INTRACOM

netMod

netMod Installation for RS-232

LINUX

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Adjustments for Linux Installation

Installation of netMod

Connect the netMod at a free serial port of your PC and switch on netMod and the PC. The Linux operating system does not need a special driver for netMod's operation.

☞ Login as a root user and type the following command:

ln –s /dev/ttyS<n> /dev/modem

! where ***ttyS<n>*** is the serial port of your PC connected with the netMod. For the correct value of the parameter **<*n*>** please consult the following table:

DOS COM Port	**Linux COM Port**
COM1	ttyS0
COM2	ttyS1
COM3	ttyS2
COM4	ttyS3

Table 1: The serial ports

Example:

If you have connected netMod on the COM2 port, type the following command:

ln –s /dev/ttyS1 /dev/modem

Connection with the Internet

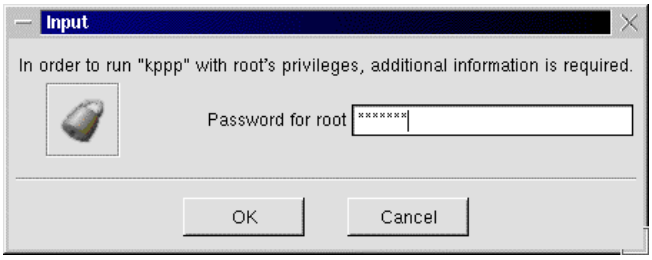
After netMod's succesful installation, you can use it to get connected to the Internet. Make sure you get the appropriate account from your Internet Service Provider that shall have an ISDN infrastructure. The most common way is via the **kppp** software of the X-Window System

! **Attention:** You need a dial-up connection for the Internet via ISDN. Your old account of simple dial-up will not work.

Connection via the kppp S/W from the X Window System

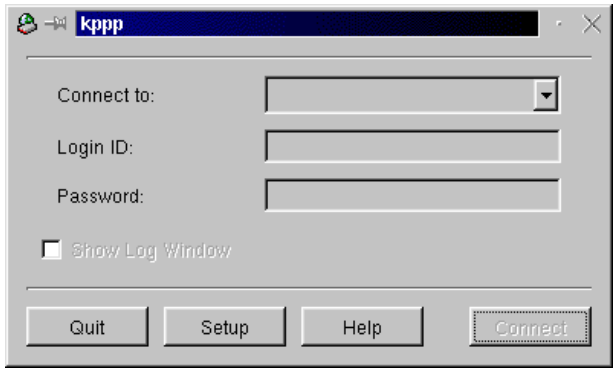
Step 1 Root Password

If you start the kppp S/W as a normal user and not as a root user, the window <*Input*> will appear on your screen. Type the root password to lunch the program.



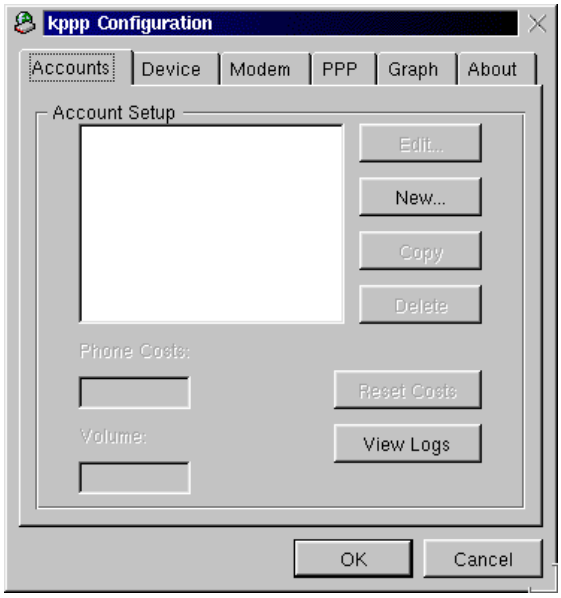
Step 2 Main Screen

If you start the **kppp** S/W as a root user, the window <***kppp***> will appear on your screen:



