands as shown. This should print a very tiny copy of the current directory listing to the printer.

MODE COM2: baud=57 data=8 stop=1 xon=on

Press <ENTER>

DIR > COM2

Press <ENTER>

5. You should also check the printer using the standard Windows printer Test Page function. Refer to the [Driver installation](#) section above for your particular operating system for additional information.
6. We also have a Service Diskette available that will test all system peripherals, including the printer. You may download the Service Diskette from our online support page:

<http://www2.clearlake.ibm.com/store/support/html/kiosk.html>

This diskette is a bootable diskette which will provide you with an easy to use menu interface to test the printer and other peripherals on the system. The printer test will provide you with several test prints that should look like example in **Figure 6** below.

Figure 5: Swecoin Graphic Test Page Sample

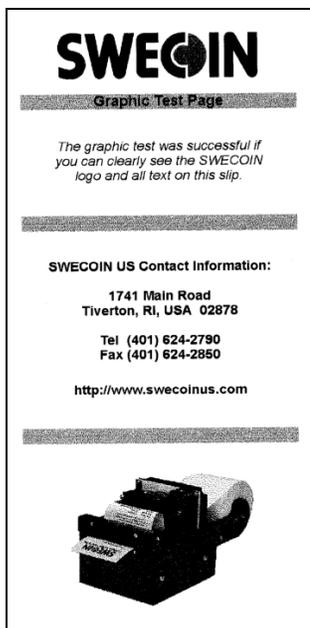
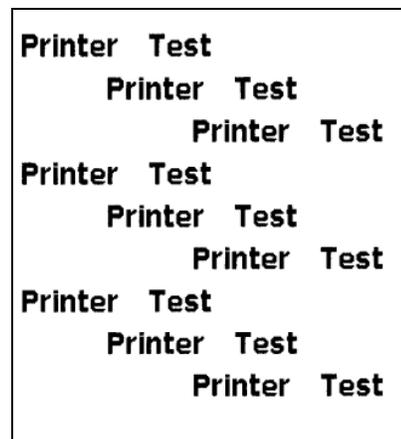


Figure 6: Diagnostics Test Print Sample



Using the Printer Setup Utility (TTP Editor)

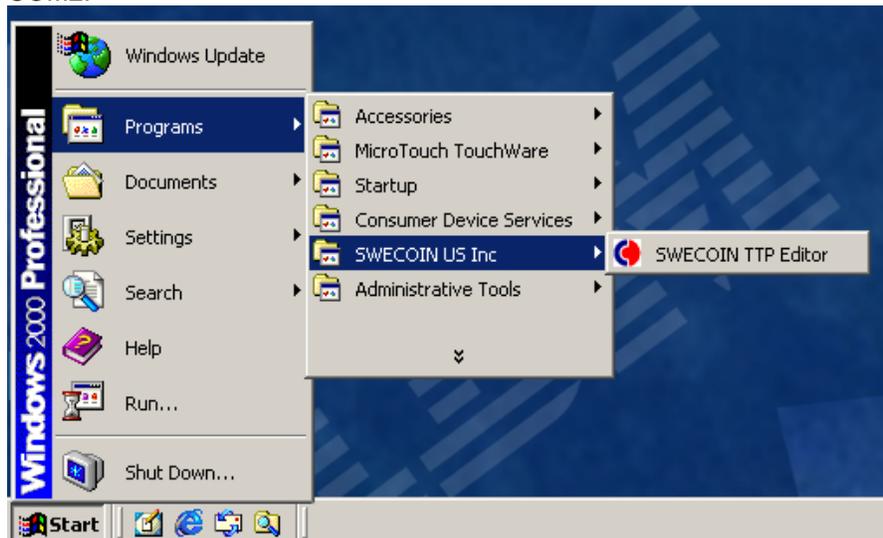
This section will briefly discuss some of the functions available in the Printer Setup Utility, hereafter referred to as the TTP Editor.

