LINDY®

COMPUTER CONNECTION TECHNOLOGY

HomePlug
USB Adaptor

User Manual *English*

LINDY No. 25121

www.LINDY.com

CE

CONNECTED BY LINDY®

Manual

Introduction

Thank you for purchasing a LINDY HomePlug product. HomePlug technology makes setting up a home or small office network quick and easy!

HomePlug allows you to create a network using electrical power lines. Simply plug a LINDY HomePlug USB Adaptor into your computers USB port and then into a mains socket. The computer data is converted into a signal that can be carried over the mains wiring without interfering with the ordinary current travelling through the wire!

> **IMPORTANT** - This manual provides you with details of how to install and use the HomePlug USB Adaptor and its utility software. It is assumed the user has knowledge and experience of setting up a basic network.

About LINDY HomePlug devices

There are two LINDY HomePlug devices available – The HomePlug USB Adaptor and the HomePlug Ethernet Bridge. Each device allows you to connect your computer to a network, but there is a fundamental difference between them -

The **HomePlug Ethernet Bridge** connects to an Ethernet port. It does not function as a network adaptor, but provides a 'bridge' between the Ethernet and HomePlug networks.

The **HomePlug USB Adaptor** connects to a USB port on your computer and functions as a network adaptor. It can only be connected to a PC running Windows 98SE, ME, 2000 or XP. It cannot be connected to a USB printer or other USB device!

The HomePlug Ethernet Bridge can be plugged into any device with a 10/100 RJ-45 Ethernet port, such as PC's, Mac's, X-Boxes, hubs, switches etc., without the need to install any special software. However, the Ethernet port, to which the Bridge is connected, must be configured to access your network.

Note: To change the network password or use the HomePlug configuration utility, you must connect the Ethernet Bridge to a PC and install the supplied software. The HomePlug software must be installed when using the USB model!

Understanding HomePlug Encryption and Security

HomePlug uses password encryption to prevent unwanted access from within or outside of your network. The encryption works by using a string of letters and/or numbers to encode your data.

The encryption password is set using the HomePlug Configuration Utility software. By default, the password protection is enabled (the default password is HomePlug). However, it is recommended that you change this password. All your Home Plug devices must use the same password in order for the computers to be networked. Make sure that all devices are loaded with the same password!

Each LINDY HomePlug device has a **Default Encryption Key (DEK)** which is printed on the bottom of the module. The DEK is required when setting up a new password.

Basic requirements for setting up a HomePlug network

- At least _two_ HomePlug devices
- Available mains sockets at each location
- Computer(s) with a 10/100Base-T Ethernet adaptor (for Ethernet Bridge model)
- PC(s) with a USB 1.1 or 2.0 port (for USB Adaptor model)
- Standard home power line wiring
- CD-ROM drive
- Windows 98SE, ME, 2000 or XP or, for the Ethernet Bridge model, any operating system - no software installation is required! ***Note: Password changes require connection to a PC running the HomePlug Configuration Utility software!***

Supplied Items (LINDY Part No. 25121)

1. LINDY HomePlug USB Adaptor module
2. Mains power cable
3. USB cable
4. Configuration software CD
5. User manual
6. Wall mounting kit

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Software Installation

> *Note: Windows may look different on other platforms!*

1. Do not connect the HomePlug USB Adaptor to your computer yet! Insert the CD into your CD-ROM drive. If the CD doesn't automatically load, run -
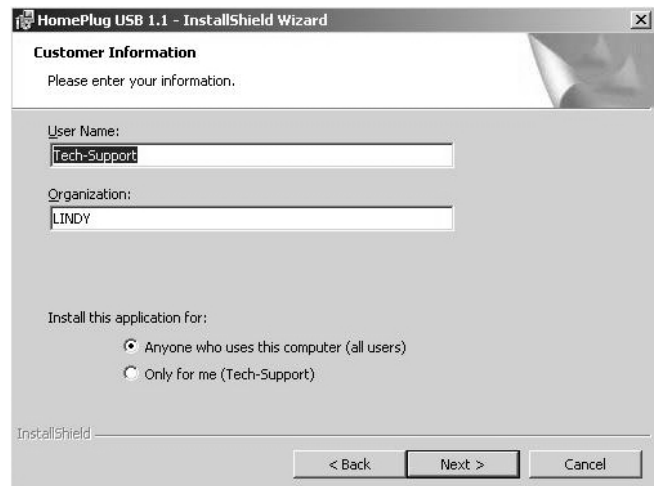
    <CD Drive Letter>:\usb\setup.exe