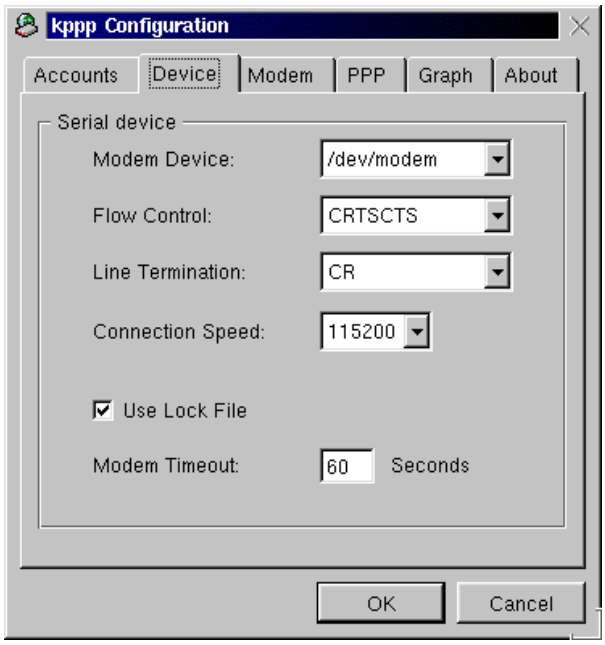
☞ Select <***Setup***> to provide the necessary information for the connection.

⇒ The next window will appear on your screen:



Step 3 Device

Select the option <***Device***> to define the parameters related to the device that will use the **kppp** S/W.



Modem Device:

This is the communication port between the operating system and the netMod.

The possible values are:

- /dev/ttys<n>, where <n> is a number (please refer to Table 1)
- /dev/cua<n>, for older Linux versions
- /dev/ttyl<n>, for internal ISDN cards. In case of the netMod, it shall NOT be used.
- /dev/modem, if the link is already established.

Suggested value:

/dev/modem

Flow Control: The flow control used by the device. The possible values are:

- CRTSCTS (Hardware Flow Control)
- XON/XOFF (Software Flow Control)
- No Flow Control

Suggested value:

CRTSCTS (Hardware)

Line Termination: The line termination character (“Enter”).

If you use a script for the connection, you may need to change the default value.

Connection Speed: The communication speed between the serial port and netMod.

Suggested value:

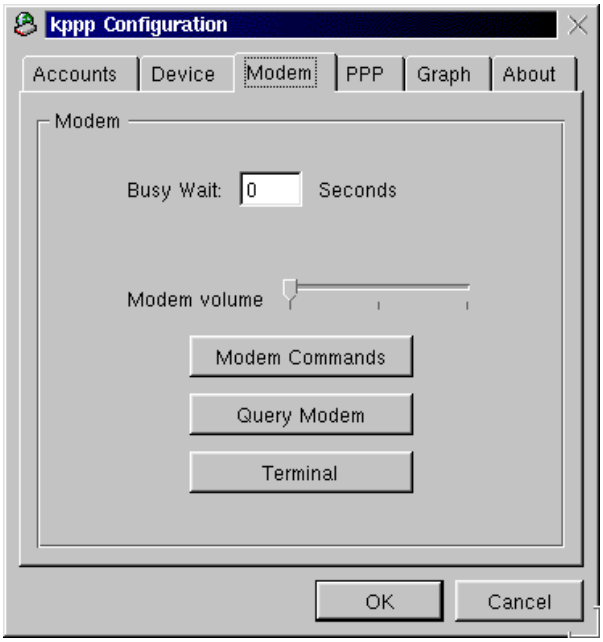
115200

Use Lock File: Select the activation of the Lock File.

Modem Timeout: The time needed for the **kppp** S/W to receive the “CONNECT” signal from the modem. If during this time period, no signal is received by the **kppp** S/W, the S/W detects a fault connection.

