USER MANUAL

DHP-302

VERSION 1.0

D-Link®

POWERLINE HD

Table of Contents

Package Contents

• D-Link DHP-302 Powerline HD Ethernet Adapter
• CAT5 Ethernet Cable
• CD-ROM with Software and Manual
• Quick Installation Guide

System Requirements

• Windows Vista®, XP (with Service Pack 2) or 2000 (with Service Pack 4)
• PC with 233MHz Processor, 64MB Memory
• Ethernet Adapter (100MBit/s)

Introduction

D-Link announces a fast, 200Mbps Powerline HD Ethernet Adapter which allows you to network your home computers, networking devices and gaming devices through the most pervasive medium in your house - the electric powerlines - and share Internet connections, printers, transfer files, play games, and more. This kit can be used to network two computers with a 10/100Base-T adapter through powerlines.

Features

- Provides Ethernet to Powerline Connection

- Fast Data Transfer Rate of Up to 200Mbps

- One 10/100 Ethernet port

- Plug & Play, Easy Installation

- Easy to use Management Software

- Configurable QoS for video streaming, VoIP and Gaming

- Firmware Upgrade Support

- Push button security

- Throughput LED

- Power Saving

- LLTD Support

Hardware Overview
LEDs

Power LED
A solid light indicates that the device is receiving power.

AP LED
A solid light indicates that the device is the master unit in the powerline network.

Ethernet LED
A solid light indicates a connection on the Ethernet port. The LED blinks during data transmission.

Throughput LED
A solid green light indicates that the master device has detected another Powerline device on the network.

Green LED: Power Line speed > 20Mbps (non master unit)
Amber LED: Power Line speed < 20Mbps or > 6Mbps (non master unit)
Red LED: Power Line speed < 6Mbps or link is down. (non master unit)

Hardware Overview
Connection

Push Button Security
Press to secure your network. Refer to page 8 for more information.

Ethernet Port
Connect CAT5 Ethernet cable to the DHP-302 Ethernet port.
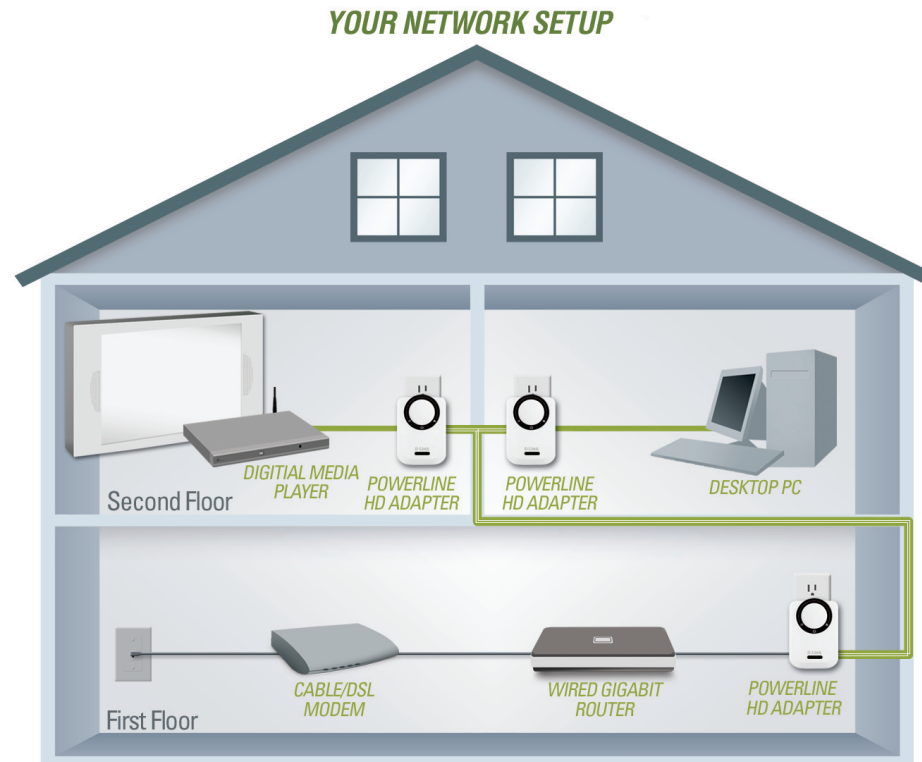
Hardware Installation

Power

Plug in the DHP-302 into an AC wall outlet or power strip.

