budii lite®
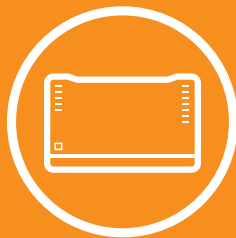
User Manual

Welcome to Budii Lite®

Thank you for purchasing Budii Lite®, the next generation of home internet connectivity.

This manual will show you how to navigate around Budii Lite's most commonly-used configuration pages. For detailed information on setting up your ADSL or NBN/Fibre service, please consult the **Quick Start Guide.**

If you get stuck at any point or if technology just isn't your strong point, please call our friendly Support Team using the contact information on the last page of this guide.

Table of Contents

Budii Lite® Overview

Wired
Indicates when Budii Lite® wired (Ethernet) ports are in use.

Storage
Lights up if you've connected an external USB hard drive.

ADSL Sync and Internet
Lights up when ADSL broadband connection is working.

NBN
Lights up when NBN or fibre internet connection is working.

Wireless 2.4GHz
Lights up when your 2.4GHz Wi-Fi network is ready for wireless devices to connect.

Wireless 5GHz
Lights up when your 5GHz Wi-Fi network is ready for wireless devices to connect.

External Antenna
Lights up when External Wi-Fi antennas are in use.

iinet
connect better

Antenna Ports
Sockets for the external antennas are located under these removable tabs.
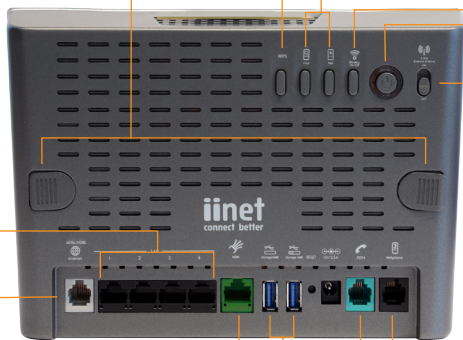
WPS
Set up wireless computers easily and securely.

Wired
Four super-fast Gigabit Ethernet ports for connecting computers, game consoles or set top boxes.

Find and Pair
Press the Pair button to pair your DECT handset or tablet with Budii Lite®; or press Find to locate an already paired device.

ADSL Internet
Phone cable plugs into this port and connects Budii Lite® to the Internet.

Wireless On/Off
Use this button to, turn Budii Lite® wireless on or off when not in use.

NBN
Dedicated Gigabit Ethernet port for your NBN or Fibre connection.

Power
Turn Budii Lite® on or off.

Storage
For external USB hard drives (maximum 3TB) or 3G USB modems.

PSTN
Hook up your home telephone line to Budii Lite®, if you want to answer calls using your handset.

Netphone
Plug in a third-party handset if you want to use it for Netphone (VoIP).
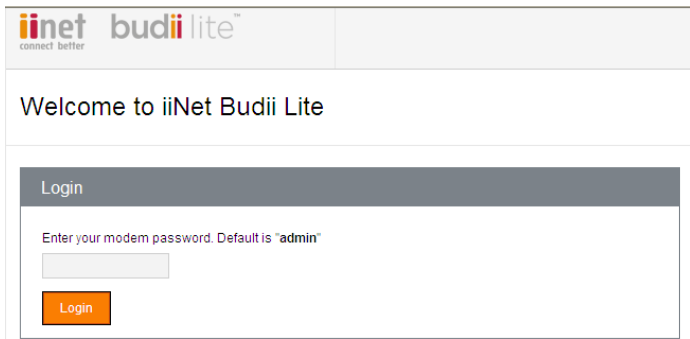
External Antenna On/Off
This should only be turned on when the external Wi-Fi antennas are in use.

Login Page

The login page of Budii Lite® is the first thing you see when you'll try to access the modem settings. It contains useful information about your modem's current status, letting you see what Budii Lite® is doing at a glance.

To log in to Budii Lite®:

1. Open a web browser on your computer.
2. In the address bar, enter **http://10.1.1.1** – and press Enter. It may take a minute or two to load.
3. Enter Budii Lite's modem password where indicated on the login page. The default password is "admin".
4. Click Login.

NAVIGATION BAR

At the top of the Budii Lite® configuration page, you will always see a Navigation Bar which will help you move around the various settings pages.

1 Wizard	**2** Set up my wireless	**3** Set up my VOIP	**4** Configure my USB Port	**5** Advanced Settings	**6** Handy Tools	**7** Status / Diagnostics

iinet *connect better*   budii lite™
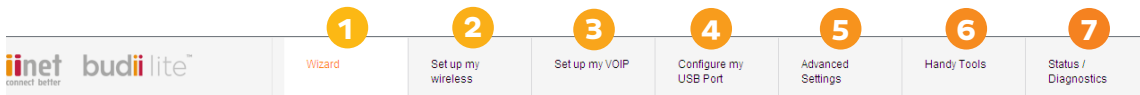
1 Wizard
Takes you to the Wizard page.

2 Set up my wireless
For all Wi-Fi configuration options.

For more details on how to set up your Wi-Fi, please consult the Quick Start Guide.

3 Set up my VoIP
For all Netphone (VoIP) advanced configuration options. For basic VoIP set up, the Wizard page should be sufficient.

For more details on how to set up your Netphone (VoIP) service, please consult the Quick Start Guide.

4 Configure my USB Port
Configure USB ports for external hard drives or 3G mobile broadband modems.

5 Advanced Settings
Advanced configuration options, including modem password & remote management controls, parental controls, LAN setup, firewall and port forwarding options.

6 Handy Tools
Reboot, factory reset and firmware upgrade tools for Budii Lite®.

7 Status/Diagnostics
Detailed status information for Budii Lite®, as well as the DHCP client list, network diagnostics options and much more.

Wizard

The Wizard page contains simple-to-use setup pages to set up your Internet and Netphone (VoIP) accounts.

For more details on how to set up your Internet, Netphone (VoIP) or Wi-Fi, please consult the Quick Start Guide.

Apart from setting up your services, the Wizard has a couple of useful tools explained below:

ADSL status
Line Status
Online
Line Mode
ADSL2+ Annex A

ADSL Status

Budii Lite® will tell you if it has an established ADSL 'sync' or physical connection, as well as the type of ADSL connection mode it is using. By default Budii Lite® will select the most stable mode based on a variety of factors, including the length of your phone line and cable quality.

Modem Restart
Restart your modem
Sometimes, just like a computer, you may need to restart Budii Lite. After you click the **Restart** button, Budii Lite may take up to 5 minutes to reconnect to the Internet, so please be patient.
Restart

Modem Restart

Click here to reboot your modem. This will not wipe any settings from Budii Lite®.

Setting up my wireless

Use this page to configure Budii Lite's wireless network (Wi-Fi), which lets you connect any wireless-enabled device to your home network and to the Internet, eliminating the need for long cables.

Wireless setup is covered in your Quick Start Guide, so if you're looking for basic setup instructions, please check out the guide.

Set up my wireless

ON Toggle wireless function

Wireless Network

1. ☑ Enable primary SSID

2. Hide primary SSID ☐ | BudiiLite-primary5084E7

3. ☐ Enable secondary SSID

4. Hide secondary SSID ☐ | BudiiLite-secondary5084E7

5. Channel
Auto ▾

6. Mode
802.11n + 802.11g + 802.11b ▾

7. Bandwidth
20MHz/40MHz ▾

Security Options
Primary SSID ▾

1. ○ Disable

2. ○ WEP ❓

3. ◉ WPA/WPA2-PSK ❓

   Pre–shared key type
   ◉ Passphrase (8~63 characters)
   ○ Hex (64 digits)

   Pre–shared key
   00b46f33

   Show pre–shared key?
   ☑

4. ○ WPA/WPA2-802.1x

Enable/disable Budii Lite® wireless feature

If you won't be using Budii Lite's wireless feature, you can disable it from the Set up my Wireless page.

To disable Budii Lite's wireless:

1. From the navigation bar on the left, click A. Set up my wireless or click E. Set up my AC wireless to configure your AC wireless.
2. Click Toggle Wireless Function setting it to OFF.
3. Click Save Settings.

