Dynalink

ADSL2+ Modem Router

Quick Setup Guide

RTA1320

Important

This Guide is intended to get you started quickly. We have made the factory default setting of this router suitable for New Zealand[1]. All you need is to follow through the steps we describe here.

This Guide should be read in conjunction with the *RTA1320 ADSL Router User's Manual*[2]. It is provided as a PDF file on this CD. To view or print this *User's Manual*, go to the previous menu **ADSL Modem Router (RTA1320)** and click the **View User Manual** button.

Important safety notes can be found on page II of the *User's Manual*. Advanced users or users who have other setup preferences should also read the *User's Manual*.

If you choose to connect via the Ethernet port, no driver is required. If you choose to connect via the USB port, you will need to load a driver. A driver is only available for Windows 98, ME, 2000 and XP systems. The drivers are found on this CD. To install a driver into Windows, go to the previous menu **ADSL Modem Router (RTA1320)** and click the **Modem Drivers** button.

Notes for this page:

1. *In New Zealand the majority of ADSL subscribers get PPPoA service by default. Your router is already preset to meet this standard requirement.*
2. *The User's Manual available on this CD was written for international users. In Chapter 3 – Connecting & Accessing the Internet, only references to PPPoA is relevant to New Zealand users. Ignore all references to the value of VPI or VCI. In New Zealand VPI is 0 and VCI is 100. These numbers are preset as factory default. Do not change, or the router will not connect.*

1 Default Configuration for New Zealand

This Router is shipped with the following factory default settings.

Router IP address	192.168.1.1
Subnet mask	255.255.255.0
VPI	0
VCI	100
Connect mode	PPPoA VC-MUX
NAT	enabled
DSL line mode	G.DMT
WAN IP	dynamic
DHCP	enabled
DNS relay	on
UPnP IGD	enabled

Firewall:

Incoming requests	blocked
Outgoing traffic	not blocked

Router configuration & management:

User name	admin
Password	admin
Telnet password	admin

The majority of users in New Zealand will be able to connect using the default factory setting. They can skip Section 6 of this Guide. ***Only if*** *your ISP advises explicitly that you have a "PPPoE service", then you need to follow Section 6.*

2 Before you start

Make sure your computer has these installed:

- Ethernet or USB port
- TCP/IP protocol enabled
- A web browser, Internet Explorer 5.x/Firefox1.x/Netscape 6 or better.

Obtain your Internet account information from your ISP:

- Login user name and password
- 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 (Preferred option for standalone and multiple computers. This method of connection is Operating System independent.)**

   Connect the Ethernet port of the router directly to the Ethernet port of your computer. One Ethernet cable is provided. For Internet sharing, a network hub and extra Ethernet cables are required. Connect the Ethernet port of the router to any of the ports available on the hub. Next, connect each of the computers to the network hub. Extra cables and network hub can be purchased from your supplier.

2. **USB (For standalone Windows 98/ME/2000/XP computers only)**

   If your computer does not have an Ethernet port you may choose this option. You must then install a driver to operate the router. The drivers are found on this CD. To install a driver into Windows, go to the previous menu **ADSL Modem Router (RTA1320)** and click the **Modem Drivers** button.

3 Connecting the router

1. Connect the DSL port of the router directly into your ADSL jackpoint (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 on the router using the Ethernet cable provided. If you choose to connect via the USB port, 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.

3. Connect the provided AC/AC power adaptor to the PWR jack of the router. Plug the adaptor into a mains power outlet. Switch on the router. In normal operation these lights shall be on: PWR, DSL, Ethernet. Section 9 of this Guide explains how these indicator lights work.

4 Getting computer ready for networking

The description below assumes you are connecting the router via Ethernet. If you are connecting the router via USB, skip this section and refer to ***Chapter 2*** *- USB Driver Installation on page 4 of the User's Manual on CD.*

You have two options. Following option 1 is easiest. This is the Windows default network setting.

