Taurus LAN - User Guide

Macpower & Tytech Technology Co., Ltd.

Date: June 11, 2008 - v1.2
Firmware: v2.6.3-20080529
PCB: MP-LNU23SL v1.2
Model: PDD-LNU2SS

The diagrams and images contained in this manual may not fully represent the product that you are using and are there for illustration purposes only.

Table of Contents

Chapter 1 - Introduction

A SATA enclosure like no other, the Taurus LAN offers the latest in network attached storage technology. Workstations connected to the same network have access to the Taurus's massive dual bay storage space. Plus, with 2 available USB host ports, any attached USB device is also accessible on the network. Used in conjunction with BitTorrent™, the Taurus LAN can be set to download media files from the Internet and save them onto its internal SATA hard drives. With powerful RAID technology, all your downloaded media and data files can be safely backed up.

Product Dimensions: 24.5cm x 14cm x 8.3cm
9.6in x 5.5in x 3.3in

Package Contents

- Taurus LAN (no HDD included)
- Power Adapter;
  Input 100-240V, Output +5V/4.2A, +12V/3A
- Ethernet Cable
- Utility CD
- Manual

Note: Package contents may vary, depending on vendor & version.

System Requirements

- Computer with internet browser and network access for setup
- Switch or Router with one free Ethernet port for the Taurus LAN
- One or two 3.5" SATA-I or SATA-II Hard Drives (1.5Gb/s)
- 20GB -1TB per HDD (maximum of 2TB in total)
- For RAID 0 & 1, two hard drives of identical capacity are recommended

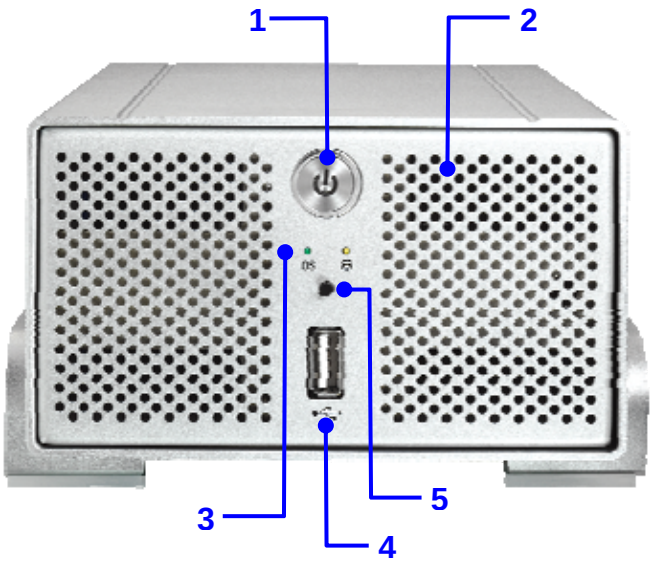
Supported Operating Systems:

- PC running Win2000, WinXP or Windows Vista
- Mac running Mac OS 10.2 or later

Note: For external USB devices, we recommend using self-powered USB drives. If two bus-powered USB drives are connected at the same time, at least one of them needs to be powered by an external power supply.

Detailed View

For a detailed description on how each of these ports and buttons work, please refer to the following chapters.



Front View

1. ON/OFF switch (blue when ON)
2. Ventilation holes
3. Status LEDs (see LED Indicators)
4. USB port (upstream)
5. USB backup button

Note: After turning on the power, it takes about one minute for the system to boot.

LED Indicators

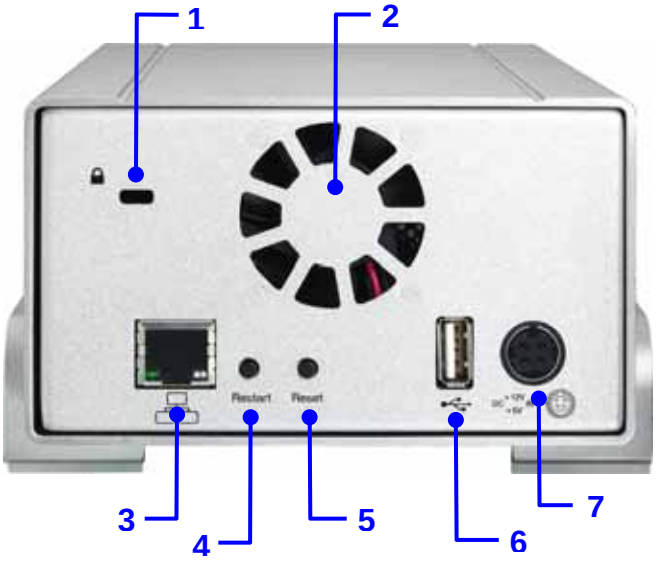
green	yellow
1. OS	2. HDD

1. System LED

ON = System ready
OFF = System shut down
Blinking = System starting or shutting down

2. Activity LED

ON = Error (disk not found or RAID error)
OFF = No disk activity
Blinking = Data access



Rear View

1. Slot for security lock
2. Smart fan for ventilation
3. Gigabit Ethernet port
4. Restart button
5. Reset button
6. USB port (upstream)
7. Power receptacle

Restart Button

Press and release this button for a hardware reset. The device will restart after you release the button.

Reset Button

Press and release this button for a software reset or when the Taurus LAN is powered up and ready, press and hold this button for 5 seconds and then release it to reset all the settings to factory default. All user accounts and groups will be erased!

Ethernet Port LED

The green LED on the left indicates the link connection and the LED on the right the speed.

Speed	green	yellow	green	yellow
	10Mbps	1000Mbps	100Mbps	

Quick Installation Guide

Following is a quick installation guide to get you up and running. For further details on each of the settings, please refer to Chapter 2 and subsequent chapters.

1. Install at least one hard drive.
2. Connect the Ethernet cable from your network router or switch to the Taurus LAN.
3. When everything is connected, turn the Taurus LAN on and give it about one minute to boot up.
4. Access the web configuration interface via your web browser. See “How to login” in Chapter 2.
5. Go to the Maintenance menu and use the disk utility to format the drive. If two identical drives are installed, you can also go to the “RAID Setting” section and create your RAID array.
6. Once the drive has been formatted, go to the Basic menu and follow the quick setup wizard. This will help you to set up the IP configuration, add the first user and prepare file sharing.
7. You are now ready to start sharing or downloading files.

Note: Set the speed for your network card to AUTO and not full or half speed.

Note: Without installing and formatting at least one drive first, the other functions of the Taurus LAN will not be available.

Power ON/OFF Procedure

Always connect the power adapter to your device before you plug it into the wall socket. To turn on the power, press the ON/OFF switch. The blue backlight LED will turn on and the unit will start to boot up. It will take about one minute for the device to go online and be ready. During boot up, the OS LED will be blinking.

To turn off the Taurus LAN, login via web browser, stop all current downloads, go to the “Turn Off Server” section in the “System” area and turn the server off or use the ON/OFF switch. The OS LED will be blinking for about 5 seconds and then the system will shut down about 20 seconds later. If the device is not in use for a longer period of time, we recommend removing the power supply from the wall socket.

About Data Backup

To protect your files and help prevent the loss of your data, we strongly recommend that you keep two copies of your data, one copy on your Taurus and a second copy either on your internal drive or another storage media such as a CD, DVD, Tape or an additional external drive.

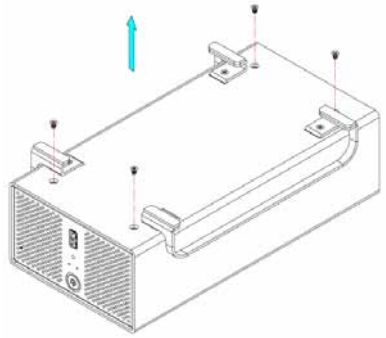
Any loss or corruption of data while using the Taurus is the sole responsibility of the user, and under no circumstances will the manufacturer be held liable for compensation or the recovery of this data.

Chapter 2 - System Setup

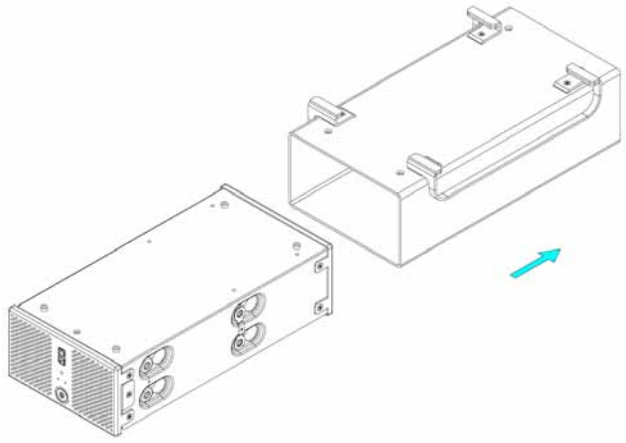
HDD Installation

Your unit may come with a pre-installed hard drive. Before opening such an enclosure, please read the warranty and any other notes from your vendor carefully before doing so, as this could void your warranty.

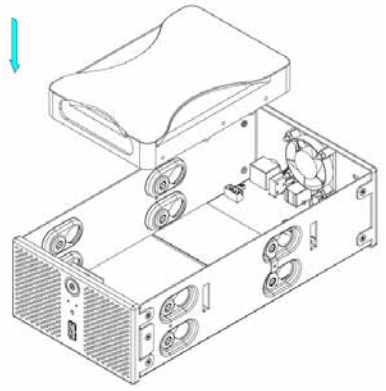
1. Remove the four screws from the bottom of the case.



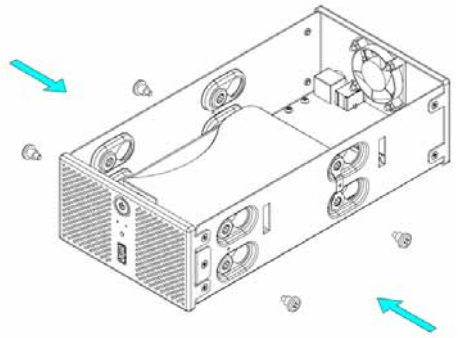
2. Push the inner enclosure out, and remove the outer chassis.



3. Install the first hard drive by placing it in the enclosure and connecting the SATA plus power cables.



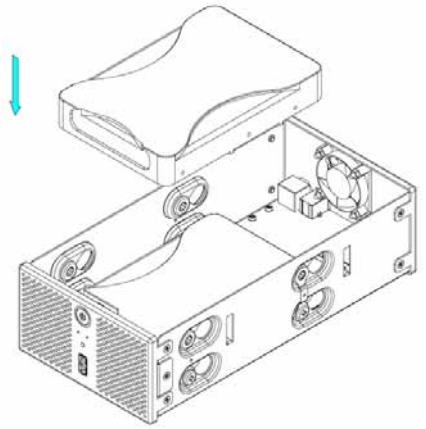
4. Mount the drive with two screws on each side.



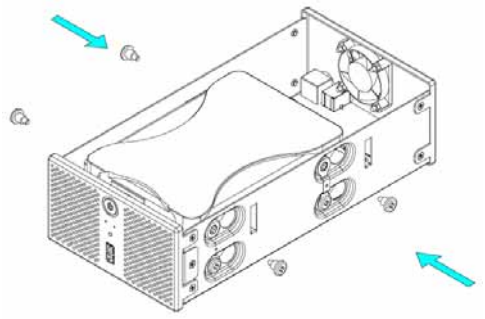
5. Attach the thermal probe with the tape provided to the first hard drive.

Choose a location in between the two drives but without damaging the thermal probe when installing the second drive.

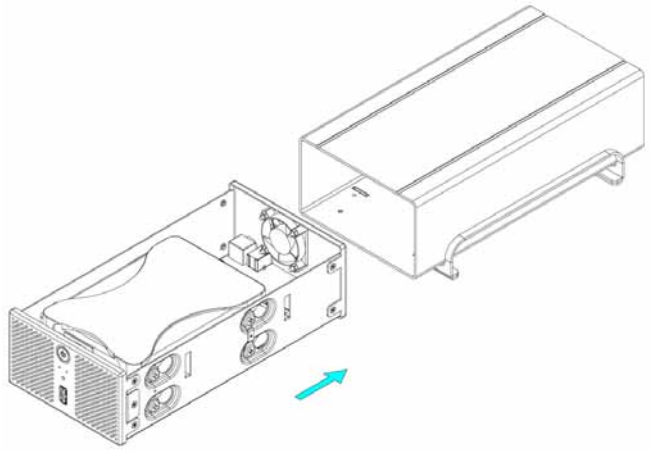
6. Install the second hard drive by placing it in the enclosure and connecting the SATA plus power cables.



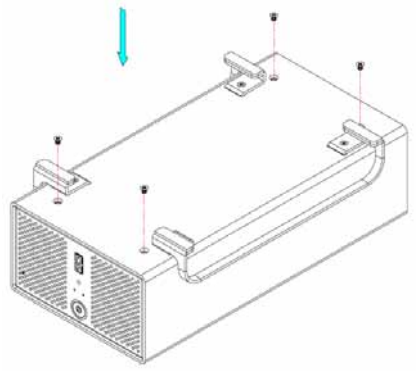
7. Mount the drive with two screws on each side.



8. Slide the inner enclosure back into the outer chassis.



9. Fasten the four screws to finish the assembly.



Note: Be careful not to damage any cables or components, and make sure the cables are connected firmly.

Fan Speed Settings

The jumper at J4/J5 can be used to set the mode for the fan speed. You can set it to "AUTO" and the fan speed will automatically be adjusted according to the temperature (thermal sensor needs to be connected) or you can manually set it to use low or high speed.

Following are the settings you can use:

- Jumper on J4 = AUTO
- Jumper on J5 = Manual/High Speed
- No jumper at all = Manual/Low Speed

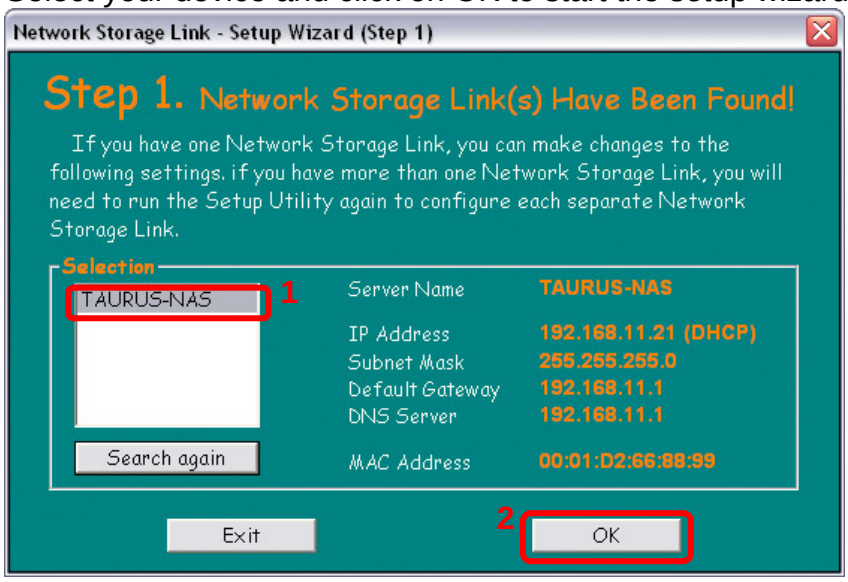
How to login

To configure your Taurus LAN, you will need to use the web browser, enter the IP address and then use the web configuration for further setup. To find out the IP address of your device once it is connected to the network, there are several different ways as described on the following pages.