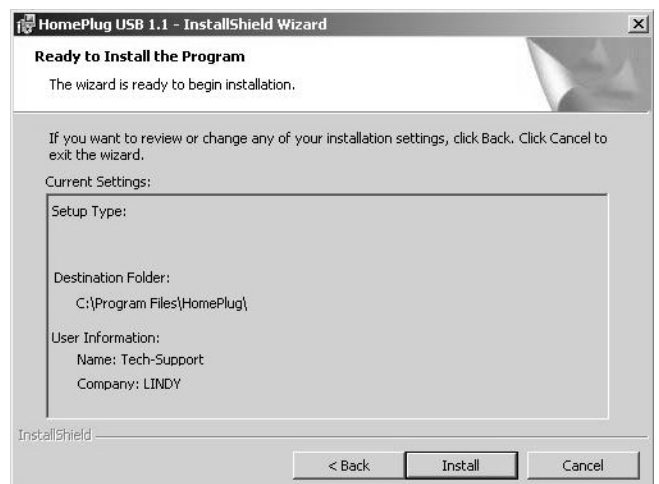   Click on 'Next' to start the installation

2. Enter a User Name and Organisation, and select either *'Anyone who uses this computer'* or *'Only for me'*, according to your preference.
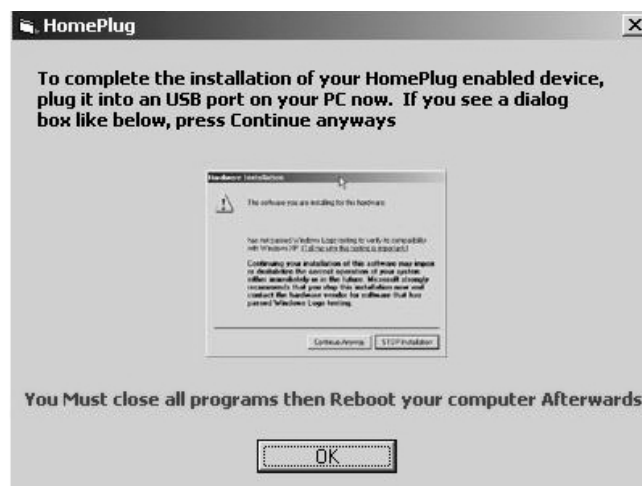
    Click 'Next' to continue.

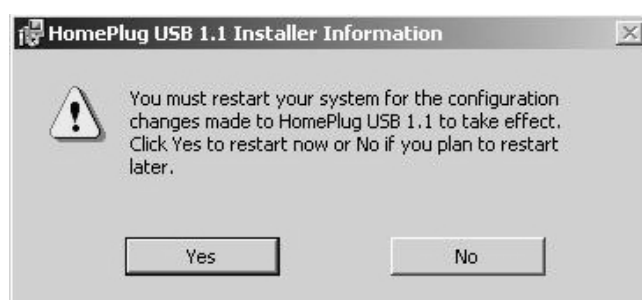3. Review or change your installation settings, then click 'Install'.

4. Connect the HomePlug Adaptor to your computer now! (**See 'Connecting the HomePlug USB Adaptor' on page 7)**

    Click 'OK' to continue.