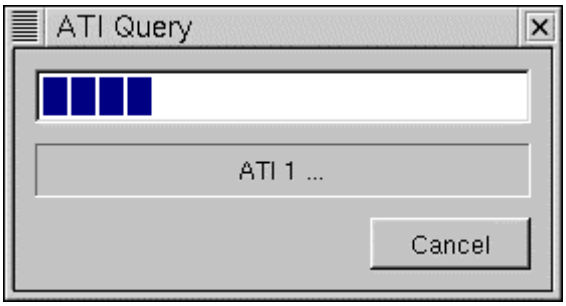
Step 4 Modem

Select the <***Modem***> option to define the parameters related to netMod's operation.

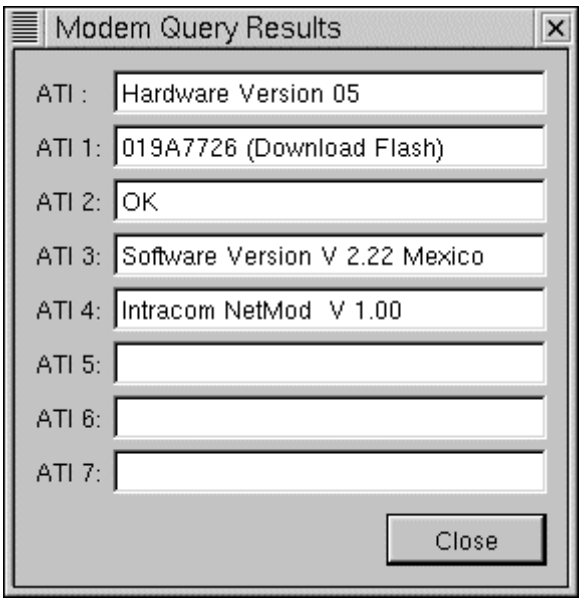


- Select <**Query Modem**> to assure that the operating system has recognized correctly the netMod device.

During the device control by the operating system, the next window will appear on your screen:



After the completion of the diagnistics tests, the next window will appear on your screen, indicating the correct operation of netMod:



- Select <***Terminal***> if you wish to enter AT commands to your netMod.
- Select <***Modem Commands***> to display the parameters configuration window for netMod.

! Here you can define netMod's various parameters, as well as the Multilink PPP support. Before proceeding, please read carefully the following:

☞ It is very important before activating this operating mode, to subscribe as Internet user for a rate of 128kbps, and to assure that your ISP supports connections with the Multilink-PPP protocol.

! The usual ISDN connections offered by the most Internet Providers operate with a maximum data rate of 64kbps, activating only the one B-channel.

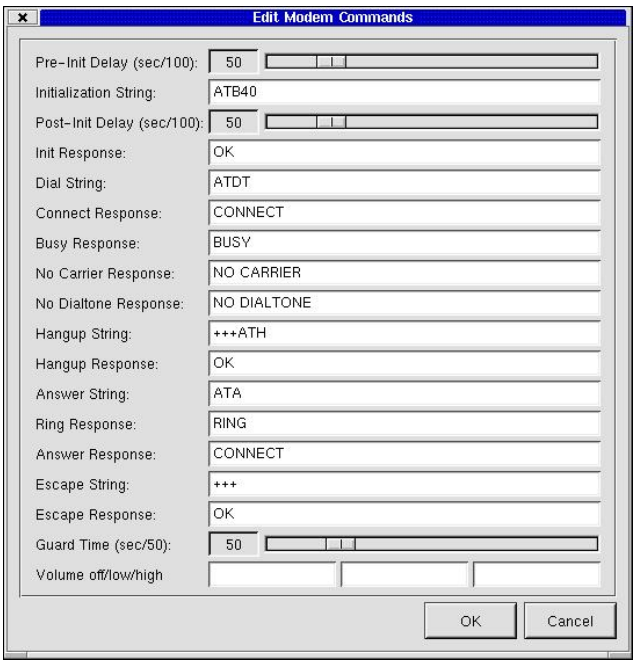
! The ML-PPP connections can provide a maximum data rate of 128kbps, thus activating both B-channels, but only in the case where this is needed, i.e. by high data transfer volume.