Login on a PC

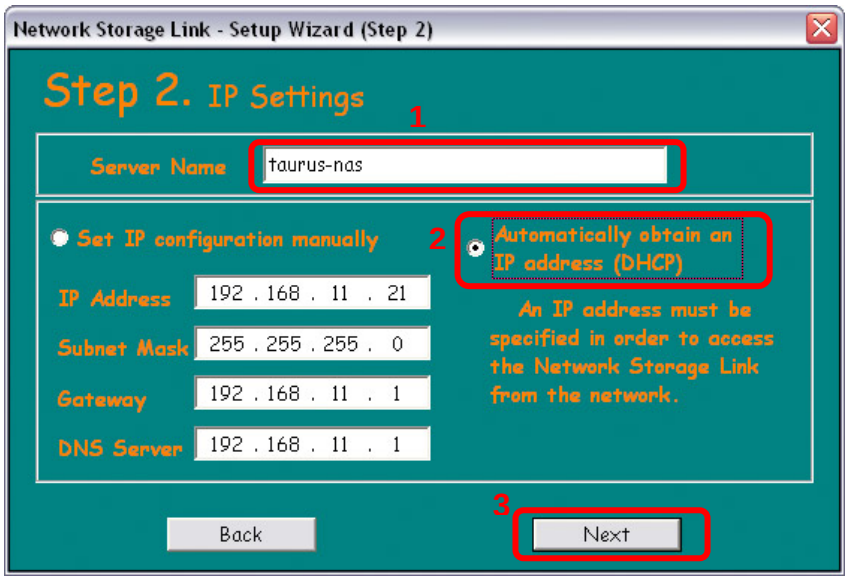
Use the NetTool utility included on the CD. This will list the device automatically and allow you to access the web configuration interface with a simple click of your mouse. You may also use the same utility at a later point to map the network drive after you setup your shares.

1. Turn on your Taurus LAN and make sure it is connected to the same network as your computer.
2. Start the NetTool utility by double clicking on the EXE file and then pressing the Setup button.
3. Your Taurus LAN will automatically show up in the device list, but if not, make sure the NetTool has access to the network and search again. You might have to configure your firewall or even temporarily turn it off.
4. Select your device and click on OK to start the setup wizard.

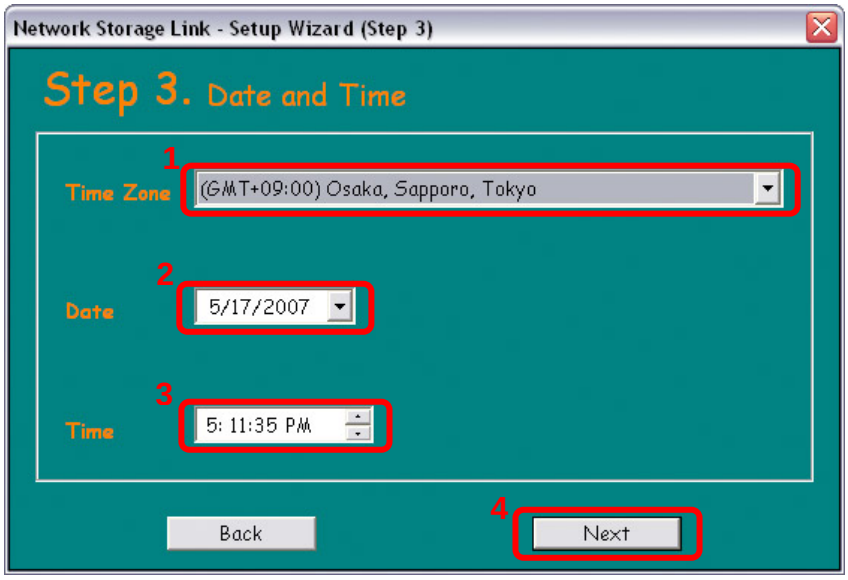


5. Before you can access the device, you will have to enter the admin password. The default login is admin/admin, so enter admin for the password and press OK to login.

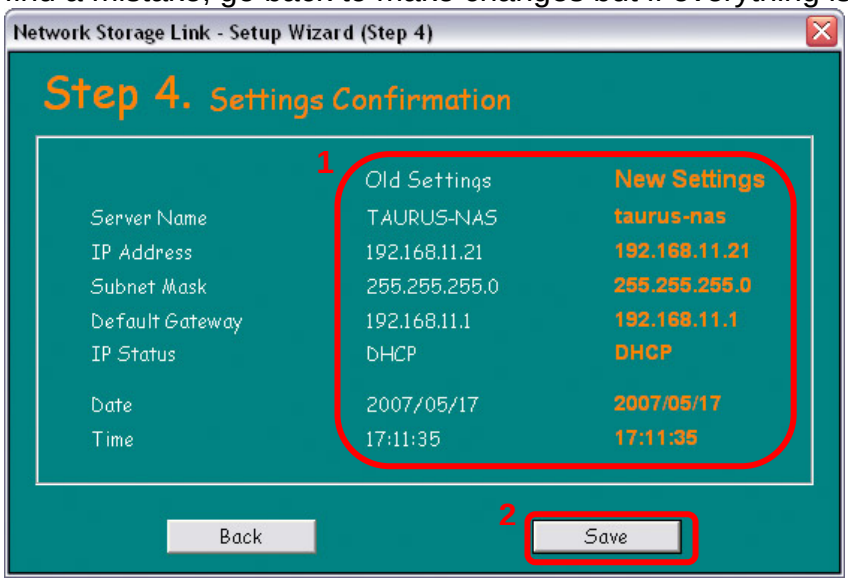
6. In step 2, you can define the name for your device and set up the IP configuration. We recommend using the “Automatically obtain an IP address (DHCP)”. When set, press Next to continue.



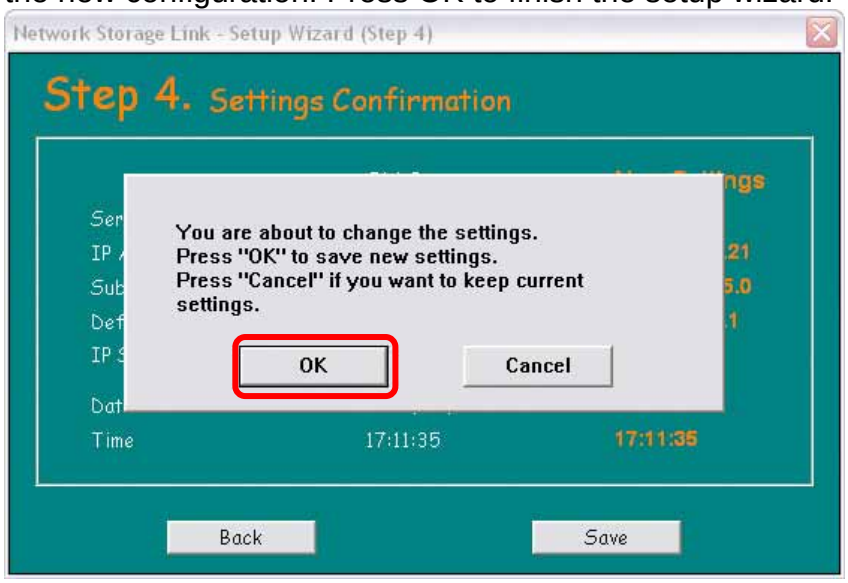
7. In step 3, you can set up the date and time. Select your time zone from the drop down menu, set the date, the time and then press Next to continue.



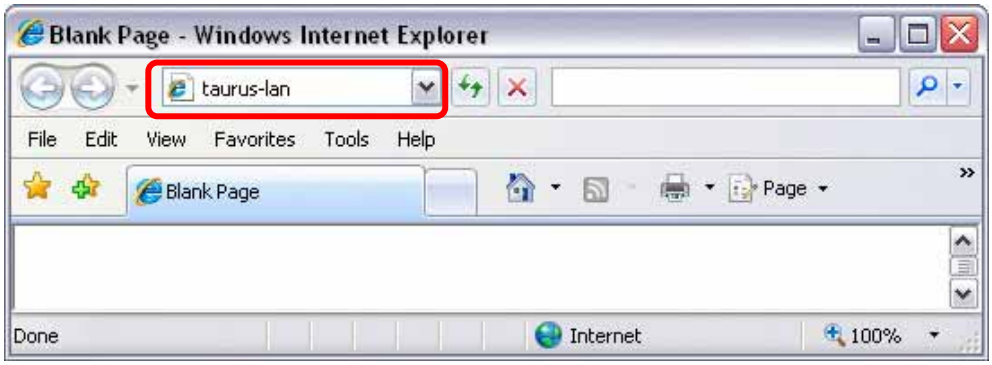
8. In step 4, you can compare your new settings with the previous configuration. If you find a mistake, go back to make changes but if everything is OK, press Save.



9. The setup wizard will remind you that the previous settings will now be updated with the new configuration. Press OK to finish the setup wizard.



Note: Alternatively, you could also write down the IP address in the first step of the setup wizard or use the product name taurus-lan, input either in the URL field of our web browser and then access the web configuration interface of your Taurus LAN.



Peer to Peer
If you connect the Taurus LAN directly to your computer (PC or Mac) via Ethernet cable, you can access it using its default IP 192.168.1.1. Open the web browser and enter 192.168.1.1 to access the web configuration interface.

Note: This only works when the Bonjour service is disabled!

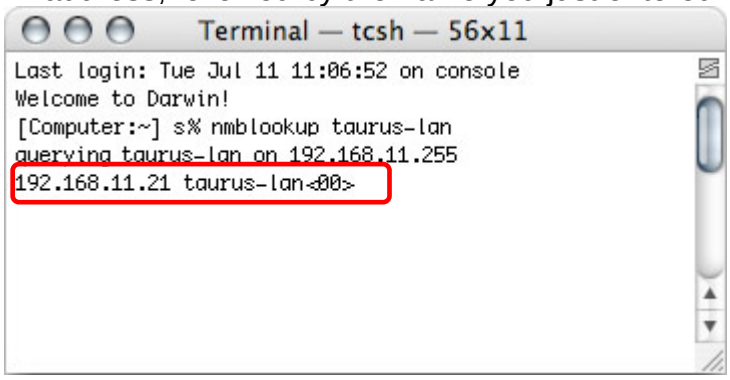
Login on a Mac
When the Bonjour service is disabled, the only way to access the login page is by using its IP address. First, you will have to find out the IP address of your Taurus LAN and then use the web browser to access the web configuration interface.

1. Turn on your Taurus LAN and make sure it is connected to the same network as your computer.
2. Start the Terminal utility, which is usually located in your Applications folder under Utilities.

3. Type nmblookup taurus-lan. This is the default name of your Taurus LAN, so if that has previously been changed and you don't know the correct name, reset the device first.

   The command looks like this:
   nmblookup taurus-lan

4. After entering the previous command and hitting the Enter key, it should return an IP address, followed by the name you just entered.



5. Open your web browser and enter the IP address from the previous step to access the web configuration interface.
6. The default username and password is admin.

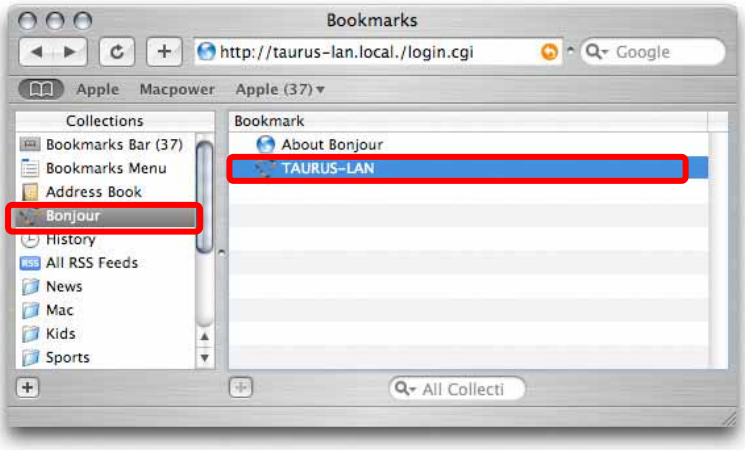
Note: When the Bonjour service is disabled, you could also use the "Peer to Peer" method to login and set up your network drive.

Bonjour

When the Bonjour service on the Taurus LAN is enabled, all you need to do is access the Bonjour tab in your bookmarks folder and select the Taurus LAN.

1. Turn on your Taurus LAN and make sure it is connected to the same network as your computer
2. Start your web browser (Safari). If not already displayed, click on the bookmarks icon to show all bookmarks.

3. Select Bonjour and browse for the Taurus LAN. Click on it to open the login page.



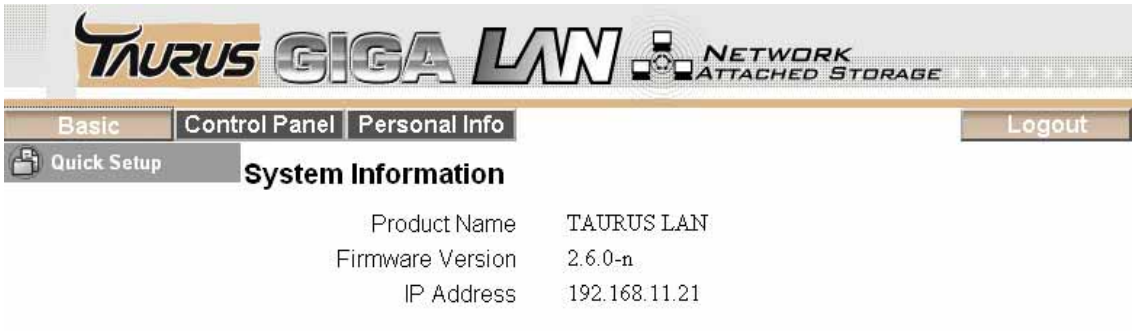
4. The default login for the Taurus LAN is admin for both username and password.

Chapter 3 - Web Configuration

Open your web browser, enter the IP address of your Taurus LAN and login. The default login is as follows:

Username: **admin**
Password: **admin**

For more information about the initial setup and finding your IP address, refer to Chapter 2.



Basic
The settings in this menu are aimed at the user who wants to quickly set up the LAN disk and share files on the local network. Only the most basic functions and settings are available but it is ideal for someone first using this device. For a more advanced set up, see Control Panel.

Control Panel
This menu includes all the settings and information the Taurus LAN offers. Sorted into individual categories, the user can access only particular settings or adjust and modify everything manually.

Personal Info
This menu is for the system administrator account. It includes the option to set the password and some other options related to the web interface.

Logout
This can be used to logout once all the settings have been configured.

Note: Without installing and formatting at least one drive first, the other functions of the Taurus LAN will not be available.

Quick Setup

The settings in this menu are aimed at the user who wants to quickly set up the LAN disk and share files on the local network. Only the most basic functions and settings are available but it is ideal for someone first using this device. For a more advanced set up, see Control Panel.

Wizard

The setup wizard can be used to configure all the basic LAN settings for your Taurus LAN.

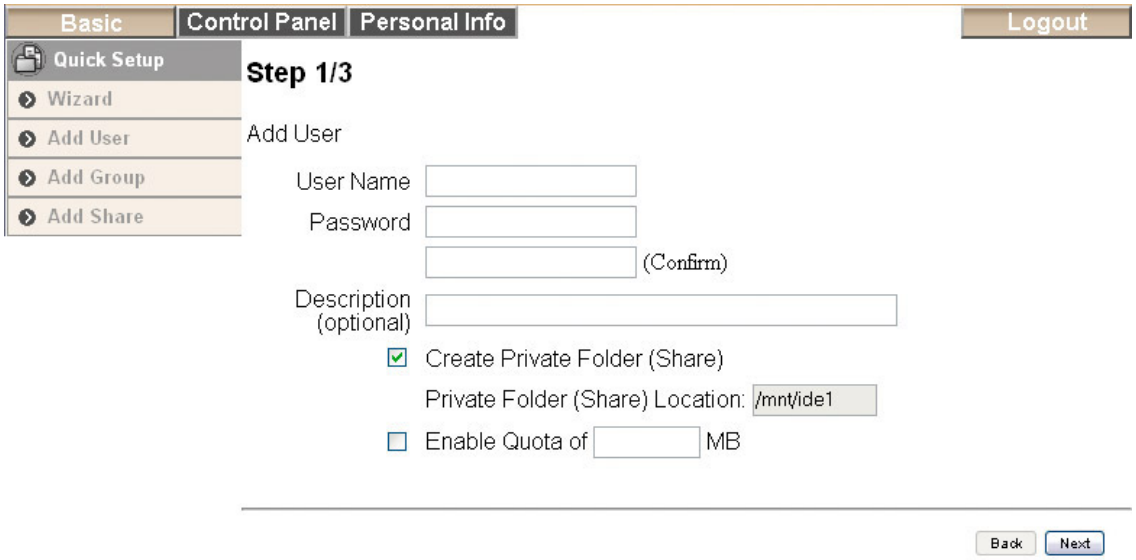
For PC users, if you have followed the setup wizard in Chapter 2, there is no need to go through this again unless you want to change some of the settings or have not yet completed the setup.