Security Options

Budii Lite® comes with wireless security set up for your primary wireless network using WPA2 (Wi-Fi Protected Access), to ensure the modem is secure straight out of the box. The Security Options section lets you change the security options for your Budii Lite® wireless networks.

You can also use this section to configure wireless security for legacy devices that don't support the more modern security methods.

Budii Lite® lets you configure the security options for your primary and secondary SSIDs separately. To switch between the security options for your primary and secondary SSIDs, you can use the dropdown box:
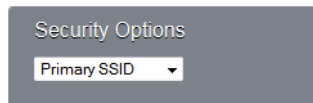
Budii Lite® supports the following wireless security types:

- **WEP** - Wired Equivalent Privacy. This is the oldest wireless security scheme, mainly included for legacy support. We don't recommend using this mode if your wireless devices support WPA or WPA2.

- **WPA/WPA2-PSK** - Wi-Fi Protected Access - Pre-Shared Key. We encourage you to use this security method as it is more secure and more user-friendly.

- **WPA/WPA2-802.1x** - an Enterprise wireless security scheme that requires an authentication server (for advanced users only).

Please see the following table for more information on Budii Lite's security types:

WEP

WEP mode	You can choose whether to configure WEP security in 128-bit or 64-bit mode.
	64-bit WEP - lets you define 10 of the characters in your wireless encryption key. It's not as secure as 128-bit WEP.
	128-bit WEP - lets you define 26 characters in your wireless encryption key It's more secure than 64-bit WEP, so only use 64-bit WEP if you have a wireless device that needs to work in this mode.
Key entry method	Choose Hex to enter keys as hexadecimal digits (0-9 and A-F). Choose ASCII to enter keys as ASCII characters.
Keys 1 – 4	You can have up to four WEP keys. When you connect your devices to your home network, you need to enter the same information as you enter here, so that Key 1 on Budii Lite ® matches Key 1 on your wireless device, and so on.
Default Key ID	Choose one of the keys you defined above to act as the default key that Budii Lite® will use to encrypt wireless data.
Passphrase	As an alternative to configuring keys, tick the box and type a passphrase.

WPA/WPA2-PSK security options

Pre-shared key type	If you select passphrase here, you'll need to enter a phrase between eight and 63 characters in length.
	We don't recommend setting your wireless passphrase to be the same as your ADSL password.
	You also have the option to enter the key yourself in the form of 64 hex digits. Choose Hex to do this.
Pre-shared key	If you chose passphrase for your pre-shared key type, enter a passphrase here. If you chose hex, enter 64 hex digits to represent your 256-bit key.
Show Pre-shared key	Un-tick this box to hide the characters in the pre-shared key.

WPA/WPA2-802.1x security options

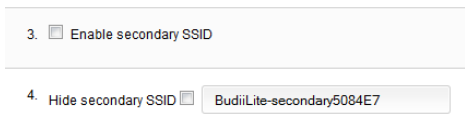|	
Re-authentication period	After being connected for this amount of time, the session will time out and your computer will automatically create a new session by re-authenticating with Budii Lite®.
Server-IP	The IP address of your authentication server.
Server-port	The port the authentication server uses for authentication requests.
Secret Key	The key you'll use to prove your identity to the authentication server.

Hiding SSIDs

Under the setup options for your Primary and Secondary SSIDs, you'll see options to Hide them. This prevents Budii Lite® from broadcasting its SSID , also known as a wireless network name.

You can disable your SSID being broadcast as an extra security feature. However, this does add a few extra steps to the process of connecting your computers and devices to Budii Lite's wireless network. If you choose to hide either your primary or secondary SSID, refer to your operating system help for instructions on connecting to a wireless network without a broadcast network name.

Setting up a secondary wireless network

Budi Lite® lets you set up an additional wireless network alongside the primary network that comes enabled by default. This could be useful if, for example, you wanted to let visitors to your house use the Internet while protecting your home computers. To set this up, enable the secondary SSID (network name) and configure the network. Here's how:

1. From the navigation bar on the left, click A. Set up my wireless or E. Set up my AC wireless.
2. In the Wireless Network section, tick Enable secondary SSID.
3. Tick Hide secondary SSID if needed. See Hiding SSIDs for more information on this option.
4. Rename the secondary wireless network if you want to, by entering it into the text field of section 4 of Wireless Network.
5. Click Save Settings.

Configuring wireless protocol and channel options

Budii Lite® supports the 802.11ac, 802.11n, 802.11g, 802.11b wireless protocols. It also lets you:

- Choose which of these protocols devices can use to connect to your network
- Change the wireless channel that traffic will travel on in your home network
- Change the bandwidth of your wireless network.

To configure wireless protocol and channel options

1. From the navigation bar on the left, click **A.** Set up my wireless or **E.** Set up my AC wireless depending on the wireless network you're using.
2. Under Wireless Network, at the Channel dropdown, pick a channel for the secondary network, or leave the dropdown on Auto and Budii Lite® will choose a channel for you.
3. At Mode, select a Wireless Protocol. By default, Budii Lite will try to support as many modes as possible.
4. At Bandwidth, if you selected 802.11n or 802.11n + 802.11g + 802.11b at Mode, you can change the Bandwidth of your wireless network.
5. Click Save Settings

SET UP A WIRELESS DISTRIBUTION SYSTEM (WDS)

With a WDS (Wireless Distribution System) you can extend your wireless network with more access points. WDS is convenient because you don't need to link the extender access points with a wired (Ethernet) connection.

To use Budii Lite's WDS you'll first need to set up your wireless network to use a specific channel. By default, Budii Lite® is set to choose a channel for you automatically, so see Configuring wireless protocol and channel options for instructions on how to select a specific channel.

There are three things you'll need to do to set up a WDS:

1. Choose a wireless channel – follow the instructions at Configuring wireless protocol and channel options.
2. Install your wireless access points – see the vendor documentation to do this.
3. Set up WDS on Budii Lite® with the instructions below.

Once you've chosen a channel and installed your wireless access points, use the following instructions to set up the WDS on Budii Lite®:

1. From the navigation bar on the left, click B. Set up my wireless distribution.
2. Click Toggle wireless distribution function and set it to On.
3. At AP MAC Address Table, find the wireless access points you have already installed and tick Enable next to each one.

Set up my wireless distribution

[Refresh] [Save Settings]

A Wireless Distribution System (WDS) extends a wireless network with multiple access points. All base stations in a Wireless Distribution System must be configured to use the same radio channel, method of encryption (i.e. none, WEP, or WPA) and the same encryption keys. They may be configured to different service set identifiers (SSIDs).

[OFF] Toggle wireless distribution function

AP MAC Address Table (up to 4 APs)

[Scan For Access Points]

SSID	MAC Address	Enable

NOTE: If your access points don't appear in the AP MAC Address Table, try clicking Scan For Access Points. If you still can't see them listed, use the vendor documentation for your wireless access points to troubleshoot things like network interference and distance from Budii Lite®.

SET UP MAC ADDRESS FILTERING

Set up MAC address filter

Refresh Save Settings

Each computer on your network has a unique MAC address - an identifier consisting of a series of numbers and letters. By entering this identifier in the table below you can grant or prevent access to your wireless network for individual computers. To enable this feature, set Toggle MAC address filtering to On.

OFF Toggle MAC address filtering

NO Allow the computers listed below to access my wireless network?

My computers

1. Device 1

| 00 | : | 00 | : | 00 | : | 00 | : | 00 | : | 00 |

2. Device 2

| 00 | : | 00 | : | 00 | : | 00 | : | 00 | : | 00 |

3. Device 3

| 00 | : | 00 | : | 00 | : | 00 | : | 00 | : | 00 |

4. Device 4

| 00 | : | 00 | : | 00 | : | 00 | : | 00 | : | 00 |

Each computer on your network has a unique MAC address – an identifier consisting of a series of numbers and letters. You can grant or prevent access to your wireless network for individual computers by setting up MAC address filtering.