! In case of an Internet connection with a data rate of 128kbps using both channels and when an incoming call at the POTS connections is arriving, one of the B-channels will be freed to answer the call. Tha same happens also, if you would like to make a call from a POTS device.

Performing a Call using only one B-channel

In order to use only one B-channel, type the following Initialization String:

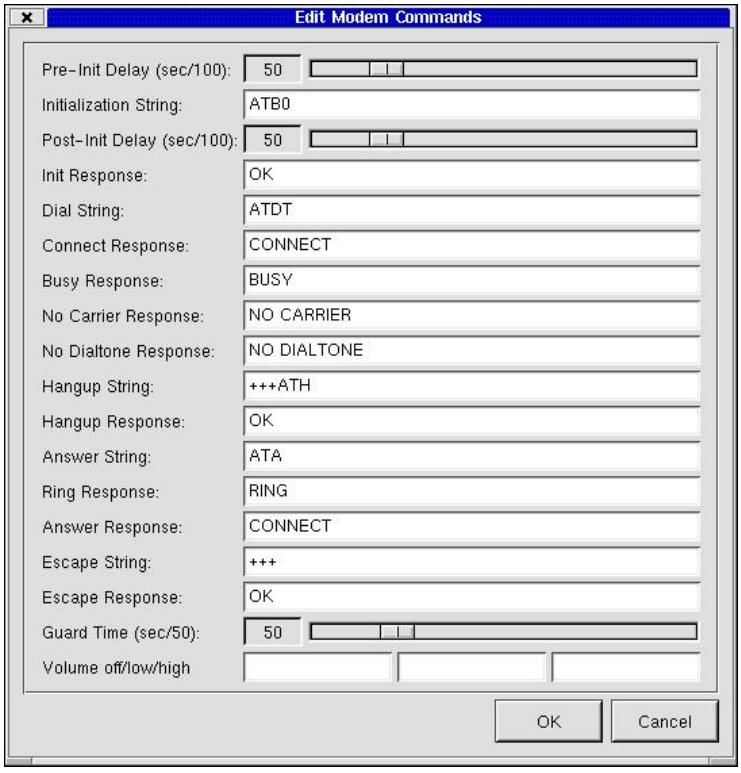
ATB40



Performing a Call using both B-channels

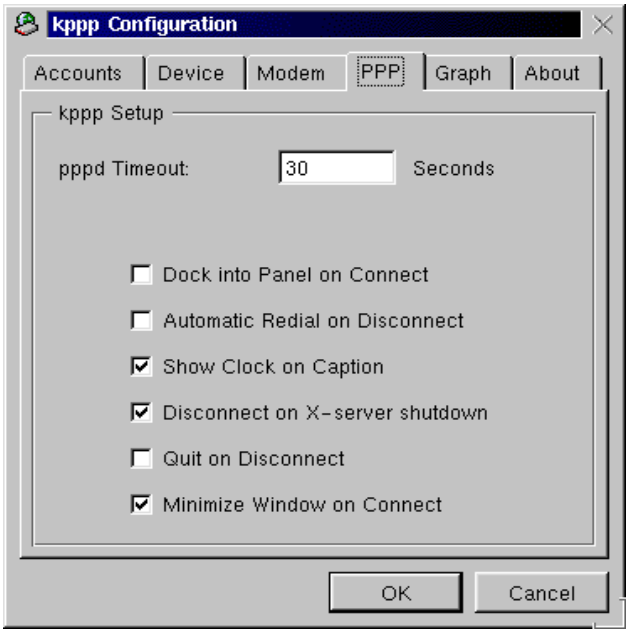
In order to use both B-channels, type the following Initialization String:

ATB0



Step 5 PPP

Select the <***PPP***> window to define parameters related to the PPP protocol.



pppd Timeout — The kppp S/W waits for this time period after the execution of the pppd until the establishment of the connection.