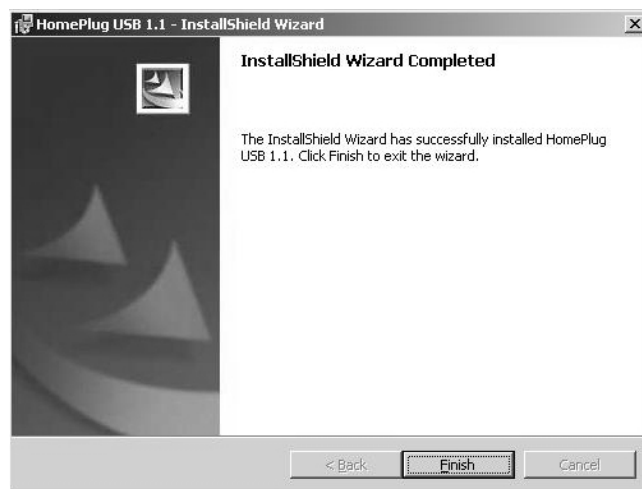5. Restart your computer for the changes to take effect by clicking 'Yes'

6. After the computer has rebooted Windows will detect new hardware and install the software.
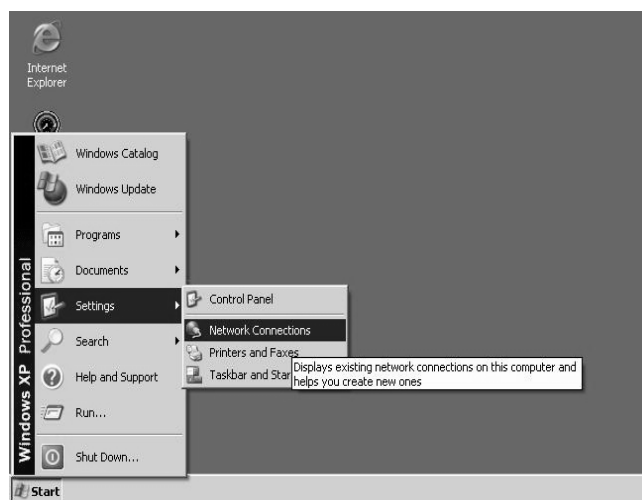
    Click 'Next' to continue.

7.   Software Installation is now complete, click 'Finish'.

8.   Confirm the correct installation of the HomePlug USB Adaptor by viewing 'Network Connections' in Windows.
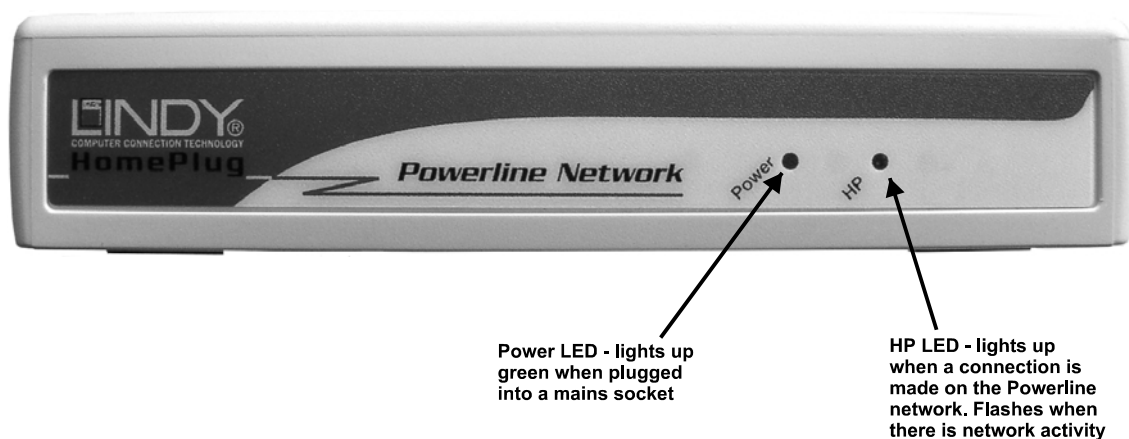
Select -