OPTION 1 CONFIGURE COMPUTER TO GET IP ADDRESS

If your computer is already configured to obtain an IP address automatically (from a DHCP server), do nothing. By default the router is a DHCP server and will assign an IP to the computer automatically. Now go to ***Section 5 – Getting On-Line.***

OPTION 2 MANUALLY ASSIGN IP ADDRESS TO COMPUTER

The router's default address is 192.168.1.1. If you prefer to assign an IP address manually, the default can be changed from the router's **Advanced > Local Network > IP Address menu.**

If you are unsure of your computer's network setting, refer to *Chapter 2 – System Requirement & Installation* of the *User's Manual*. Pages 19-28 contain information on **Setting TCP/IP** for different versions of Windows. If you choose to follow option (1) above, consult the section **Configure PC to get IP address from DHCP** on pages 29-33.

After configuring your computer, go to ***Section 5 – Getting On-line.***

5 Getting On-line

Before you start, the DSL & Ethernet (USB if you connect via USB) lights on the router must be on. Refer to Section 10 – Troubleshooting of this Guide to resolve any issues.

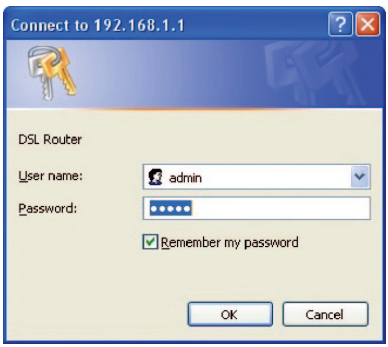
STEP 1 GO TO THE 'CONNECT TO INTERNET' PAGE

Start your web browser. Enter the default address **http://192.168.1.1.** Type **admin** for both User name and Password.

See Q1 in Section 10 - Troubleshooting if you cannot get this screen.

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

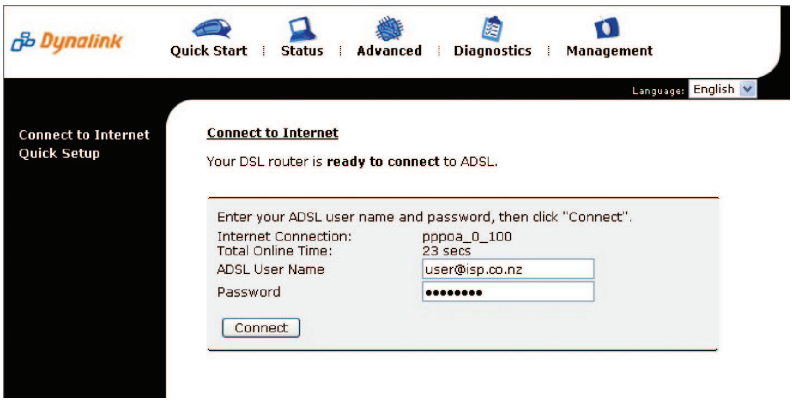
If your ISP specifies that your ADSL service is PPPoE, you must now follow Section 6 to change connect mode to PPPoE. Check with your ISP if you are unsure.



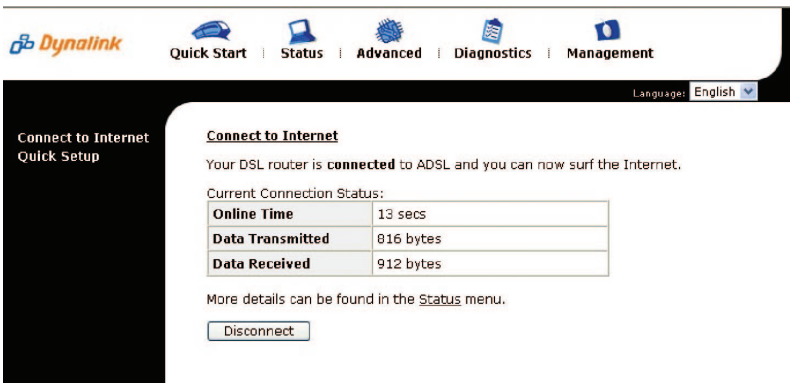
STEP 2 ENTER INTERNET ACCOUNT DETAILS

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.co.nz**. Make sure the page displays **"Your DSL router is ready to connect"**, before clicking **Connect.**

See Q2 in Section 10 – 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.



