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Quick Start Guide

NB6, NB6W, NB6Plus4, NB6Plus4W
ADSL2+ Modem Router

SECTION 1   BEFORE YOU START

Computer must have:

- Ethernet or USB port (USB is not available with NB6Plus4)
- TCP/IP protocol enabled (standard on most modern PCs)
- A web browser, Internet Explorer 5.x/Firefox 1.x/Netscape 6 or better.

Obtain your Internet account information from your ISP:

- Login user name and password
- ADSL Connection type (eg. PPPoE is the most common type in Australia)
- Public IP address (only if you subscribe for static IP)
- DNS server IP (only if specified by ISP).

Choose from your connection options:

1. Ethernet (Recommended, this method of connection is Operating System independent.)

All NB6 Series Routers include an Ethernet port for direct connection to a PC or network. The NB6Plus4 and NB6Plus4W has a built in 4-port network switch and up to 4 computers can be connected directly to the router. If you require to connect more computers, purchase another network switch to provide for more connections. Only one Ethernet cable is provided. Extra cables and network switch can be purchased from your supplier.

2. Wireless LAN (NB6W and NB6Plus4W only. Suitable for computers that are wireless enabled. This is also Operating System independent.)

The router is also a wireless access point that supports 802.11g and 802.11b. To configure for wireless it is best to connect a computer to the router via Ethernet and follow the Setup Procedure under Section 4 - Setting up wireless of this Quick Guide.

3. USB (Not recommended. This option is only available to standalone Windows 98 SE/ME/2000/XP/ Vista computers - Not available with NB6Plus4)
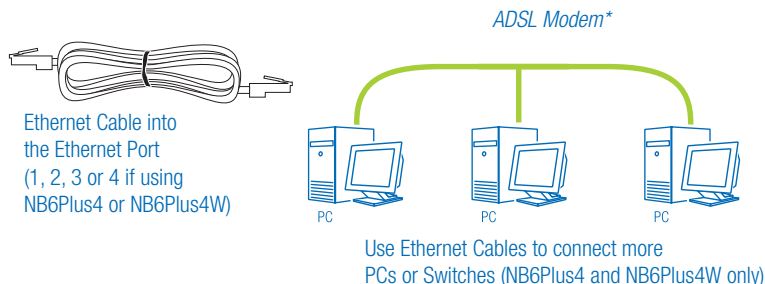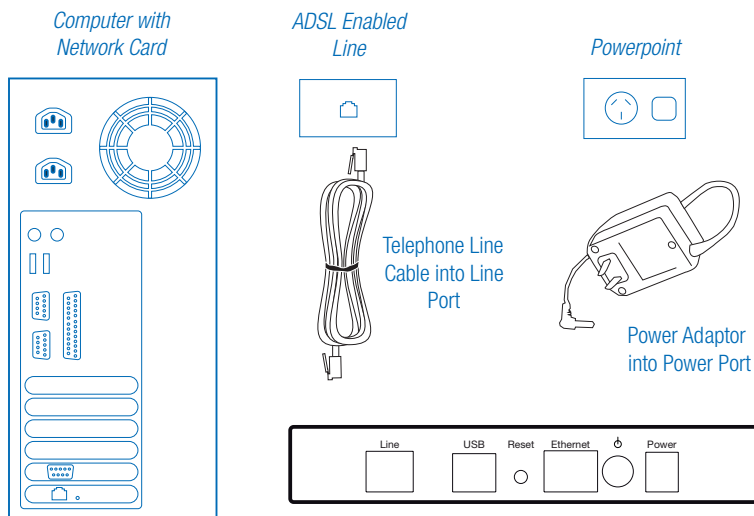
Choose this option only if a computer does not have an Ethernet port and it is not feasible to add an Ethernet port or use wireless. You must then install a driver to operate the router. The USB driver and User's Guide featuring detailed installation instructions are found on the accompanying CD.

SECTION 2   CONNECTING THE ROUTER

1. Connect the Line port of the router directly into your ADSL enabled line (telephone wall socket) with the provided line cord. Do not connect through a filter, unless the filter has a designated MODEM port for this purpose.

2. Connect the Ethernet port of your computer to the Ethernet port of the router (1, 2, 3 or 4 if using the NB6Plus4 or NB6Plus4W) using the Ethernet cable provided.