Note: Power source is confirmed when the green LED Power Indicator on the DHP-302 is illuminated.

Connect the Ethernet Cable

Connect the included Ethernet cable to the network cable connector located on the DHP-302 and attach the other end of the Ethernet cable to the network or PC. Network Connectivity is confirmed when the green LED Indicator on the DHP-302 located left of the Power LED is illuminated.

YOUR NETWORK SETUP

Second Floor

DIGITIAL MEDIA
PLAYER

POWERLINE
HD ADAPTER

POWERLINE
HD ADAPTER

DESKTOP PC

First Floor

CABLE/DSL
MODEM

WIRED GIGABIT
ROUTER

POWERLINE
HD ADAPTER

Push Button Security

1. All Adapters

Plug in all the adapters to be configured.

2. First Adapter

Select the first adapter to be configured as the AP (Access Point). Press and hold the button until the AP light starts flashing.

Press and hold the button

Note: It is recommended to choose any adapter connected to your Internet connection such as a router as AP, or to the data or media source device such as a Media Center PC. There must be only one security key master (AP) in the network.

The adapters memorize their security settings even after power is removed from the units. The security settings of any adapter can be cleared by pressing the button until its AP LED is off. This will reset the unit back to the factory default settings.

First Adapter

3. First Adapter

Wait until the AP LED stops flashing (up to 30 seconds).

4. First Adapter

The AP LED remains on and is now ready to start registering new adapters.

First Adapter

5. First Adapter

Press the button until its AP LED starts flashing and continue to the new adapter.

Press and hold the button

First Adapter

6. New Adapter

Press and hold the button in the new adapter until the AP LED starts flashing.

Press and hold the button

New Adapter

7. New Adapter

The new adapter's AP LED will turn off indicating that it is securely configured and its Throughput LED will indicate the link quality.

New Adapter

8. First Adapter

After registering the new adapter, the AP LED of the first adapter remains on and its Throughput LED will indicate the link quality.

Note: *When adding more adapters, repeat steps 5 to 8. At the end of this process, only one adapter should have the AP LED on.*

First Adapter

Using the Setup Wizard

Follow the simple steps below to run the Setup Wizard to guide you quickly through the installation process.

Insert the **D-Link DHP-302** CD into your CD-ROM drive. If the CD Autorun function does not automatically start on your computer, click **Start** > **Run**.
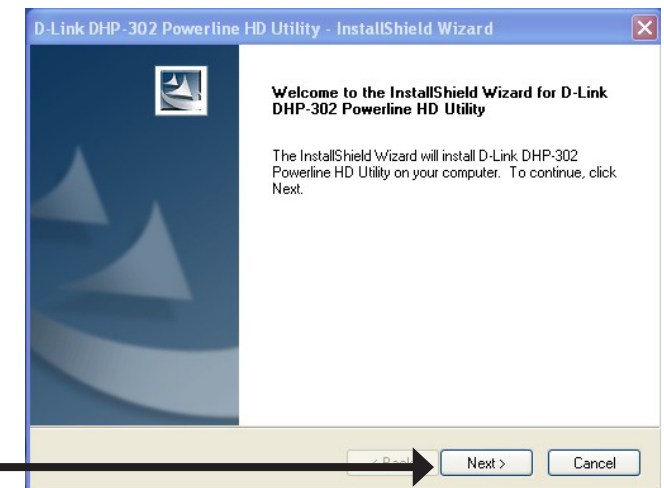
In the Run command box type "**D:\DHP302.exe**", where D: represents the drive letter of your CD-ROM. If it does start, proceed to the next screen.
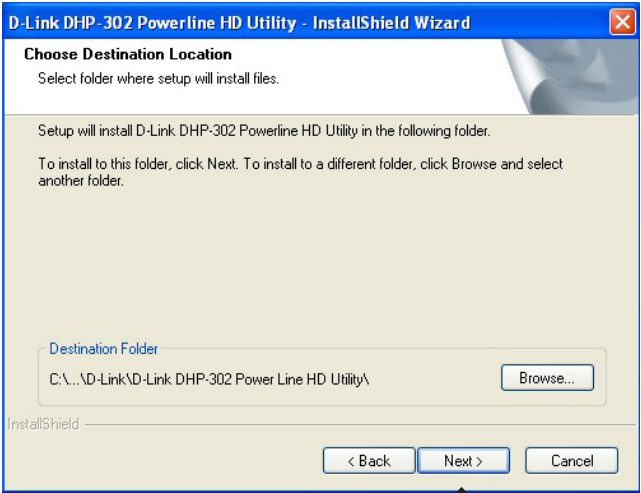
Click on **Install Utility**