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

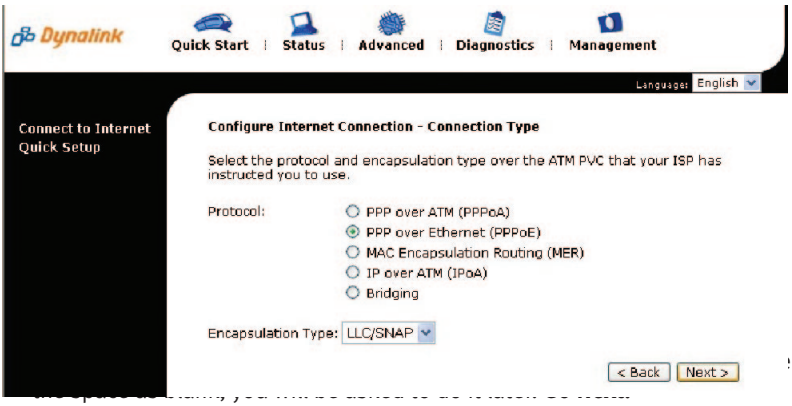
If previously the computer had a modem for Internet connection, check your browser setting. The system may still try to communicate through the previous connection. In Internet Explorer, go to **Tools–Internet options–Connections**, select **Never dial a connection.** Close Internet Explorer to take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

6 PPPoE

Caution - Only follow this section if your ISP advises explicitly the service is PPPoE. If you have followed the procedure below by mistake, reset router to factory default will restore router to the standard New Zealand setting.

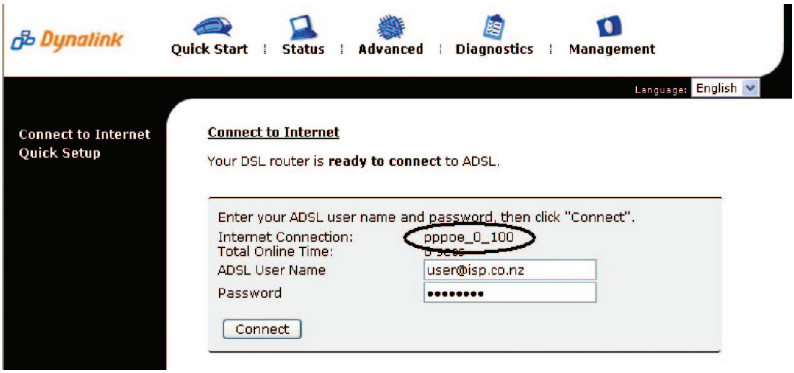
From the **Quick Start** menu click on **Quick Setup** to configure for PPPoE.

1. Untick the Auto Scan Internet Connection box. VPI and VCI shall be set to 0 and 100 respectively. Click Next for the next page.
2. Select **PPP over Ethernet (PPPoE).** Encapsulation shall be **LLC/SNAP** as illustrated below. Go to the next page, change nothing and then **Next.**



4. Do not change the network configuration unless you are an advanced user having your own preferences. Go **Next.**
5. A summary of the configuration is displayed. Check carefully that the setting is **VPI/VCI = 0/100, Connection Type is PPPoE LLC/SNAP.** Then click **Finish** to confirm the changes. The router will restart itself automatically to activate the new setting.

6. Now follow *Step 2 of Section 5 – Getting On-line*. The screen will show the changes made: pppoe_0_100 has replaced the default pppoa_0_100.



7 Some advanced functions of your router

Firewall, port forwarding, DMZ & traffic restrictions

By default a firewall is actively blocking incoming requests including *Ping* from the Internet to your private network. In the reverse direction requests sent from your network can freely pass through to the Internet. This default setting offers good protection for the majority of users.

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 73 of the *User's Manual*.

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 77 of the *User's Manual*. 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 79 of the *User's Manual*.