For Mac users, follow the setup wizard from step 1 to 6 to quickly prepare your Taurus LAN for file sharing.

- **Step 1:** Select your preferred language for the web interface from the drop down list.
- **Step 2:** Set a new password for the web configuration interface. Not required but strongly recommended.
- **Step 3:** If you prefer a different hostname for your Taurus LAN, you can change the name here, otherwise simply use the default name.
- **Step 4:** We recommend setting both IP Address and DNS Server to obtain the IP automatically but if required, you can set it manually. If you need assistance in manually filling out these fields, please contact your network administrator for help.
- **Step 5:** Set the date and time manually or select your time zone from the drop down list and use a NTP server to synchronise the time via the internet.
- **Step 6:** Compare the new settings with the previous configuration and if OK, complete the setup wizard to save the new settings.

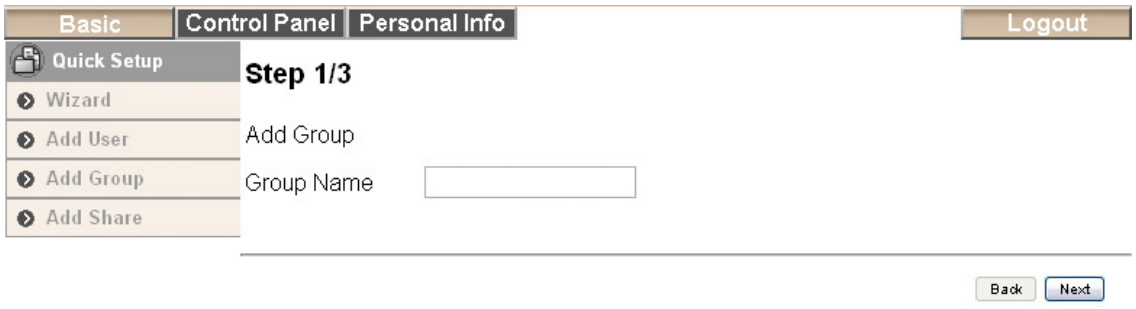
Note: For a more detailed explanation of each of the settings, refer to System.

Add User
Use this setup wizard to quickly add and configure a new user account.



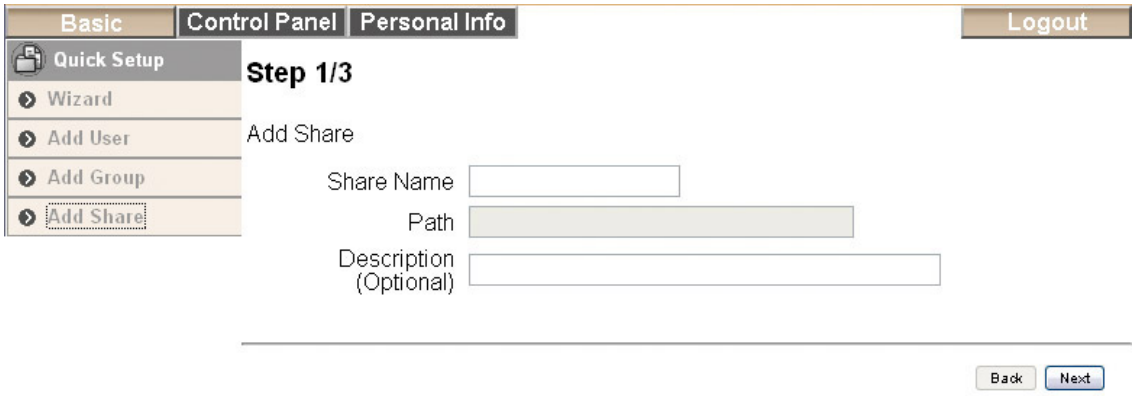
- **Step 1:** Enter the user name and password for the new account. At the same time, you can also create a private folder for that user and set the quota limit.
- **Step 2:** If there are other users already set up, they can be added to the user account management.
- **Step 3:** In the last step you can configure the permissions to the shared folder and add or remove other users.

Add Group
Use this setup wizard to quickly add a new group.



- **Step 1:** Enter the group name.
- **Step 2:** Configure which members will be included in this group by adding and removing the members from the list.
- **Step 3:** Configure the share permissions by adding (read only or writable) and removing the shares from the list.

Add Share
Use this setup wizard to quickly add a new share.



- **Step 1:** Enter the share name and an optional description for the share.
- **Step 2:** Configure the Windows/FTP access permissions by adding (read only or writable) and removing the members or group from the list.
- **Step 3:** Configure the NFS access permissions by adding unique IP addresses or a subnet.

Note: For a more detailed explanation to each of the settings, refer to Users and Group Management or File and Print.

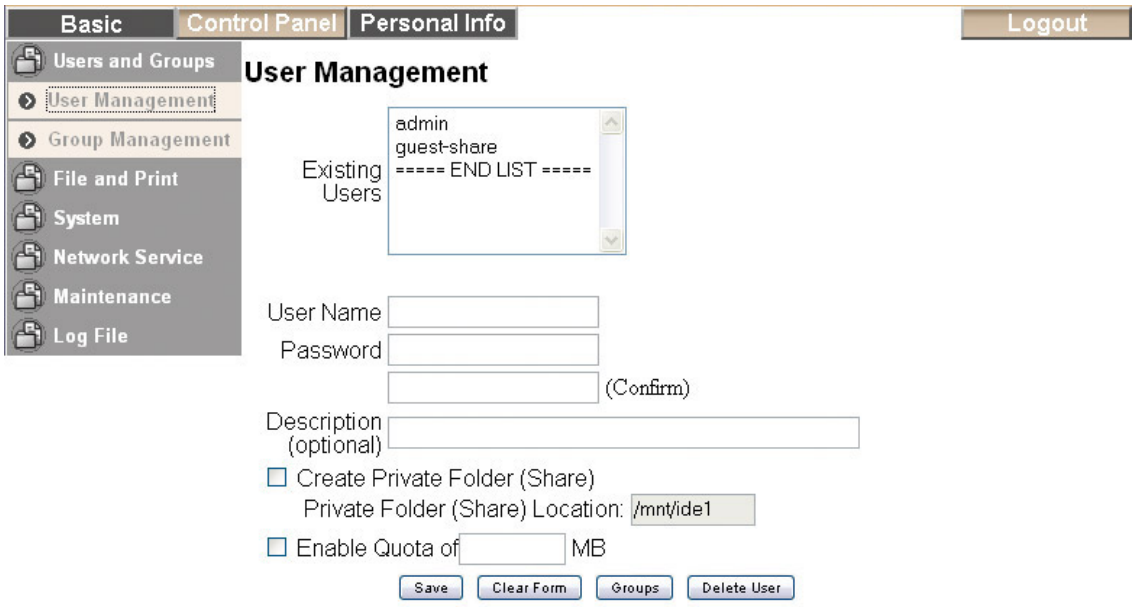
Users and Groups

In this menu, the admin can manage the users and groups for the Taurus LAN. Start by adding your users first, then create the groups and assign the members to their groups.

Note: If there is no hard drive installed or the HDD is not yet formatted, this menu is not available.

User Management

In this section you can see all existing users for the Taurus LAN and manage them by adding or removing them from the list.



- **Existing Users:** Lists the current users of the Taurus LAN.

- **Adding Users:** To add a new user, clear the form by pressing the “Clear Form” button, then fill out a user name and password. The description is optional but will help you to manage multiple users, so we recommend filling out a short description. If required, you can create a private folder for that user and set a limit for the capacity. Once done, press the “Save” button to create the new user. If you would like to add this user to an existing group, select the user from the existing users list and press the “Groups” button for further settings.

- **Modifying Users:** Select the user from the existing users list and modify the settings. Once done, press the “Save” button to apply the new settings.

- **Removing Users:** To remove a user, select it from the existing users list and then press the “Delete User” button.

Group Management
In this section you can see all existing groups for the Taurus LAN and manage them by adding or removing them from the list. Groups are not required to grant access to the Taurus LAN but will help the admin to manage multiple users and easily share a folder among a group of people.

- **Existing Groups:** Lists the current groups of the Taurus LAN.

- **Adding Groups:** To add a new group, clear the form by pressing the “Clear Form” button, then enter a new group name. Once done, press the “Save” button to create the new group. If you would like to add some members to this group, select the group from the existing groups list and press the “Members” button for further settings.

- **Modifying Groups:** Select the group from the existing groups list and modify the members by pressing the “Members” button for further settings. Once done, press the “Save” button to apply the new settings.

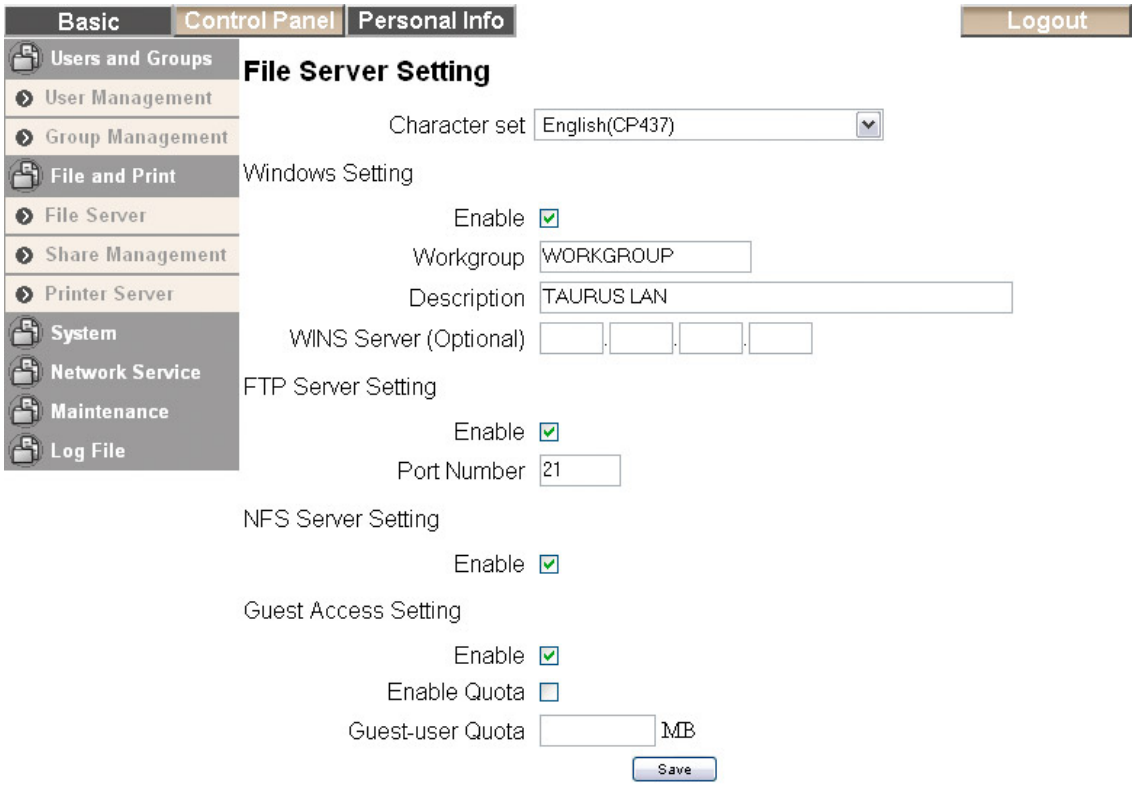
- **Removing Groups:** To remove a group, select it from the existing groups list and then press the “Delete Group” button.

File and Print

In this menu, you can configure all the settings related to the FTP, NFS and printer server. Use this to manage how your files and folders are shared.

File Server

In this section you can modify the server settings and also enable or disable a service.



- **Character set:** By default, this is set to Traditional Chinese (CP950). If your file names include characters from another language, change the encoding here and select your language from the drop down list (e.g. English CP437).

- **Windows Setting:** In this section, you can change the workgroup that the Taurus LAN belongs to and modify its description. The IP for the WINS Server (Windows Internet Name Server) can be left blank unless this is required for your network.

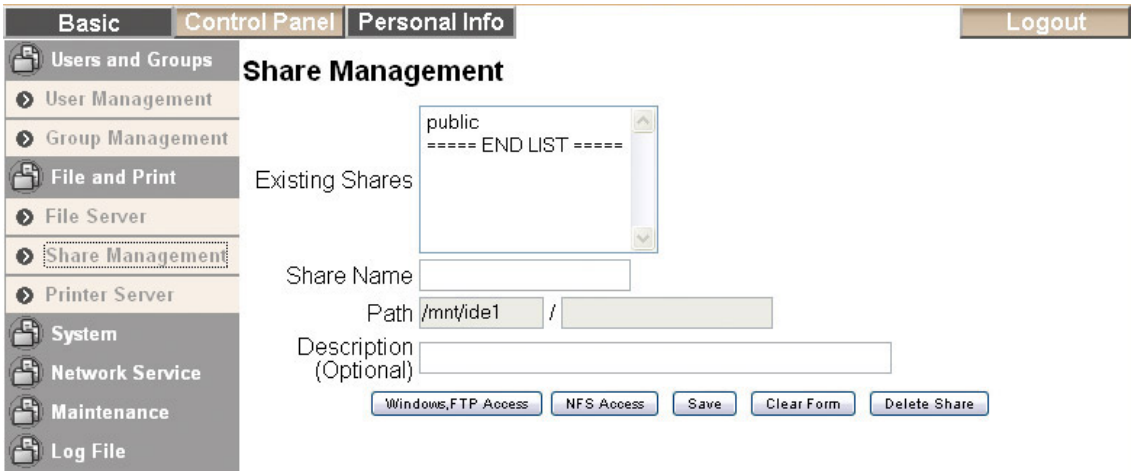
- **FTP Server:** This service can be enabled or disabled. When enabled, the default FTP port number will be set to 21 but you can change that if required.

- **NFS Server:** This service can either be enabled or disabled depending on your requirements.

- **Guest Access:** To enable guest access (guest-share), enable it and if required, set a limit for the disk space. For security reasons, the guest access can also be disabled.

Note: After changing any of the settings, press the "Save" button to apply the new configuration and save its settings.

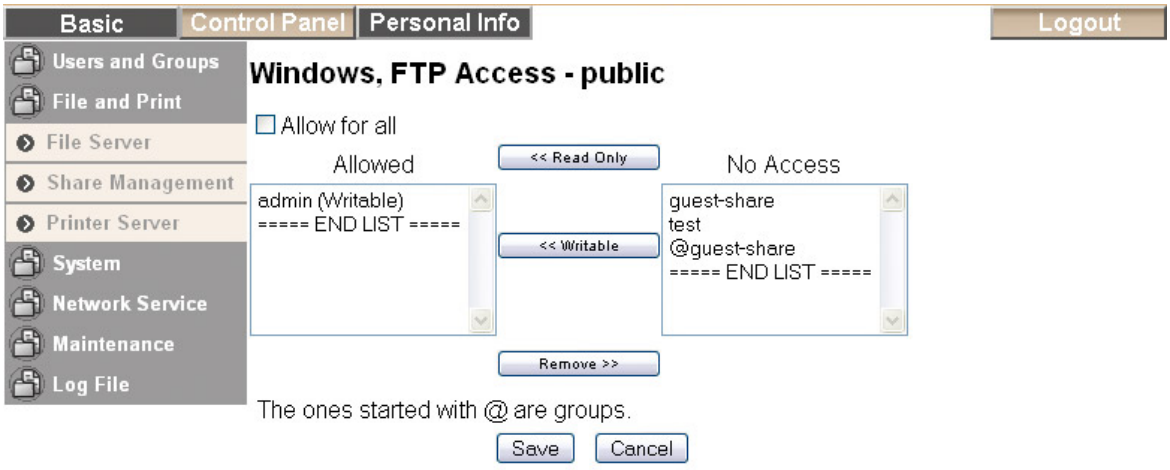
Share Management
In this section you can manage the shares and access rights.



- **Existing Shares:** Lists the current shares on the Taurus LAN.