   Note: If you choose to connect via the USB port (not recommended), there is no need to use the Ethernet cable. Do not plug in the USB cable yet. During driver installation, you will be advised to do so. Refer to page 21 of the User's Guide for instructions.

3. Connect the provided AC power adaptor to the Power jack of the router. Plug the adaptor into a mains power outlet. Switch on the router. In normal operation the following lights should be on: Power, ADSL, Ethernet (1, 2, 3 or 4 if using the NB6Plus4 or NB6Plus4W), WLAN (NB6W and NB6Plus4W only). Section 7 of this Quick Start Guide explains the definition of these indicator lights.

Computer with Network Card

ADSL Enabled Line

Powerpoint

Telephone Line Cable into Line Port

Power Adaptor into Power Port

Line   USB   Reset   Ethernet   ⏻   Power

ADSL Modem*

Ethernet Cable into the Ethernet Port (1, 2, 3 or 4 if using NB6Plus4 or NB6Plus4W)

PC   PC   PC

Use Ethernet Cables to connect more PCs or Switches (NB6Plus4 and NB6Plus4W only)

* Model shown is NB6, NB6W, NB6Plus4 and NB6Plus4W vary slightly from image

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SECTION 3   GETTING ON-LINE

Before you start, the ADSL & at least one of the ethernet or USB lights on the router must be on. Refer to Section 8 – Troubleshooting of this Guide to resolve any issues.

Step 1 Go to the 'Connect to Internet' Page

Start your web browser. Enter the default address **http://192.168.1.1**

Enter **admin** for both User name and Password.

See Q1 in Section 8 - Troubleshooting if you cannot get this screen.

Next you will be in the **Quick Start** > **Connect to Internet** page.

Step 2 Enter Internet Account Details

Enter your Internet account User Name & Password in the exact format as specified by the ISP. Usually the user name resembles an e-mail address with suffix **@isp.com.au**. Make sure the page displays **"Your DSL router is ready to connect"**, before clicking **Connect**.

See Q2 in Section 8 – Troubleshooting, if after several minutes the message "Your DSL router is not ready to connect" still shows.
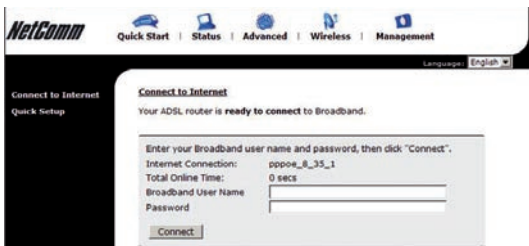
Once connected the screen changes to display the on-line time. The PPP light on the front panel of the router will come on, indicating that you are online. Click **Disconnect** only if you wish to disconnect manually.
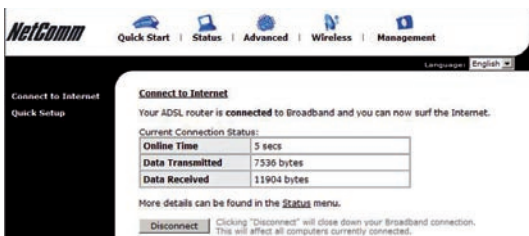
You are now successfully connected to the Internet.

Your Internet account user name & password will be saved automatically.

If previously the computer had a dial-up modem for Internet connection, check your browser setting. The system may still try to communicate through the previous connection. In Internet Explorer, go to Tools–Internet options–Connections, select Never dial a connection. Close Internet Explorer to take effect.

SECTION 4 SETTING UP WIRELESS (NB6W & NB6PLUS4W ONLY)

By default wireless is activated on your router and a minimum security level has been enabled to help prevent unauthorised wireless access. The default wireless security enabled is 64-bit WEP and the default WEP key is: a1b2c3d4e5.

To connect wirelessly from a laptop or PC, first go to **Control Panel** > **Network Connections**. Right click on **Wireless Network Connection** and select **View Available Wireless Networks**.
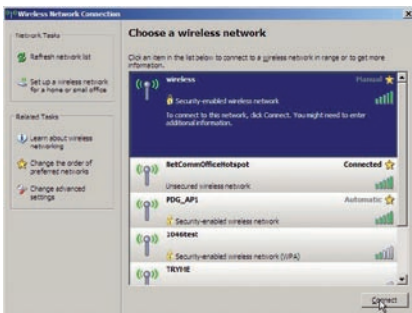

Click on the connection named **Wireless** and click on **Connect**.