To enable this feature, set Toggle MAC address filtering to On.

There are two ways to use Budii Lite's wireless network MAC Address filter:

- List the computers you want to allow access to your network, and block everyone else. If you only have a couple of computers on your home network and you're fairly certain they won't change, this might be the easiest way to use the MAC address filter. This feature is also useful if you think you'll have trouble finding the MAC address of a computer you want to block.

- List the computers you want to block, and allow everyone else. Don't worry, they'll still have to get past the other security features you configured while setting up your wireless. This might be the way to go if you only want to block one or two computers, and you know you'll be able to get their MAC addresses.

To add MAC addresses to the table:

1. At the Wireless DHCP client list dropdown, find the computer you're interested in.
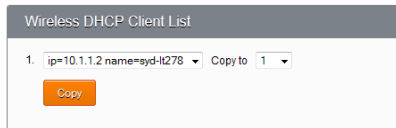
2. At the 'Copy to' dropdown, choose a number that corresponds to an empty row in the My Computers table.
3. Click the Copy button. The computer's MAC address is pasted into the table.
4. Repeat these steps for other computers you want to filter, making sure you choose a new table row each time.

To set up the MAC address filter:

1. Click C. Set up MAC address filter.
2. Click Toggle MAC address filtering, setting it to On.
3. Select whether the MAC address filter should allow or not allow computers to access your wireless network.
4. Enter the MAC addresses of the computers to be filtered by doing one of the following:

   – Follow the procedure above to add MAC addresses to the table.
   – Type the MAC addresses into the empty rows in the My Computers table.
5. Click Save settings.

WI-FI PROTECTED SETUP (WPS)

WPS (Wi-Fi Protected Setup) is a simple and secure way to connect computers and other wireless devices to Budii Lite's wireless network. If your device supports WPS, you have two easy options for getting connected:

- Use PBC (Push-button configuration)

- Use the wireless computer's PIN (Personal Identification Number) to identify it to Budii Lite®

Set up WPS ⓘ

Refresh   Save Settings

The WPS function supports both 2.4G and 11ac wireless.

There are 2 ways to connect a wireless computer to your network:

1. Push Button Configuration (PBC)
2. Personal Identification Number (PIN)

ON ◯ Toggle WPS function

Connect via Push Button Configuration

1. Press the push button on your wireless laptop.

2. Within 60 seconds, click the **Connect** button below.

   Connect

Connect via a Personal Identification Number

1. Enter your wireless computer's PIN.

   [   ]

2. Within 60 seconds, click the **Connect** button below.

   Connect

To connect a wireless computer using PBC:

1. Click D. Set up WPS.
2. Scroll to the Connect via Push Button Configuration section.
3. Push the WPS button on your wireless computer.
4. Within 60 seconds, click Connect.
5. If your device didn't connect, press Refresh and try again.

To connect a wireless computer using a PIN:

1. Click D. Set up WPS.
2. At Connect via a Personal Identification Number, enter your wireless computer's PIN.
3. Within 60 seconds, click Connect.
4. If your device didn't connect, press Refresh and try again.

Set up my VoIP

NETPHONE (VOIP) ADVANCED SETUP

The **Wizard** provides the quickest and simplest Netphone (VoIP) setup process for Budii Lite®, however there may be occasions during troubleshooting when you may be asked to change advanced settings, which are found on these pages.

Note: Changing any of these settings may cause your Netphone (VoIP) service to stop working.
Please avoid changing these settings unless instructed by a member of our Support Team.

VOIP ADVANCED SETTINGS

This page contains advanced settings for configuring VoIP. We'll look at each section in turn:

- General Settings
- Advanced Call Features
- Voice Codec Configuration

GENERAL SETTINGS

Support Call Waiting

Much like a standard telephone service, if you're on the phone, your VoIP service can tell you there's another call coming in with a series of beeps.

Caller–ID presentation

Again, this feature works a lot like it does on standard telephone lines. If you have this enabled, Budii Lite® will show you the caller's phone number or VoIP name.

Support User–Agent Header

Gives Budii Lite® permission to tell a SIP server about the hardware you're running.

Support Out of Band DTMF

DTMF are the tones you hear when pressing buttons on the phone. Tones of different pitches (frequencies) act like commands to a telephone exchange. Sometimes, VoIP can distort these tones if they're sent in-band (that is, in the same stream of data as your voice).

Use SRV option for SIP registration

An SRV record helps a VoIP system find your computer or device that's making a call with VoIP. Because VoIP works over the Internet, there's no guarantee your VoIP phone will have the same IP address all the time. This means that a VoIP system has to keep track of where your SIP address is at any given moment. The SRV option for SIP registration lets you have a public SIP address that directs traffic to your computer. This lookup system works a lot like email.

Use SIP ALG option
This option is sometimes used when a NAT (Network Address Translation) routing setup is preventing VoIP from working.

Call Hold Version
Defines what standardised method Budii Lite® should use to put calls on hold.

Telephony Hook Flash Timer
This setting controls the timing of the "hook flash" button for call waiting.

Telephony tone country setting
Different countries use different frequency tones to control calls.

VoIP SIP Port
See the Glossary entry on Ports for more information. SIP is the protocol that sets up and completes VoIP call connections. Its default port is 5060.

Re-registration time interval
When you register your SIP address with a server where you can be contacted by VoIP, this registration expires. This setting controls when your registration expires. Bear in mind, however, that the SIP registrar might have a different re-register interval that could override yours.

ADVANCED CALL FEATURES

DND – Do not disturb

Sets a VoIP line to not ring.

Call Forwarding

Forwards your VoIP calls to another number. There are three options for forwarding:

- Forward unconditionally – Always forward VoIP calls to this number.
- Forward on "busy" – Forward the call whenever the caller gets a "busy" signal.
- Forward on "no answer" – Forward the call when the phone rings out before you pick up.

VOICE CODEC CONFIGURATION

Your voice is an analogue signal, whereas computers need to send digital information – ones and zeroes. A voice codec is a standardised piece of software for converting your voice into ones and zeroes so your computer can send it. Budii Lite® supports a few different codecs.

Adjusting Codecs

1. Click on the codec in the Available Codecs list to highlight it.

2. Click the **>>** button to move the codec into the Selected Codec list.

3. Likewise, you can move codecs out of the Selected Codecs list by selecting them and then clicking the **<<** button.

VOIP PORT ADVANCED SETTINGS

Phone DECT

1. Volume Gain Control

   Input: 5 / Output: -4

2. ☑ Enable VAD (Voice Activity Detection)?

3. Inter Digit Delay

   3 Sec.

   (The delay time before processing the dialed digits)

Phone FXS

1. Volume Gain Control

   Input: -4 / Output: 0.5

2. ☑ Enable VAD (Voice Activity Detection)?

3. Inter Digit Delay

   3 Sec.

   (The delay time before processing the dialed digits)

Your VoIP port can be fine-tuned for better performance. Some commonly used settings are:

Volume gain control

If you're having trouble hearing or being heard in VoIP calls, change the volume gain of your handsets. Adjust input volume to make your voice louder or softer; adjust output volume to make the other person's voice louder or softer. –10 is the lowest volume, while 10 is the highest.

VAD

VAD (Voice Activity Detection) helps conserve bandwidth by only transmitting audio data when Budii Lite® detects that you're speaking.

Inter digit delay

After the delay time entered here, your handset will assume you've finished entering digits.

VOIP DIAL PLANS

The iiNet Group does not offer a PSTN override code, so you can skip this section when configuring VoIP dial plans, unless your VoIP service is provided by a third-party that offers this feature.

PSTN override code
Some telephony providers offer cheaper calls when you prefix the phone number you are calling with a set of digits. Please contact your provider to see if they offer this (iiNet do not offer this service).
1. PSTN Override Code

Dialling plans
You can add a phone number here and decide if this particular number is called over VoIP or PSTN.

No.	Phone number	Connection type	Configure
1		VoIP	Add

Dialling Plans

The Dialling Plans section lets you add phone numbers and decide how Budii Lite® will handle outbound calls to these numbers – that is, call them through your VoIP line or through the standard telephone service (PSTN).

