KPN Mobile Internet Router 850
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1. Your Mobile Internet Router 850 (MIR850) on the outside

2. PC Configuration Requirements

The recommended PC configurations for using the MIR850 are as follows:

- CPU: Pentium 500 MHz or above
- Memory: 128 MB RAM or above
- Hard disk: 100 MB or above available space
- Operating System: Windows 2000, Windows XP SP2 or Windows Vista
- LCD resolution: 800*600 pixel or above, recommended 1024*768 pixel
- Interface: standard USB interface (1.0 or 2.0) and Ethernet connection
- Internet Browser: Internet Explorer 6.0 or above, Firefox 1.5 or above, Netscape 8.0 or above
3. In a few steps: connecting your MIR850 and use as a Mobile Router

Step 1: Insert the SIM Card in your MIR850

Note: Firstly remove all cables and the Power-supply from your MIR850 !!

Now remove the plastic card slot out of the MIR850. Slide the SIM-card into the card slot with the golden contact facing upward. Insert the card-holder with SIM back into the MIR850, according to the drawing.
Important: By default, your (U)SIM-card is protected by a PIN-code, which is 0000. Your MIR850 will not make a connection to the mobile network and to the Internet, until this PIN is verified. Until that moment, the LED of the “Signal” will blink RED (see also chapter 4).

There are two ways to verify this PIN:

a. In the Web Management Software (see Step 10 for this) go to menu ‘Advanced Settings’ and then to “SIM Settings”. Here you can enter the PIN, and also make a setting that from now the MIR850 automatically verifies this PIN itself, every time at starting up.

b. First put the SIM in a mobile handset, and in the security menu de-activate the PIN on the SIM. The disadvantage of this is, that if the SIM is stolen out of the MIR850, it can be used without restriction in another device, because there is no security any more. That’s why this method is not recommended!

Step 2: Connect to the Power Adapter

Use a power adapter that is compatible with the MIR850, otherwise, the MIR850 may be damaged.

Step 3: Connect to a PC

Connect your PC or laptop to one of the 4 wired ports with an Ethernet cable (CAT5). The green Ethernet indicator light will now go on. The Ethernet cable cannot be longer than 100 meters (328 feet). To achieve better results, shielded cable can be used.

Step 4: Connect to a telephone Set (Optional)

The communication quality of the telephone set can be interfered by the wireless signal, which gives unwanted sounds and noise. Place the telephone set at least one meter away from the MIR850.
Step 5: **Place the MIR850**

The MIR850 can be placed either horizontally on a table, hanging against the wall, or leaning against the pedestal. Place the MIR850 on a higher place or near the window, so it can receive stronger signals. This will result in a better coverage and higher speeds.

Press the bayonet of the pedestal, and place the MIR850 into the pedestal as shown in the figure. That way, the MIR850 can lean against the pedestal.

Caution: To avoid other electrical devices from interfering by the wireless signal (unwanted sounds or noise), place electrical devices at least one meter away from the MIR850.
Step 6: **Connect an External Antenna (Optional)**

To have an even better reception (and thus better coverage and higher speeds), an external antenna can be connected to the MIR850. Tighten the antenna to make sure that the antenna is well connected with the antenna jack. Depending on the external antenna used, sometimes an antenna cable accessory can be necessary to fit the antenna connector on the MIR850, which is type SMA.

When using an external antenna, make sure the Antenna-switch is on “External”.

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Step 7: **Power on the MIR850**

Press and hold the ON/OFF button to power the MIR850. You will then see multiple LED's light on the MIR850. See chapter 4 for this.
Step 8: **Make a call**
When you hear the dial tone after picking up the handset, you can make a call.
No pre-dial numbers are necessary. Just dial the (general 10-digit) subscriber-number.

Step 9: **Connection to the Internet**
By default, with its pre-defined settings the MIR850 automatically makes a connection to the internet at power-ON. You can directly use the network services such as web browsing, and receiving or sending emails.