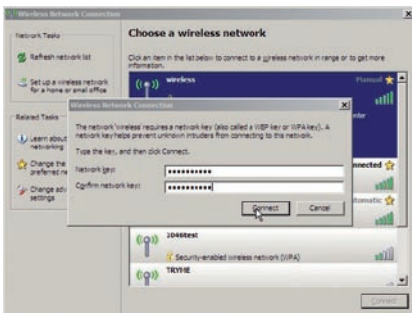*Note: if you are unable to see any wireless network connections in the list please visit the NetComm Knowledge Base for troubleshooting steps:*

http://kb.netcomm.com.au/

Wireless > General Information/Troubleshooting

Now you will need to enter the Network key (or WEP key, **default is a1b2c3d4e5**)

You should now have wireless connection through your router.

Changing the default wireless settings on your router

1. Connect wirelessly or via the Ethernet port of a computer to configure wireless operation. Start your web browser. Enter the default address http://192.168.1.1. User name and password are both **admin**.

2. Go to **Wireless > Basic**. By default the SSID is set to 'wireless', however you can use any SSID of your choice. Pick a desired channel, the default channel is 6. If there are other access points nearby, try to choose a channel that is not in use to avoid interference. Wireless clients will scan all channels and use the same channel as the access point. Click **Apply**.

3. Set up wireless clients according to the section above. The router is also a wireless access point. Select **infrastructure mode**. Do not use Adhoc (or peer-to-peer) mode. Every wireless client should use the same SSID and security as the access point. **Keep in mind that the default 64 bit WEP key is: a1b2c3d4e5**.

Increasing wireless security

Several options are available to increase your level of wireless security including:-

Hide SSID – SSID is a name that identifies the network and this is periodically broadcast by the router to signify it's presence. If you hide the SSID then it will not be broadcast and other wireless clients normally will not see the router.

Change protection type – 64-bit WEP is a minimum level of wireless security. Advanced security is provided by WPA/WPA2 and 802.1x. Whichever protection method is selected in the router must also be used by wireless clients wishing to connect.

Access control – the MAC addresses of permitted clients can be registered in the router.

For detailed procedures, refer to page 100 of the User's Guide.

SECTION 5   TIPS FOR SECURITY

This router is shipped secured by a firewall by default. In order to take full benefit from the security features of this router:

Do:

- Change your router's administrative user name & password.
- Back up your router's configuration. See the router's **Management** > **Backup Config** menu.
- Disable UPnP if you don't need this function.
- Read about advanced functions of this router. Found in Chapter 4 of the User's Guide on this CD.

Don't:

- Enable any form of remote access to the router unless you are confident in handling the security implications. Remote administration of the router opens up the opportunity to breach the security of your router and network. Use the built in access control list to restrict access to only authorised Internet hosts.
- Enable IP extension (bridging) without firewall protection.
- Send your router away for repair or replacement without resetting to factory default or wiping out your Internet account login details. Use the Backup Configuration option to save your router's settings elsewhere. When a replacement unit is received, restore the original setting from the backup file.

SECTION 6   SOME ADVANCED FUNCTIONS OF YOUR ROUTER

Firewall, port forwarding, DMZ & traffic restrictions

By default a firewall is actively blocking incoming requests from the Internet to your private network. In the reverse direction requests sent from your network can freely pass through to the Internet.

If you have local servers on your network and want the servers accessible to Internet users, set up Virtual Servers. Refer to Chapter 4 – Virtual Servers Port Forwarding on page 80 of the User's Guide.

If you run applications that require unrestricted 2-way traffic between a computer on your network and the Internet, set up the computer as DMZ Host. Refer to Chapter 4 – Virtual Servers DMZ Host on page 85 of the User's Guide. Caution – DMZ hosts are no longer protected by the firewall.

You can prevent or restrict access of selected computers to the Internet by defining IP Filters. Refer to Chapter 4 – Firewall IP Filtering on page 89 of the User's Guide.

Quality of Service (QoS)

The router allows prioritising of upstream traffic (to the Internet). The user specifies the traffic conditions and traffic rules. The router has three queues for traffic priority: high, medium and low. Low priority packets are not sent when there are higher priority queues.

To use QoS, refer to Chapter 4 – Quality of Service on page 92 of the User's Guide.

