



JBM Device Recovery Procedures

**After attempted re-flash of
firmware with power interruption**

Purpose:..... 3

Prerequisites:3

Connecting to the JBM Device:.....3

Step 1:4

Step 2:5

Step 3:6

Step 4:7

Step 5:8

Step 6:9

Getting into the JBM Device:.....9

Step 1:9

Step 2: 11

Getting the Flash.bin image to the JBM Device: 11

Step 1: 11

Step 2: 12

Step 3: 12

Step 4: 14

Step 5: 15

Step 6: 15

Step 7: 16

Step 8: 16

Step 9: 16

Step 10: 17

Step 11: 18

Step 12: 18

Programming the JBM Device: 19

Step 1: 19

Step 2: 19

Step 3: 20

Purpose:

This procedure is used to recover a JBM router device after the unit gets corrupted during an attempted firmware re-flash that was interrupted during the reprogramming process, i.e. power interruption to the device or network disconnection. The following steps can take more than 2:00 hours to complete. These procedures are geared for the Windows operating system, which can be a stand-alone system or a VMWare type guest OS, i.e. Parallels on Mac OS host running Windows guest OS.

Prerequisites:

The JBM device needs to be powered off, i.e. the unit must be disconnected from the power source either at the electrical outlet or the unit itself.

You will need the following cables:

- 9-pin Console cable connected to the ttyS0 Console (DCE) port located on the back of the unit next to the Power connector.
- USB to SERIAL adaptor cable, such as the Keyspan P/N USA-19HS or equivalent.

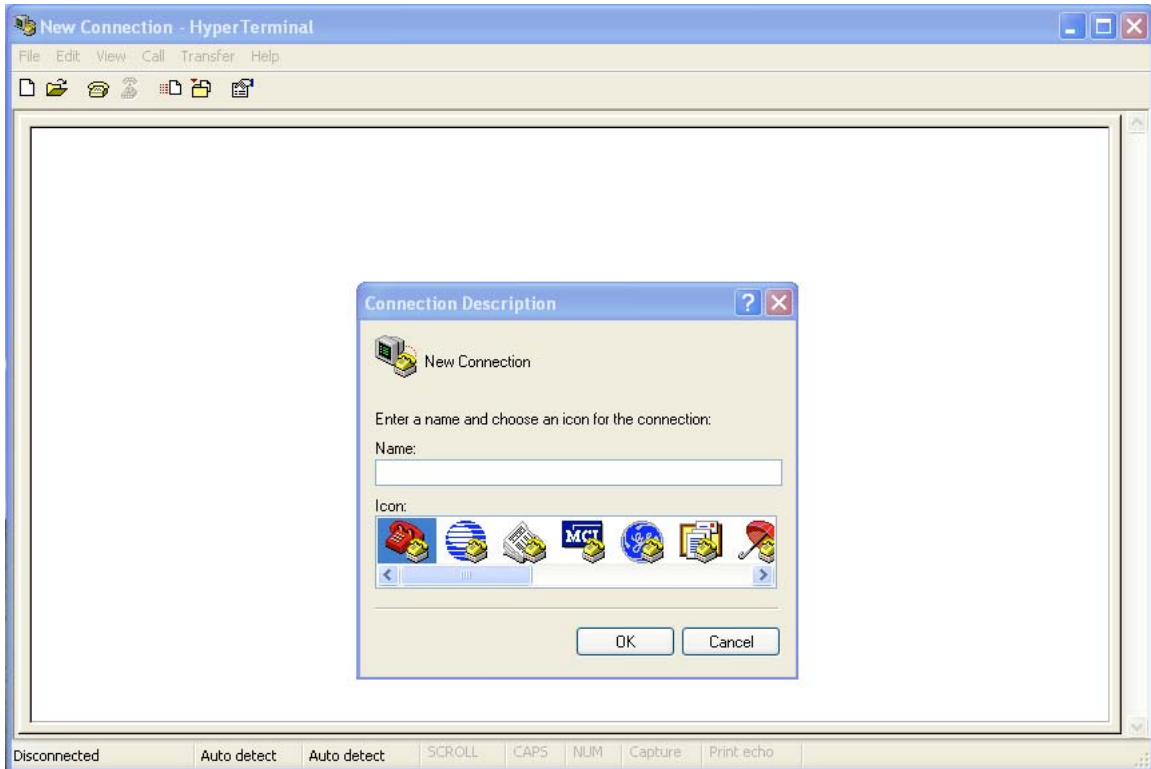
You will need to have a confirmed good “flash.bin” firmware image downloaded onto your computer system connected to the JBM device.

Connecting to the JBM Device:

If your computer system does not have a COM port, such as a Laptop, then you will need to have a USB to SERIAL adaptor cable, i.e. the Keyspan adaptor.