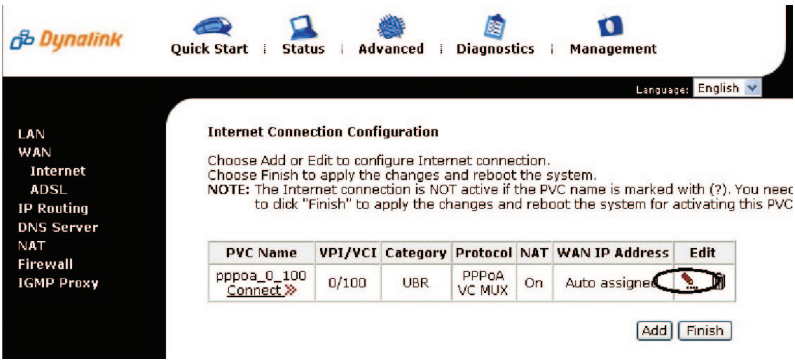
IP extension bridging

In IP Extension Mode the ADSL router is reduced to resemble an ADSL modem. Firewall protection and Internet sharing are not available. The router acts as a bridge between WAN & LAN. A computer or network device behind it receives

a public IP directly from the ISP. This arrangement is suitable for certain advanced applications that require the device behind to receive a public WAN IP.

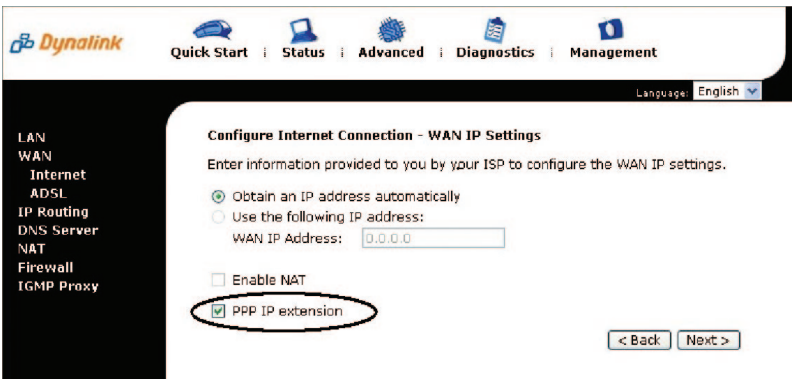
Caution: This mode of operation assumes firewall security will be provided by another device on your LAN.

To set up IP extension, go to the Advanced menu. Select **WAN > Internet**. Click on the "modify icon" under **Edit:**



The next screen displays VPI and VCI as 0 and 100. Do not change these numbers. Go **Next**. Select **PPPoA VC MUX** or **PPPoE LLC/SNAP**. If your ISP did not specify PPPoE you can assume it is PPPoA. Go **Next.**

On the next screen untick **Enable NAT,** and tick **PPP IP extension** as illustrated. Go **Next.**



Enter your Internet account user name and password. Go **Next.**

The new configuration is displayed. Click **Apply** to confirm the changes. The router will restart itself to activate the new setting.

You will notice all NAT or firewall settings disappear from the **Advanced** menu hereafter. Now follow Step 2 of *Section 5 – Getting On-line*.

Quality of Service (QoS)

The router allows prioritising of upstream traffic (to the Internet) by allowing the user to overwrite the Type of Service (TOS) field in the IP datagram header. TOS parameters such as Precedence, Delay, Throughput & Reliability are described in the RFC791 Internet Protocol specification.

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. When QoS is enabled a received packet has the TOS field in its header overwritten by the traffic rule, subject to traffic conditions are met.

The router supports both Bridge (layer 2) and IP (layer 3) QoS. The difference is how traffic conditions can be set. With Bridge QoS, IEEE 802.1p priorities are used as conditions for a traffic rule to apply. With IP QoS, it is the IP criteria defined by the user that determines the rule to apply.

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

8 Tips for security

This router is shipped "secure" 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. This function can be found in the router's **Management > Backup Config** menu.
- Disable UPnP if you don't need this function.
- Read about the more advanced functions. They can be found in *Chapter 4* of the *User's Manual* on this CD.

Don't:

- Enable any form of remote access to the router unless you are confident in handling the security implications. Beware that an attacker may compromise the router and attempt to exploit the system without your knowledge. 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. If the router operating in this mode is connected to a computer, to the minimum have a "personal firewall" (software) to protect the computer.
- 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 store your router's setting elsewhere. This function can be found in the router's **Management** > **Backup Config** menu. When a replacement unit is received, restore the original setting from the backup file.