Start ►Settings ►Network Connections

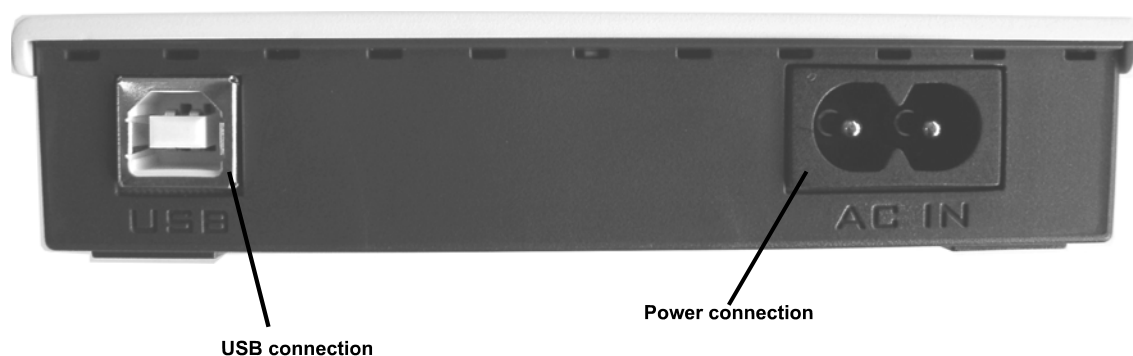9.   You will see a new Local Area Connection for the HomePlug Adaptor!

Connecting the HomePlug USB Adaptor

1.   Plug the supplied power and USB cables into the relevant sockets on the rear of the HomePlug module.

2.   Plug the other end of the USB cable into a USB socket on your computer.

3.   Plug the mains cable into the socket and switch it on.

Front View

Power LED - lights up green when plugged into a mains socket

HP LED - lights up when a connection is made on the Powerline network. Flashes when there is network activity

Rear View
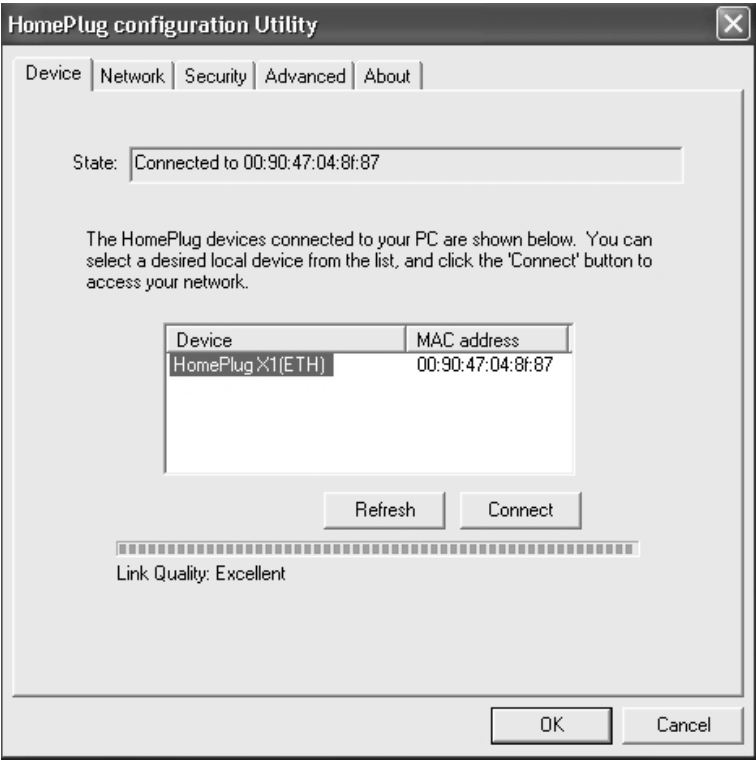
USB connection

Power connection

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HomePlug Configuration Utility

With the HomePlug Configuration Utility you will be able to configure and obtain status on your HomePlug network. Just click the shortcut on your desktop.