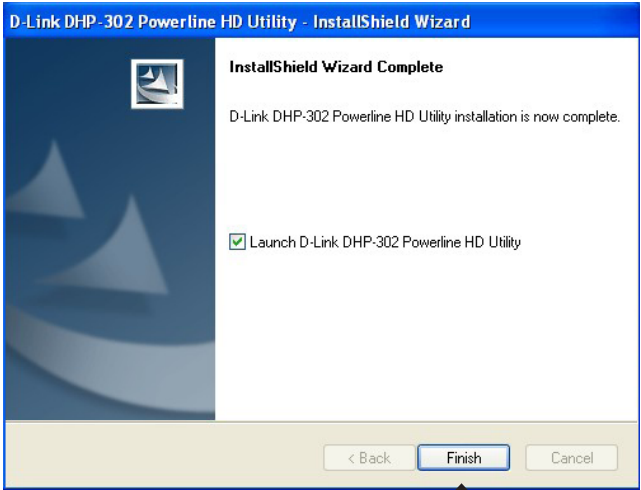The InstallShield Wizard will begin the DHP-302 software installation.

Click **Next**

Click **Next**

Click **Finish**

Configuration

After you have completed the D-Link DHP-302 Utility installation wizard, double-click the *D-Link DHP-302 Powerline HD Utility* icon on your desktop to start the configuration of the DHP-302.

Double-click the **D-Link DHP-302 Powerline HD Utility** icon

The utility provides you with the option of setting your own unique Network ID and the ability to prioritize traffic passing through the network. The color of text on the **Device Name**, **Network ID**, **MAC**, and **Location** columns represent the status of powerline network.

- **Green text** - Powerline network is encrypted with a non-default Network ID.

- **Red text** - Powerline network is encrypted with the default Network ID (DHP-302).

- **Grey text** - Powerline network is not connected due to a different Network ID.
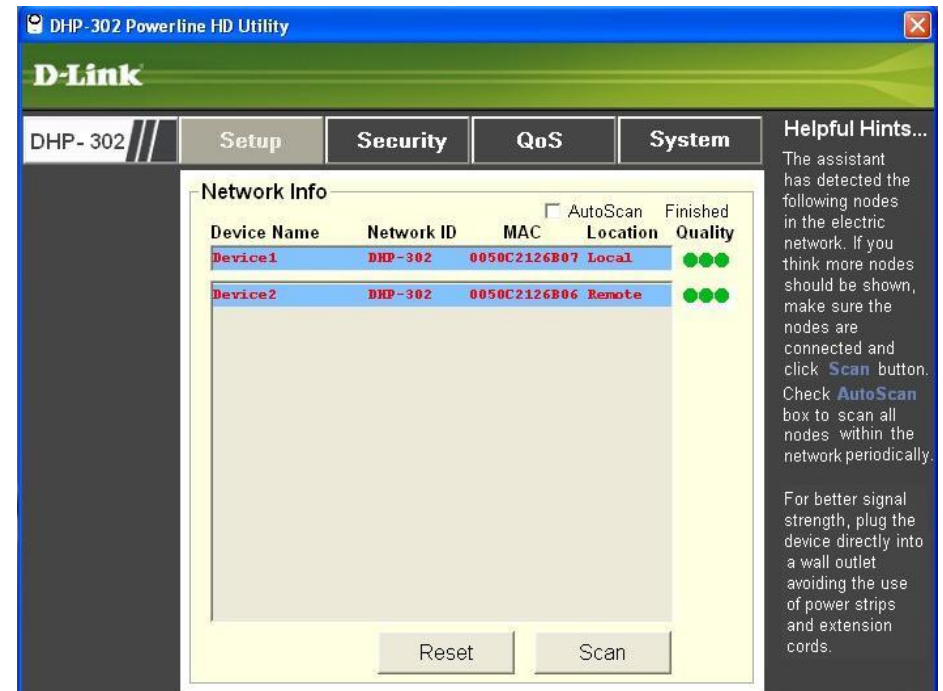
Red text on the **Device Name**, **Network ID**, **MAC** & **Location** columns mean that the powerline network is encrypted with the default Network ID (DHP-302). Follow the steps below to encrypt the network with a non-default Network ID:

- Single-click on the nodes that you want to change.