Step 1:

Open a HyperTerminal window by going to Start -> All Programs -> Accessories
-> Communications -> HyperTerminal



Step 2:

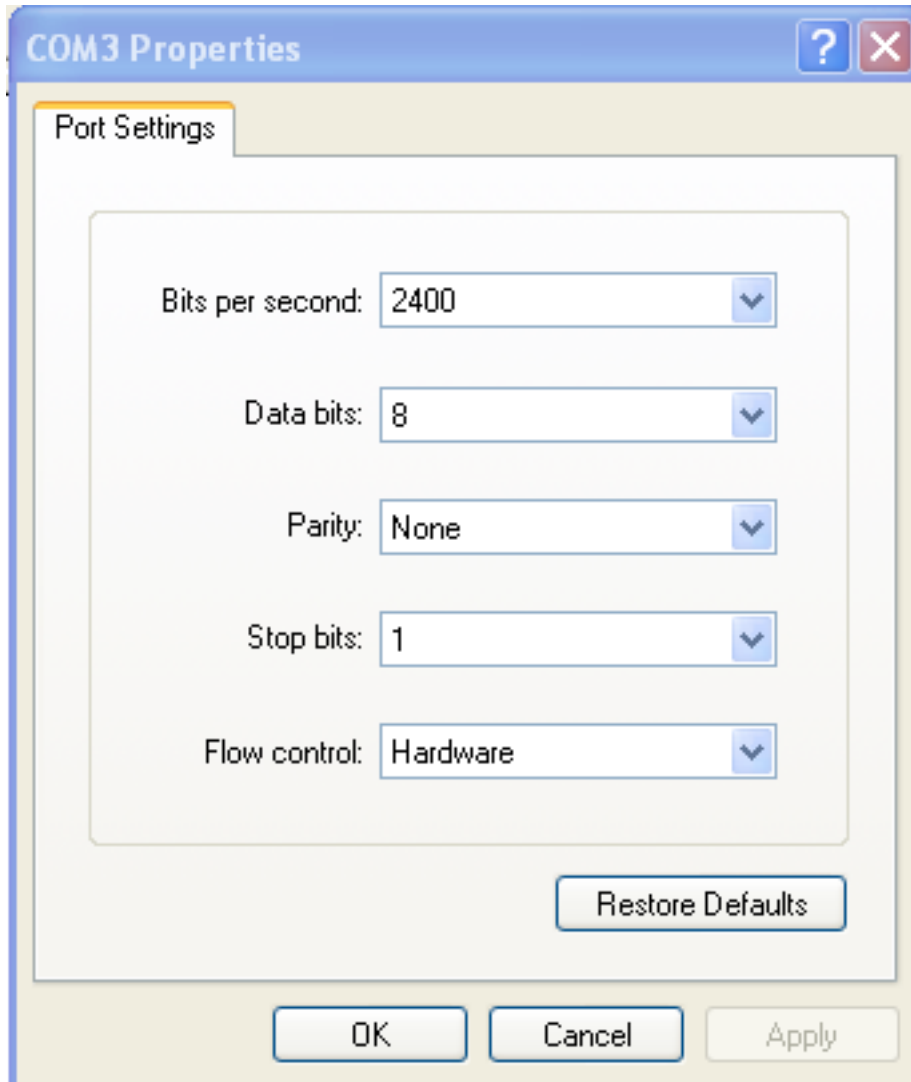
Type in a name of your selection, then click on the OK button.



The image shows a Windows-style dialog box titled "Connect To". It features a blue title bar with a question mark icon and a close button (X). Below the title bar is a red telephone icon and the text "c120". The main area of the dialog box is light beige and contains the instruction "Enter details for the phone number that you want to dial:". Below this instruction are four input fields: "Country/region:" with a dropdown arrow, "Area code:" with a text box, "Phone number:" with a text box, and "Connect using:" with a dropdown menu currently showing "COM3". At the bottom of the dialog box are two buttons: "OK" and "Cancel".

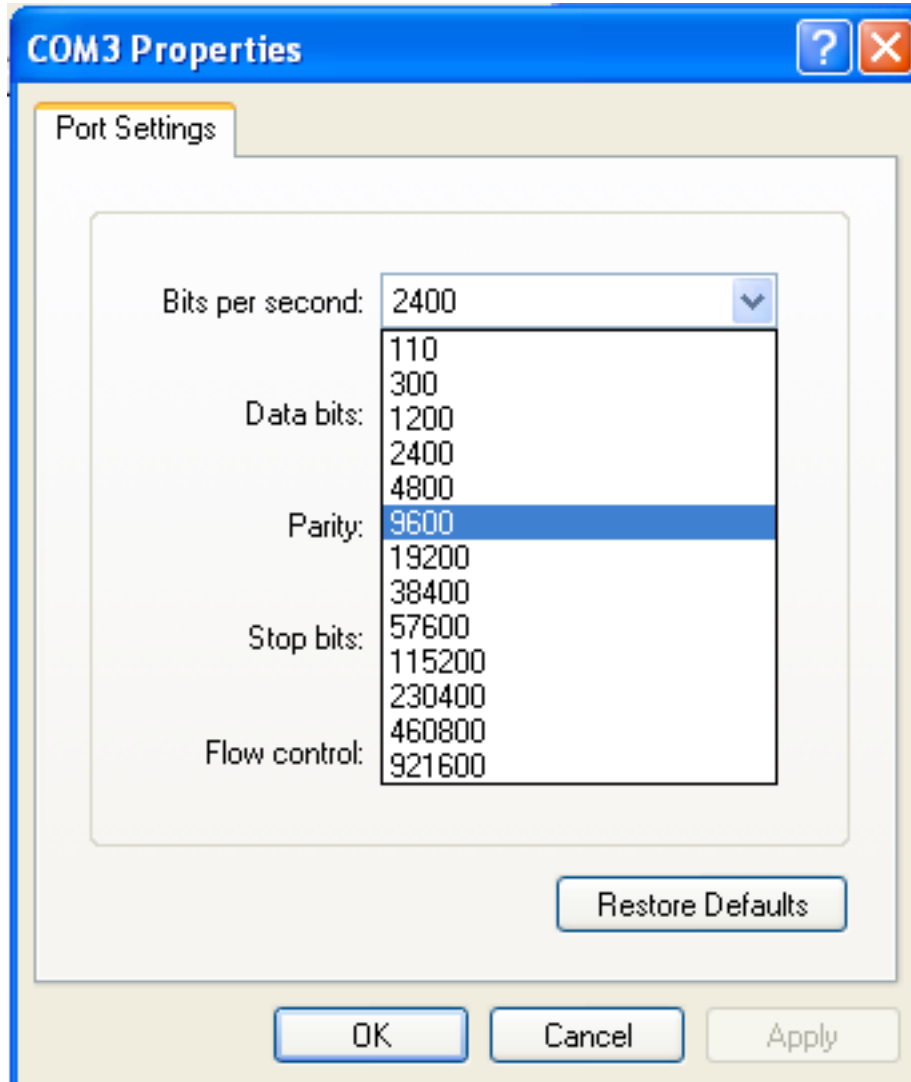
Step 3:

Choose the COM connection associated with the link with the JBM device, in this case it is COM3. Click the OK button.



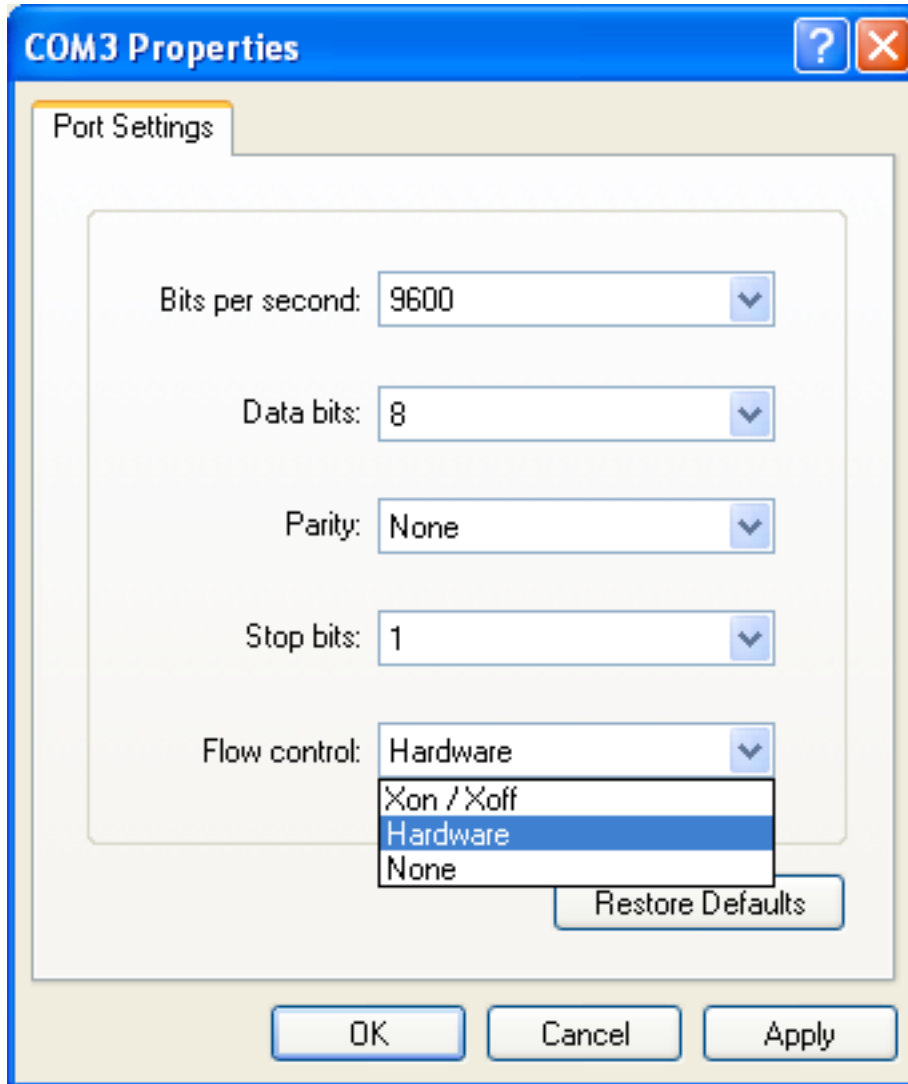
Step 4:

Change the “Bits per second:” to 9600 from the pull down menu.