To configure VoIP dial plan settings:

1. At the Dialling Plans section, enter a phone number.
2. At Connection Type, select VoIP or PSTN. You may also select Block to prevent calls from the number.
3. Click Add.
4. Click Save Settings.

Quick dial plans

Vanity keypad style

Select a vanity keypad layout:

1. Australian Classic ▾

Dialling plans

You can add a phone number here and decide if this particular number is called over VoIP or PSTN.

Quick dial code		Vanity		Number / user name	Configure
*7 [ ]	#	*8 [ ]	#	[ ]	Add

In this section, set up quick dial codes for your handset.

To make a quick dial call from your handset, press *7xx#, where "xx" stands for the quick dial code you assigned to the number.

At Number/User Name, you can enter either a Home Phone (PSTN) number to make calls using your Home Phone service or a SIP username to call someone using your Netphone (VoIP) service.

CALL HISTORY

Phone Port Status		
Port type	SIP URI	Registration
Account1		Idle
Account2		Idle

Phone Port Call Logs					
Port type	Received calls	Dialled calls	Missed calls	Rejected calls	Forwarded calls
Account1	0	0	0	0	0
Account2	0	0	0	0	0

Call History keeps some statistics about the use of the voice services running through Budii Lite®, both Netphone (VoIP) and Home Phone (PSTN). These statistics include:

- Calls you missed
- Calls you made
- Calls you answered

You'll also see the status of your VoIP line and statistics about calls to and from it.

DECT SETTINGS

The Digital Enhanced Cordless Telecommunications (DECT) protocol is supported by Budii Lite®, allowing you to pair up to five (5) handsets to the modem to use with Netphone (VoIP) and Home Phone.

DECT handset
1. Register DECT handset
Register
2. Unregister DECT handset
Unregister
3. Page DECT handset
Page

Register DECT handset
Click **Register** to put Budii Lite® into a state where it's searching for compatible to handsets to pair with.

Unregister DECT handset
Click **Unregister** to force Budii Lite® to unpair itself from all handsets registered to it.

Page DECT handset
Click **Page** to cause all handsets paired to Budii Lite® to ring – perfect if you can't find them!

Configure my USB Port

USB CONFIGURATION

Budii Lite® has several options when it comes with working with USB devices. Whether they're USB mobile broadband devices, USB flash drives or external hard drives, Budii Lite® can interact with them in several ways.

3G Mobile Broadband USB Modem

For instructions on how to use your Budii Lite® as a router for a 3G Mobile Broadband service, see:
iihelp.iinet.net.au/support/node/13557

SET UP A USB HARD DRIVE AS AN FTP (FILE TRANSFER PROTOCOL) SERVER

Set up my FTP server

Refresh | Save Settings

Budii Lite's File Transfer Protocol(FTP) server lets you plug a USB hard drive into Budii Lite's USB por and access files via the Internet. Set up secure access to the files on your USB hard drive by following the steps below.

OFF | Toggle FTP server function

No USB Mass Storage device detected!

Add FTP user

1. Port number to use

   21

2. Maximum amount of computers that can connect to my hard drive at the same time

   10

3. If no users have accessed file after this period of time they will need to log back in after (minutes)

   10

Access settings

OFF | Toggle ftp server feature externally

To access the ftp server, open up a web browser on any computer on the internet and type in: `ftp://wan ip :port`

Existing users

You currently have the following users configured to use your home file server

User name	Device	Folder available to access	Edit details	Delete

---

An FTP (File Transfer Protocol) server hosts files and allows people to download and/or upload them over the Internet. Use this feature if you plan to run a file hosting service and have lots of files that you need to make available for others to download.

Maximum storage is 3TB (terabytes).

To set up a USB hard drive as an FTP server:

1. Plug a USB hard drive into the USB port on Budii Lite's back panel.
2. Click the 4. Configure my USB port tab.
3. From the navigation bar on the left, click B. Set up my FTP server.
4. Click Toggle FTP server function, setting it to On.
5. Choose a Port number to use – 21 is the default FTP port.

6. Enter the maximum number of computers that can use your FTP server at the same time. This setting can help you to control the bandwidth your FTP server uses.
7. Enter the time limit a user can be inactive before they'll need to log back in.
8. If you want people to be able to use your FTP server from the Internet, not just your home network, scroll down to the Access Settings section and set Toggle FTP Server Externally to On.
9. Click Save Settings. Your setup page should now look something like this:

Add FTP user

1. Port number to use

21

2. Maximum amount of computers that can connect to my hard drive at the same time

10

3. If no users have accessed file after this period of time they will need to log back in after (minutes)

10

Access settings

On Toggle ftp server feature externally

To access the ftp server, open up a web browser on any computer on the internet and type in: `ftp://wan ip :port`

To add an FTP user:

1. In the first box, type a username.
2. In the second box, type a password. See About Passwords for help in choosing a secure password.
3. In the third box, re-type the same password.
4. From the dropdown box, choose whether this FTP account will have full access or read-only access.
5. At Select Volume, choose a file system to use as the FTP server.
6. At Path, click Browse and choose a folder.
7. Click Save Settings.

See the example to the side.

SET UP A USB HARD DRIVE AS A FILE SERVER

Add a file server user

1. Ensure a USB hard drive is plugged into the USB port of this modem.

2. Server name:

Budii

3. Server description:

File Server

4. Group name:

WORKGROUP

Add User

Access settings

OFF Toggle file server feature externally.

Existing users

The following users are configured to use your home file server.

User name	Device	Folder available to access	Edit details	Delete

No USB Mass Storage device detected!

Budii Lite's file server feature lets you set up a USB hard drive to be accessible by the computers on your local network (see Set up a USB hard drive as an FTP server if you need the files to be accessible from outside your home network).

Budii Lite's storage port supports FAT16/32 and NTFS USB mass storage devices. It is not designed for full Network Attached Storage function.

When you enable Budii Lite's file server feature, you'll need to set a username and password so people on your home network can log in to read, modify, add or delete files on the server.

This guide will step you through enabling and setting up the file server. We'll also show you how to get to the file server from a Windows computer once it's set up.

To set up a USB hard drive as a file server:

1. Click 4. Configure my USB port.
2. From the navigation bar on the left, click D. Set up my file server.
3. Click Toggle file server function to On.
4. If you need to, change these settings:
    a. Server Name: This is how the USB file server will appear in your file system.
    b. Server Description: A text description of the USB file server.
    c. Group Name: In Windows, this is also called the domain. Usually this can be left as WORKGROUP, but it depends how you've set up your home network.
5. Click Save Settings.

To set up a password-protected file server account:

1. From the USB file server setup page, click Add User.
2. Enter a share folder name (this is also the username you'll need to connect).
3. Select an access mode.
4. Type a password, and confirm it in the box below.
5. Click Save Settings.

Advanced Settings

REMOTE MANAGEMENT

This is where you can change Budii Lite's password and enable remote management.

Budii Lite's default password is "admin" – not hard to guess, so we recommend you change it, especially if you're going to enable remote management. See Changing Budii Lite's Admin Password on page 43 for instructions.

Budii Lite's remote management gives you access to your settings from any computer connected to the Internet – handy if you need to reconfigure while you're out and about. This setting is disabled by default.

REMOTE MANAGEMENT SETTINGS

Port
Incoming requests to access Budii Lite's admin site will only be permitted through the port you specify.
The default port is 2420.

Selected computers
By default, enabling remote management lets you access Budii Lite's settings from any computer on the Internet. However, you might want to restrict access and only permit remote management from specific computers. Budii Lite® lets you specify up to three. If you fill out this section, only computers with IP addresses matching your selections will be permitted to log in to the modem.

IP Address
Once you've enabled Remote Management, you'll be able to access Budii Lite's admin pages by entering your unique IP address, along with the port you specify, into a browser. Your current unique IP address is shown on the setup page in the modem web interface.