Device section

The Device section shows the HomePlug adaptor(s) that are directly connected **(local)** to your computer.
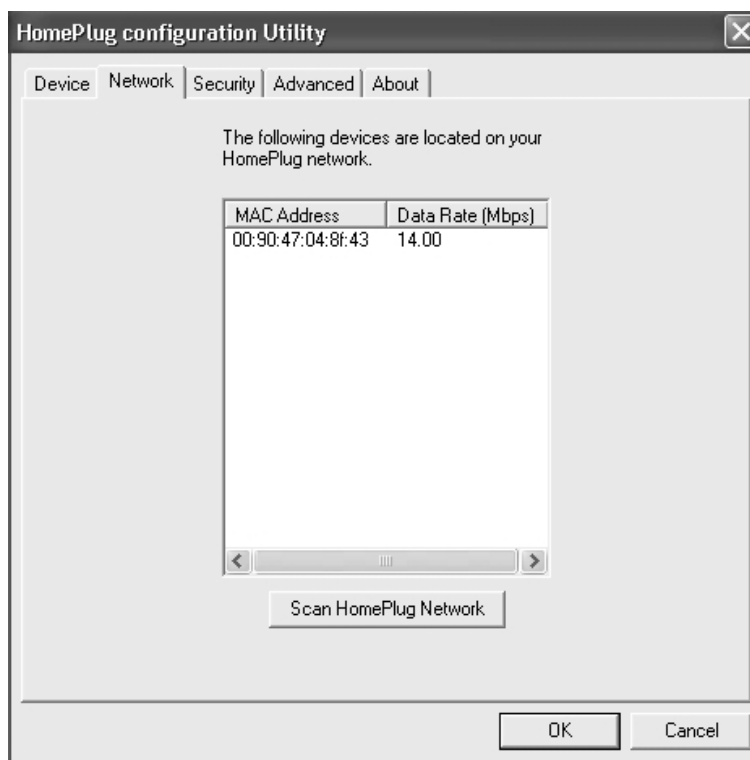

State	Shows the MAC address of the **local** HomePlug adaptor.
Refresh	Click on this button to refresh the information about the **locally** connected HomePlug adaptor.
Connect	When you have more than one HomePlug device connected directly to your computer you can select which one you want to connect to, by highlighting it in the device window, and clicking 'Connect'.
Link Quality	Shows the signal strength of the linked HomePlug devices on the network. ***Note: When only one HomePlug device is present on the network the Link Quality will show as poor!***

Network section

This section shows all of the **remote** HomePlug devices on the HomePlug network. The **local** HomePlug device will *__not__* be shown here.

MAC Address	The MAC address of each **remotely** connected HomePlug device is shown here.
Data Rate	Shows the speed that each **remote** device is connected at. The data rate will vary depending on the power line quality.
Scan HomePlug Network	Click here to scan for new devices on the HomePlug network.

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Security section

The security password for the **locally** connected device can be set in this section. To ensure network security a password must be set for each HomePlug device on the network, and for correct operation all of the HomePlug devices must share the same password. **(See 'Setting the network password' on page 12)**