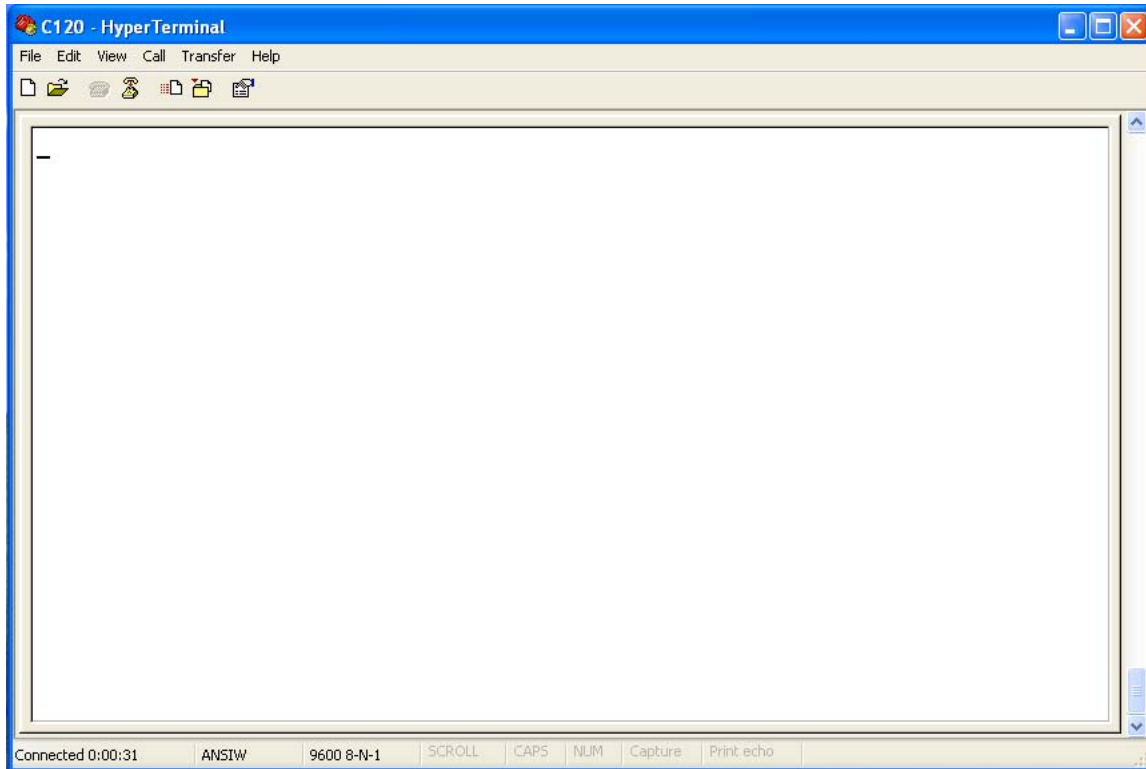
Step 5:

Select “Flow control:” to None from the pull down menu.



Step 6:

Click on the Apply button. At this point the HyperTerminal window will be blank.



Getting into the JBM Device:

The next step happens relatively quick so you must be ready to tap the <esc> or the 'x' key when you see the "Autoboot in 5 seconds. <esc> or 'x' to abort..." appears.

Step 1:

Plug the power cord into the JBM device and observe the HyperTerminal screen closely as the unit boots up and the information gets scrolled on the screen.

-- Welcome to JBM Gateway --

JBM 16mb Flash - Mod v1.55

uCbootloader v1.06.1 (c) Copyright 2001-2002 Arcturus Networks Inc.
(c) Copyright 2000 Lineo, Inc.
(c) Copyright 1999 Rt-Control Inc.

JBM Model : C120F
JBM S/N : 003947

Autoboot in 5 seconds. <esc> or 'x' to abort...

Tap the <esc> key or the 'x' key to abort the boot process and place you at the "B\$" prompt.

FLASH type 0018 [INTEL28F128]

D-|020000 D-|040000 D-|060000 D-|080000 D-|0a0000 D-|0c0000
D-|0e0000 D-|100000 D-|120000 D-|140000 D-|160000 D-|180000
D-|1a0000 D-|1c0000 D-|1e0000 D-|200000 D-|220000 D-|240000
D-|260000 D-|280000 D-|2a0000 D-|2c0000 D-|2e0000 D-|300000
D-|320000 D-|340000 D-|360000 D-|380000 D-|3a0000 D-|3c0000
D-|3e0000 D-|400000 D-|420000 D-|440000 D-|460000 D-|480000
D-|4a0000 D-|4c0000 D-|4e0000 D-|500000 D-|520000 D-|540000
D-|560000 D-|580000 D-|5a0000 D-|5c0000 D-|5e0000 D-|600000
D-|620000 D-|640000 D-|660000 D-|680000 D-|6a0000 D-|6c0000
D-|6e0000 D-|700000 D-|720000 D-|740000 D-|760000 D-|780000
D-|7a0000 D-|7c0000 D-|7e0000 D-|800000 D-|820000 D-|840000
D-|860000 D-|880000 D-|8a0000 D-|8c0000 D-|8e0000 D-|900000
D-|920000 D-|940000 D-|960000 D-|980000 D-|9a0000 D-|9c0000
D-|9e0000 D-|a00000 D-|a20000 D-|a40000 D-|a60000 D-|a80000
D-|aa0000 D-|ac0000 D-|ae0000 D-|b00000 D-|b20000 D-|b40000
D-|b60000 D-|b80000 D-|ba0000 D-|bc0000 D-|be0000 D-|c00000
D-|c20000 D-|c40000 D-|c60000 D-|c80000 D-|ca0000 D-|cc0000
D-|ce0000 D-|d00000 D-|d20000 D-|d40000 D-|d60000 D-|d80000
D-|da0000 D-|dc0000 D-|de0000 D-|e00000 D-|e20000 D-|e40000
D-|e60000 D-|e80000 D-|ea0000 D-|ec0000 D-|ee0000 D-|f00000
D-|f20000 D-|f40000 D-|f60000 D-|f80000 D-|fa0000 D-|fc0000
D-|fe0000 DP|1000000

B\$

Step 2:

Type in “help” to pull up the Help items.