To access Budii Lite® remotely, you'd type in a URL using your unique IP address followed by ":2420". For example: http://123.123.123.123:2420

CHANGING MODEM PASSWORD

Changing your default modem login password from **admin** is strongly recommended, to further protect Budii Lite® from unauthorised access.

You can change the password inside the **Modem password & remote management** page, found under **Advanced Settings** in the Navigation Bar. For the best security, you should use a combination of lower and upper-case letters, numbers and punctuation marks.

Modem password

1. Enter a new login password for Budii Lite:

We suggest a combination of lower and upper case letters and numbers

2. Confirm Budii Lite's new password:

3. Enter a time limit (in minutes) after which Budii Lite will automatically log you out:

10

Enter "0" for no auto-logout

MODEM DATE/TIME

Having the correct date and time settings on your Budii Lite® is important for several reasons, including the logging of data crucial for troubleshooting.

To change it, navigate to **Modem time settings** inside the **Advanced Settings** tab.

Ensure the timezone selected matches the area you live in, as well keeping the daylight savings option ticked if you are in a state or territory where Daylight Savings is used.

Why does my modem need to have accurate time?

Budii Lite synchronises with a time server on the Internet to provide a common reference for accuracy of network logs to help with troubleshooting. There are many sources for time servers - for example, the National Institute of Standards and Technology (NIST) automated computer time service (ACTS) is designed for modems that regularly connect to the Internet.

Time server

NO Let me manage my time server?

1. Primary time server:

time.iinet.net.au ▼

3. Custom time server IP address:

Use this option if you have set **Let me manage my time server?** to **"YES"**. This will override the primary and secondary time server settings.

Daylight saving and my local time

Current time: 2014/3/4 - 10:25:25

1. Time zone

(GMT+10:00) Canberra, Melbourne, Sydney ▼

DNS (DOMAIN NAME SERVER), UPNP (UNIVERSAL PLUG AND PLAY) AND DDNS (DYNAMIC DOMAIN NAME SERVER)

DNS, UPnP and DDNS

Refresh   Save Settings

1. DNS (Domain Name System)

A DNS (domain name system) translates regular, human–readable web addresses (eg: www.iinet.net.au) into a set of numbers that computers understand. These allow computers to retrieve URLs that are typed into a web–browser. By default, your ISP? takes care of this.

To use an alternate DNS server, set the **Let my ISP manage the DNS server** switch to **"NO"** and enter your preferred DNS addresses into the two *DNS address* fields.

YES   Let my ISP manage the DNS server

1. Primary DNS address:

2. Secondary DNS address:

2. UPnP (Universal Plug and Play)

Universal Plug and Play allows your computers, printers and other devices to find each other on your home network.

YES   Toggle UPnP

Normally,your Internet Service Provider manages the way your computer looks up IP addresses and domain names. If you need to change these settings, can do so within the DNS, UPnP and DDNS section of Advanced Settings. You can also enable and disable UPnP (Universal Plug and Play).

About DNS (Domain Name Server) Lookup

A DNS (Domain Name Server) translates website names into IP addresses – numbers that your computer can understand. For example, when you enter "www.iinet.net.au" into a browser, your domain name server translates it to something like "203.173.50.151". Your computer then shows you the content located at that address.

Your Internet Service provider sets a default domain name server for you, but you can change this setting by entering the IP address of a different DNS.

DNS settings

- **Let my ISP manage the DNS server**
  Un-tick this box if you need to enter the primary and secondary DNS addresses yourself.

- **Primary DNS Address**
  The IP address of the domain name server your computer will use.

- **Secondary DNS Address**
  The IP address of a backup domain name server. Your computer will use this if there's a problem with the primary DNS.

Changing Your DNS Addresses

To change your DNS addresses:

1. Click Let my ISP manage the DNS server, and set it to No.
2. At Primary DNS Address, enter the IP address of a primary DNS.
3. At Secondary DNS Address, enter the IP address of a secondary DNS.
4. Click Save Settings.

DYNAMIC DNS (DDNS)

3. DDNS (Dynamic DNS)

DDNS (Dynamic DNS) is a popular way to provide Budii Lite with a fixed host name if the IP address allocated by your ISP can change over short periods of time.

| NO | Toggle DDNS | | O OFF | DDNS status |

1. Provider
   DynDNS.org

2. Domain name

3. E-mail account

4. Password

On most residential Internet services, the IP address allocated to Budii Lite® are dynamic, meaning they can change. Setting up a DDNS (Dynamic DNS) service lets you use a domain name instead of an IP address – so if you've enabled Remote Management or set up a web server, you'll always be able to access your modem, even if your IP address changes.

You may want to set up a DDNS service if you have a dynamic IP address and want to use Budii Lite's Remote Management features.

Enable or disable Dynamic DNS

Turns DDNS on or off for Budii Lite®.

Status

The status of your DDNS service. Information will be shown here when DDNS has been set up.

Provider

The organisation hosting your DDNS service – for example, DynDNS or No-IP.

Domain Name

A domain name allocated to your modem, supplied by your DDNS provider – for example, "yourname.dyndns.org".

Account or email

The account name or email address you used to sign up for DDNS with your DDNS provider.

Password

The password for your DDNS account.

ACCESS CONTROL AND PARENTAL CONTROL TOOLS

Perfect for families, the tools on this page will help you control when and how your Internet service is accessed. There are two options available for selection, as shown below.

Access control and parental control tools   Refresh

Internet schedule rule

Block particular computers from the Internet at the times you list - for example, you might want to only allow access for the kids' computers between 5 and 9 in the evening.

Configure

URL website filtering rule

Set up a rule to block people from accessing Web sites with URLs or keywords you specify. You can set it up so that everyone is blocked from these sites, or just the computers you list.

Configure

Internet schedule rule

Control when the Internet can be accessible from Budii Lite®.

Simply enter the IP addresses of the devices on your network you wish to include as part of this schedule rule, then tick the boxes of the days and hours you want this rule to be active.

For more information on obtaining the IP addresses of devices, please see "DHCP Client List" on page 68.

Internet schedule rule

| | Refresh | Save Settings | Clear |

Use this page to restrict Internet access to individual computers on your network at certain times.

Computer

IP Address range ▾   10.1.1. [   ] - 10.1.1. [   ]

Planner

Day		12	1	2	3	4	5	6	7	8	9	10	11
☐ Mon	am	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
	pm	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐ Tue	am	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

URL website filtering rule

Enter the keywords you would like Budii Lite® to block, then enter the IP addresses of specific devices, or nominate whether you want all devices connected to Budii Lite® to be affected by this rule.

URL Website filtering rule

| Refresh | Save Settings | Cancel |

Use this section to restrict access to websites by URL or by keyword. Select whether to restrict all computers on your network, or specify restricted computers by IP address.

* Leave the **Client PC** fields blank if **Apply for all PCs?** is checked for a rule number.

Rules

Rule number	URL/keyword	Client PC *	Apply for all PCs?
1		10.1.1. [ ] ~ [ ]	☐
2		10.1.1. [ ] ~ [ ]	☐
3		10.1.1. [ ] ~ [ ]	☐
4		10.1.1. [ ] ~ [ ]	☐

INTERNET SETUP & ADSL STANDARD

The **Wizard** provides the quickest and simplest ADSL setup process for Budii Lite®, however there may be occasions during troubleshooting when you may be asked to change advanced settings, which are found on these pages.

To access these, select **Advanced Settings**, then **Internet setup & ADSL standard** from the left-hand menu.

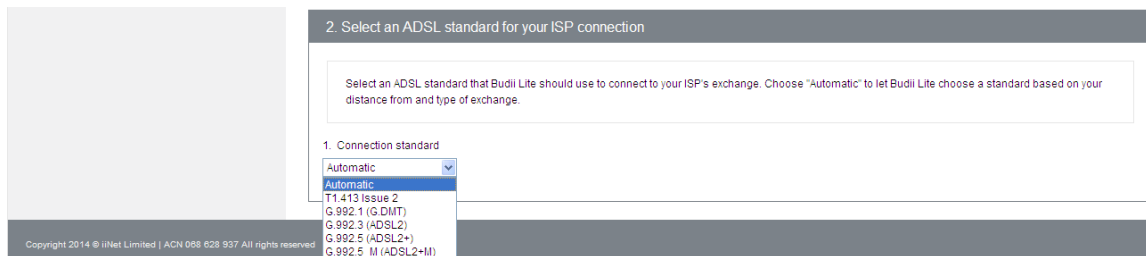By default, Budii Lite® will have one Internet, or 'WAN' connection set up automatically.