- **Adding Shares:** To add a new share, clear the form by pressing the “Clear Form” button, then enter a new share name. Once done, press the “Save” button to create the new group.

  Select the new group from the existing shares list, then depending on how you share the files, click on “Windows, FTP Access” or “NFS Access” and add the users or groups that will have access to this share. You can allow access for all users or define each user and group separately. The names with an @ for the first letter are groups.



- **Modifying Shares:** Select the share from the existing shares list and modify the access rights by pressing the “Windows, FTP Access” or “NFS Access” button for further settings. Once done, press the “Save” button to apply the new settings.

- **Removing Shares:** To remove a share, select it from the existing shares list and then press the “Delete Share” button.

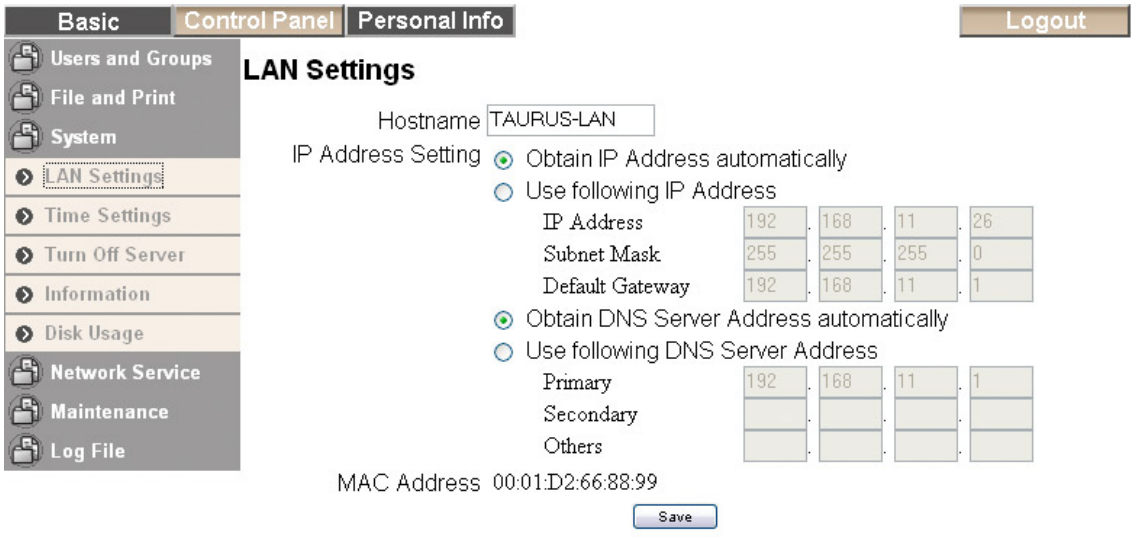
Printer Server
In this section you can enable or disable the printer server and check the details of the connected USB printer.

System

In this menu you can configure the basic network settings for the Taurus LAN and find some details related to the firmware or disk usage.

LAN Settings
In this section you can define the hostname for your Taurus LAN and set up the IP configuration. We recommend using the “Obtain IP/DNS address automatically”. When selecting a hostname, make sure to use a unique name and not one that has already been used on the local network.

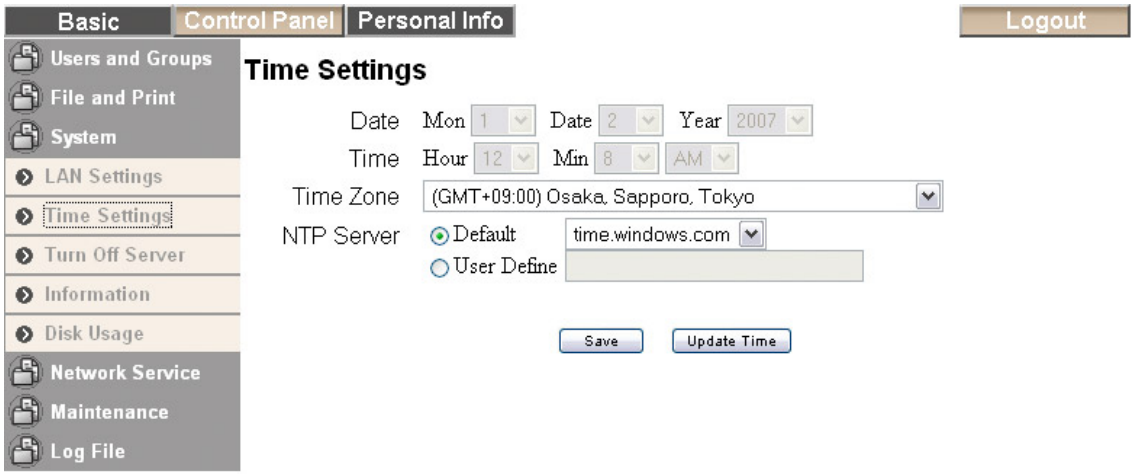
If required, you can also set the individual addresses yourself. If you need assistance in manually filling out these fields, please contact your network administrator for help.



Note: After changing any of the settings, press the “Save” button to apply the new configuration and save its settings.

Time Settings
In this section, you can set the date and time manually or select your time zone from the drop down list and use a NTP server to synchronise the time via the internet

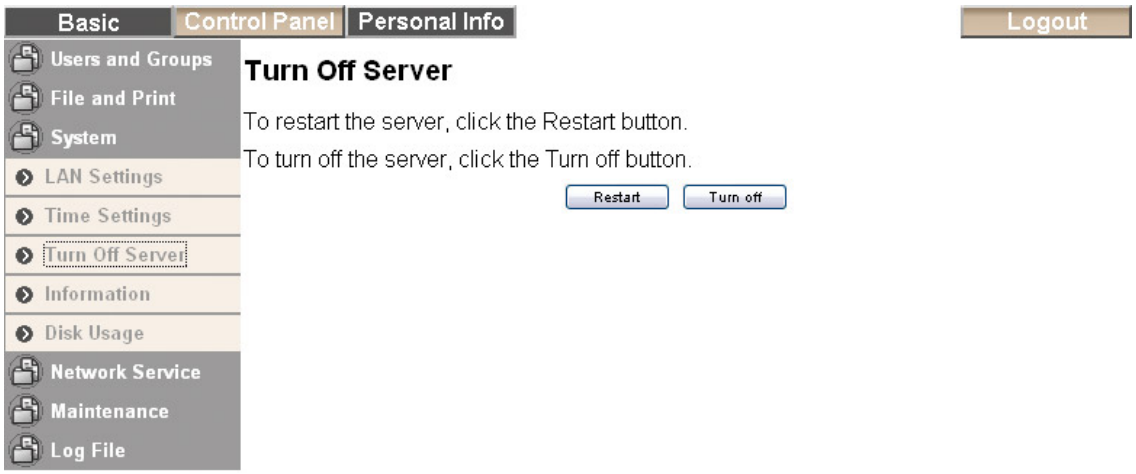
When set manually, press the “Save” button to apply the new time and save the settings or when synchronised via the internet, select the NTP server and press the “Update Time” button.



Note: To use the NTP function, you need to enter a valid NTP server or select one from the drop down list. If the default address at time.windows.com does not work, find a new one and then try again or turn off the NTP server and set the time manually.

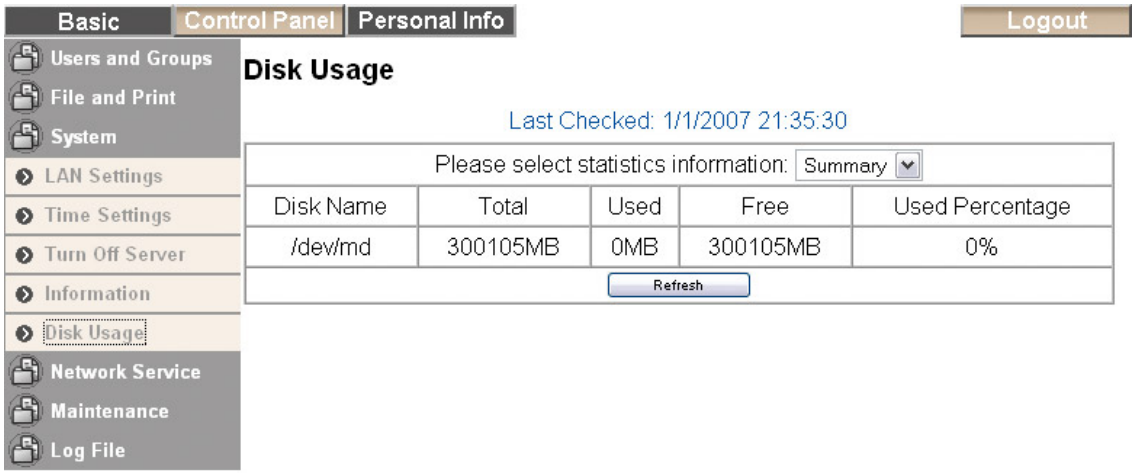
Turn Off Server
In this section, you can restart the server or turn off the Taurus LAN via the web browser. Make sure that nobody is accessing the device when you restart or turn it off.

Press the “Restart” button to restart the server. The system will restart and automatically prompt you for the login when it’s ready. Press the “Turn Off” button to shut down the system. The browser will prompt you to close the window after about 90 seconds (Internet Explorer only, for other browser close it manually).



Information
In this section, you can find the product name, the current firmware and the current IP address.

Disk Usage
In this section, you can find a summary of the hard disk status and disk usage. Press the "Refresh" button to update the information.



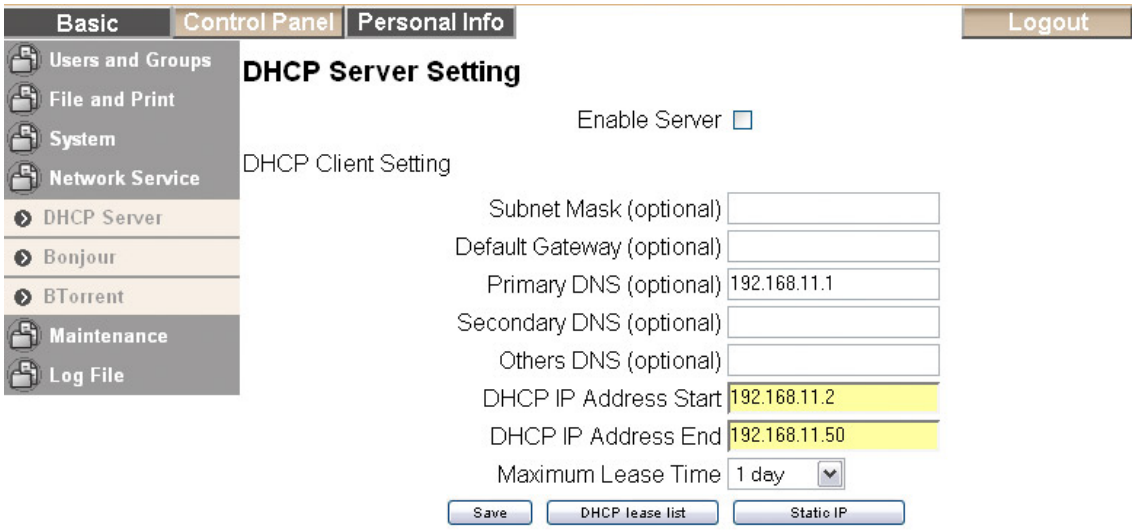
Network Service

In this menu, you can enable or disable the network services like the DHCP server, Bonjour and the BitTorrent™ download service.

DHCP Server

In this section, you can enable and set up the DHCP server. In general, there is already a DHCP server on the local network, so you don't need to enable this but if required, enable it and configure the addresses.

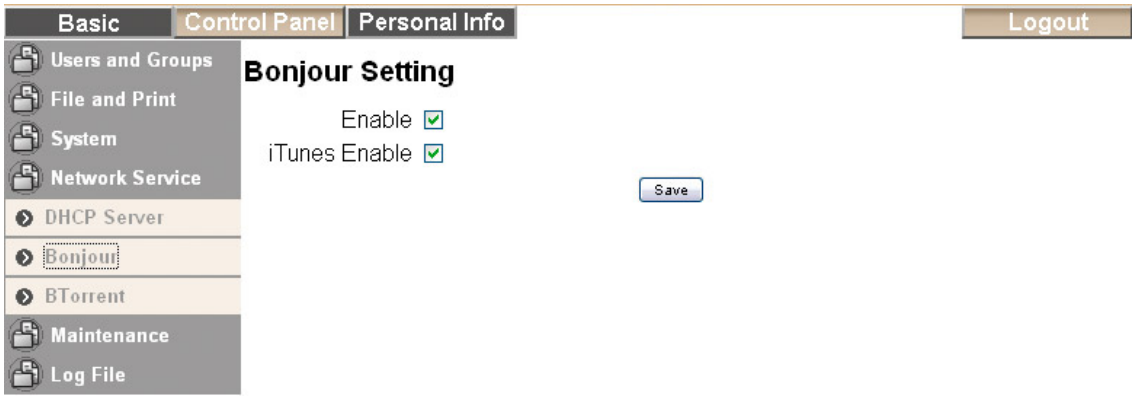
Once you have set everything up, press the "Save" button to start the DHCP server and save the settings.



Bonjour

In this section, you can enable or disable the Bonjour service. For Mac users, turn it on to offer easy access to the login page via the Safari web browser. In addition to that, you can also enable the iTunes service, so that music files can be accessed directly from iTunes.

When the iTunes option is enabled, you can store your MP3 music files in the /public/music folder and play them directly from iTunes. The Taurus LAN will automatically appear in iTunes under shared devices.

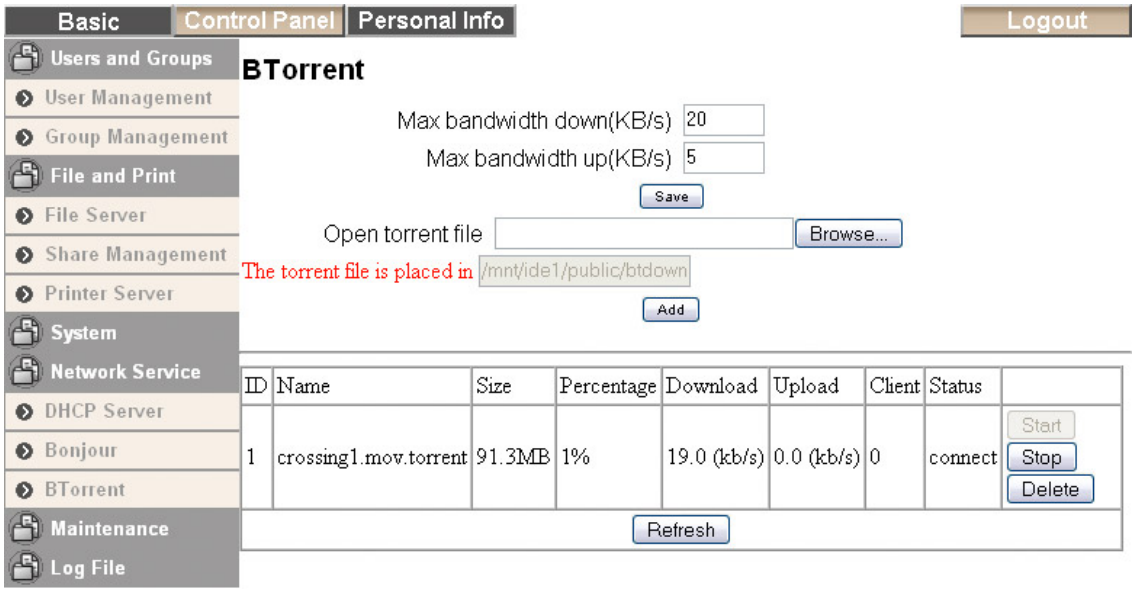


BTorrent
In this section, you can manage your torrents and add new downloads to the queue. Before you add the first job, set a limit for the download and upload speed according to your network's bandwidth. After changing the settings, press the Save button to apply the new configuration.

To start downloading files, you will have to download a torrent file from the internet first and then upload it to the Taurus LAN. Once the torrent file has been added, you can start downloading. The downloaded files will be stored in your /public/btdownload folder.