- Once all the nodes you want to encrypt with a non-default Network ID, click the **Security** page.

- Change to different Network ID.

- Press **Save Settings**.
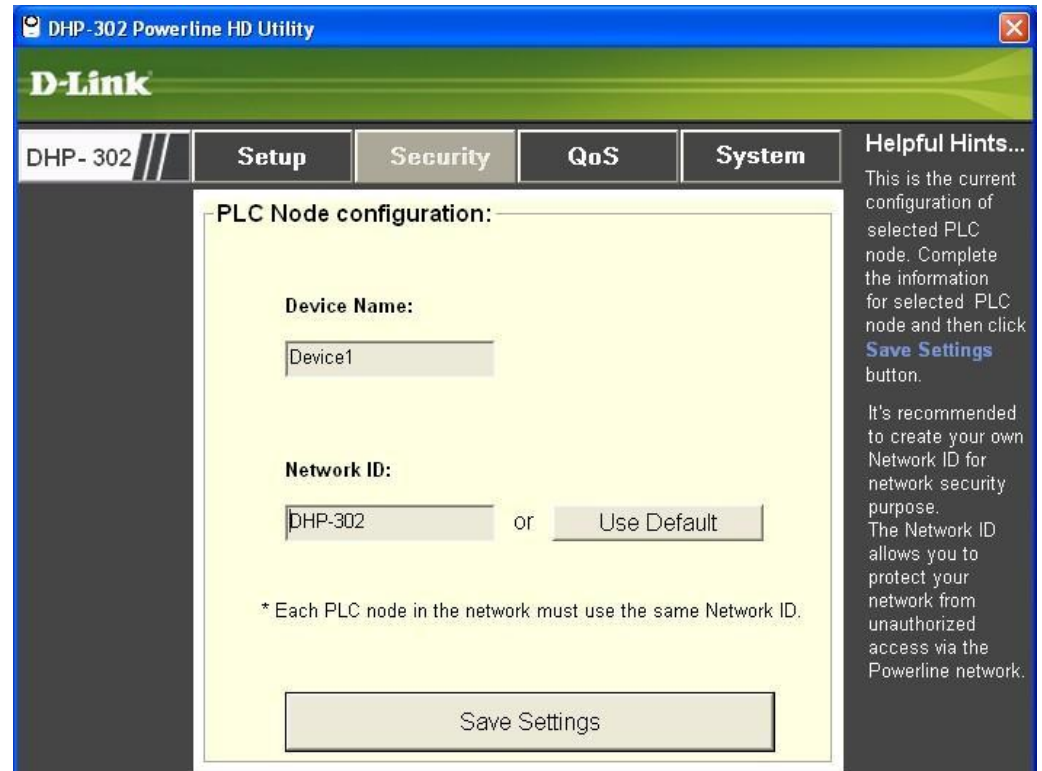
Setup
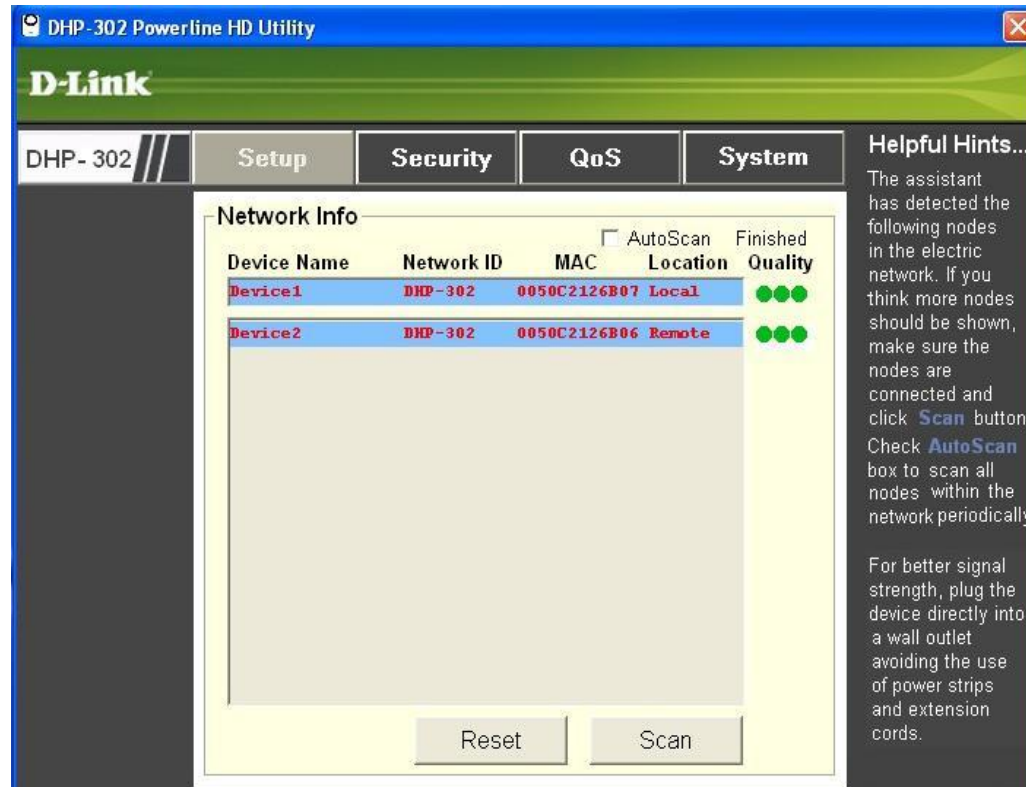
This screen shows the current configuration of the DHP-302.