B\$ help

Simple Help

sh: invoke a new shell
exit: exit from the current shell
help: display this command list
rx: receive XMODEM into the RAM buffer
program: erase OS, then burn OS from RAM buffer
verify: compare OS FLASH image to the RAM buffer
go: execute the OS image
fast: change to 115200bps
slow: change to 9600bps
speed: change to one of from 1200bps to 115200bps
md: dump memory

Getting the Flash.bin image to the JBM Device:

Step 1:

Type in fast at the prompt.

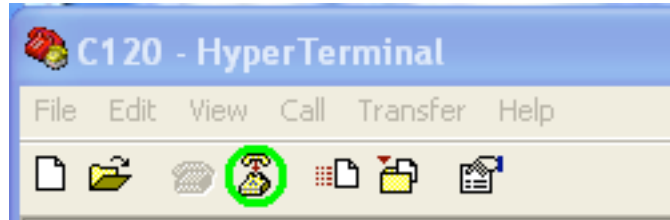
B\$ fast

baud set to:: 115200bps...

NOTE: This will freeze the display due to conflicting baud rate that was previously set up to 9600, so you will need to reconfigure the settings for the HyperTerminal session currently used.

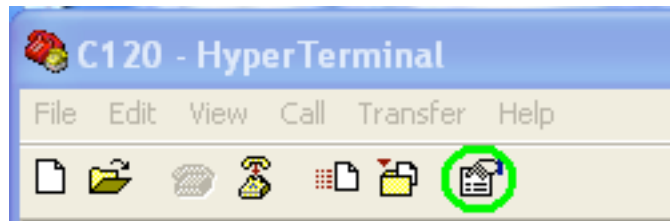
Step 2:

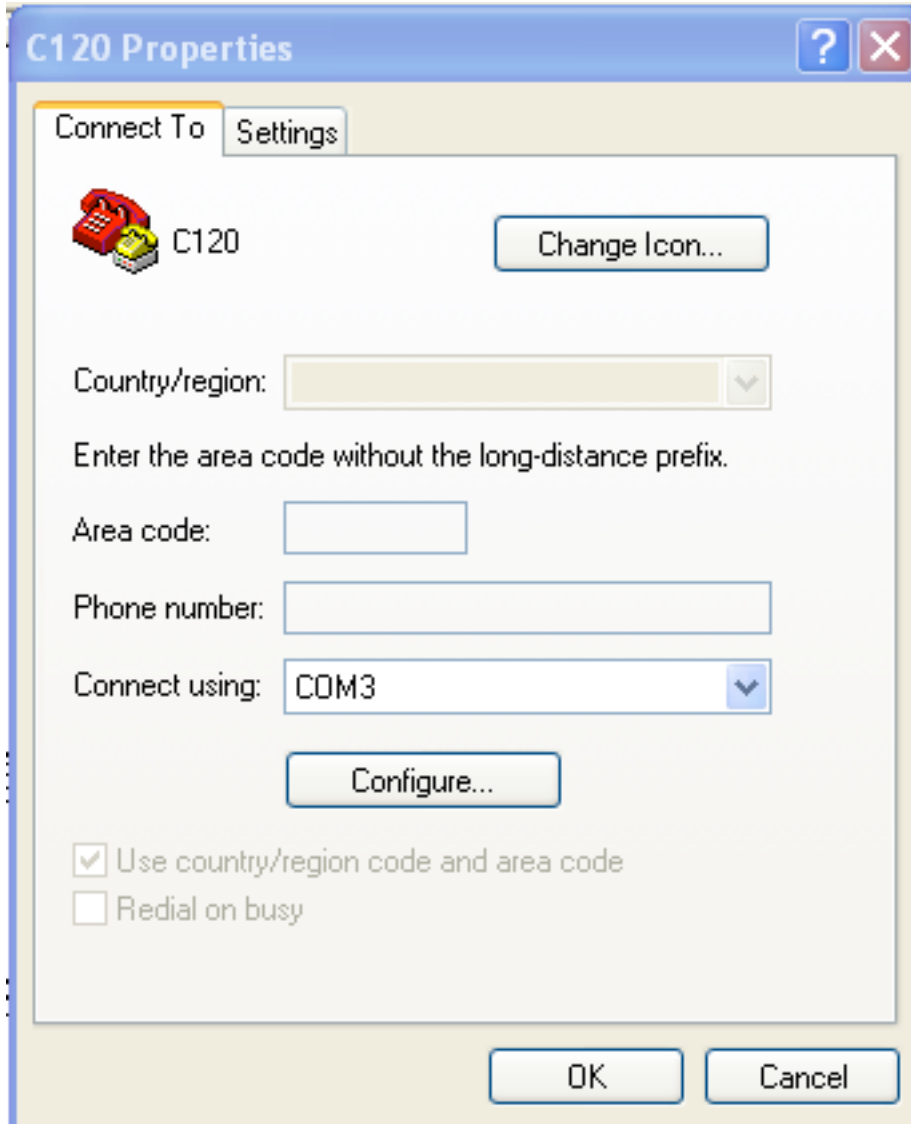
Click on the Disconnect icon on the HyperTerminal window to stop the HyperTerminal connection in order to adjust the settings.