The BitTorrent™ client on the Taurus LAN can download 5 files at the time with a maximum of 40 files in the queue. Remember to start the download again if the Taurus LAN has been turned off or rebooted before the file has been downloaded completely.

For more details, see BTorrent under Additional Features in chapter 5.



Note: If there is no hard drive installed or the HDD is not yet formatted, this menu is not available.

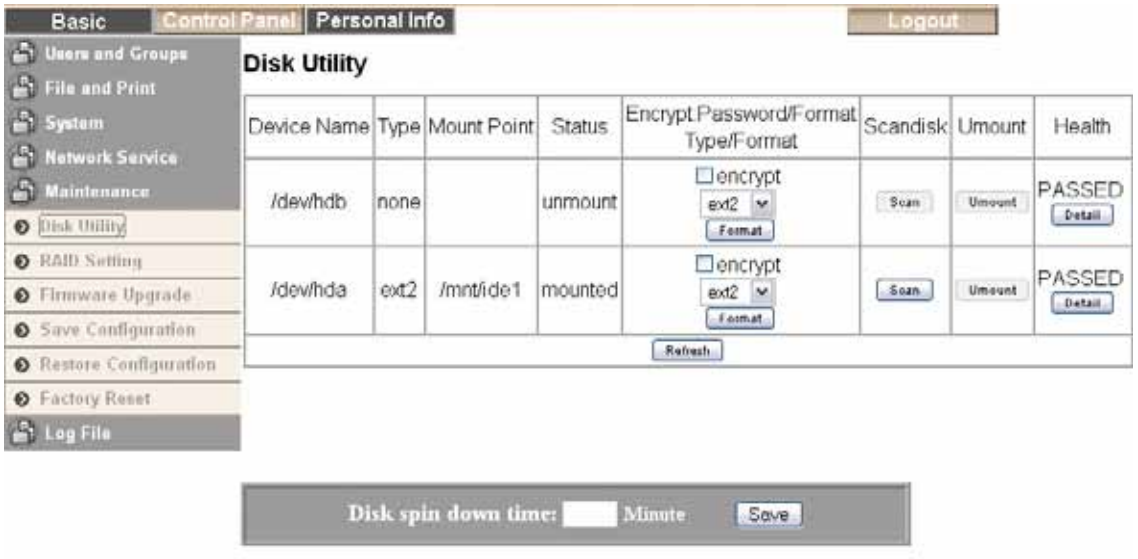
Note: The BitTorrent™ client on the Taurus LAN is using the TCP protocol and the ports 6881-6889. Make sure those ports are not blocked by your router or its firewall and if necessary, set up port forwarding, so that the traffic for those ports is forwarded to your Taurus LAN.

Maintenance

In this menu, you can format the hard drives, setup the RAID array, upgrade the firmware and manage the configuration settings.

Disk Utility

This utility can be used to format the individual hard drives and also to see all the information related to those disks.



- **Encryption:** The Taurus LAN supports 128bit loop-AES encryption for the EXT2 file system. When enabled, the drive has to be formatted again and you will be prompted for a password (has to be exactly 20 characters).

- **File System:** .For drives that are not in a RAID array, there is a choice between EXT2, EXT3 and FAT32. For drives installed in the Taurus LAN, we recommend using EXT2 for optimum performance and functionality.

- **Scandisk:** Press the “Scan” button to check the disk integrity. If possible, any errors found will automatically be fixed. This will take a while to finish depending on the capacity of the drive, and also the disk can not be used in that time.

- **Umount:** This function is only available for external USB drives that are attached to the Taurus LAN. Press the Umount button to eject the USB drive before you disconnect it.

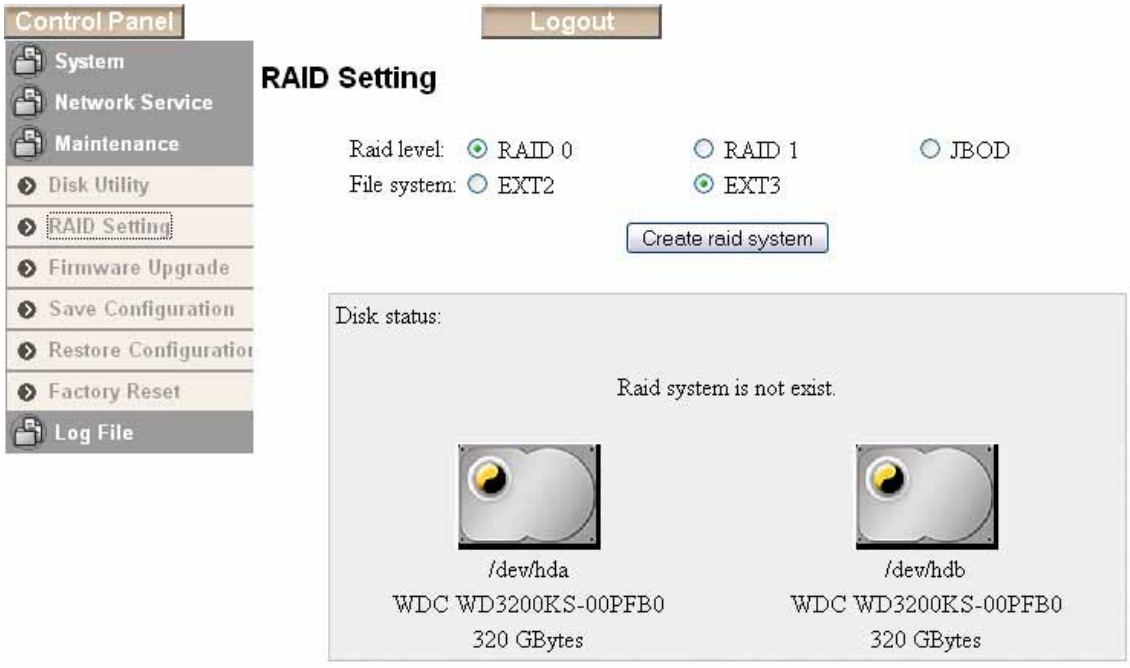
- **Detail:** Press the “Detail” button to see further disk information. If the HDD supports S.M.A.R.T, it will also report the disk’s health status.

- **HDD Power Management:** To save power and reduce heat, you can let the hard disk spin down if not used for a certain amount of time. Enter a time in minutes and press the “Save” button to apply the new setting.

Note: The “disk spin down” function might not work properly for some WD hard drives due to lack of the E3h command.

RAID Setting

In this section you can manage the RAID array and set up your drives. The Taurus LAN supports RAID 0 and RAID 1. Two hard drives of identical capacity and make are required. If only one drive is installed, the RAID configuration will not be available.



- **RAID 0:** Used where speed is the primary objective, RAID Level 0 (also called "striping") is not redundant. This form of array splits each piece of data across both of the drives in segments; since data is written without any form of parity data-checking, it allows for the fastest data transfer compared to the other setups. However, if one drive becomes damaged, the whole array can become corrupted.

- **RAID 1:** This mode requires 2 identical drives to implement. A RAID 1 creates an exact copy (or mirror) of a set of data on the second drive. This is useful when reliability and backup are more important than data capacity. The available capacity to the user will only be as large as a single drive but when one of the hard drives fails, it can be replaced and the data rebuilt.

- **JBOD:** Used to combine two hard drives of different capacity and create one single larger hard drive. If you are using two identical drives, we recommend using RAID 0 instead.

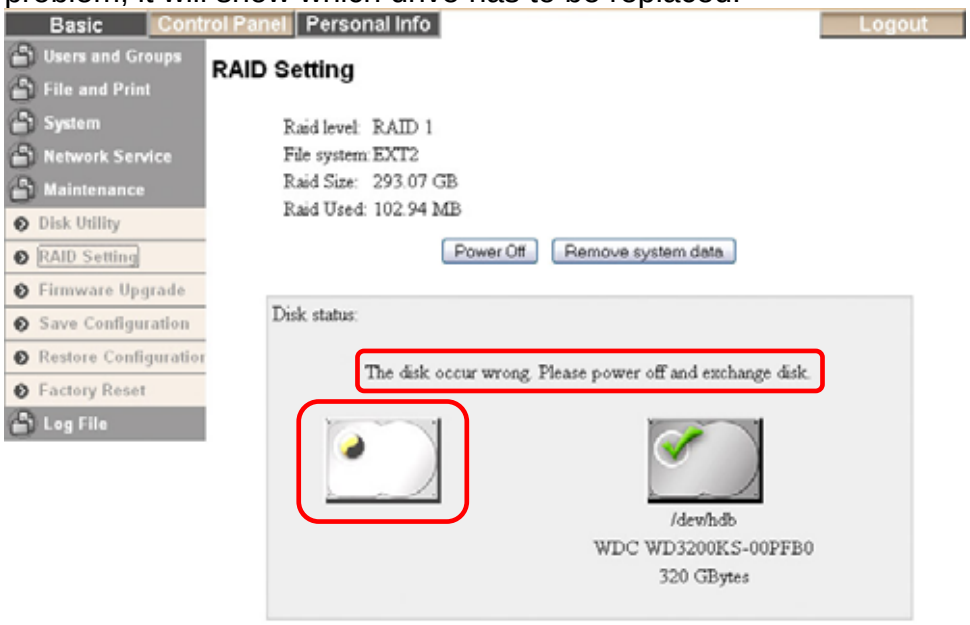
Note: Creating the RAID system will take a while, depending on the drive capacity. Do not turn off the power or interrupt the system in any other way during this process! We recommend using the EXT2 file system for optimum performance and functionality.

Changing the RAID setup will require you to re-format the drives. Make sure you backup all data before doing so!

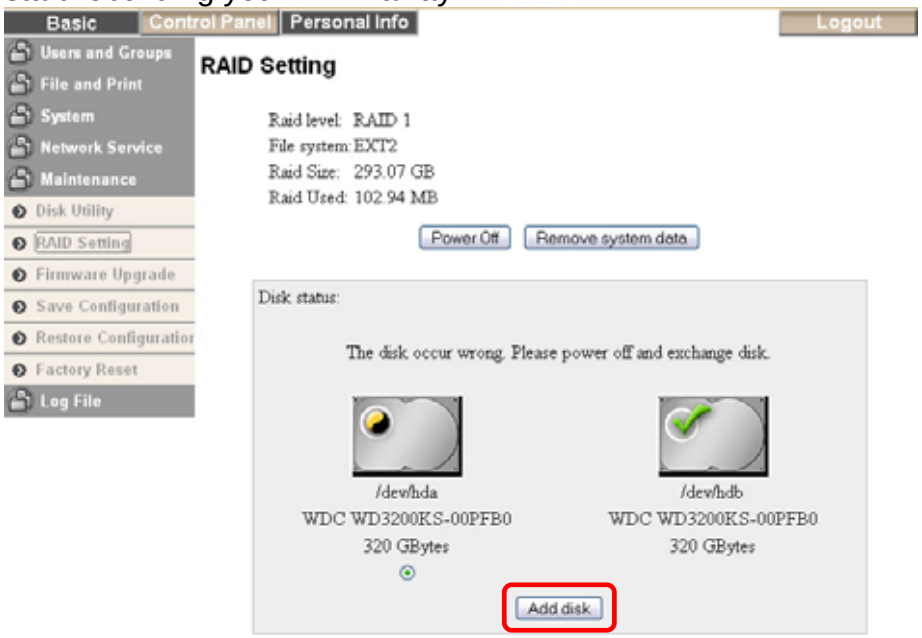
Rebuilding a RAID array

When using RAID 1 and one of the drives has failed, the faulty HDD has to be replaced and the RAID 1 array rebuilt.

1. Login and go to the RAID Setting menu to check the disk status. If there is a problem, it will show which drive has to be replaced.

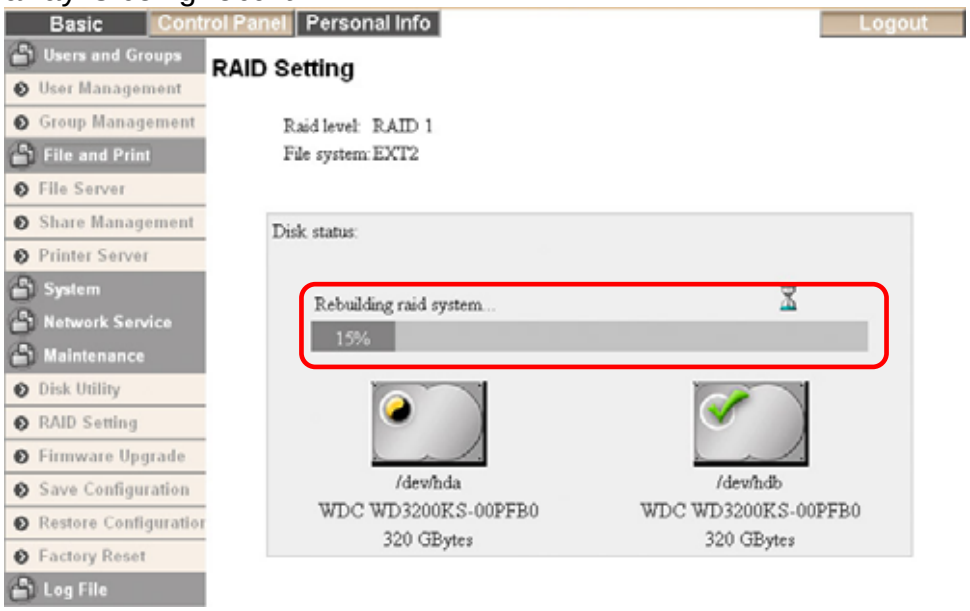


2. Turn off the power, remove the power supply from the wall socket and replace the defective HDD with a new one.
3. Turn on the power and go to the RAID Setting menu. Press the “Add disk” button to start rebuilding your RAID array.

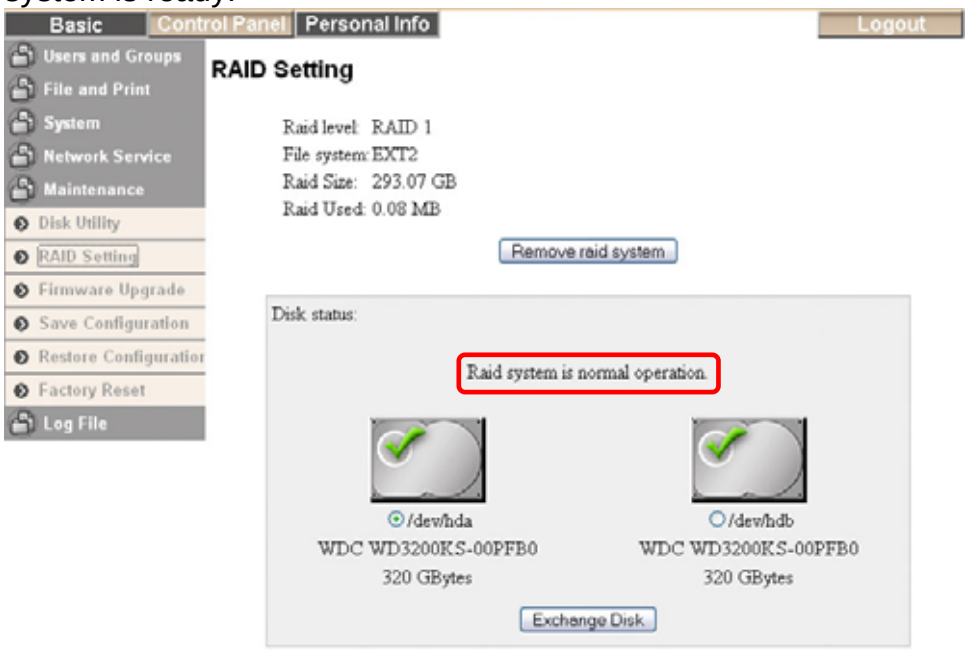


Note: On the bridge board of your Taurus LAN, the connector at P1 indicates the drive at hdb, whereas P2 indicates the drive at hda. With firmware v2.6.3 or later, P1 indicates the drive at hdc and P2 the drive at hdd.

4. Depending on the capacity, rebuilding will take a while. Do not turn off the power or interrupt the system in any other way. The HDD LED will be ON while the RAID array is being rebuilt.