Device Name: Show name of devices that have been discovered. Default is Device 1, Device 2 etc (Max 16 characters, 0-9, A-Z, case sensitive) ie. Living room, Bedroom, etc.

Network ID: Powerline Network Name. The default ID is **DHP-302** (Max 10 characters, 0-9, A-Z, case sensitive).

MAC: MAC Address of detected node.

Location: Local or Remote nodes.

**Quality:** Network connection quality of the connected node.

- Three circles - Best powerline connection. Suitable for HD video stream connection.
- Two circles - Better powerline connection. Suitable for SD video stream connection.
- One circle - Good powerline connection. Suitable for data and internet activity connection.

Scan: Scan the powerline network for PLC nodes. Check the **AutoScan** box to scan the network periodically.

*Note: Network ID can be changed to prevent unauthorized access to your powerline network. Make sure the **Network ID** of the devices within your powerline network are the same to enable data transmission.*

Security

This section shows the security configuration of the DHP-302. You can modify any of the parameters and click **Save Setting** to save your configuration.
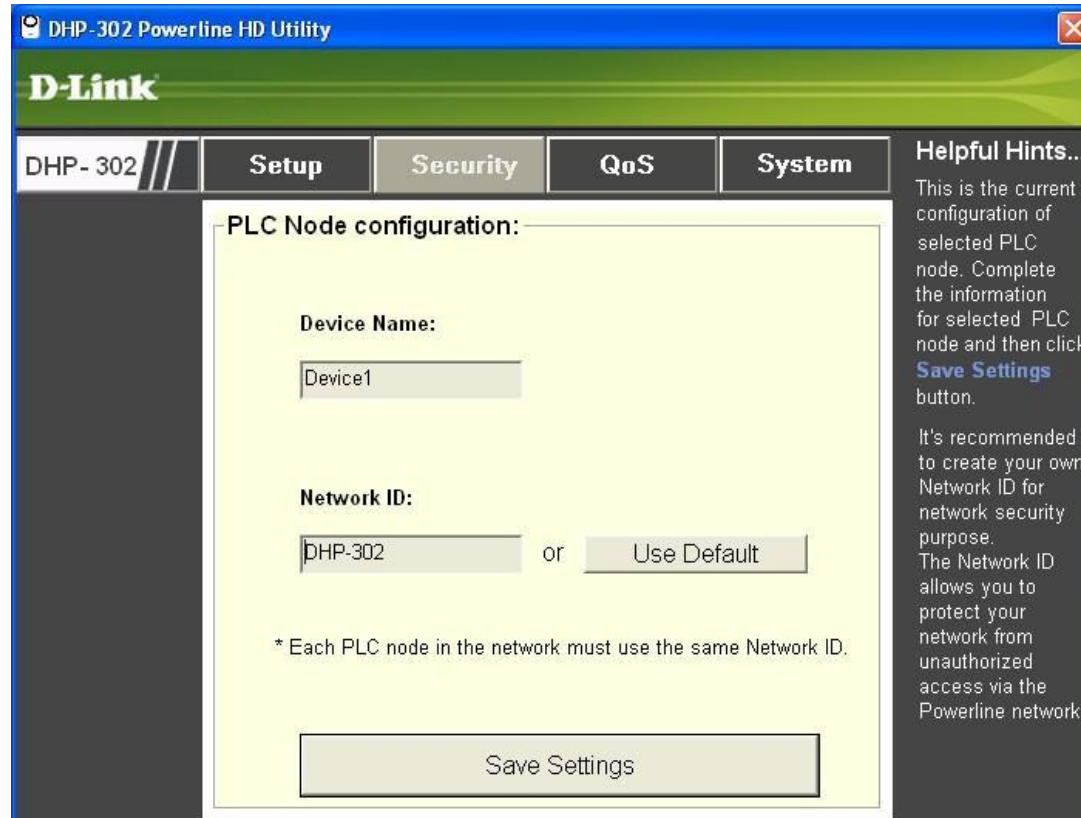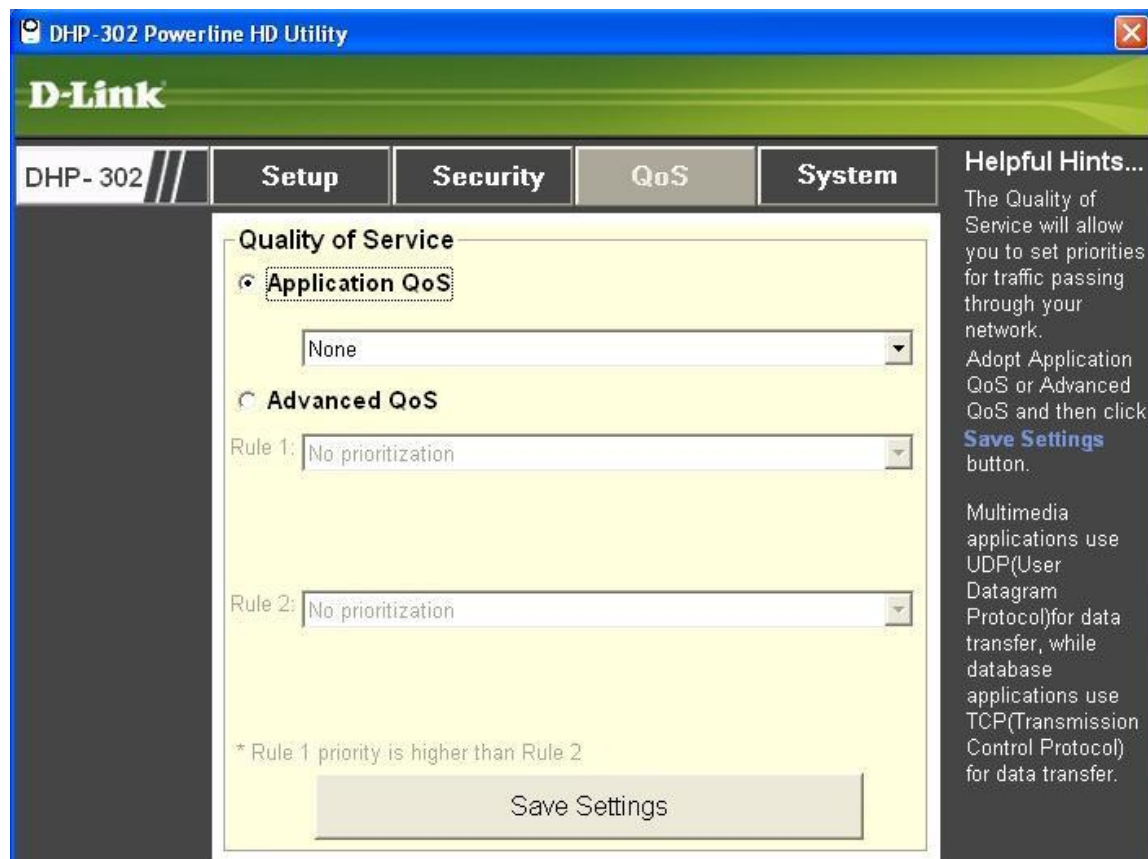

Device Name: Show name of devices that have been discovered. Default is Device 1, Device 2 etc (Max 16 characters, 0-9, A-Z, case sensitive) ie. Living room, Bedroom, etc.