Please Note:

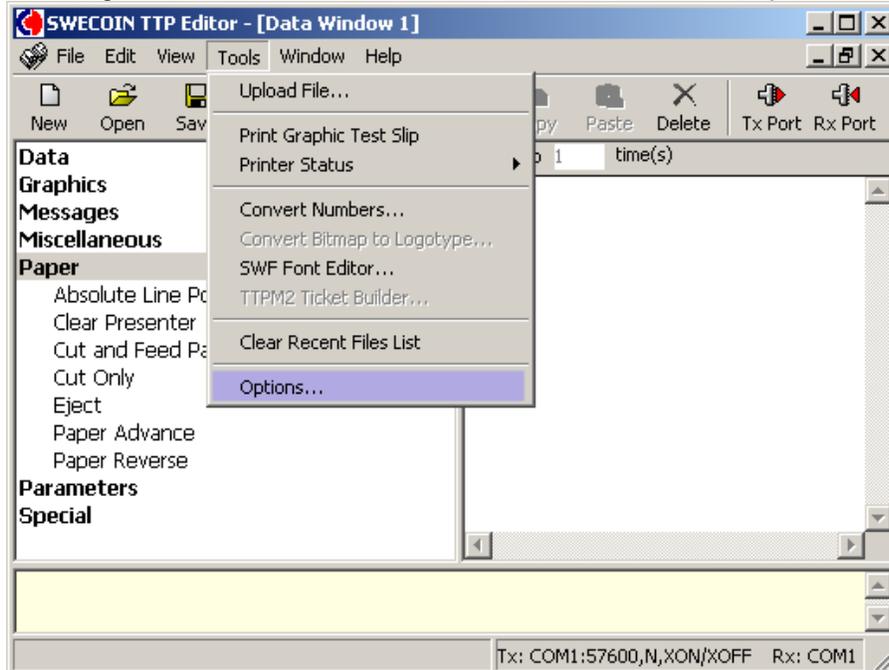
The TTP Editor should be used with extreme caution. This utility will enable you to change any setting within the printer's value range, regardless of that values validity. Selecting invalid value ranges may cause the printer to stop communicating with the system, or cause permanent damage to the printer. Such damage shall not be covered by the system warranty.

Configure TTP Editor to communicate with Printer:

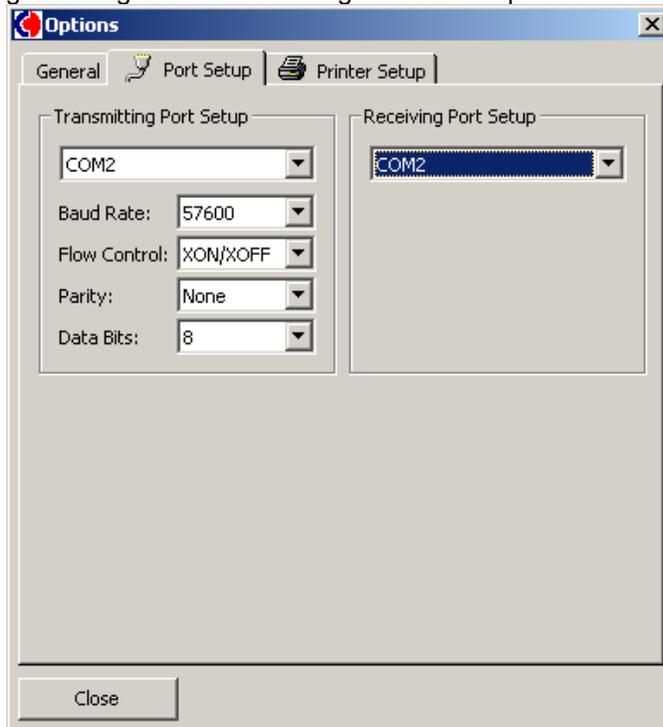
1. Download and install the latest TTP Editor from the online support website.
2. Unzip the distribution file to a temporary location, then run the "SETUP.EXE" file to install the utility.
3. Once installed, launch the TTP Editor from the Programs menu
4. Before you can use the TTP Editor, you must free the COM2 (default) port that the Printer is connected to. You can do this simply by opening the Printer Properties (See Printer Driver installation instructions for your operating system) and change the Port settings to LPT1. Once completed with the TTP Editor operations, be sure to reset the Port value back to COM2.