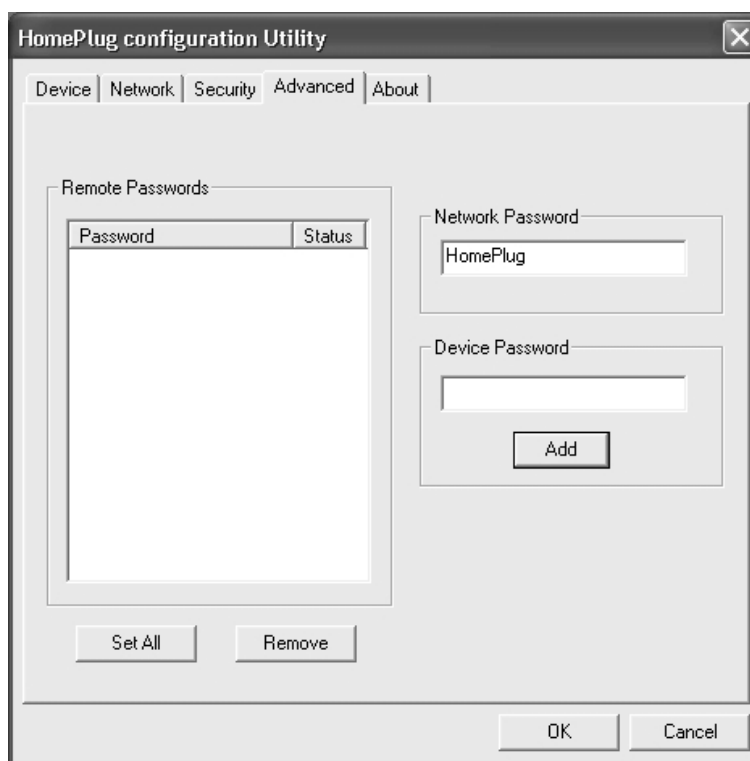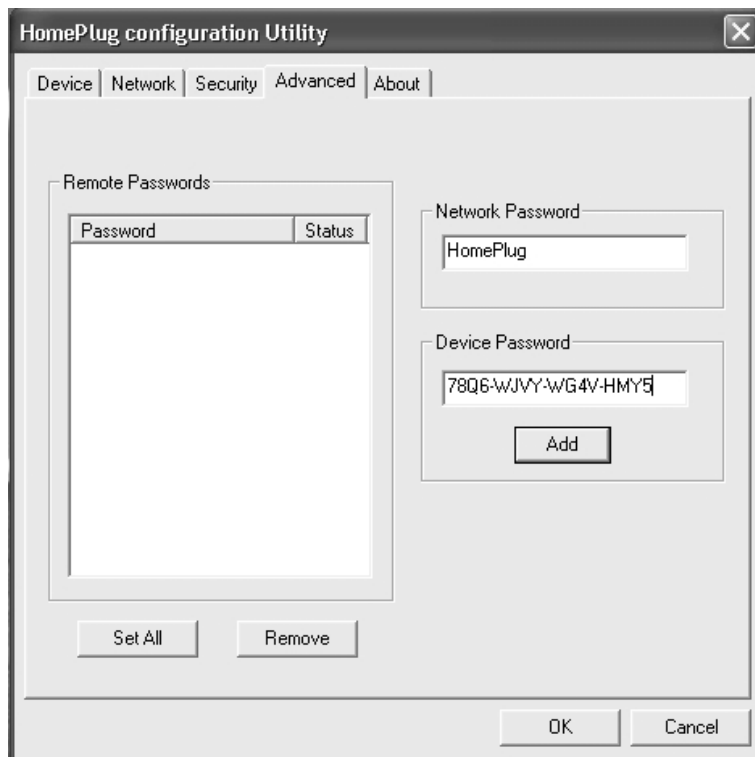|	
Network Password	Enter a new network password here (the default password on all LINDY HomePlug devices is 'HomePlug'). *Note: the password is case sensitive and must be the same on all of the HomePlug devices on the network!*
Set Local	Click here to set the network password for the **local** device.
Restore Default	Clicking this button restores the default password ('HomePlug') to the **local** device.