5. When finished, the HDD LED will turn off and the disk status will show that the system is ready.

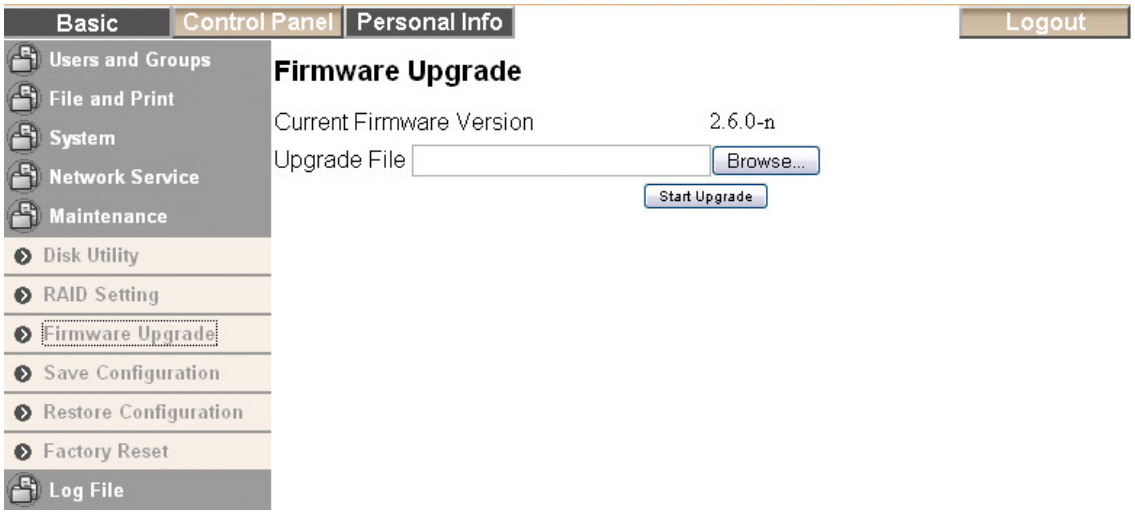


Note: Rebuilding the RAID system will take a while, depending on HDD capacity. Do not turn off the power or interrupt the system in any other way during this process!

Note: Pressing the "Remove system data" or "Remove raid system" button will erase all data! Only use this if you need to set up a different RAID system.

Firmware Upgrade

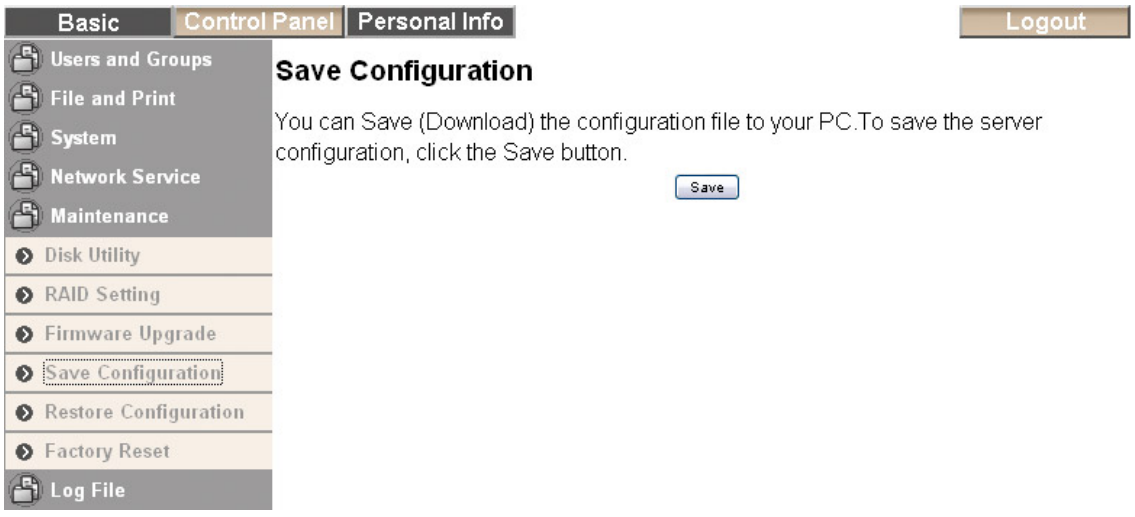
In this section you can check the current firmware version and upgrade if a new one is available. Download the latest firmware and store in on your computer, then browse for the *.gz file, select it and start the upgrade. The upgrade process takes about 10-20 minutes.



Note: Never turn off your unit during the firmware upgrade procedure. This may damage your device! If for any reasons (e.g. power supply failure during firmware update) the procedure fails, you may not be able to operate your device any more.

Save Configuration

For backup and before every firmware upgrade, you can use this function to save your current configuration. Press the “Save” button and save the config.tar file on your computer.

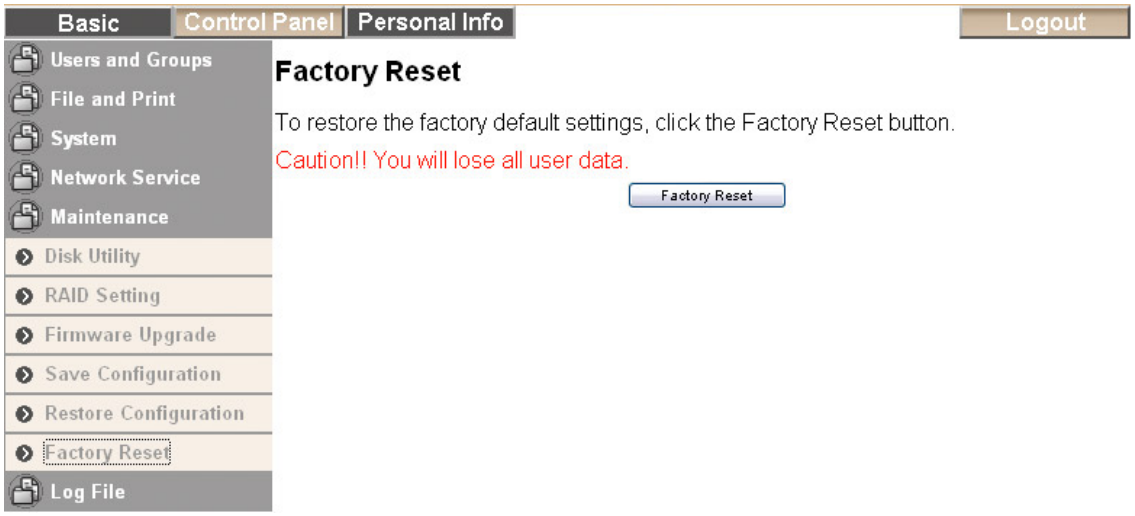


Restore Configuration

To quickly restore previous settings or set up multiple units, you can save the configuration and then use this function to upload a previous backup. Browse for the config.tar file on your computer and press the “Restore” button to restore the previous settings.

Factory Reset

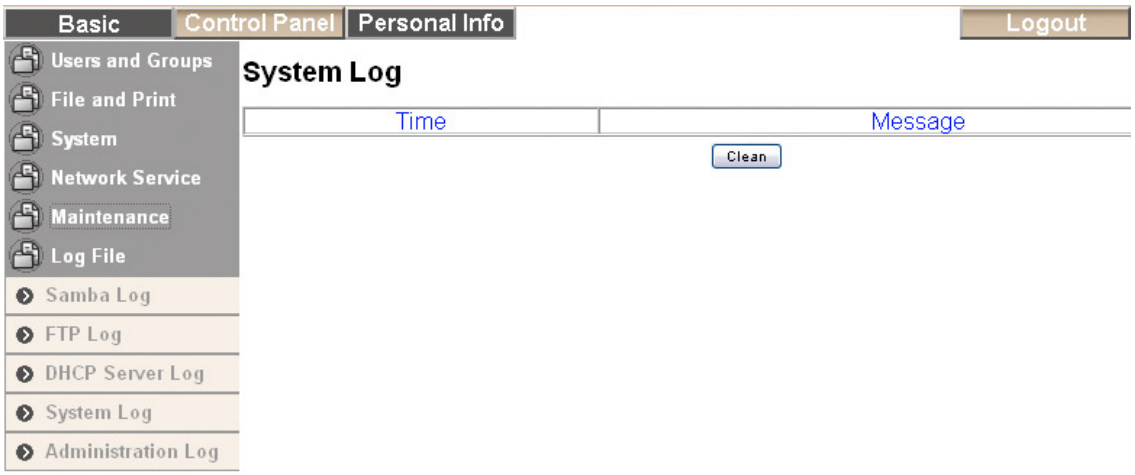
Pressing the “Factory Reset” button will restore all settings to their default configuration. Before pressing this button, we recommend saving your current configuration in case you want to restore it again later.



Note: When the “Factory Reset” button is pressed, all users, groups and other configurations will be lost! The files inside the shared folders will not be erased but only the administrator will have access to them via SMB, unless the same share name is set up again and access is granted for new users.

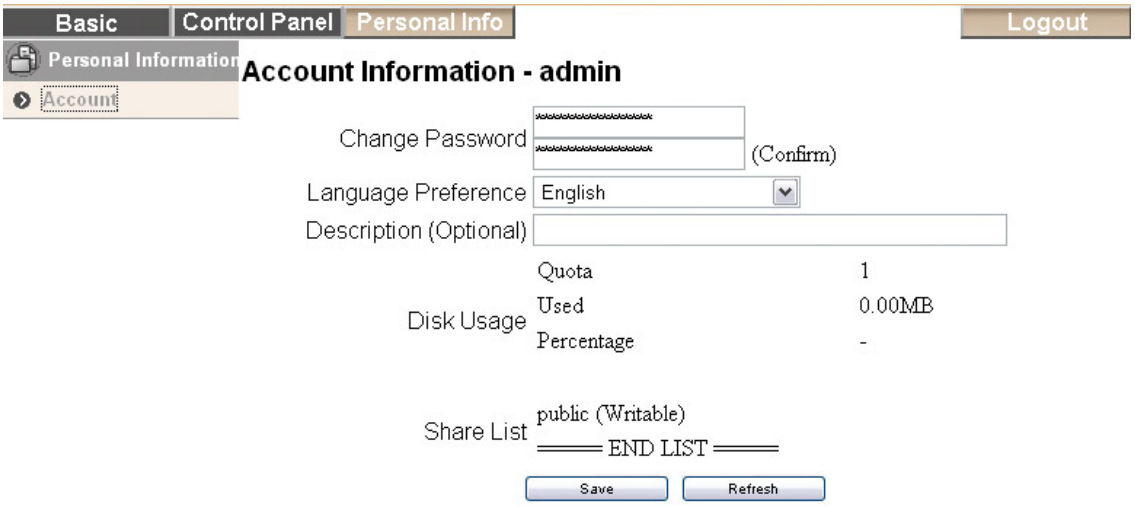
To completely erase the files inside the shares, use the “Share Management” menu to remove the shares before the reset or use the administrator account after the reset, login via SMB and delete the files.

Log File
This menu includes all the log files of your Taurus LAN. You can find logs for the SAMBA, FTP and DHCP server as well as system and administration logs.



Note: To delete the old log files, press the Clean button beneath the log.

Account Information
In this menu, you can change your admin password and the menu language for the configuration interface. There is also an overview of disk usage and share list available.



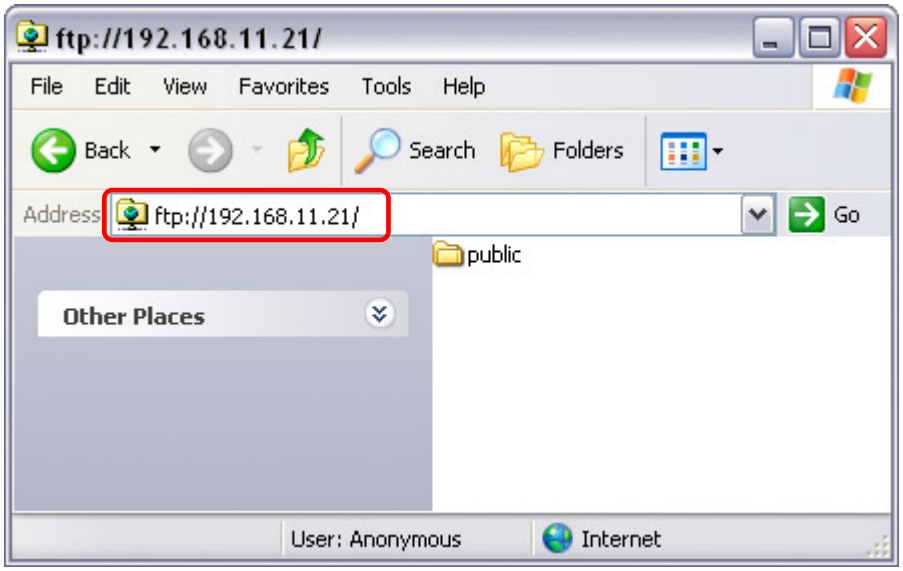
Chapter 4 - Network Storage

To access the data on the Taurus LAN via the network connection, you may use either FTP or SMB. Before you can access the shared folders, you will have to set up your users, groups and shares. See chapter 3 for more details about user, group and share management.

File Access on a PC

FTP
Use your Windows Explorer and type ftp:// followed by the IP address of your Taurus LAN. It will list the available folders and you can download or upload new files.

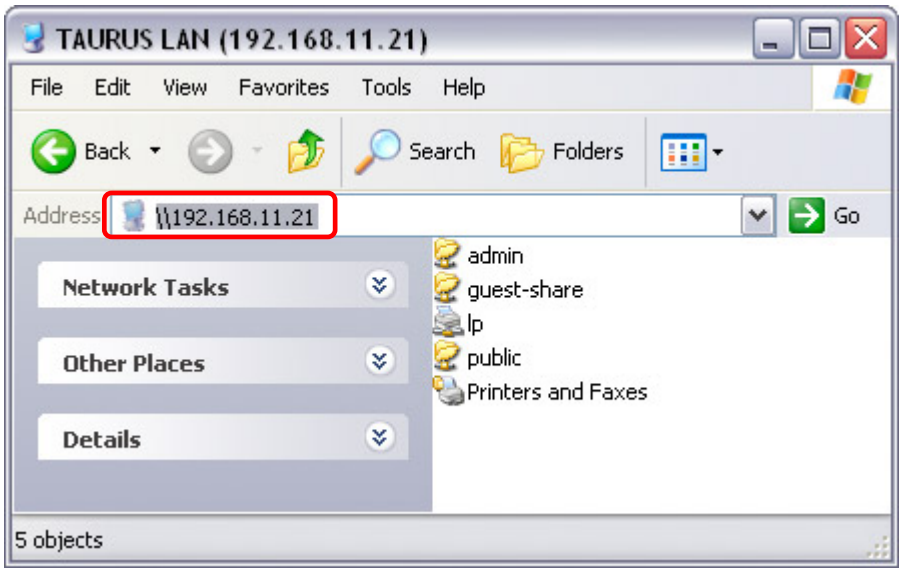
As an example, your URL might look something like this:
ftp://192.168.11.21



Note: For FTP transfers, we recommend installing and using a dedicated FTP application, which can either be a free utility or professional shareware program.

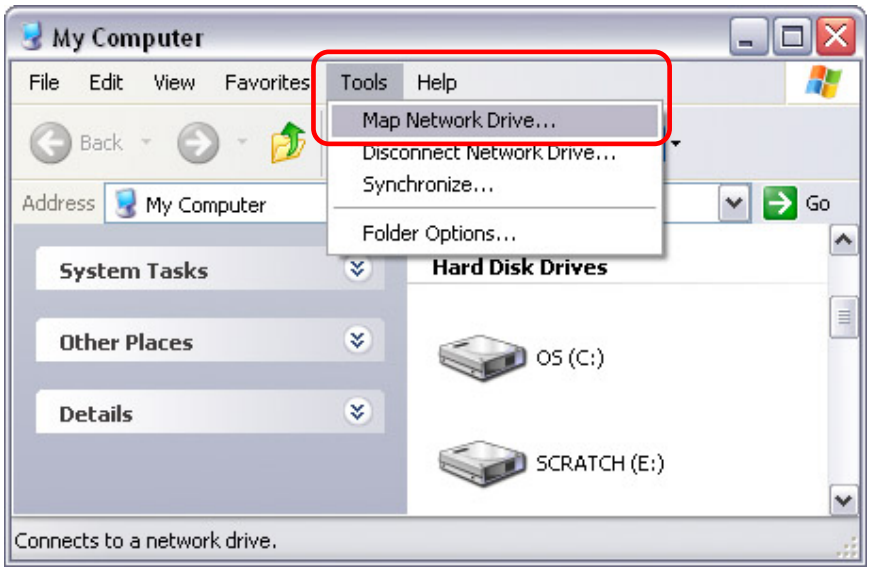
Windows Explorer
Use Windows Explorer and type \\ followed by the IP address of your Taurus LAN. It will list all available folders and shares on your Taurus LAN, which you can then access directly.