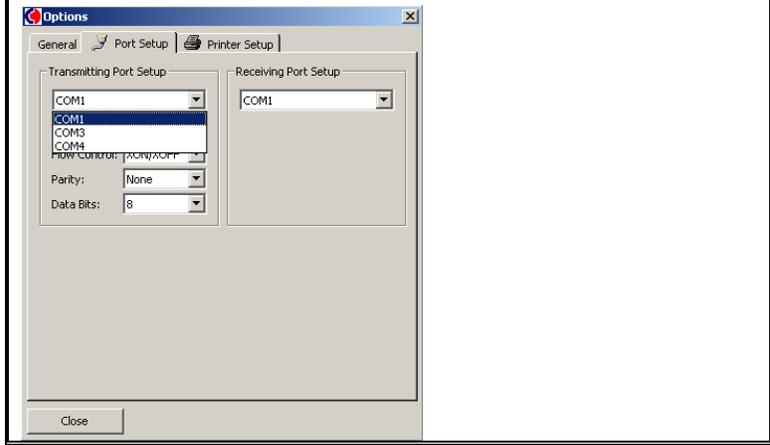
5. To configure the TTP Editor, click on “Tools” and then click on “Options...”



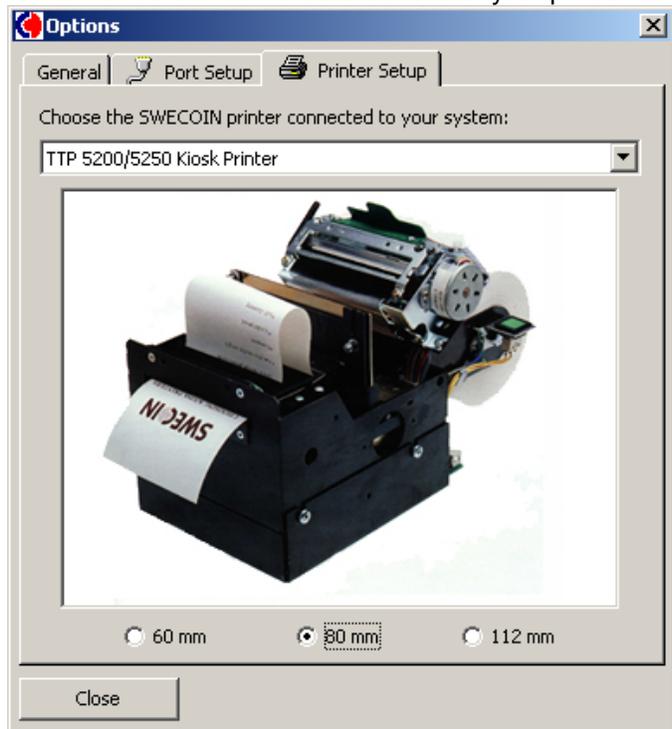
6. Click on the “Port Setup” tab and set the values on this Options screen to exactly those settings currently in the printer’s firmware (see Note below). You should refer to a current Printer Test Print for correct values; see [“Step 1: Verify Printer Settings”](#) for instructions on generating a Printer Test Page. The example below shows the default settings.



NOTE: If COM2 (or your custom configured port value) is NOT available in the port list (see example below), then the port is already in use. This is typically caused by the printer driver already being installed. To workaround this problem, simply change the port settings in the Printer Properties to another port, such as LPT1. Once finished with the TTP Editor, be sure to return this setting to the correct value.



7. Click on the "Printer Setup" tab and ensure that the printer selected is "TTP 5200/5250 Kiosk Printer" and the width value is correct for your printer.