Please refer to the User's Guide for other advanced functions. Always restart the router to activate any changes to configuration.

SECTION 7   GETTING TO KNOW YOUR ROUTER

This Router is shipped with the following factory default settings.

- Router IP address   192.168.1.1
- Subnet mask   255.255.255.0
- VPI   8
- VCI   35
- Connect mode   PPPoE LLC/SNAP
- NAT   enabled
- DSL line mode   G.DMT/MMODE
- WAN IP   dynamic
- DHCP   enabled
- DNS relay   on
- UPnP IGD   enabled

Wireless Settings (NB6W and NB6Plus4W only):
- SSID   wireless
- Channel   6
- WEP Key   a1b2c3d4e5

Firewall:
- Incoming requests   blocked
- Outgoing traffic   not blocked

Router configuration & management:
- User name   admin
- Password   admin

If your ISP specifies that your ADSL service is PPPoA, connect mode must be changed to PPPoA LLC/SNAP. Please refer to User's Guide for instructions. Check with your ISP if you are unsure of the type of service you have subscribed to.

NB6 Series LED Indicators

Function	Color	Definition
Power	Off	Power is off.
	Solid Green	Power is on and the device operates normally.
	Solid Red	Power on self-test in progress
		The device enters the console mode of the boot loader.
		Power on self-test failure if the led always stays solid red.
	Flash Red	Firmware upgrades in progress
ADSL	Off	No ADSL signal is detected.
	Slow Flash Green	ADSL line is handshaking in progress
	Fast Flash Green	ADSL line is training in progress
	Solid Green	ADSL line connection is up.
PPP	Off	No PPPoA or PPPoE connection
	Solid Green	At least one PPPoA or PPPoE connection is up. The users can access the Internet now.
Ethernet (1, 2, 3, 4 on NB6Plus4 and NB6Plus4W)	Off	No Ethernet signal is detected.
	Flash Green	User data is going through Ethernet port
	Solid Green	Ethernet interface is ready to work.
USB	Off	No USB signal is detected.
	Flash Green	User data is going through USB port
	Solid Green	USB interface is ready to work.
WLAN (NB6W and NB6Plus4W only)	Off	No radio signal is detected or WLAN has been disabled.
	Flash Green	User data is going through WLAN port
	Solid Green	WLAN interface is ready to work.

SECTION 8   TROUBLESHOOTING

The installation procedure in this Quick Start Guide assumes you are connecting the router via Ethernet (recommended). If you are connecting the router via USB (not recommended), skip this section and refer to **Chapter 2 - USB Driver Installation** on page 21 of the User's Guide on CD.

Preparation: Configure Computer to get IP Address

If your computer is already configured to obtain an IP address automatically (from a DHCP server), do nothing (Windows default network setting). By default the router is a DHCP server and will assign an IP address to the computer automatically.

If you are unsure of your computer's network setting, refer to Chapter 2 of the User's Guide. Pages 26-32 contain information on **Setting TCP/IP** for different versions of Windows.

Now go to **Section 3 – Getting On-Line**.

Q1. Cannot open the router control panel from my browser.

1. Check that the ETHERNET light (1, 2, 3 or 4 if using the NB6Plus4 or NB6Plus4W) indicating the connection to the computer is on. If not, check that the ETHERNET cable is firmly plugged in.
2. Perform a PING test. In Windows Vista, click Start and type 'cmd' in the text bar and press Enter. In Windows XP or 2000, click Start-Run. Enter cmd then OK. (In pre-2000 Windows versions enter command instead). Type ping 192.168.1.1 then press Enter. The response should resemble:
    Pinging 192.168.1.1 with 32 bytes of data:
    Reply from 192.168.1.1: bytes=32 time=4ms TTL=30
    ….
    If there is a similar response, the router is communicating with your computer correctly and the problem lies elsewhere. If the result is Request timed out or similar failures, there may be a network problem. Check that the ETHERNET cable is firmly plugged in.
3. Disable any personal firewall or virus checker temporarily. If you are using Internet Explorer, go to Tools–Internet options-Security. Reset security level of all 4 icons to default. You can revert to your customised settings after configuring the router.
4. If previously the computer had a dialup modem, check browser setting. For example in Internet Explorer, go to Tools–Internet options–Connections, and select Never dial a connection. Also check LAN Settings that the option Use a Proxy Server is not selected.
5. If the router is connected to a network hub, try connecting the router directly to the computer in a standalone setup to eliminate any possible problem associated with the hub.
6. The router's default IP address is 192.168.1.1. To access the browser control panel your computer must be on the same subnet as the router. See also Q3.