You can copy files to the network storage as if it were a folder on your local drive. Depending on the bandwidth, you can also directly play and open the files, although we recommend transferring the data to your local drive first.

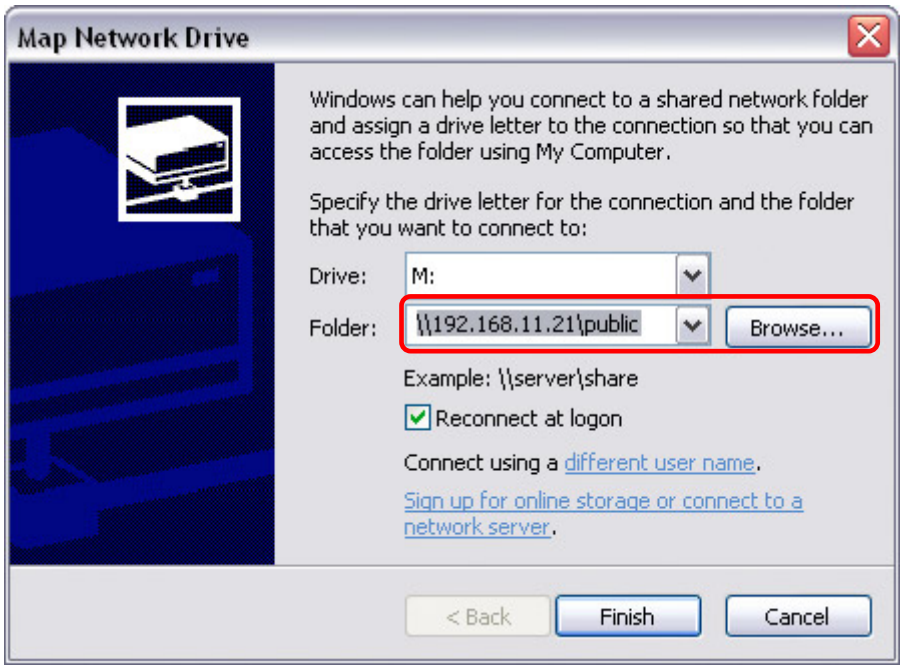


Mapping a Network Drive
For easy access, we recommend mapping the storage as network drive.

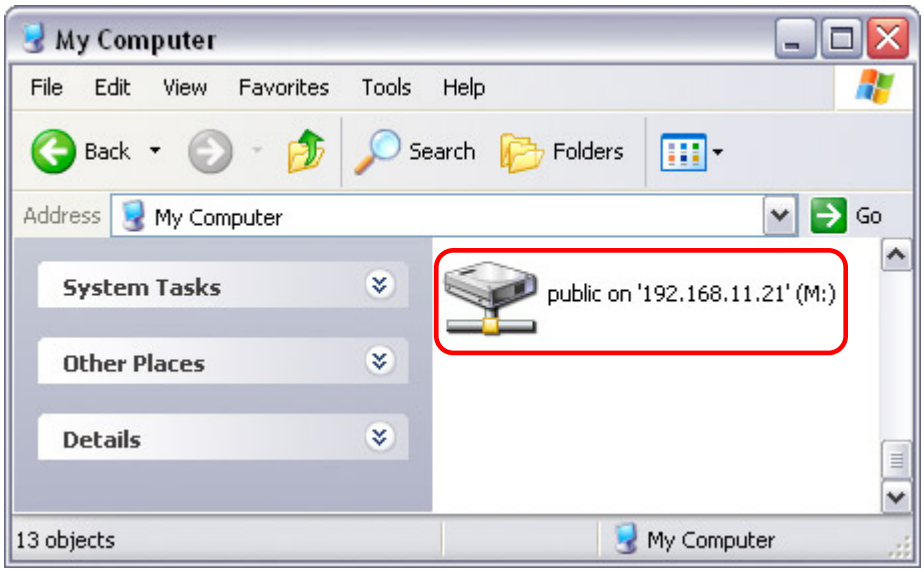
1. Double click on My Computer, go to the Tools menu and select “Map Network Drive…”.



2. Follow the setup wizard and fill in the path to your Taurus LAN. Alternatively, you can also browse for the shares by clicking on the Browse button and locating the folder that way.



3. Once the drive has been mapped, you are able to find and access it under My Computer. This link will still be there even after rebooting your Operating System.

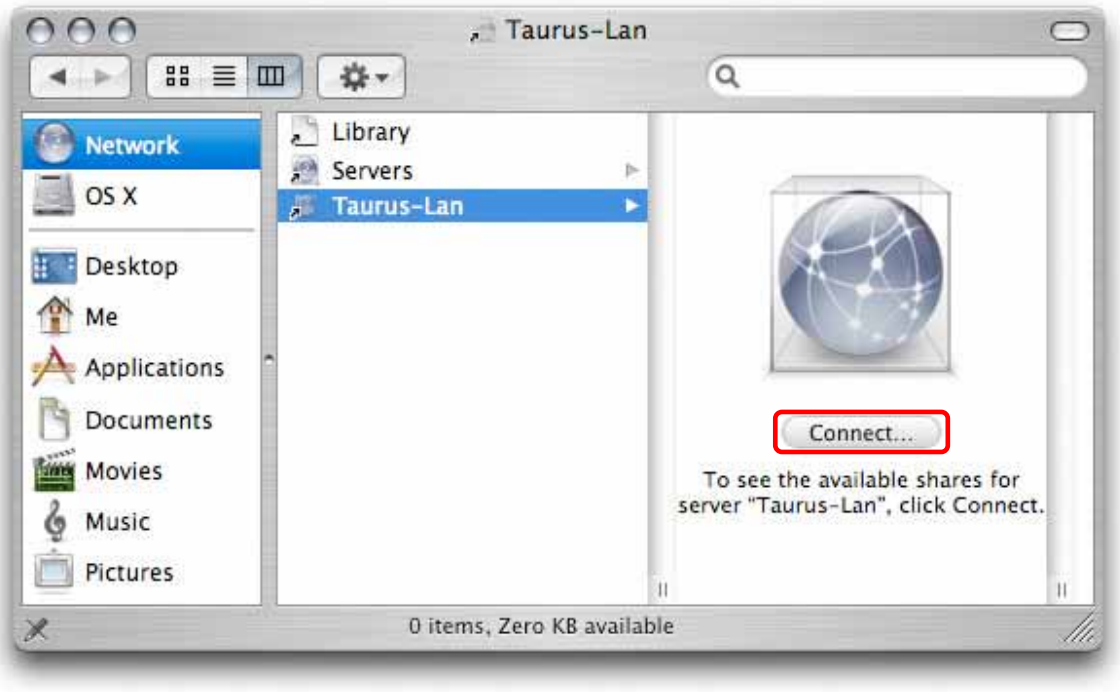


Note: For quick and temporary access, you can also simply go to My Network Places, view the workgroup computers and select your Taurus LAN.

File Access on a Mac

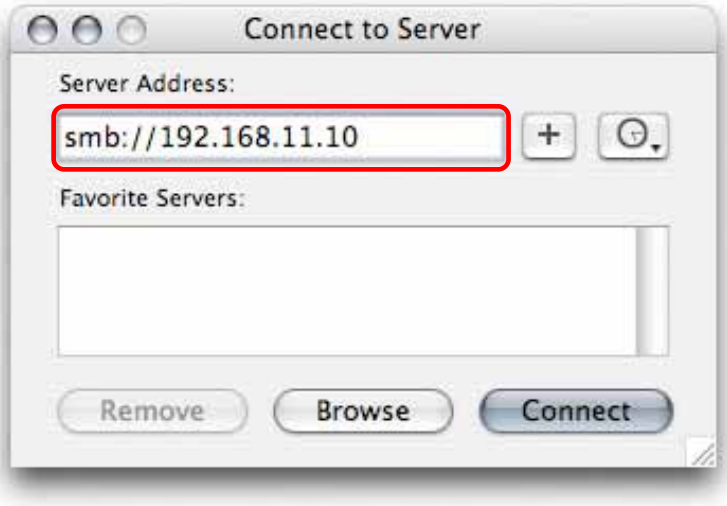
SMB

To mount and access the network storage, open your Finder, click on “Go” and choose “Network”. Browse for your network storage and click on it to access the folder.

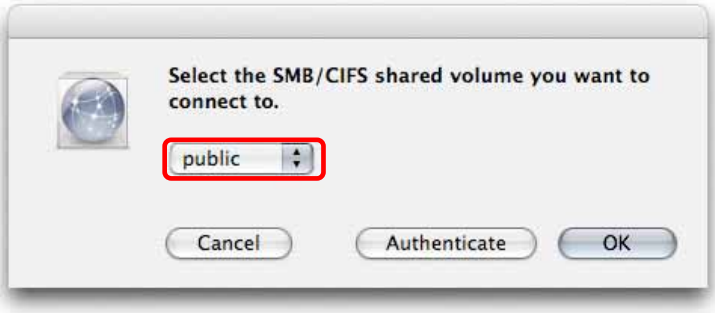


Alternatively, you can use the “Connect to Server” command.

1. Click on “Go” and choose “Connect to Server”.
2. Type smb:// followed by the IP address of your Taurus LAN or click on the Browse button to locate the folder on your network. Click on the Connect button once the server address has been filled out.



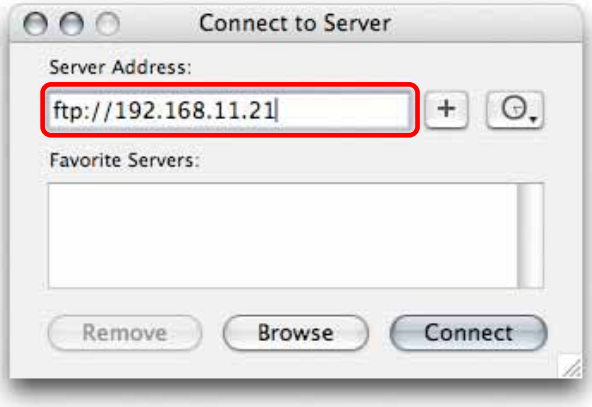
3. You will be asked to choose a folder and after entering the correct password (if passwords have been set), it will then mount the folder on your desktop.



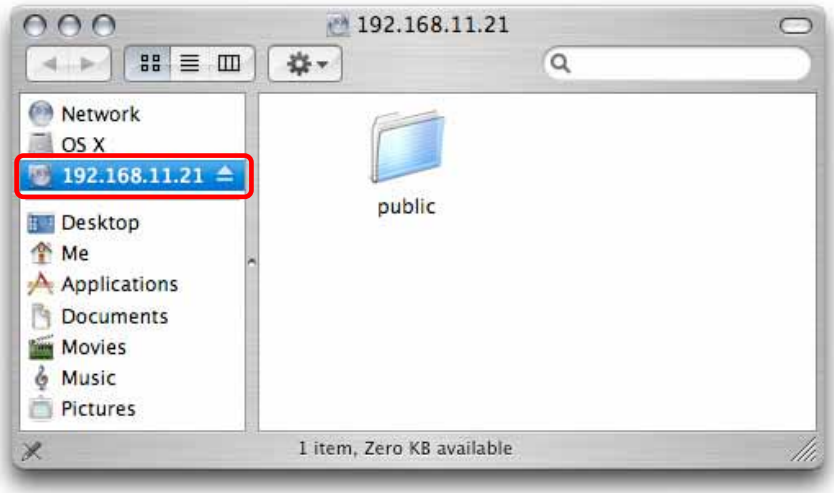
FTP

The FTP utility on the Mac will be able to read the data on the network drive but you can not upload new data to the drive. To do that, you will need to install a dedicated FTP application, which can either be a free utility or professional shareware program.

1. Click on “Go” and choose “Connect to Server”.
2. Type ftp:// followed by the IP address of your Taurus LAN. Click on the Connect button once the server address has been filled out.



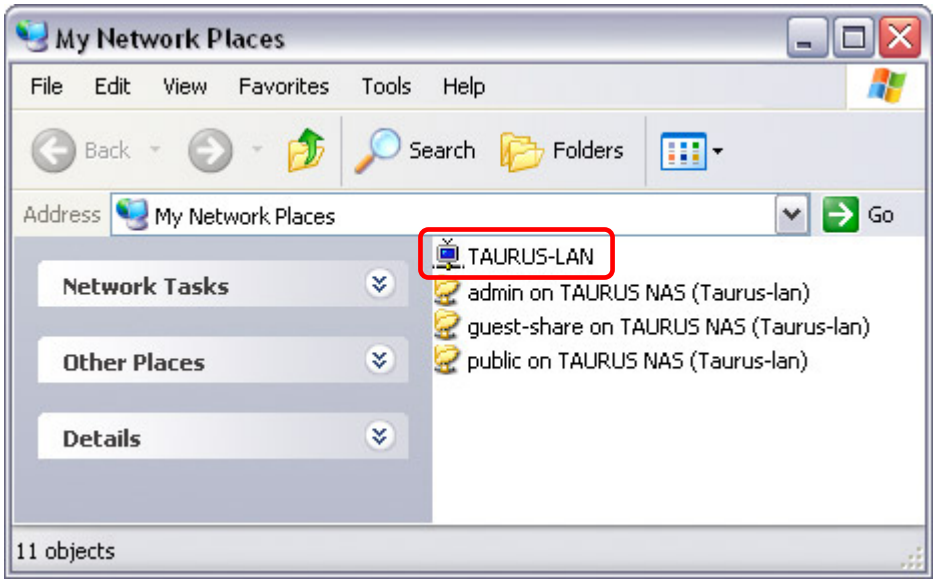
3. You will be asked to choose a folder and after entering the correct password (if passwords have been set), it will then mount the folder on your desktop.



Chapter 5 - Additional Features

UPnP

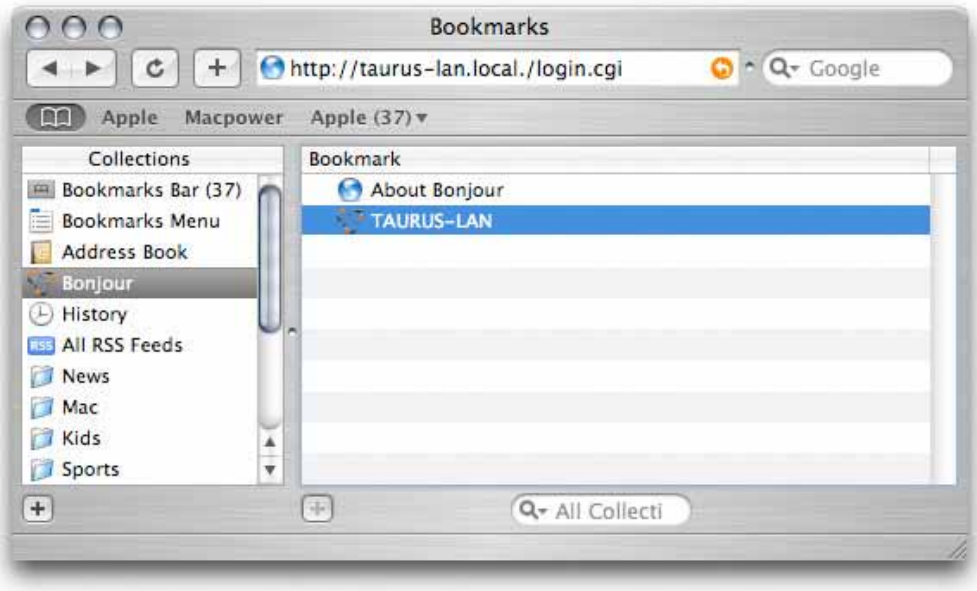
The Taurus LAN supports UPnP v1.0. To access the device on a PC, go to My Network Places and the Taurus LAN will be listed as an UPnP device. You can select it and access the configuration page.