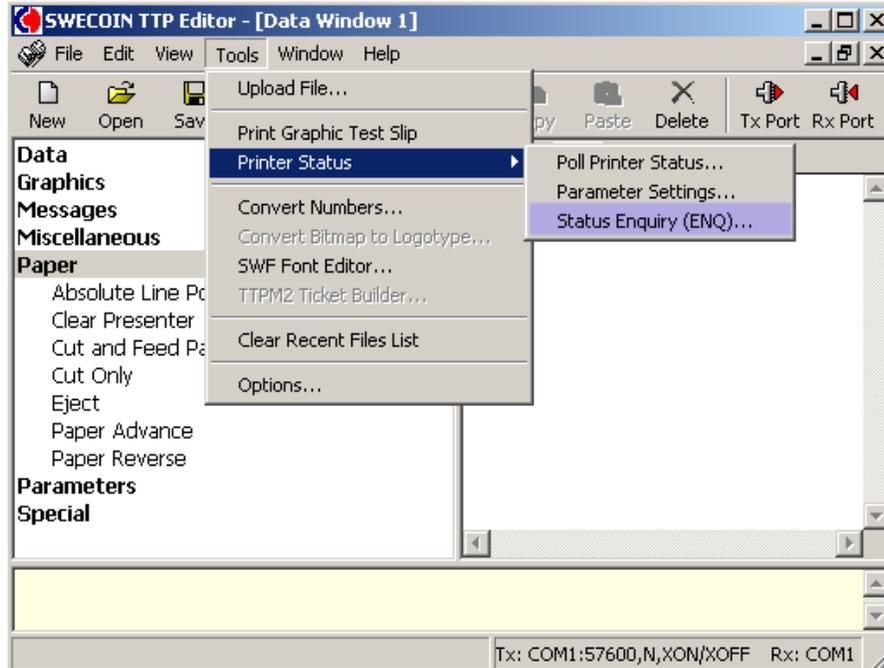


8. Click "Close"

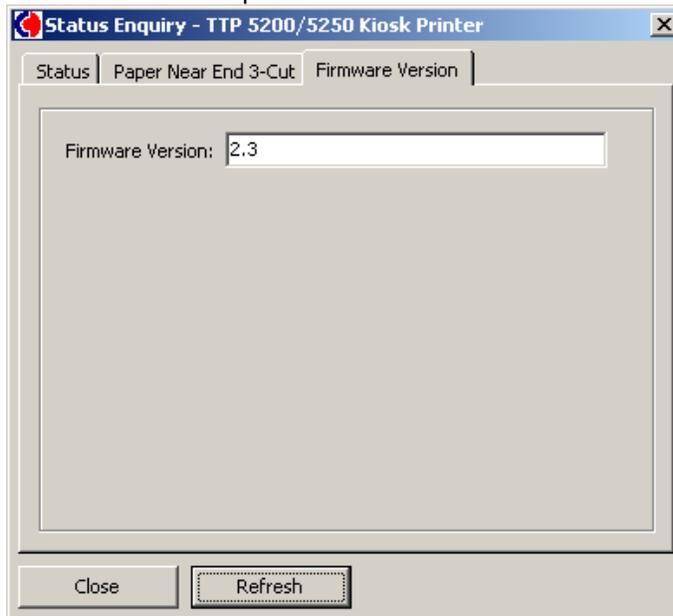
Test Communication Settings:

Attempting to modify printer settings or upload printer firmware updates without having communications properly configured may result in permanent damage to the printer. To ensure that the printer and system are communicating properly follow the steps below.

1. Click on “Tools” and then on “Printer Status” and then click “Status Enquiry (ENQ)...”



2. Click on the “Firmware Version” tab. The value in this field should match the firmware version in the printer (refer to the Printer Test page). If this value remains at “0.0” then the printer and the computer are not configured to communicate properly. Repeat the steps above to properly configure communication, turn off the printer for 10 seconds and back on, then reboot the computer.

