How to set up and use Windows 'Hyperterminal'

Some kits (K122, 123, 164, 108) require a communications program to transfer data between the serial port on the PC and the kit. Windows comes with a comms program called 'HyperTerminal' which is installed with Windows by default. If not then you can add HyperTerminal via 'Add/Remove Programs' in the Windows Control Panel. In Windows 95/98, click on the 'Windows Setup' tab and then select 'Communications'. In Windows 2000/XP, click on 'Add/Remove Windows Components'.

There are **slight differences** in setup between the HyperTerminal versions supplied with Windows 95/98 and that supplied with Windows 2000/XP.

WINDOWS 2000/XP SETUP

Start HyperTerminal by clicking on '**Start -> Programs -> Accessories -> Communications -> HyperTerminal**'.

The first screen that appears is the '**New Connection**' dialog box. Here you can enter a name for this configuration of HyperTerminal. In this case let's call it 'Term9600' because the setup will be for communication at 9600 baud data rate. Select an icon then press '**OK**'.

The '**Connect To**' dialog box appears. Ignore the first three boxes – these are used with dial-up modem services. In the last box '**Connect using**' select the COM port that you will be using and press '**OK**'.

In the following '**COM properties**' dialog box you can set up the communication parameters for the COM port. Set for **9600 bits per second**, **8 data bits**, **no parity**, **1 stop bit** and **no flow control**. Press '**OK**' when done.

That's it – setup complete!

The next screen is the actual communications window. Connect the kit to the selected COM port and power it up. You should see a message appear on the screen. Try sending commands to the kit (as per kit instructions) and you should get a response back. If so then you are ready to go.

If you can't communicate with the kit then maybe HyperTerminal is not connected. Click on '**Call**' in the menu bar. If connected you will see '**Disconnect**' displayed in the drop down list. If it is greyed out then you are not connected. In this case click on '**Call**' in the drop down list and try communicating now.

You can also connect and disconnect by clicking on one of the **telephone icons** just below the menu bar. One of them will be greyed out depending on whether you are currently connected or not.

If you are connected when trying to exit HyperTerminal you will be asked if want to disconnect first. Click '**Yes**'.

If this is the first time you have run this particular setup of HyperTerminal you will also be asked if you want to save the connection. You **MUST** click '**Yes**' otherwise your HyperTerminal will be lost. Your connection will be saved as a shortcut called '**Term9600.ht**' under '**Start -> Programs -> Accessories -> Communications'** in a new '**HyperTerminal**' folder. Use this shortcut to run HyperTerminal. You can move or copy this shortcut to the desktop for easier access if you like.

WINDOWS 95/98 SETUP

Start HyperTerminal by clicking on '**Start -> Programs -> Accessories -> Communications -> HyperTerminal**'. A window will appear with a number of default HyperTerminal setups ('.ht' files). Double click on '**Hypertrm**' to start HyperTerminal.

The next screen that appears depends on whether HyperTerminal has been run before.

When running for the first time the '**Location Information**' dialog box appears. Even though we will not be using a dial-up connection Hyperterminal insists that we fill in this information. Select your country or region and enter your area code then press '**Close**' to continue.

If you do not have not installed a modem a dialog box will appear asking you to install a modem. Ignore it by pressing '**Cancel**'.

The '**Connection Description**' dialog box appears. Here you can enter a name for this configuration of HyperTerminal. In this case let's call it 'Term9600' because the setup will be for communication at 9600 baud data rate. Select an icon then press '**OK**'.

The '**Connect To**' dialog box appears. From here on the setup is the same as for Windows 2000/XP (see above).

SENDING FILES

Programmer kits such as K121, K122 and K123 require that a HEX file be sent to the programmer when required. To send a file in HyperTerminal click on '**Transfer -> Send Text File…**' then navigate to the file you want, select it and press '**Open**'. The file will be sent.

CAPTURING DATA TO DISK

Sometimes it is necessary to save data received from a kit to a disk file eg. when capturing logged call data from K164 or HEX data read out from an Atmel chip in K121, K122 or K123. This data is normal ASCII text. In HyperTerminal we use the 'screen capture' feature to do this.

Click on '**Transfer -> Capture Text…**' – a dialog box appears where you can enter a filename and choose the folder where it will be saved. HyperTerminal uses '**CAPTURE.TXT**' as a default filename – you can change this to whtever you like. Press '**Start**' when done. The word '**Capture**' will be displayed at the bottom of the Hyperterminal window, indicating that screen capture is enabled.

Now, ALL data written to the screen will captured and saved to the specified file.

When you have finished capturing data click on '**Transfer -> Capture Text -> Stop**'. The file is a normal text file which you can view or edit using any text editor such as Notepad.

EXAMPLES OF USING HYPERTERMINAL WITH VARIOUS KITS

Using with kits K121, K122 and K123

Start HyperTerminal and check that you can communicate with the programmer kit.

Put in the chip to be programmed. Use the **Erase** (**C** or **E** – read the menu) command to erase the chip, ready for programming.

Hit **P** for program. You will be prompted '**Send file now …**'. Send the HEX file as described above. The file will be sent and programmed into the chip.

If you want to verify that the chip was programmed correctly use the **V** command. You will be prompted to send the HEX file again.

Use the **L** command to lock the code in the chip. This is a security feature of the chips that prevents the code being read out.

In the latest K123 firmware there is a '**Q - Bulk Programming'** feature built in. This is the same as using the 'C P L' commands individually. You will still be prompted to send the file.

It may be helpful to put the shortcut to HyperTerminal (**.ht** file) in the same folder as your HEX files. The '**Send Text File**' dialog box will then automatically show the HEX files without you having to browse to their location.

If you want to read out the contents of a chip and save it to disk then you enable screen capture (as described above) and use the **R** command. The chip data is written to the screen and saved to disk at the same time. When finished turn off screen capture. You will have to edit the text file to remove any unwanted characters at the beginning and end of the file.

Saving K164 call data to disk

Start HyperTerminal and check that you can communicate with the kit. Hit the enter key and type in your password. You will be presented with a menu.

Enable screen capture as described above under '**CAPTURING DATA TO DISK**'.

From the menu select option '**1 – Download data**'. The data will be written to the screen and saved to the disk file at the same time. When all data has been sent turn of screen capture. You will have to edit the text file to remove any unwanted characters at the beginning and end of the file.

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