Dock into Panel on Connect — If you select this option, the kppp S/W icon is docked in the system tray.

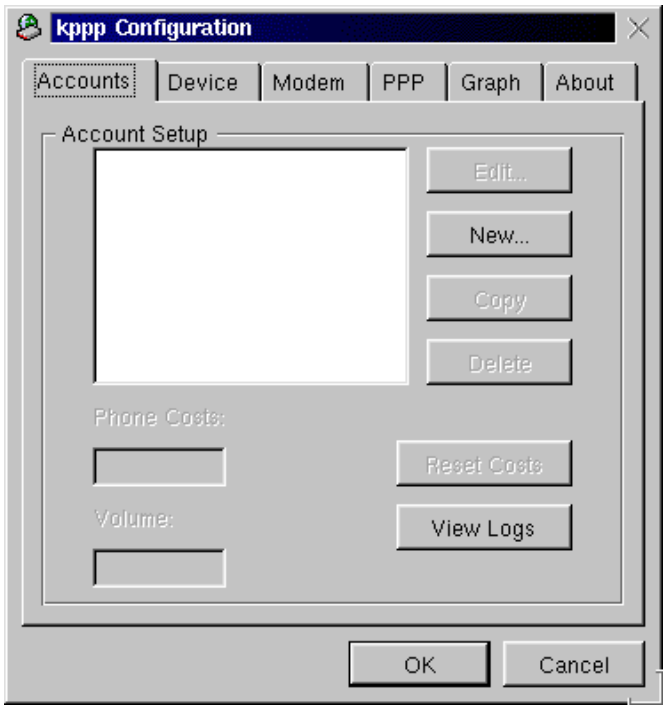
Show Clock on Caption — If selected, displays on the window title of kppp, the duration of the connection.

Disconnect on X-server shutdown — If selected the connection is terminated if the user exits the X window environment.

Quit on Disconnect	If selected, the kppp is terminated after disconnection by the user.
Minimize Window on Connect	If selected, the kppp window becomes minimized after the establishment of the connection.

Step 6 Accounts

Select <**Accounts**> to continue with the establishment of a new account.



Select <**New**> to start. The next window appears on your screen.

Step 7 Dial

Connection Name Unique descriptive name for the new connection.

Phone Number The called telephone number (provided by the ISP). If your ISP has given you more than one telephone number, you can separate them with the symbol «:». Example:

096511111:096522222:096533333

Authentication The way your ISP verifies your connection identification. You should ask your ISP, if he uses PAP, CHAP or a manual authentication procedure.

Store Password Storage of your password in order to be recognized by the kppp S/W during each following call.

Execute program upon connect A program to be executed when pppd establishes the connection.

Execute program before disconnect A program to be executed before pppd terminates the connection.

Execute program upon disconnect A program to be executed after pppd terminates the connection.

Edit pppd arguments Modification of pppd's parameters. Before proceeding to parameter's modification, it is suggested to consult pppd's manual (man pppd).