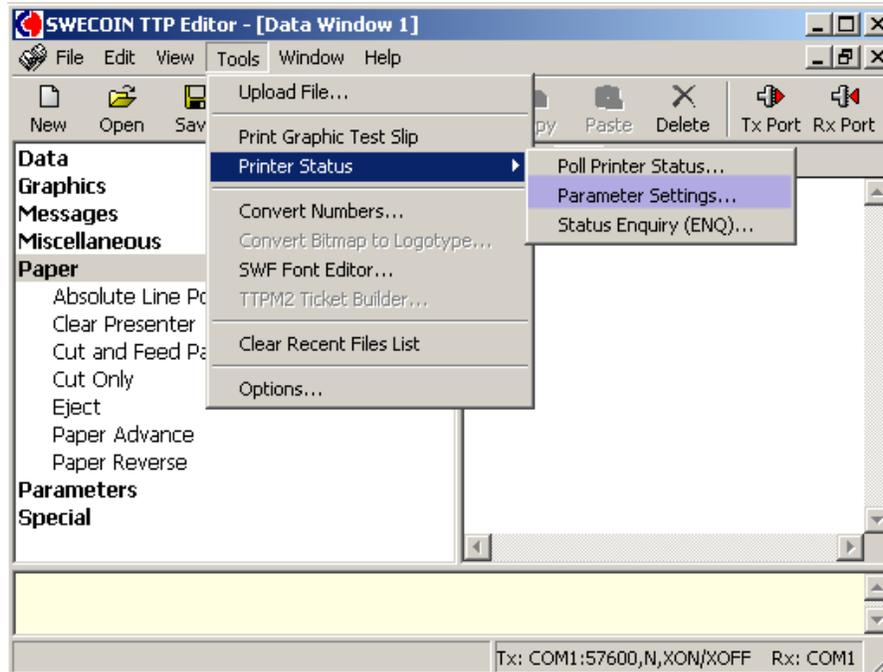


3. Once communication is working properly as demonstrated by the display of the correct Firmware value, you can proceed with setting printer values or uploading new firmware.

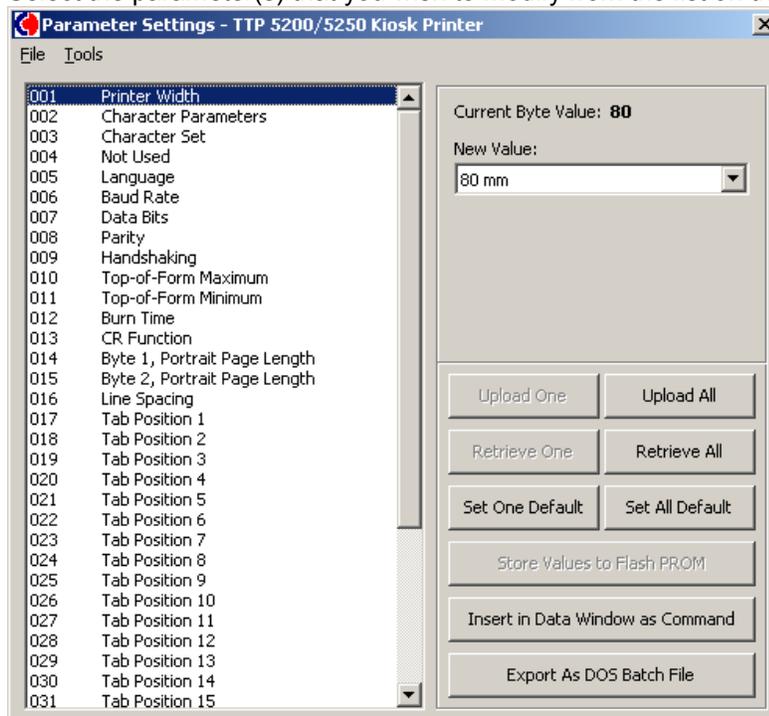
Setting Values in the Printer:

To set the values in the printer, follow the steps above to download, configure and test communication with the printer via the TTP Editor. Once all is configured and working properly, you may set the values in the printer as follows:

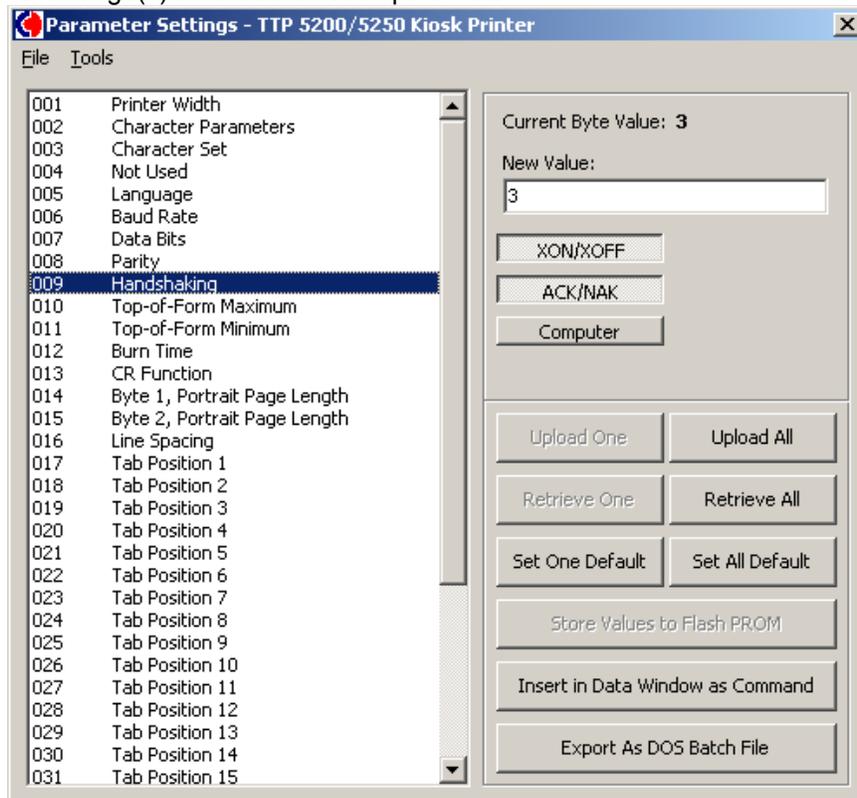
1. Launch the TTP Editor from the Programs menu
2. Click on “Tools” and then click “Printer Status” and then click “Parameter Settings...”



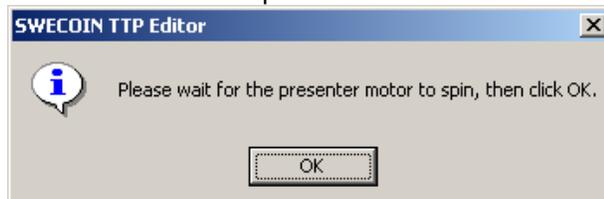
3. To further test communications, watch the screen as you press the “Retrieve All” button. The screen should flicker for a moment as you press the button and the values refresh. These values should not change on the refresh, and must match exactly the values provided on the Printer Test page. If they do not match, then proper communication is not occurring. Refer to the [Configure TTP Editor to communicate with Printer](#) section above.
4. Select the parameter(s) that you wish to modify from the list on the left side window.



- Enter the value you wish to set for that parameter on the right. Or, as shown in the “Handshaking” example below, you may select the appropriate value using the buttons and/or menus which appear under the “New Value:” field. Each parameter provides a different set of options that will change as you select a new parameter. This allows you to easily see the valid range(s) of values for each parameter.



- Once all changes have been made, press the “Upload All” to upload all changes. When you press the “Upload All” button, you will be presented with a screen instructing you to wait until the Presenter Motor spins:



NOTE: YOU MUST WAIT FOR THE PRESENTER MOTOR TO SPIN BEFORE CLICKING OK.

- Listen for the Presenter Motor to spin. Please allow up to 2 minutes for the spin – if no spin occurs, this is an indication that the system is not communicating with the printer properly. Refer to the [Configure TTP Editor to communicate with Printer](#) section above. Once properly configured, shut the system down and power off both the system and the printer for 10 seconds, then turn them back on.
- Once the Presenter Motor spins, click “OK”
- Turn the Printer off for 10 seconds, and then back on to reset.
- Close the TTP Editor.
- You may want to print a new Printer Test page to verify that the changes took effect.

Uploading new Firmware to the Printer:

The upload of firmware binaries to the printer is not recommended for all users. To that end, IBM does not make firmware updates publicly available on our websites on a regular basis.

Failure to apply a firmware update properly will cause permanent damage to the printer.