Step 3:

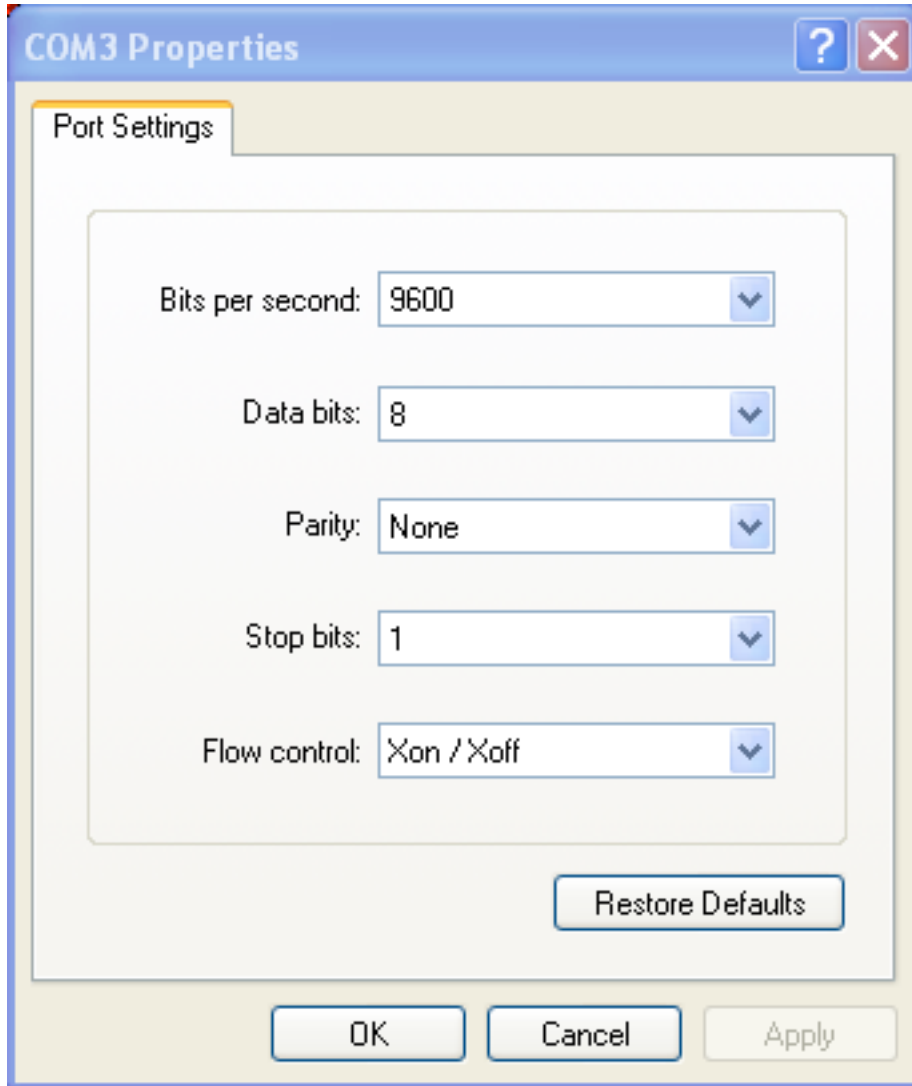
Click on the Properties icon to open the Properties window.





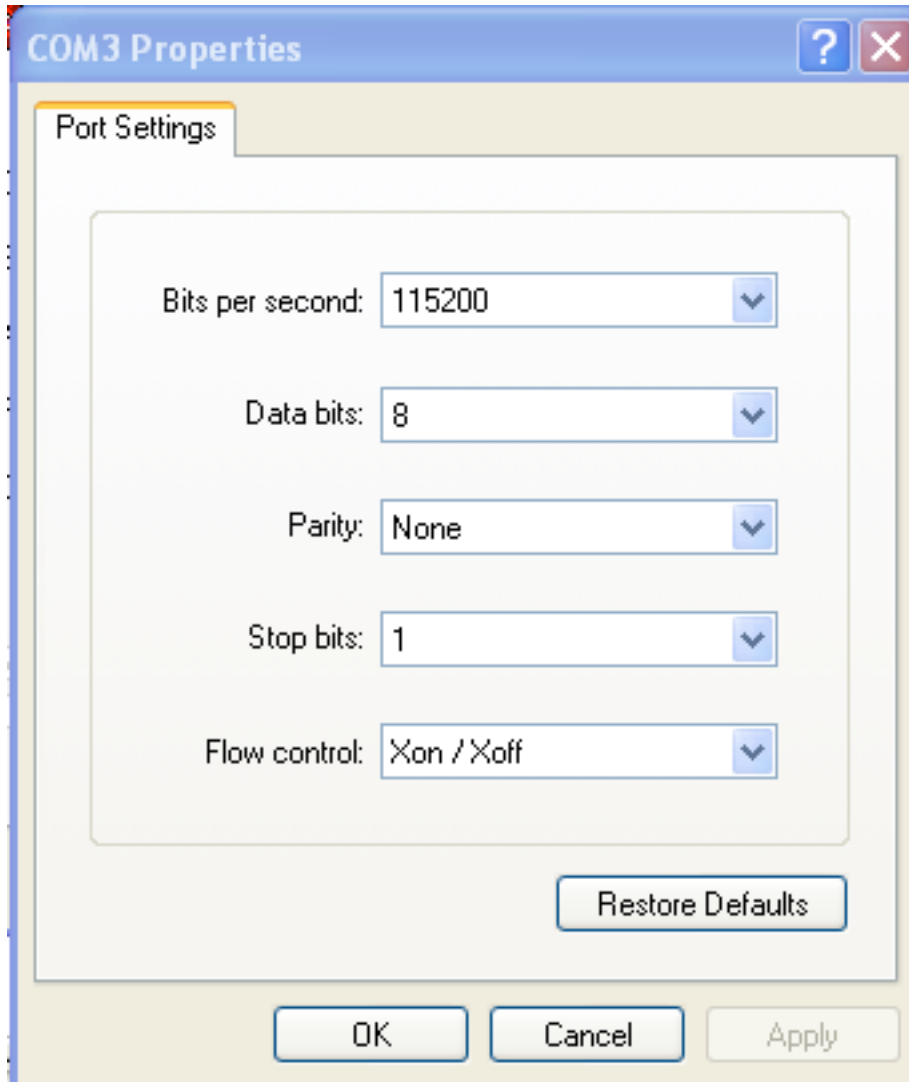
Step 4:

Click on the Configure button to access the settings.



Step 5:

Reset the “Bits per second:” to 115200 from the pulldown menu and click the apply button.

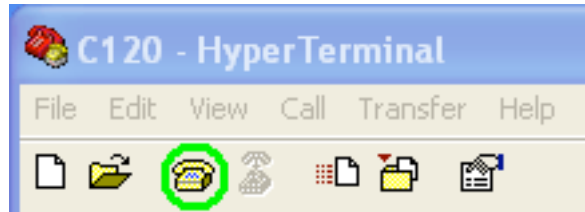


Step 6:

Click on the OK button.

Step 7:

Click on the Connect icon to establish a connection to the JBM device once again.



If the B\$ prompt does not come up immediately, then tap the Enter key once.

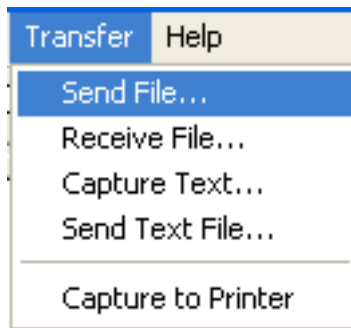
Step 8:

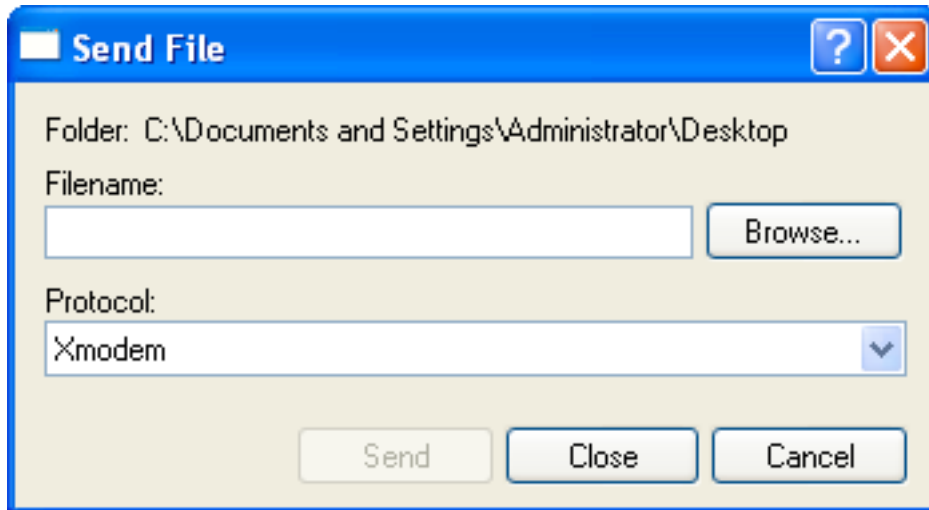
At B\$ prompt type in rx to put the device in "receive XMODEM into RAM buffer" mode.

B\$ rx

Step 9:

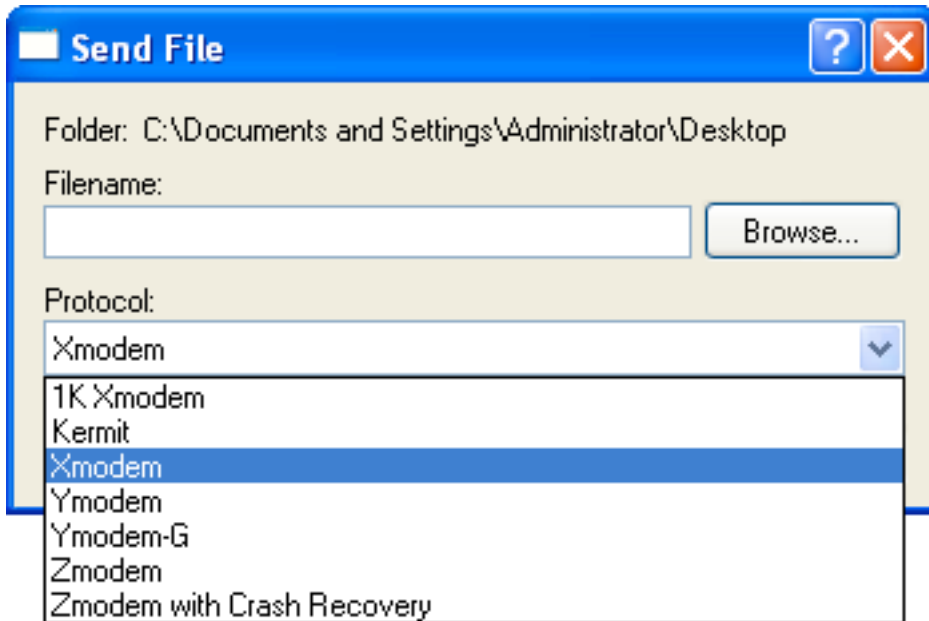
Go to Transfer -> Send File.





