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**MXACU FIRMWARE UPGRADE PROCEDURE**

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The MXACU has a bootloader program that is activated on power-up of the MXACU. Depending on the state of the SELECT switch, the bootloader selects between MXACU firmware and monitor mode operation. The program HyperTerminal which comes with installed on PCs is used for the firmware upgrade process.

1. Set up HyperTerminal with the following, 57600 bps, 8 data bits, 1 stop bit and no parity, on the desired COM port.
2. Under HyperTerminal settings → 'Properties' → 'Settings' tab → 'ASCII setup' → 1mS character delay.
3. Connect to the MXACU to verify the communications settings.

Once communications has been verified and established, perform the following steps for the firmware upgrade. All MXACU serial commands are terminated with a carriage return (ENTER key).

1. Press and hold down the Base A SELECT button while cycling the power. The radio will enter the bootloader monitor mode and the 'VxMon >' prompt will be displayed.
2. Type in the command 'LOADR'. The bootloader will prompt the user to send the firmware file. Use the HyperTerminal menu → 'Transfer' → 'Send file ...' to upload the file to the MXACU.
3. Select the 'Xmodem' protocol for the transfer and enter the name of the file containing the firmware. The user will have approximately 15 seconds to complete this step. If the character 'C' is received before the file transfer starts, hit the 'ESC' key after the Xmodem file transfer dialog box appears. This will cancel the file transfer but should preserve the file location. Steps 2 through 3 can be repeated to initiate a successful file transfer. The MXACU front panel LEDs will flash as the file transfer progresses.
4. Once the transfer is completed, the bootloader will reset the MXACU to begin operation with the uploaded firmware.

## STARTING HYPERTERMINAL PROGRAM

Start the HyperTerminal program:

1. Click on START
2. Click on PROGRAMS
3. Click on ACCESSORIES
4. Click on COMMUNICATIONS
5. Click on HYPERTERMINAL

If you are unable to locate HyperTerminal on your PC please see the next section on HOW TO INSTALL HYPERTERMINAL

## HOW TO INSTALL HYPERTERMINAL

1. Click on Control panel
2. Click on My Computer
3. Click on Install/Remove Programs
4. Click on Windows settings
5. Click on Communications
6. Select Hyper terminal and click apply or OK at the bottom.
7. You will be prompted for your Windows CDROM.

## HYPERTERMINAL PROGRAM SETUP

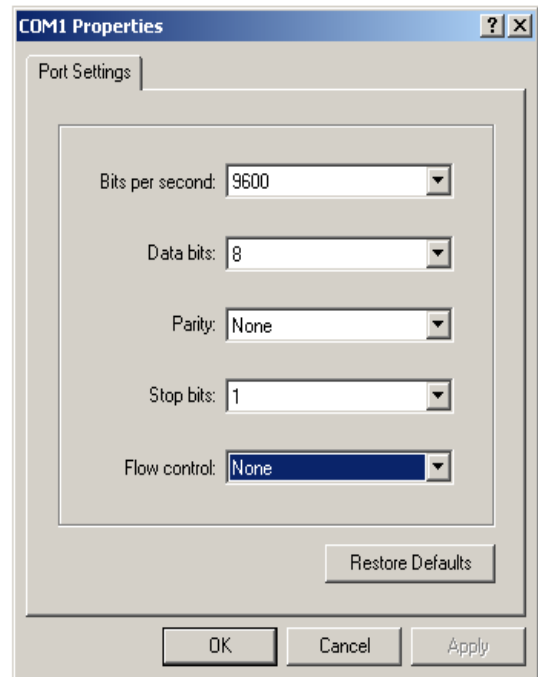
1. After starting HyperTerminal for the first time it will ask you to create a connection. i.e. MXACU



2. Name the connection with a suitable relevant name. (i.e. Spectra MXACU) Then Click OK.
3. Next you need to select the Comm.'s Port for which you will be using. Then click OK.

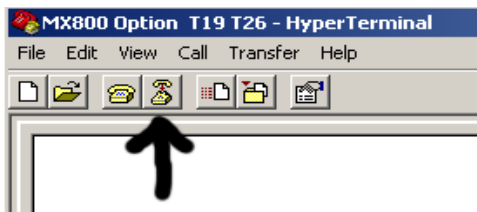


4. Set the Port settings as show in Picture below.

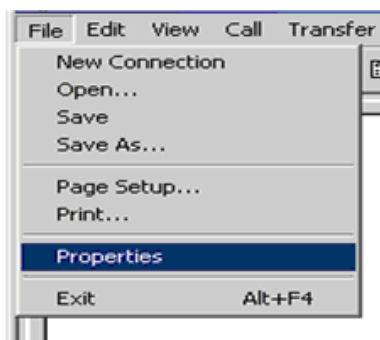


5. Click OK. (Note 57600 for firmware upload)
6. You have now created your connection. Though we now need to set the terminal emulation up.

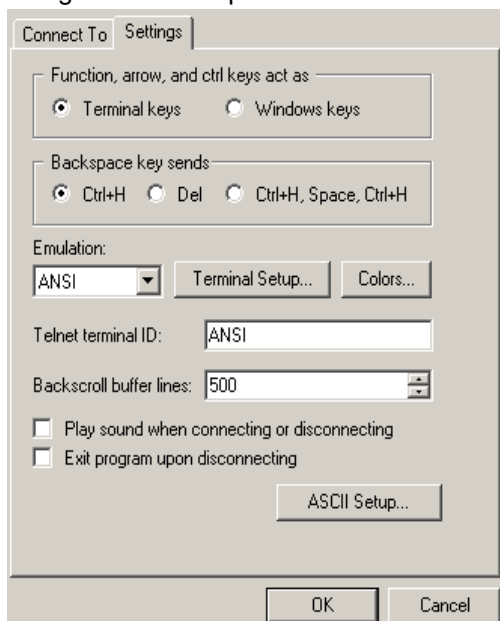
- Click on the disconnect icon. In the main Terminal window.



- On the File menu, select properties.

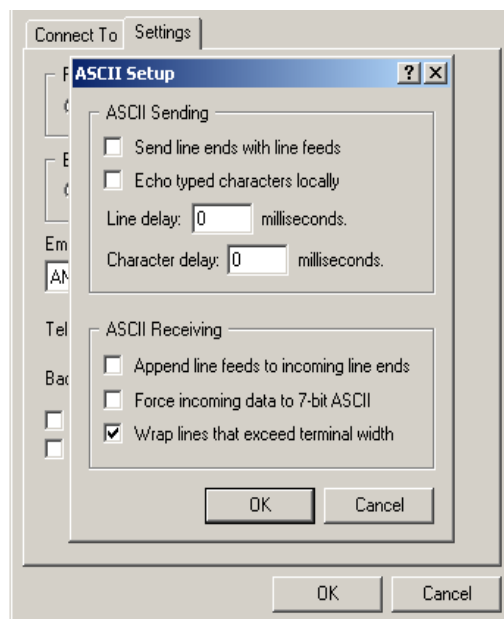


- Click the setting tab. Setup the Setting as shown in picture below.



- Now we need to setup the ASCII setup. Click the ASCII Setup icon.

- Setup the following settings as show in picture below.



- Click OK
- On the File menu, select save as to save the connection setup for future connection.
- You are now ready to program. Please see technical manual for assistant.