1. Internet configuration			
Budii Lite supports up to 8 connection types. To set up a connection type, click on a WAN configuration in the first column.			
WAN configuration number	**Ethernet or VPI/VCI**	**Encapsulation**	**Protocol in use**
One	8/35	LLC	PPPoE
Two	– / –	– – –	– – –
Three	– / –	– – –	– – –
Four	– / –	– – –	– – –
Five	– / –	– – –	– – –
Six	– / –	– – –	– – –

Select an ADSL standard for your internet connection

By default, Budii Lite® will select the best ADSL mode to connect to the Internet with, however you can change this manually by selecting a mode from the dropdown box.

2. Select an ADSL standard for your ISP connection

Select an ADSL standard that Budii Lite should use to connect to your ISP's exchange. Choose "Automatic" to let Budii Lite choose a standard based on your distance from and type of exchange.

1. Connection standard

Automatic

| Automatic |
| T1.413 Issue 2 |
| G.992.1 (G.DMT) |
| G.992.3 (ADSL2) |
| G.992.5 (ADSL2+) |
| G.992.5_M (ADSL2+M) |

> **Note: Depending on the quality of your phone line, some of these modes may cause connection instability. Please avoid changing these settings unless instructed by a member of our Support Team.**

WAN CONFIGURATION (ADSL)

Inside WAN configuration, you will find detailed Internet setup and configuration information.
The **Wizard** page will pre-configure these options for you depending on the type of Internet connection you have.

WAN configuration

| Refresh | Save Settings | Cancel |

WAN configuration number 1

1. WAN source ethernet or DSL

DSL

2. ADSL username

BudiiLite

3. ADSL password

•••••••••••••••

4. Confirm password

•••••••••••••••

5. Protocol

PPPoE

7. Encapsulation - LLC or VC MUX

LLC

8. Quality of service class

UBR

9. PCR, SCR & MBS

4000   3980   10

10.Authentication method

AUTO

11.IP address assigned by your ISP

Yes

12.If 'no' answered for question 11, enter IP address allocated

0.0.0.0

13.If 'no' answered for question 11, enter subnet mask assigned to you

0.0.0.0

14.MTU

1492

15.MRU

1492

16.Enable network address translation

☑

17.Enable IGMP multicast

☑

18.Select connection period

Always Connected

19.Idle time if triggered by traffic selected in question 18

0

20.Enable IPv6 for this service

☐

Use Static IPv6 Address

☐

Static IPv6 Address

WAN CONFIGURATION (NBN/FTTH)

WAN configuration for NBN/FTTH services is a lot more straight-forward due to the way the technology is implemented – simply select which type of connection protocol you require to connect.

WAN configuration

Save Settings   Cancel

WAN configuration number 1

1. WAN source ethernet or DSL

ETH

2. Protocol

Disable
Disable
Dynamic
Static
PPPoE

Note: Selecting the wrong protocol may cause your service to stop working. Please avoid changing these settings unless instructed by a member of our Support Team.

LOCAL AREA NETWORK SETTINGS

For detailed configuration relating to your local area network (LAN), you can make changes on the **Local area network settings** page.

Here's where you can change things like:

- Budii Lite® IP address
- Your LAN subnet mask
- The range of IP addresses computers and devices can use on your LAN, and the IP address lease time
- Your LAN domain name

Local area network settings   Refresh   Save Settings

Local Area Network (LAN) settings

1. Set Budii Lite's IP address (default setting is 10.1.1.1):

10.1.1.1

2. Set IP subnet mask (default setting is 255.255.255.0):

255.255.255.0

3. DHCP server

enabled

4. Set IP address pool range start:

10.1.1.2

Set IP address pool range finish:

10.1.1.254

VLAN SETTINGS

VLANs (Virtual Local Area Networks) split a LAN into multiple parts. Computers on separate VLANs behave as though they are on separate local networks.

Budii Lite® supports VLANs by associating, or binding, VLANs to LAN ports (Budii Lite® has four). Computers on an infrastructure connected to, for example, LAN port 1 might be on one VLAN, while computers on an infrastructure attached to LAN port 2 might be on another.

You can also control the interaction between VLANs using the VLAN access control matrix.

Applications

On this screen, you can:

- Route data between subnets with static routes

- Configure RIP

- Configure SNMP

- Prioritise bandwidth to different applications by configuring QoS (Quality of Service).

FIREWALL

You can adjust Budii Lite's firewall settings on this page, including;

- Enabling or disabling the firewall or adjusting its security level.

- Mask internal IP addresses with NAT (Network Address Translation).

- Set up exceptions for certain applications, such as video conferencing, some games, etc, that would be blocked by NAT.

- Configure computer hosting services that need to be presented with a DMZ.

- Maintain an intrusion detection table for various common attacks.

Firewall

| Refresh | Save Settings |

ON Toggle IPv4 firewall   ON Toggle Ipv6 firewall

Firewall level
High Level

Network Address Translation (NAT)

NAT is a method of IP masquerading, and provides a low-level firewall by hiding internal IP addresses.

Configure NAT

Demilitarized Zone (DMZ)

Any service provided to users over the Internet could be placed in the DMZ. The most common such services are web servers, mail servers, FTP servers and DNS servers.

Configure DMZ

PORT FORWARDING

Some Internet applications and devices, such as game consoles, require certain data ports to be made available in Budii Lite's firewall. The ports need to be set up to 'forward' information from external Internet sources, such as game servers, to particular ports on your Internet devices.

You can do this from the Port Forwarding page. You can enter port information manually in the Port list table, or you can select from a list of common applications.

Enable

Tells Budii Lite® whether or not to redirect traffic for this port. This means you can set up a port forwarding rule and un-tick the Enable box to keep the settings for use at a later date.

Description

A description of the traffic that comes through this port.

WAN interface

Budii Lite® has up to two interfaces that it presents over the Internet – one is your public IP address for ADSL, ADSL2+, or your NBN/FTTH connection; the other is for mobile broadband, and is only active if you're using a mobile broadband USB modem.

Inbound port

All traffic between your computer and the outside world passes through Budii Lite®, and arrives via a certain inbound port. Traffic that arrives via the port specified here will be forwarded according to the rule you're setting up.

Type

The protocol this type of traffic travels on. For most applications, this will be TCP. UDP is more commonly used for streaming data, such as video or calling/conference software.

Private IP address

This is the local or internal IP address of the destination computer for this type of traffic – for example, the local IP address of the computer hosting a web server.

Private port

TThe port on the destination computer to send the traffic through. This must correspond to how you've set it up on the destination computer. For example, if your web server is set up to accept requests through port 80 (the default for web traffic), you'd put 80 here.

Setting up port forwarding

To set up port forwarding, you'll need to find out the Private IP address of the computer you're directing traffic to. In some setups, you'll also need to figure out which Inbound port the traffic comes through, and possibly the Private port, if these have been changed from the defaults. Budii Lite® will usually take care of the other details by using the defaults.

Let's consider an example:

Your computer (internal IP address 10.1.1.4) is running a web server. A computer somewhere on the Internet makes requests to view the pages on your web server. These requests come in via Budii Lite's external IP address on port 80 – for example, http://123.456.789.012:80. We'll set things up so that Budii Lite® forwards any traffic for port 80 straight to your computer, the web server.

To set up port forwarding correctly:

1. From the Add application dropdown, select an application. For this example, choose HTTP.
2. Click Add. An entry is copied to the port forwarding table.
3. Adjust the WAN interface setting if you need to.
4. At Private IP address, enter the local IP address of the destination computer (the web server).