9 *Indicator lights*

There are 5 indicators on the front panel.

Function	Colour & Status	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 this light remains solid.
	Flash Red	Firmware upgrade in progress
DSL	Off	No DSL signal is detected
	Slow Flash Green	DSL line handshaking in progress
	Fast Flash Green	DSL line training in progress
	Solid Green	DSL line connected
PPP	Off	Modem is not online
	Solid Green	Modem is online
Ethernet	Off	No Ethernet signal is detected
	Flash Green	Data going through Ethernet port
	Solid Green	Ethernet interface is ready
USB	Off	No USB signal is detected
	Flash Green	Data going through USB port
	Solid Green	USB interface is ready

10 Troubleshooting

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

1. Check that the router's ETHERNET (or USB) light is on. Check that the ETHERNET (or USB) cable is firmly plugged in.
2. Perform a **PING test**. 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 (or USB) 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 private 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 DSL light status on the router. Normally it takes less than one minute to establish a DSL link, and the light comes on. If the DSL 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 DSL 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 5 – 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.dynalink.co.nz** (or any valid web address)

   (B) Ping 205.178.180.16 (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 procedure (2) of *Section 4* and the relevant sections of the *User's Manual*. 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 procedure (2) of *Section 4* and the relevant sections of the *User's Manual*. 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 may be with your 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. You can change the router's IP so that it is consistent with the network. Disable DHCP on the router.

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

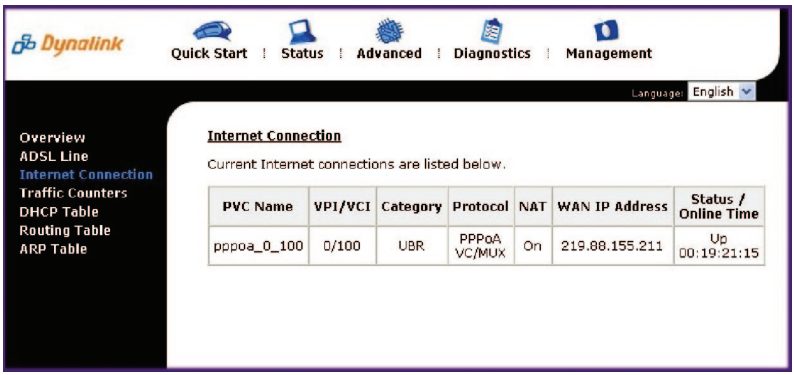
You need to set up virtual servers or DMZ host. See *Section 7 - Firewall, port forwarding, DMZ & traffic restrictions.*

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.

Q6. I need to know the WAN IP of the router when it is on line

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



Q.7 How to get information update

This Quick Guide and User's Manual on CD are the primary source of information about the product. Please check the Dynalink website **www.dynalink.co.nz** regularly for updates, links, or to download a more current version of this Quick Set-up Guide.

Warranty

Dynalink warrants this product against defects in materials and workmanship for a period of twelve months from the original date of purchase. We will, at our discretion, repair or replace the faulty unit, free of charge, provided it is returned to us with proof of purchase from an authorised dealer within the warranty period. Return delivery after repair will be paid for by Dynalink. We reserve the right not to repair or replace goods that:

- have been mishandled, abused or not installed according to the guidelines as outlined in the instructions.
- have been subjected to a power surge from other equipment or other external factors.
- have been altered or modified.

Help

Always check that your hardware is installed correctly. Check our web site for the latest information and troubleshooting guide. If you have difficulties, contact Dynalink Technical Support for issues relating to installation and operation.

If possible, visit Dynalink's on-line support area at:

New Zealand www.dynalink.co.nz/support
Australia www.dynalink.com.au/support

Contact Dynalink's Technical Support:

New Zealand
Phone 0800 653 962
Fax 0800 503 962
(Monday-Friday: 8:30am-7:30pm)

Australia
Phone 1800 653 962
Fax 1800 063 962
(Monday-Friday: 8:30am-5:30pm)