☞ Continue with the window <**IP>.**

Step 8 IP

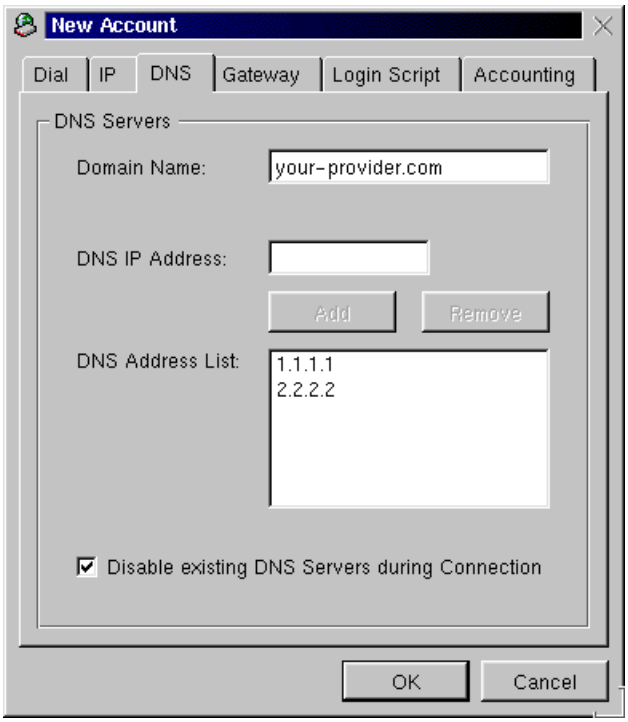
Dynamic IP Address Select this option if your ISP has provided you with a dynamic IP address.

Static IP Address Select this option, if your ISP has provided you with a static IP address. In this case you must type the static address and the network mask.

Auto-configure hostname It defines the device's name based on the IP address of the S/W given by the ISP. It is suggested NOT to activate this option.

☞ Continue with the <***DNS***> window.

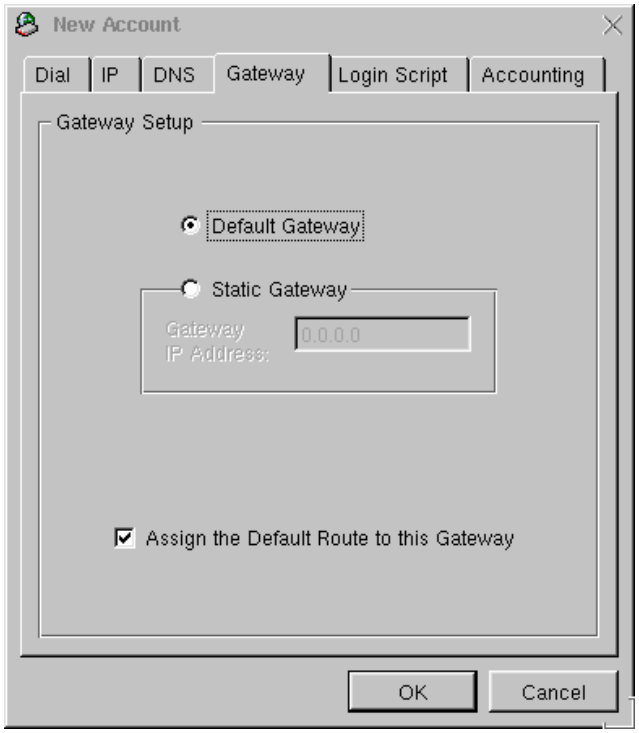
Step 9 DNS



Domain Name	The ISP's domain name.
DNS IP Address	The ISP DNS server's IP address. The address shall be always given arithmetically.
DNS Address List	The order according to which the kppp S/W will consult the DNS servers.
Disable Existing DNS	Deactivation of some predifined DNS servers during the connection.

☞ Proceed with the window <**Gateway**>.