IPSEC

IPsec is a suite of security protocols that encrypt and authenticate each packet of data transmitted from Budii Lite®.

Using Budii Lite's IPsec features you can:

- Set up secure VPN connections using IPsec in tunnel mode.
- Add up to four IPsec local certificates, to prove your identity to peers.
- Add up to four trusted CA (Certificate Authority) certificates to verify the identity of peers.

Handy Tools

The Handy Tools page contains several important maintenance options for your Budii Lite®.

FIRMWARE UPGRADE

Allows you to upgrade the software on your Budii Lite®.

Firmware is a type of semi-permanent software, stored on Budii Lite®. From time to time, iiNet Labs may release updates to your modem's firmware. The firmware upgrade tool lets you install these updates.

To upgrade Budii Lite's firmware:

1. At Firmware upgrade, click Continue.
2. Click the download link.
3. Locate your product and download the firmware file.
4. Click Choose file and locate the file you downloaded.
5. Click Upgrade firmware.

A. Firmware upgrade

A1. From time to time, we release firmware upgrades for Budii Lite. Click here to download the latest firmware and save it to Budii Lite.

Your current firmware version is: **BudiiLite0013**.

Continue

BACKUP

Allows you to save all configuration options on your Budii Lite® into a file you can store on your computer. Useful if you need to perform a factory reset of your modem and you have a lot of custom settings.

Note: We would not recommend using the Backup option during a firmware upgrade, as there may be data conflicts between the 'old' settings and the new software version.

B. Backup

B1. **Save Budii Lite's current settings**

This tool lets you save Budii Lite's current settings to a file on your PC. If you ever need to reset Budii Lite, you can easily restore your settings. Click **Continue** to save your settings.

Continue

RESTART BUDii LITE®

Sometimes all it takes to get your Internet connection back up and running is to restart Budii Lite® by doing the following:

- At C1 – Restarting Budii Lite®, click Restart.

Budii Lite® will then restart. It may take several minutes to reboot.

C. Restarting and resetting your modem

C1. Restarting Budii Lite

Sometimes, just like a computer, you may need to restart your modem. After you click the **Restart** button, Budii Lite may take up to 5 minutes to reconnect to the Internet, so please be patient.

[Restart]

C2. Resetting Budii Lite to factory settings

Resetting Budii Lite to factory settings will clear **all** your settings, so if you do this you'll need to go through the setup process again. You might want to back up yo settings by using the tool at B1 above.

Restore Budii Lite® to factory settings

Restoring Budii Lite® to factory settings will clear all your settings, so if you do this you'll need to go through the setup process again. There are two ways to reset Budii Lite® to factory settings:

- By pressing and holding the Reset button on Budii Lite's rear panel.
- Through the Handy Tools section of Budii Lite's web interface.

To reset Budii Lite® to factory settings using the Reset button:

- Make sure Budii Lite® is powered on.
- Using a pen or paperclip, gently press and hold the Reset button on Budii Lite's rear panel for 12 seconds.

Budii Lite® will power off and restart. Once it powers up again, all settings are lost and returned to factory defaults. To reset Budii Lite® to factory settings, do the following:

- At C2 – Restore Budii Lite® to factory settings, click Continue.
- Click Apply.

Status/Diagnostics

DHCP CLIENT LIST

DHCP list

Refresh

This list shows you the devices currently connected to your network. You can also use this page to fix an IP address to a device or release a device's IP address.

Client No	IP address	Computer name	Computer MAC address	Wireless or ethernet?	Fix IP address to client?	Release IP address?	Is computer online?
1	10.1.1.2	syd-lt278	f0-de-f1-70-40-7c	Ethernet	☐	Release IP	Yes

New

A DHCP client is a computer on your home network that Budii Lite® has given an IP address. This section lists all the DHCP clients and lets you manage the computers on your LAN. You can:

- Change a computer's IP address.
- Manually create a new DHCP client.
- Make a computer release its IP address and get a new one from Budii Lite®. This can help to resolve IP address conflicts on your LAN.

Fix IP address to client?
This will make sure that the computer always has the same IP address on your home network.

VIEWING THE NAT (NETWORK ADDRESS TRANSLATION) MAPPING TABLE

NAT (Network Address Translation) is an Internet technology used to convert between IP addresses inside and outside a local network.

The NAT mapping table shows the current NAPT (Network Address and Port Translation) mappings of Budii Lite®.

In this table you'll see how Budii Lite® translated the local IP address and port combinations of recent traffic originating from computers on your home network to the external IP address and port of Budii Lite®. You'll also see the Internet destination of the traffic.

BUDii LITE'S ROUTING TABLE

All computers and routers using IP networking have a routing table that tells them how to send data to other destinations.

To view Budii Lite's routing table:

1. Click the 7. Status/diagnostic tab.
2. Click C. Routing table.

Routing table

Refresh

Table

Flags	Network address	Netmask	Gateway	Interface	Metric
U	10.1.1.0	255.255.255.0	0.0.0.0	br0	0
UC	ff02::1/128		ff02::1	br0	0
U	ff00::/8		::	br0	256

List of flags

U: Up
!: Reject
G: Gateway
H: Host
R: Reinstate
D: Dynamic (redirect)
M: Modified (redirect)

ADSL MONITORING

This page shows you some information about your ADSL connection's performance. You might find this information helpful in troubleshooting any connection or speed issues you're having.

ADSL Monitoring

Line status tells you whether your ADSL connection is up and running.

Link type is the ADSL standard you're using to connect to the Internet – for example, ADSL2+.

Data rate

The actual data rate is an indicator of the speed of your ADSL connection, in Kbps. It's separated into upstream (upload) and downstream (download) speeds.

Operation data/defect indication

The noise margin, also known as a signal-to-noise ratio, tells you how strong your ADSL connection is. Higher numbers indicate a better connection.

Attenuation is an indication of how far you are from your ISP's exchange. Lower numbers indicate a better connection.

CRC and HEC errors

These are measures of the errors in your data stream due to noise. These errors are detected by:

- Your modem (the far end indicator, for download traffic).

- Your ISP (the near end indicator, for upload traffic).

Lower numbers indicate fewer errors and a better connection.

Statistics

The cell counter is a measure of how much data your Budii Lite® has transmitted (uploaded) and received (downloaded).

NETWORK CONNECTION DIAGNOSTICS

If you're trying to troubleshoot your Internet connection, this page might help.

Network connection diagnostics

Use this tool to test your network connection status. Enter a domain name or an IP address at **Destination Address** to perform a ping test.

Ping test

Destination address

Execute

Execution result

Destination IP address: is empty
Test result: Stopped

Refresh

Ping Test

Ping is a function that contacts an IP address and sends you its response. This can be useful for troubleshooting your own Internet connection, or testing whether a particular address you're trying to access is down.

To use the ping test:

1. In the Ping test section, at Destination Address, enter an IP address. For this example, we'll use one belonging to Google (74.125.227.80).
2. Click Execute.

Have a look at the results.

- If you lost packets, it could have been a network error somewhere along the line – so try again.

- If you consistently fail to receive packets, the address you pinged could be down – try another address to test this.

- If you still can't receive packets, there could be a problem with your Internet connection, or your computer's network adapter or firewall.

- High response times could indicate network congestion between you and your destination, or a problem with your Internet connection. Try other IP addresses to test this out.

- If your ping test reveals problems, use the diagnostic information on this page to help you figure out what's going on, or contact our Support Team for assistance using the contact information on the last page of this guide.

LAN Connection Diagnostics

- **Testing Ethernet LAN connection** checks Budii Lite's LAN ports to see if they're connected.

- **Testing Wi-Fi connection** checks Budii Lite's Wireless is up and running.

LAN connection diagnostic

Testing ethernet LAN connection: LAN4:PASS LAN3:FAIL LAN2:FAIL LAN1:FAIL
Testing WiFi connection: 2.4G:PASS 11AC:PASS

WAN Connection Diagnostics

- **Testing ADSL synchronisation** makes sure Budii Lite® can talk to your Internet Service Provider's broadband equipment at your local telephone exchange.