Advanced section

This section allows you to remotely set the network password of all the HomePlug devices on the network.
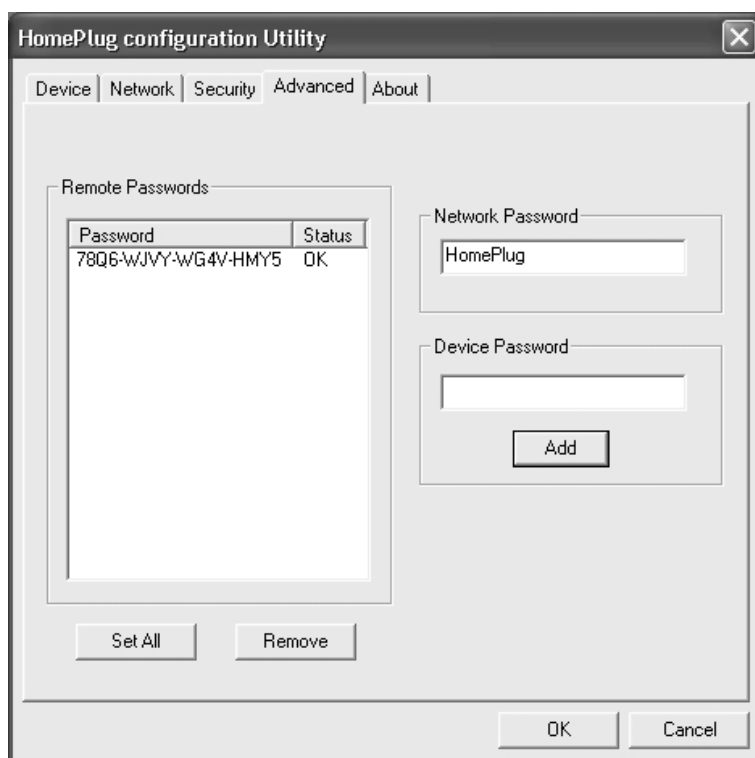

Remote Passwords	The DEK (Default Encryption Key) and status of each **remotely** connected device is listed in this box.
Network Password	Shows the current network password
Device Password	The DEK (Default Encryption Key) of each **remotely** connected device is entered here.
Add	Click this button to add the **remote** device DEK to the 'Remote Passwords' box.
Set All	Clicking this button applies the current network password to all the devices listed in the 'Remote Passwords' box.
Remove	Remove a device from the 'Remote Passwords' box by highlighting it and clicking this button.

Setting the network password

1. Open the Advanced section and enter the DEK number of the **remote** HomePlug device (located on the bottom of the module) in the Device Password box and click 'Add'
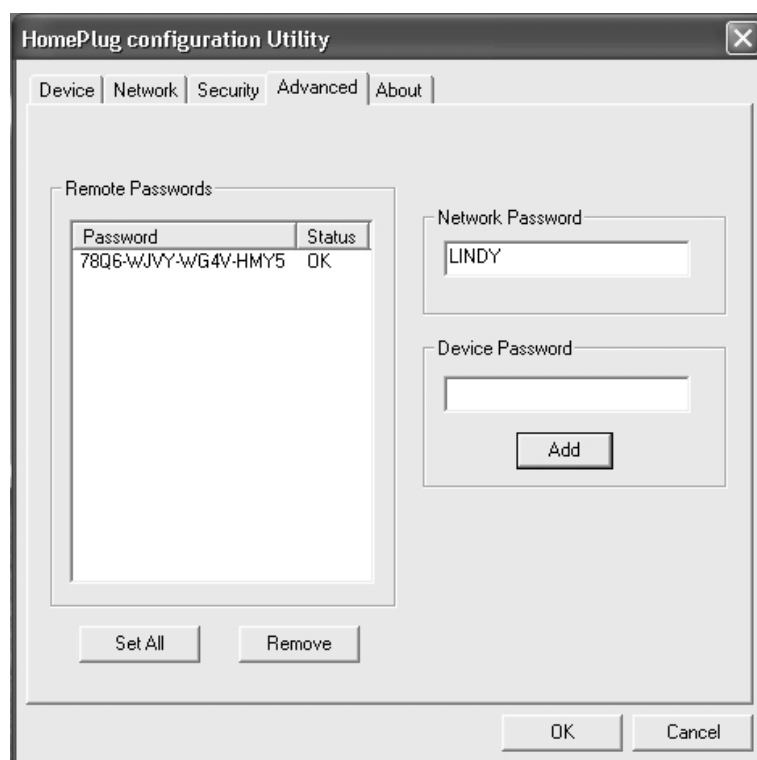
2. The DEK number will appear in the 'Remote Passwords' box.