Network ID: Powerline Network Name. Default is DHP-302 (Max 10 characters, 0-9, A-Z, case sensitive).

Use Default button: Select to reset the Network ID to the default value (DHP-302)

Application QoS

The Quality of Service (QoS) screen will allow you to set priorities for traffic passing through your network. By default all types of traffic are assigned the same priority. Multimedia applications use UDP (User Datagram Protocol) for data transfer, while database applications use TCP (Transmission Control Protocol) for data transfer.

Application QoS: Select an application from the drop-down menu of predefined QoS rules to apply QoS automatically. Click the **Save Settings** button to apply your settings.

Advanced QoS

Rule: Select the traffic type (UDP or TCP) to have priority. 802.1p use prioritization bits in Layer-2 frames.

Port: Input the port number to have priority.

Priority: Input port priority from 1 to 6. The highest priority is 6, and the lowest is 1.

Note: Rule 1 has priority over Rule 2

System

Power Saving

When the master unit is in stand-by mode, the throughput LED will blink red intermittently. With the power saving mode enabled and the ethernet link activity being down for 15 minutes, the DHP-302 will automatically go into stand-by mode.

Reset

To reset your configuration password, please click **Reset** to restore the password to the factory default value.

Troubleshooting

- **DHP-302 Powerline HD utility does not start correctly:**
  Reinstall the utility.

- **DHP-302 Powerline HD utility does not detect the PowerLine HD Ethernet Adapter:**
  Please make sure your Powerline HD Ethernet Adapter is correctly plugged and connected to the computer or network device.

- **I can't configure any parameter of the PowerLine HD Ethernet Adapter, an error is shown when I try to configure it:**
  Please make sure you have not unplugged the PowerLine HD Ethernet Adapter while configuring it.

- **I changed the connection cable to another Ethernet adapter and now the utility does not work correctly:**
  Please restart the utility each time you disconnect the connection cable.

- **I'm having a lot of problems configuring my network:**
  If you are having many problems configuring the network with two or more PowerLine HD Ethernet Adapter, please make a reset to all of the Ethernet adapters, reset the utility and start configuring the adapter again.

Technical Specifications

Network Port
10/100 Ethernet port

EMC
• FCC Part 15 Class B
• CE Class B

AC Input
110 ~ 240VAC

Operation Temperature
0°C ~ 40°C

Storage Temperature
-10°C ~ 70°C

Humidity
• Operation: 10% ~ 90% RH
• Storage: 5% ~ 90% RH

Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- • Model number of the product (e.g. DHP-302)
- • Hardware Revision (located on the label on the bottom of the router (e.g. rev A1))
- • Serial Number (s/n number located on the label on the bottom of the router).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

For customers within the United States:

Phone Support:
(877) 453-5465

Internet Support:
http://support.dlink.com

For customers within Canada:

Phone Support:
(800) 361-5265

Internet Support:
http://support.dlink.com

Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty:

D-Link warrants that the hardware portion of the D-Link product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

- Hardware: One (1)Year Limited

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

Limited Software Warranty:

D-Link warrants that the software portion of the product ("Software") will substantially conform to D-Link's then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days ("Software Warranty Period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by DLink in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

Non-Applicability of Warranty:

The Limited Warranty provided hereunder for Hardware and Software portions of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

Submitting A Claim:

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow DLink to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.

- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at https://rma.dlink.com/.

- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. DLink will only replace the defective portion of the product and will not ship back any accessories.

- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

What Is Not Covered:

The Limited Warranty provided herein by D-Link does not cover:

Products that, in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

Disclaimer of Other Warranties:

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

Limitation of Liability:

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK'S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

Governing Law:

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

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CE Mark Warning:

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement:

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 communication. 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.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

Registration

Register your product online at:
http://support.dlink.com/register

Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

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