- **Testing HSPA modem** checks your USB mobile broadband modem is working, if it's connected to Budii Lite's USB port.

- **Testing WAN connection** checks you have Internet access.

- **Ping primary domain name server** checks whether you can access your primary DNS server – by default, Budii Lite® assigns this automatically.

WAN connection diagnostic

Testing ADSL synchronisation: FAIL
Testing HSPA modem: Not Connected
Testing WAN connection: FAIL
Ping primary domain name server: FAIL

This page contains lots of information on Budii Lite's broadband connection and wireless network. It might be helpful for troubleshooting any issues you have.

Use this page to see:

* The connection status for Budii Lite's WAN and LAN interfaces

* Budii Lite's firmware and hardware version numbers

* Any illegal attempts to access your network

* Information on all DHCP clients currently connected to your network

Current Time: 2010/1/1 - 0:14:52
UPTIME: 0:0:00:00

Status	
Internet	**Gateway**
ADSL: Physical Down	**IP Address:** 10.1.1.1
	Subnet Mask: 255.255.255.0
	DHCP Server: Enabled
	Firewall: Enabled
	UPnP: Enabled
	Wireless: Enabled

CURRENT TIME AND UPTIME

The Current Time is the time set for Budii Lite®.

Uptime is the length of time Budii Lite® has been connected to the Internet without being disconnected.

INTERNET

This section provides a summary of how you're connected to the Internet, and the configuration of your connection.

ADSL

A status of **"Connected"** means there are no problems with your Internet connection. **"Physical Down"** means the modem is unable to communicate with your local telephone exchange.

Mode

This is the standard or version of ADSL you're using to connect to the Internet.

Download

The average rate at which you're downloading information from the Internet.

Upload

The average rate at which you're uploading information to other computers on the Internet.

WAN IP

Your IP address, as seen from the outside world.

Subnet Mask

The subnet mask for your WAN IP. The subnet mask tells any device sending data to Budii Lite® which sections of Budii Lite's IP address to pay attention to. Usually, the Subnet Mask for your WAN IP will be 255.255.255.255, which means "Pay attention to all sections of Budii Lite's IP address".

Gateway

Budii Lite® sends all data destined for the Internet to this server address. The server then forwards this data to its destination.

Primary DNS

The main server you're using to translate domain names into IP addresses. By default, Budii Lite® will assign this automatically.

Secondary DNS

The backup server you'll use to translate domain names into IP addresses if the Primary DNS isn't available.

GATEWAY

This section gives you some information about how Budii Lite® manages your local network.

IP Address
Budii Lite®'s IP address on your home network.

Subnet Mask
Determines the range of IP addresses to allocate to the computers on your home network. In the example, all the computers will have IP addresses between 10.1.1.2 and 10.1.1.254 inclusive.

DHCP server
If enabled, Budii Lite® will automatically allocate IP addresses to the computers on your home network.

Firewall
If enabled, Budii Lite® will use the rules in your Firewall setup to protect your home network.

UPnP
If enabled, computers on your network will be able to find each other automatically.

Wireless
If enabled, you'll be able to connect computers to Budii Lite's wireless network.

WIRELESS

Wireless	Information
2.4G Wireless: Enabled	**Numbers of DHCP Clients:** 1
Channel: AUTO	**Runtime Code Version:** BudiiLite0013
Wireless Devices: 0	**Boot Code Version:** 1.0.38-112.118
Virtual AP1 SSID: BudiiLite-primary507C44	**ADSL Modem Code Version:** A2pv6F039g1.d24n
Wireless Security: Enabled	**LAN MAC Address:** 78:A0:51:50:7C:44
Security Mode: WPA/WPA2	**Wireless MAC Address:** 78:A0:51:50:7C:45
Virtual AP2 SSID: BudiiLite-secondary507C44	**WAN MAC Address:**
Wireless Security: Enabled	**Hardware Version:** A610A354067R
Security Mode: WPA/WPA2	**Serial Num:** A1403VGD00012
802.11AC Wireless: Enabled	**Build Time:** 2014.02.17-14:02:14
11AC Channel: auto	
11AC Wireless Devices: 0	
11AC Virtual AP1 SSID: BudiiLite-primary507C44_11ac	
11AC Wireless Security: Enabled	
11AC Security Mode: WPA/WPA2	
11AC Virtual AP2 SSID: BudiiLite-secondary507C44_11ac	
11AC Wireless Security: Enabled	
11AC Security Mode: WPA/WPA2	
11AC Wireless Antenna status:: External	

This section summarises your wireless network setup.

Wireless

If enabled, computers can connect to Budii Lite's wireless network.

Channel

The channel (a frequency range) the computers on your home network are using to communicate wirelessly.

Wireless devices

The number of devices connected wirelessly to Budii Lite's home network.

- **Virtual AP1 SSID:** This is your primary network name.
- **Virtual AP2 SSID:** Your secondary network name.

Wireless Security

If enabled, anyone who accesses your secondary wireless network will need to provide the right password first.

INFORMATION

This section gives you a summary of details about Budii Lite's firmware version, serial number, MAC addresses and more.

Numbers of DHCP clients
The number of computers or other devices that Budii Lite® has allocated local IP addresses.

Code versions
Budii Lite® runs a number of software packages; these entries show you their version numbers.

LAN MAC Address
IThe physical address identifying Budii Lite® to computers on your wired home network.

Wireless MAC address
The physical address identifying Budii Lite® to computers on your wireless home network.

WAN MAC address
The physical address identifying Budii Lite® to computers in the outside world.

Hardware version
Budii Lite's model number.

Serial Number
Budii Lite's individual serial number.

Build time
When Budii Lite® was set up for the first time.

ATM PVC/ETH WAN

ATM PVC/ETH WAN			
WAN1	**WAN2**	**WAN3**	**WAN4**
VPI/VCI or ETH : 8/35 **Encapsulation:** LLC **Protocol :** PPPoE **IP Address :** Down **Subnet Mask :** --- **Gateway :** --- **Primary DNS :** --- **Secondary DNS:** ---	**VPI/VCI or ETH:** **Encapsulation:** **Protocol:** **IP Address:** **Subnet Mask:** **Gateway:** **Primary DNS:** **Secondary DNS:**	**VPI/VCI or ETH:** **Encapsulation:** **Protocol:** **IP Address:** **Subnet Mask:** **Gateway:** **Primary DNS:** **Secondary DNS:**	**VPI/VCI or ETH:** **Encapsulation:** **Protocol:** **IP Address:** **Subnet Mask:** **Gateway:** **Primary DNS:** **Secondary DNS:**
[Connect]	[Disconnect] [Connect]	[Disconnect] [Connect]	[Disconnect] [Connect]
WAN5	**WAN6**	**WAN7**	**WAN8**
VPI/VCI or ETH: **Encapsulation:** **Protocol:** **IP Address:** **Subnet Mask:** **Gateway:** **Primary DNS:** **Secondary DNS:**	**VPI/VCI or ETH:** **Encapsulation:** **Protocol:** **IP Address:** **Subnet Mask:** **Gateway:** **Primary DNS:** **Secondary DNS:**	**VPI/VCI or ETH:** **Encapsulation:** **Protocol:** **IP Address:** **Subnet Mask:** **Gateway:** **Primary DNS:** **Secondary DNS:**	**VPI/VCI or ETH:** **Encapsulation:** **Protocol:** **IP Address:** **Subnet Mask:** **Gateway:** **Primary DNS:** **Secondary DNS:**
[Disconnect] [Connect]	[Disconnect] [Connect]	[Disconnect] [Connect]	[Disconnect] [Connect]

This table gives a few more low-level, technical details about your Internet connection(s). Budii Lite® can have up to eight connections set up.
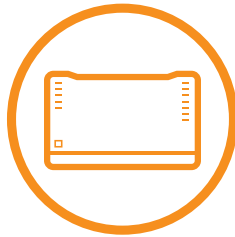
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support@iinet.net.au

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If you have any issues or technology just isn't your
strong point, you can always call our friendly staff
for a hand.