3.   Enter a new network password in the 'Network Password' box and click 'Set All' to change the network password for the **locally** connected device and all the **remote** devices listed in the 'Remote Passwords' box.

Note: Changing the network password does not alter the DEK number in the 'Remote Passwords' box – each device will always be listed by its DEK number!
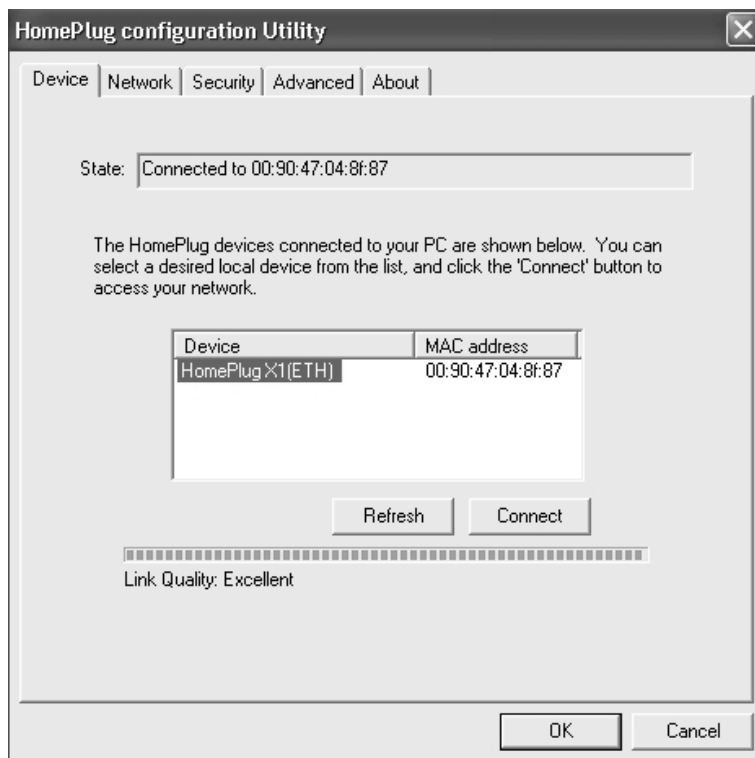
4.   Open the Security section and check the Network Password of the **locally** connected device – it will have changed to the new password (e.g. LINDY)

4.   Open the Device section and
     check the Link Quality of the
     remote devices by clicking
     'Refresh'.

     *Note: When the password
     change is successful the link
     quality will be 'Good' or
     'Excellent'. When a HomePlug
     device with an incorrect
     password is present on the
     network, the link will be poor!*

HomePlug configuration Utility

Device | Network | Security | Advanced | About |

State: Connected to 00:90:47:04:8f:87

The HomePlug devices connected to your PC are shown below. You can
select a desired local device from the list, and click the 'Connect' button to
access your network.

Device	MAC address
HomePlug X1(ETH)	00:90:47:04:8f:87

Refresh   Connect

Link Quality: Excellent

OK   Cancel

Radio Frequency Energy

Shielded cables must be used with this equipment to maintain compliance with radio frequency energy emission regulations and ensure a suitably high level of immunity to electromagnetic disturbances.

FCC Warning

This equipment has been tested and found to comply with the limits for a Class B Digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• **Reorient or relocate the receiving antenna**

• **Increase the separation between the equipment and receiver**

• **Connect the equipment into an outlet on a circuit different from that to which the receiver is connected**

• **Consult the dealer or an experienced radio/TV technician for help**

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation

For Home and Office Use
Tested to comply
with FCC Standards

LINDY No. 25121