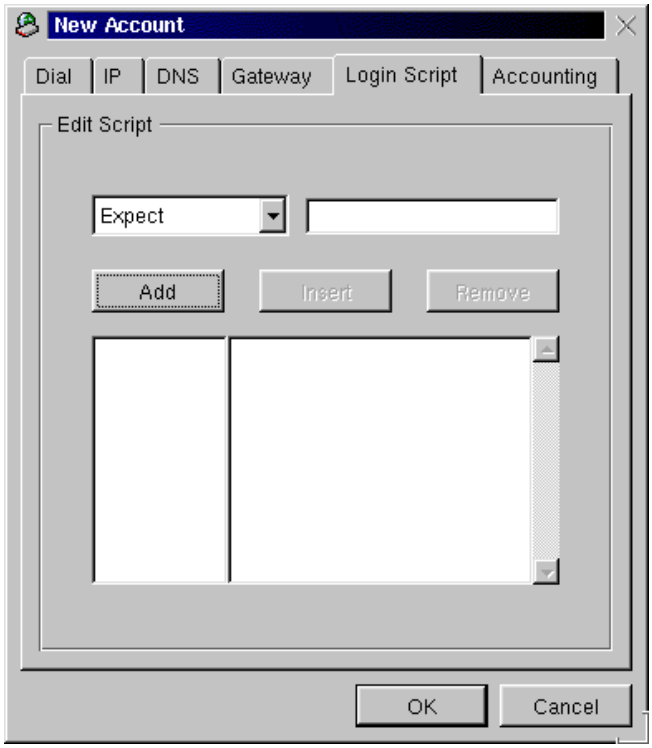
Step 10 Gateway



Default Gateway	Here is defined that the kppp S/W will use the default gateway of the device.
Static Gateway	Definition of the IP address of the gateway to be used by the device.
Assign the Default Route	Do **NOT** modify this selection.

! If the authentication procedure defined by the ISP is a manual one, then proceed to the <***Login Script***> window, otherwise continue with the window <***Accounting***>.

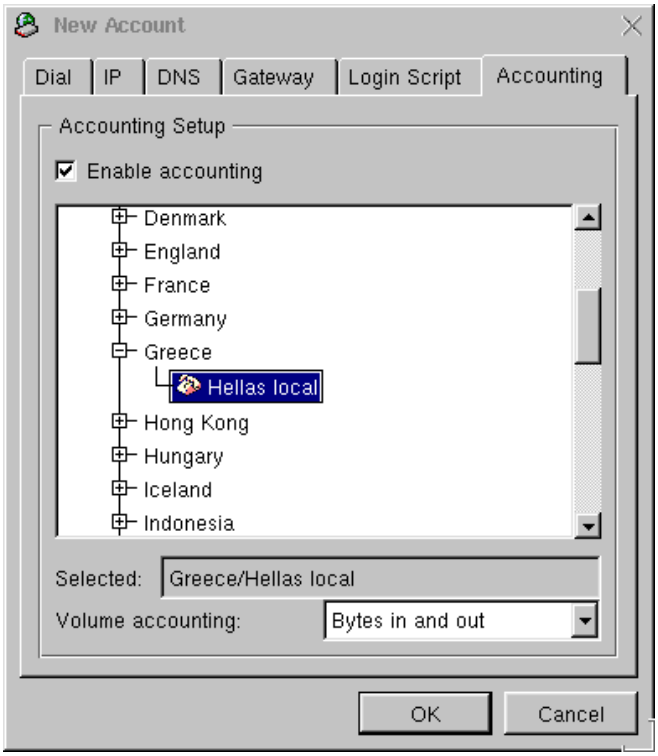
Step 11 Login Script



! If you intend to use a login script, consult your ISP for the structure of the login script.

Step 12 Accounting

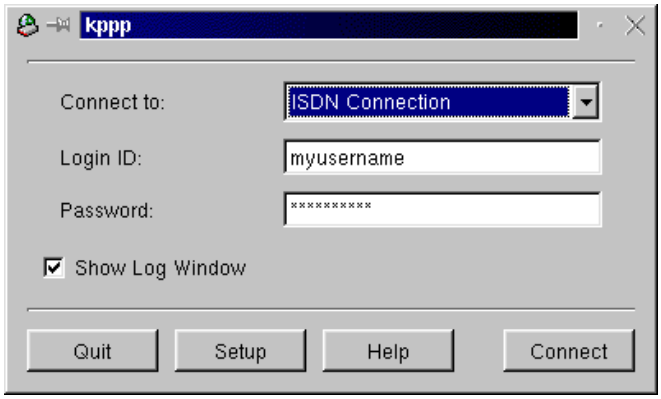
(not for customers outside Greece)



☞ Select <***Greece***> and <***Hellas Local***> if you wish to keep logs about your connection. Selecting <***Accounting***> you can keep statistics also about the total charging of your connection.