Step 10: **Log in to the MIR850 Web Management software**
By default, the WLAN (WiFi) part of your MIR850 is secured by having a WPA-key activated. This has been pre-configured, and the WPA-key is printed on a separate sticker on the bottom of the casing.
With this WAP-key, you can register and use laptops with WiFi, wireless on your MIR850.

If you need to configure the WLAN or other MIR850-related parameters, you need to access the MIR850 management page (http://192.168.1.1). For detailed operations, refer to the wireless MIR850 user guide.

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**Please be aware that changing this to wrong data or settings may lead to a situation that the MIR850 does not make a connection to the mobile network or the Internet any more!**
Administrator: Has the rights to view and modify the configurations. Username = Admin, default password is admin.

Normal User: Has the right to view only the basic information. Username = (Normal) User, default password is user.

To avoid the conflicting configurations, only one user is allowed to log in to the MIR850 management page at a time.

4. Viewing the MIR850 Running status Through the Indicators (LED’s)

1. Power indicator:
   Steady on and in light-green: the MIR850 is switched on successfully.

2. WLAN indicator:
   - Steady on and in light-green: the WLAN is enabled.
   - Blinking light-green: data is transmitting.

3. Signal strength indicator:
   - Fast blinking in red: SIM card error (SIM card is not inserted or the PIN code is not verified).
   - Steady on and in red: Signal strength in level one (weak).
   - Steady on and in light-green: Signal in level two or three (middle).
   - Steady on and in dark-green: Signal strength in level four or five (strong).

4. Network mode:
   - Double blinking in green: Searching the mobile network.
   - Blinking in green: Registering with the (slow) 2G network (GPRS)
- Steady on and in green: Internet-connection over (slow) 2G network (GPRS).
  Max. download speed around 52 kbps.
- Blinking in dark-blue: Registering with the (faster) 3G network (UMTS).
- Steady on and in dark-blue: Internet-connection over (fast) 3G network (UMTS).
  Max. download speed around 384 kbps.
- Steady on and in light-blue (cyan): Internet-connection over (fastest) 3,5G network (HSPA). Max. download speed around 6 Mbps (depends on the connected Operator’s network).

5. Optionally connect and use your MIR850 as a USB-Modem

In the USB modem mode, you can use extra functions such as SMS and phone book. However, in this mode the Ethernet connection and WLAN cannot be used.

![USB Modem Diagram]

1. USB data cable
2. USB connector
3. Auxiliary USB data cable

The Auxiliary USB data cable is in most cases needed for additional power supply, because some USB-ports on laptops cannot provide enough power each. In this case, plug the 2nd USB-cable into a 2nd USB-port of the computer to obtain extra power from the computer.
Step 1: Insert the (U)SIM card into the MIR850.

Step 2: Connect the MIR850 and PC with a compatible USB data cable, according to the drawing. In this case, the external power-supply of the MIR850 is not necessary (cannot be connected any more).

Step 3: The computer automatically recognizes the new hardware, and displays on the lower right of the desktop the green arrow. The MIR850 and PC are connected successfully.

Step 4: After a short while, automatically the installation of the “KPN Mobile Connect” communication program will start. After the installation, this program will start automatically, and a new KPN-icon will appear on your desktop.

If the installation does not start automatically, go to Start-Run, and browse to the new system-drive (for example E:) that the MIR850 has created. Choose the file “Autorun.exe” and click “OK”.

Step 5: Click the button “Connect” to make a connection to the Internet. In this “KPN Mobile Connect” software you can also for example send SMS-messages and maintain a Phonebook.

Step 6: Your MIR850 is now also ready to make speech calls with an analogue phone, if this is connected.

6. Using the extended User Guides

On the memory of your MIR850 there are electronical versions (in PDF-format) of the extended user manuals of the Router-part, as well as the USB-Modem function. This also includes a description (User Manual) of the “KPN Mobile Connect” software program.

You can find this in the directory E:\Manuals, if E: is the drive-letter that your computer assigned to the MIR850 in the USB-modem mode.