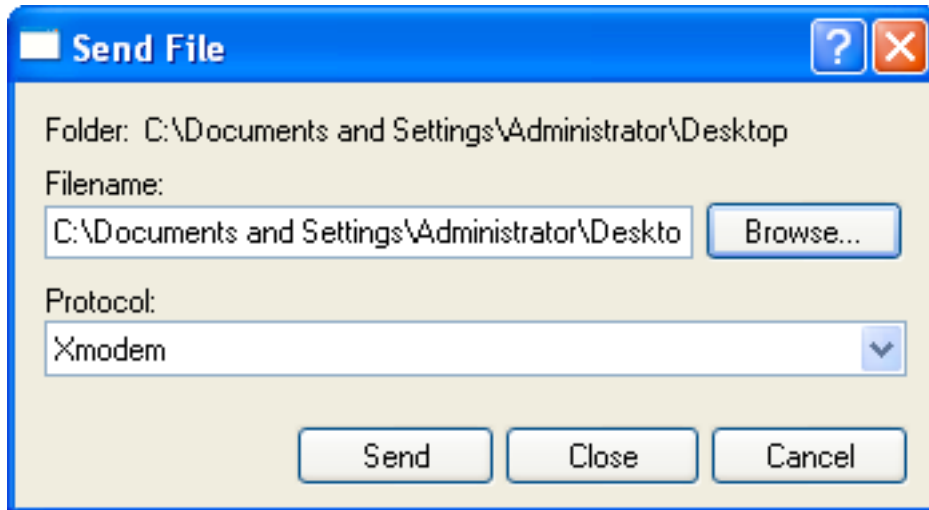
Step 10:

Choose the Protocol of "Xmodem" from the pull down menu.



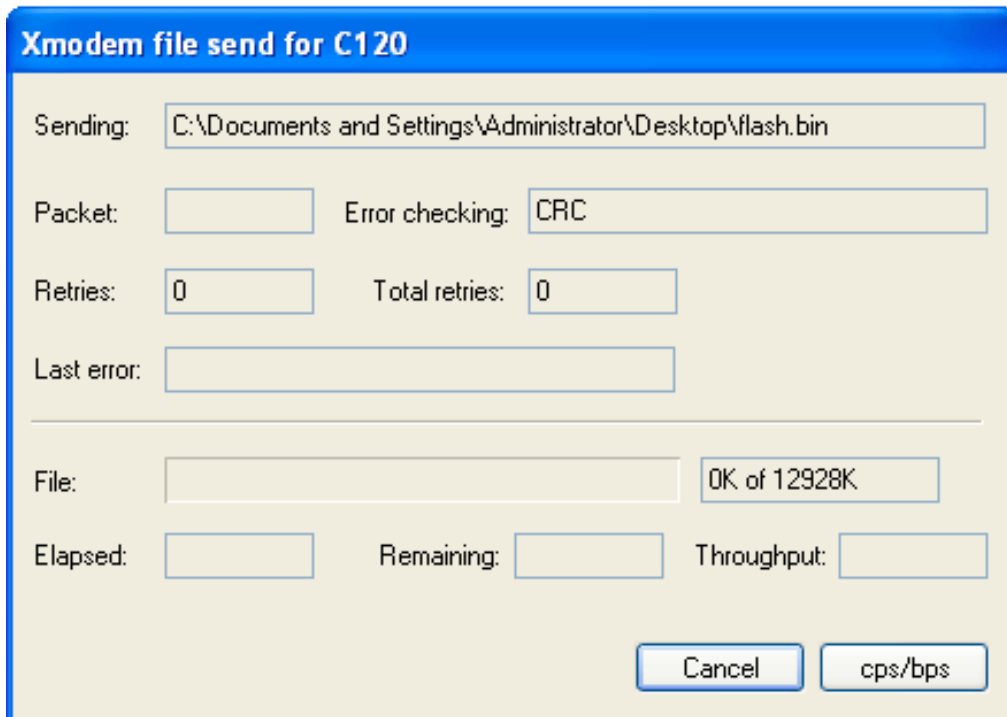
Step 11:

Click on the Browse... button and double-click on the 'flash' file from where you placed it on your Windows system.



Step 12:

Click on the Send button (this will start the process of transferring the flash.bin to the RAM drive of the JBM device).



The HyperTerminal will reflect the file is being transferred by the combination of capital C's that appear beneath the "B\$ rx".

B\$ rx
CCC

NOTE: This process can take as long as 2:00 hrs so patience is needed.

Once the file is transferred, you will see the following:

B\$ rx
CCC
Send (x) flash.bin: 13238400 bytes, 1:57:38 elapsed, 1875 cps, 16%

ca0080 bytes buffered
B\$

Programming the JBM Device:

Step 1:

Type in **program** at the B\$ prompt to erase the running OS and then burn the OS from the RAM buffer.

B\$ program
erase...done.
write... done.

Step 2:

Type in **verify** at the B\$ prompt to compare the OS FLASH image to the OS in the RAM buffer.

B\$ verify
verify...
done.