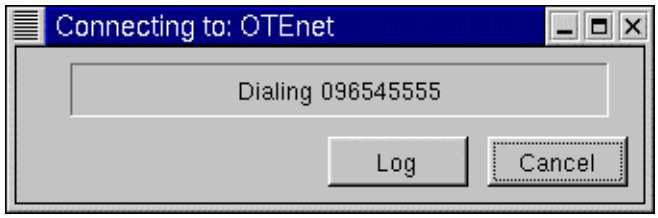
☞ Select <***OK***> to exit the window <***New Account***>.

Step 13 Connect

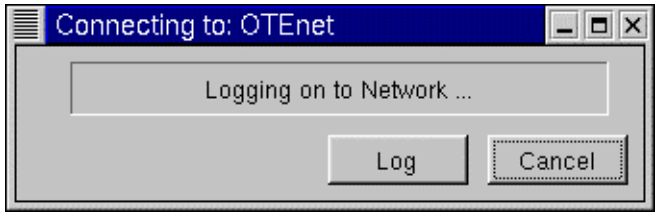


Check the option <***Show Log Window***> in order to display a further window providing connection informations.

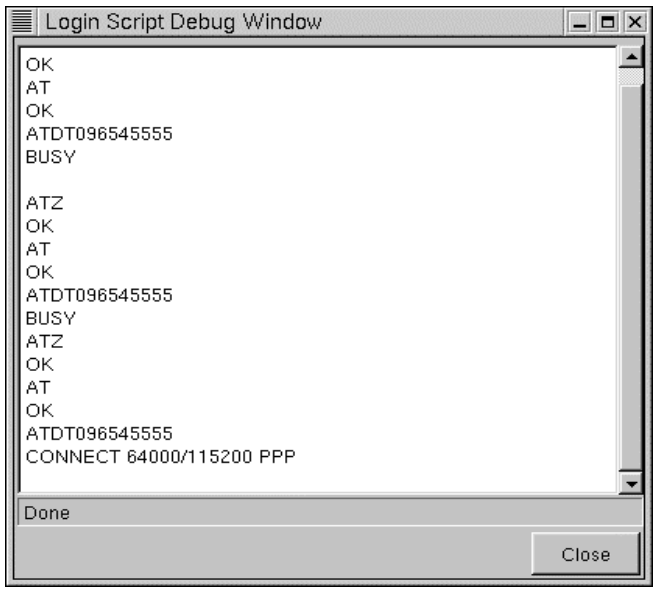
☞ When ready, click on the button <**Connect**>.



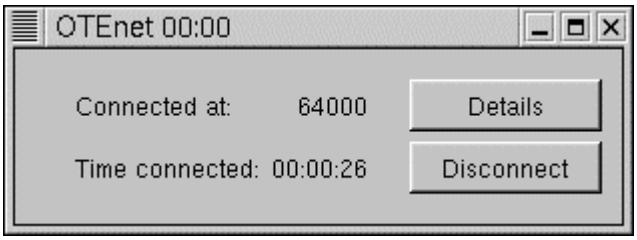
☞ If the call is performed successfully, the next window will appear on your screen:



⇒ In the <**Log Window**> window you should see some information as in the next window:



⇒ After the establishment of the connection, the next window will appear on your screen:



! (In this example, only one B-channel is used)

In case you need more information related to your connection, click on the <***Details***> button.

⇒ In this window you can see the IP address provided by your ISP, information related to your connection (incoming and outgoing), as well as a diagram showing the throughput changes.