Q2. Cannot connect to Internet or cannot browse

1. Check that the ADSL light is on. Normally it takes less than one minute to establish an ADSL link, and the light comes on. If the ADSL light does not come on, the router is not seeing any signal. Check that:
    - ADSL service has been enabled.
    - If there is a designated ADSL jackpoint for the service, make sure the router is connected directly into this jackpoint. Other jackpoints cannot be used.
    - If there is no designated ADSL jackpoint, any jackpoints may be used. Connect the router directly into a jackpoint, or through the port marked MODEM on a filter.
2. If the ADSL light is on, but the PPP light is off, check that:

- The Internet account User Name & Password are correctly entered. Go to the Quick Start menu as described in **Section 3 – Getting On-line**. Re-enter user name and password in the exact format as specified by the ISP.
- Your ADSL account has been activated with the ISP.

3. If the PPP light is on, verify the network configuration of computer and router. If you still cannot browse, perform a PING test as described in Q1-2. If there is response, now use these addresses:

   (A) Ping www.netcomm.com.au (or any valid web address)

   (B) Ping 203.26.24.112 (or any valid public IP address)

   If both (A) & (B) reported failures such as "request time out", and you assigned an IP address to your computer manually, refer to Preparation: Configure computer to get IP address in Section 8 and the relevant sections of the User's Guide. Check that the router's IP (192.168.1.1) is entered as gateway & DNS.

   If (A) fails but (B) shows a response, this is probably a DNS problem. Refer to Preparation: Configure computer to get IP address in Section 8 and the relevant sections of the User's Guide. Enter the router's IP (192.168.1.1) as DNS. If the ISP specifies a set of DNS address, use the address.

   If both (A) & (B) show responses, you are on line. The problem is perhaps the browser setting. Try returning any custom settings of the browser to default. If you have a personal firewall, disable it to see if it makes any difference. Also you may try shutting down the computer and restarting.

Q3. Need to install router on a network that does not use 192.168.1.0

If the existing network already has a DHCP server, disconnect one computer from the network. Connect the computer to the router. The host computer will be assigned 192.168.1.2. The router's IP can now be changed so that it is consistent with the network. Disable DHCP on the router.

Q4. Browsing is fine but I cannot run certain applications.

You need to set up virtual servers or DMZ host. See Section 6 on Firewall & traffic restrictions.

Q5. The router's IP and/or administrative password have been modified. But the details have now been forgotten.

You can restore the router to factory default by pushing a pin into the hidden reset button located next to the power on/off button at the back of the router. Push and hold for 5 seconds then release to reset router.

Warning: Resetting the router will remove all configuration including ADSL username and password.

Q6. I need to know the dynamically assigned WAN IP when the router goes on line

Go to Status > Internet Connection, the WAN IP is displayed here.

Q7. What to do if the wireless link quality is poor

If the link quality is poor, it may be due to one of these reasons:

- Wireless station and access point are too far apart.
- Radio interference.

There are 13 channels available to use. Channels are selectable from the access point. Try picking a different channel to avoid interference. Also try:

- Moving the wireless client or the access point to a different location.
- Not sharing the same AC power socket between the computer and the device generating the interference.
- Staying away from microwave sources (including microwave oven) and large metal objects.

Q8. How to get information update

This Quick Start Guide and User's Guide on CD are the primary source of information about the product. Please check the NetComm website www.netcomm.com.au regularly for updates, links, or to download a more current version of this Quick Start Guide.

Product Warranty

NetComm products have a standard 12 months warranty from date of purchase. However some products have an extended warranty option, via registering your product online at the NetComm website **www.netcomm.com.au**. Refer to the User Guide for complete product warranty conditions, limitations of warranty and other legal and regulatory information.

Contact Information

If you have any technical difficulties with your product, please do not hesitate to contact NetComm's Customer Support Department.

Email: support@netcomm.com.au

www.netcomm.com.au

Note: NetComm Technical Support for this product only covers the basic installation and features outlined in the Quick Start Guide. For further information regarding the advanced features of this product, please refer to the configuring sections in the User Guide or contact a Network Specialist.