If the firmware on your printer is currently down-level, you may request an updated firmware binary by sending a note to deash@us.ibm.com – detailed instructions for applying the firmware update will be included with the binary. At the time of publishing this document, current firmware level is 2.5 – displayed on the Printer Test Page as:

Firmware SWC908—250 000310

Troubleshooting:

Symptom	Suggested actions
Strange paper feed behavior	Verify that the presenter sensor is not affected by excessive ambient light from the top or the front of the printer.
Printing does not stop at paper out.	Verify that the paper-out/TOF sensor is not affected by excessive ambient light.
Nothing is printed when the form-feed button is depressed while switching the printer ON, but the document is transported, cut and ejected.	<ul style="list-style-type: none"> ▪ Verify that the paper roll is turned with the temperature-sensitive side facing up. ▪ Verify that the paper meets the paper specification) ▪ Verify that the ribbon cable connector on the top of the print module is fully inserted.
The test document can be produced as described above, but the printer does not function properly in normal operation.	<ul style="list-style-type: none"> ▪ Verify that both ends of the data cable are properly connected. ▪ The application program may be incorrect, for example, handshaking, and baud rate. Contact the system manager. ▪ Make a HEX dump printout and check incoming data string.
Printing stops before complete	<ul style="list-style-type: none"> ▪ Verify that the printer is not out of paper. ▪ Check to see if there is a paper jam. ▪ Verify that the presenter sensor is not blocked by paper dust or pieces of paper. ▪ Check function of presenter sensor. ▪ Verify that the printer is properly connected to ground. This is to prevent earth currents between printer and host, and also to prevent electro-static discharges.
Printer does not work at all	<ul style="list-style-type: none"> ▪ Verify that the paper release lever is in vertical position (print head presses against the paper). ▪ Check for a paper jam between print module and cutter. If cutter is not in home position, check the function of the cutter home switch. ▪ Red and green voltage indicator lamps should be lit (visible from the rear of the printer). ▪ If both lamps are not lit, check that the power cable is connected at both ends and that the power supply is switched ON. ▪ Check line voltage supply fuses. ▪ If only the green lamp is lit, replace the PCB.
No cutting	Check that the connector for the cutter motor and the cutter home sensor is fully seated on the control board.
Bad cutting (uneven top and bottom document edges)	Switch the printer OFF, remove any obstructing paper particles in cutter and presenter modules.
Missing print or irregular spots	<ul style="list-style-type: none"> ▪ The paper may be too humid. Let the paper adapt to ambient temperature and humidity for approximately 24 hours before use. ▪ The paper being used does not meet the paper specification.
White longitudinal lines in the printout	<ul style="list-style-type: none"> ▪ Clean print head with isopropyl alcohol. ▪ Replace print module.
Faint print	<ul style="list-style-type: none"> ▪ The paper used might not meet the paper specification.

	<ul style="list-style-type: none">▪ Clean print head with isopropyl alcohol.▪ Check to see if the print head has been dropped. If so, replace the print head.
Strange characters or graphics printed, or any kind of strange printer behavior.	<ul style="list-style-type: none">▪ Verify the validity of transferred data by using the hex dump test function. Make sure there is no erroneous data.▪ Check the transmission speed (Baud rate) and parity settings on the host computer.

Poor Printing Example:

Below are some example print outs where printing is garbled, off center, or otherwise not acceptable. Also we have included some typical causes for this output, and tips to resolve.

Figure 7: Sample Printout



```
Windows 2000
Congratulations:

If you can read this
information, you have
correctly installed
your TTP5200D on
KIOSK2.

The information below
describes your
printer driver and
port settings.

Submitted Time:
07/15/2004 07:15:20 AM
Machine name:
KIOSK2
Printer model:
TTP5200D
Color support: No
Port name(s): LPT1:

Data Locals:
Share name:
Location:
Comment:
Data file:
TTP5200D.GPD
Config file:
UNIDRVUI.DLL

Setup files:
UNIDRV.HLP
Driver version: 5.00
Environment:
Windows NT x86

Additional files used
C:\WINNT\System32\spoc
(5.00.2149.1)
C:\WINNT\System32\spoc
C:\WINNT\System32\spoc

This is the end of
the printer test
page.
```

Issue:

Compressed text that overlaps rows of text, that are the same font size, within same paragraph.

Cause:

Printer drivers are most recent, however, printers Firmware is down-level.

Resolution:

Refer to the "[Using the Printer Setup Utility \(TTP Editor\)](#)" section for information on updating the firmware.

NOTE:

It is normal depending on the settings to have text of different sizes, and/or text and graphics to overlap. For example, the "Windows 2000" logo and the word "Congratulations:" in this example may appear even if all settings are correct.

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