Note: There is no need to configure anything, this function is turned ON by default and other devices will be able to recognise it automatically.

Bonjour & iTunes

For easy access to the web configuration interface on the Mac, a shortcut to the Taurus LAN will be available in the bookmarks collection under Bonjour.

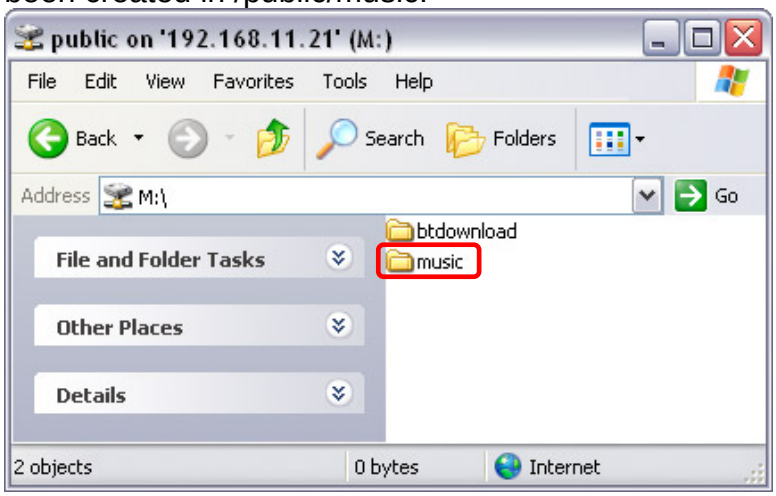


iTunes

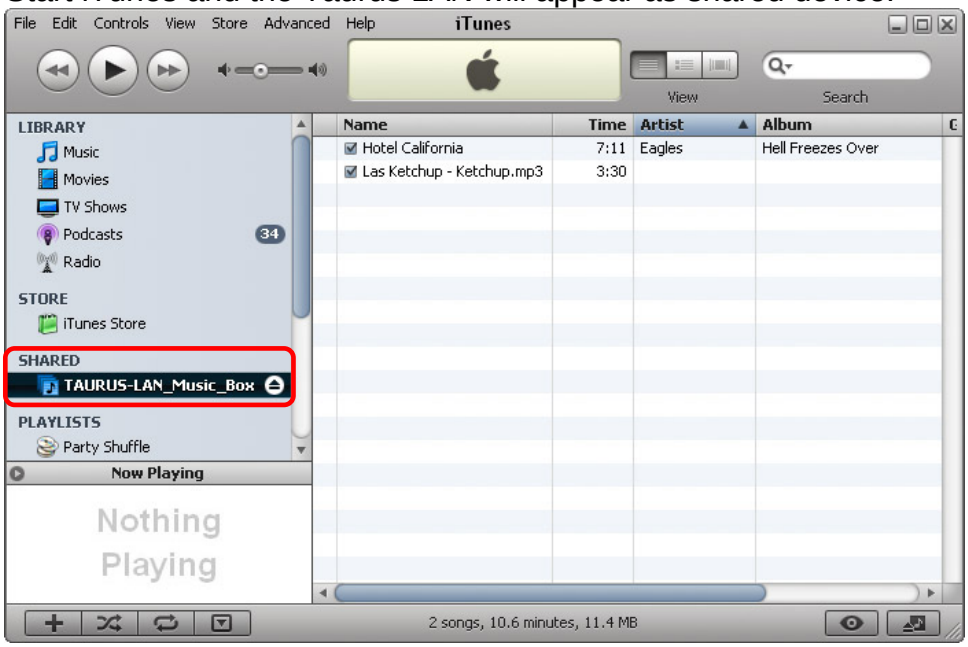
If the iTunes support for Bonjour is enabled, the Taurus LAN will appear as a shared music folder in your iTunes library. Store your MP3 files in the music folder of the Taurus LAN and play them over the network.

1. Make sure the support for iTunes in the Bonjour menu is enabled.

2. Store your MP3 files in the music folder of your Taurus LAN. The folder has already been created in /public/music.



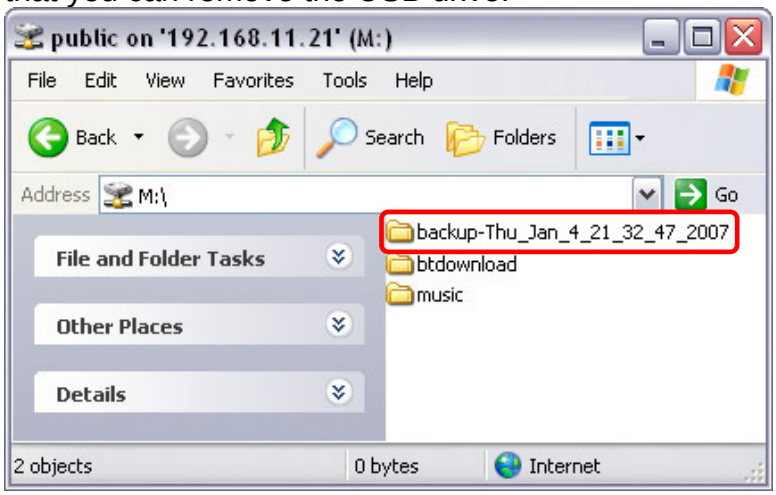
3. Start iTunes and the Taurus LAN will appear as shared device.



USB Backup

The USB backup function can be used to quickly and conveniently copy the files from an external USB drive to the internal SATA hard drives.

1. Connect the USB drive to the front port of the Taurus LAN.
2. Press the button just above the USB port for 4 seconds to backup your files.
3. A new folder based on date and time will be created in the /public directory. All files will be copied to that folder. During the backup process, the yellow LED will blink. When finished, the LED will stop blinking and it will automatically eject the drive, so that you can remove the USB drive.

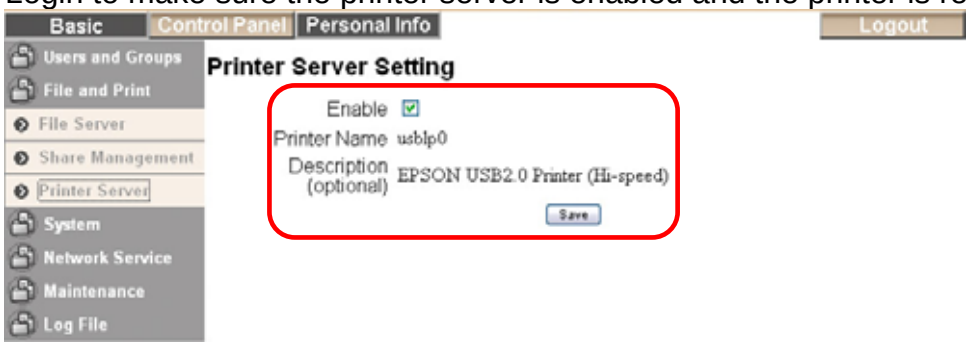


Note: For external USB devices, we recommend using self-powered USB drives. Only drives formatted using FAT32 are supported! If more than one USB drive is connected, only the files from the second drive will be copied.

USB Printer

The Taurus LAN is equipped with additional USB ports and a printer server. Connect your USB printer to one of the USB connectors on the Taurus LAN and enable the printer server to share the printer among other workstations on the same local network.

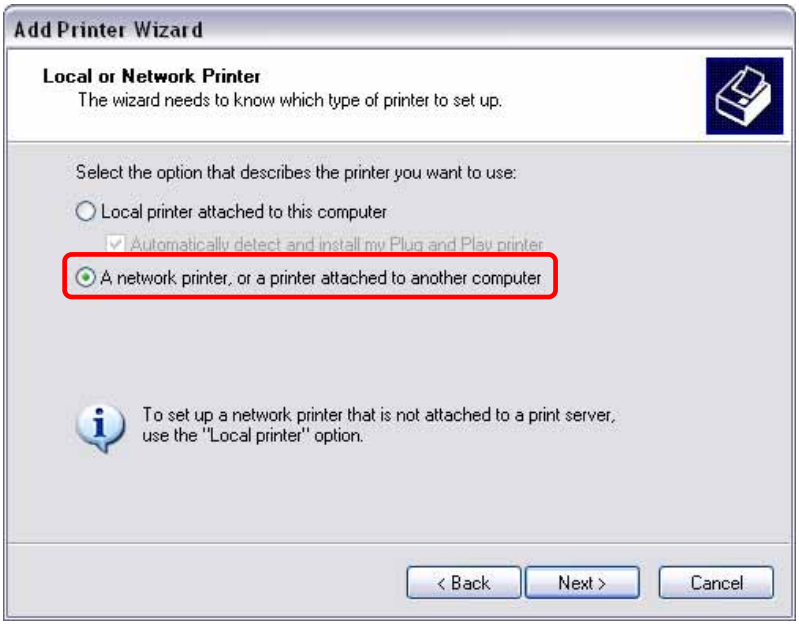
1. Connect your USB printer to one of the USB ports on the Taurus LAN and turn both devices on.
2. Login to make sure the printer server is enabled and the printer is recognised.



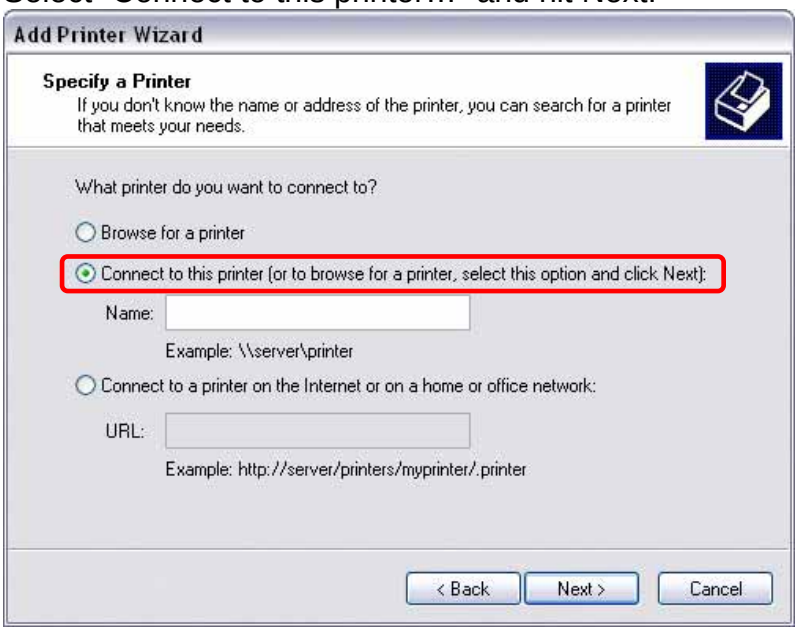
Installation on a PC

Printing via the shared network printer will be slower than when the printer is connected directly to the USB port on the computer. After you press the Print button, please wait for the printer to receive the data.

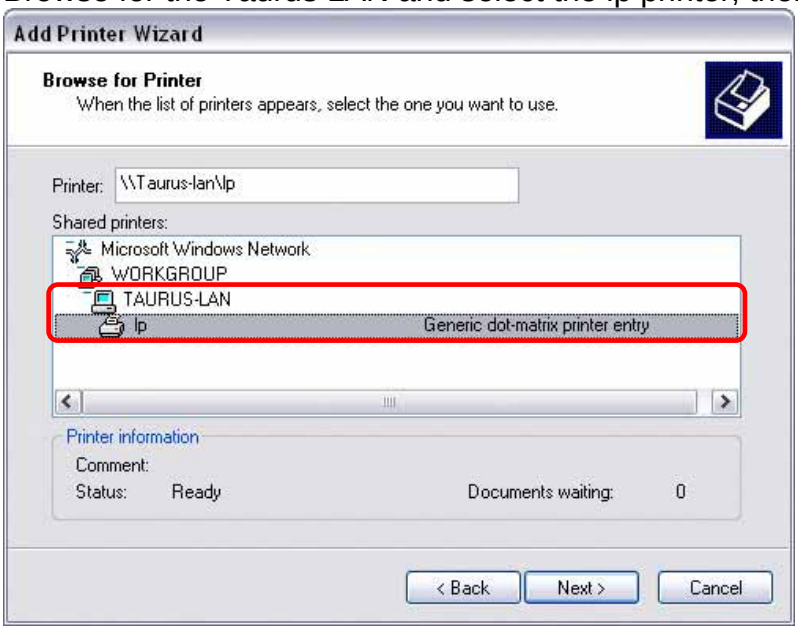
1. On your PC, go to Start and select “Printers and Faxes”.
2. Go to File and select “Add Printer” to bring up the printer setup wizard.
3. Click on Next to start the wizard, then select “A network printer…” and hit Next once more.



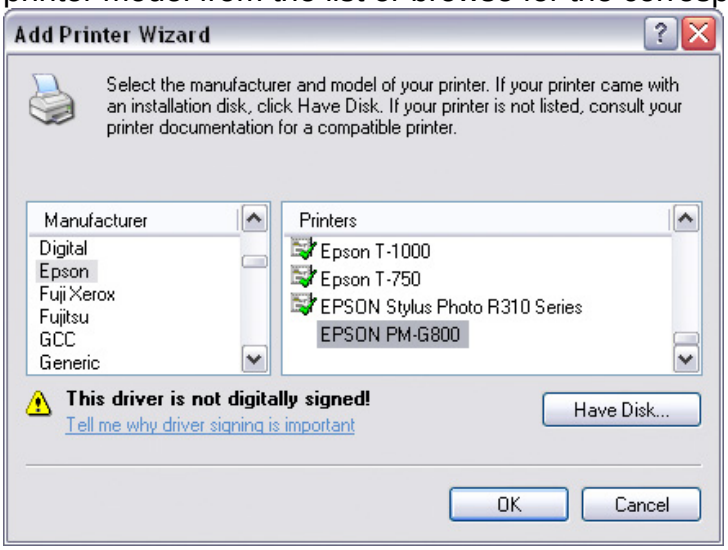
4. Select “Connect to this printer…” and hit Next.



5. Browse for the Taurus LAN and select the lp printer, then hit Next.



6. After you hit Next, a pop-up window will appear asking for a driver. Select your printer model from the list or browse for the corresponding driver on your local drive.

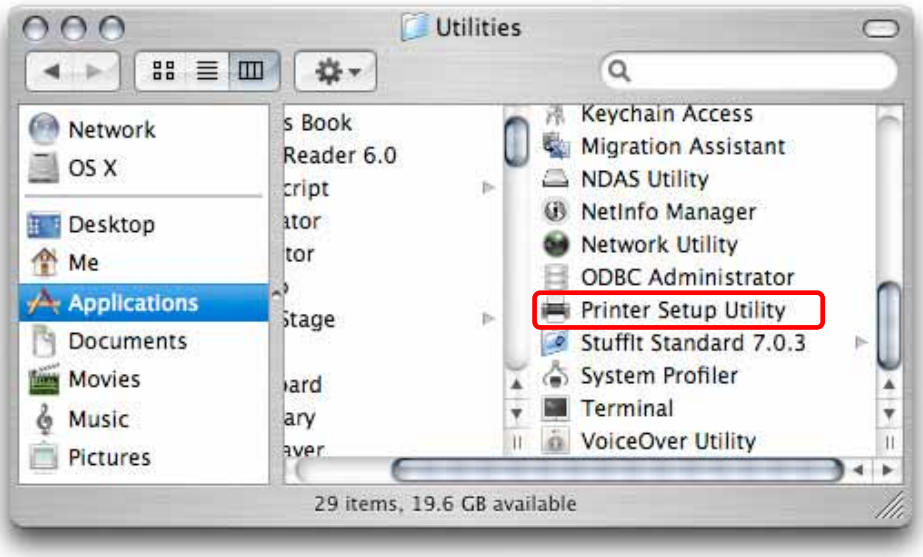


7. Finish the wizard and you are done. Your printer is now set up and you can print the first page.

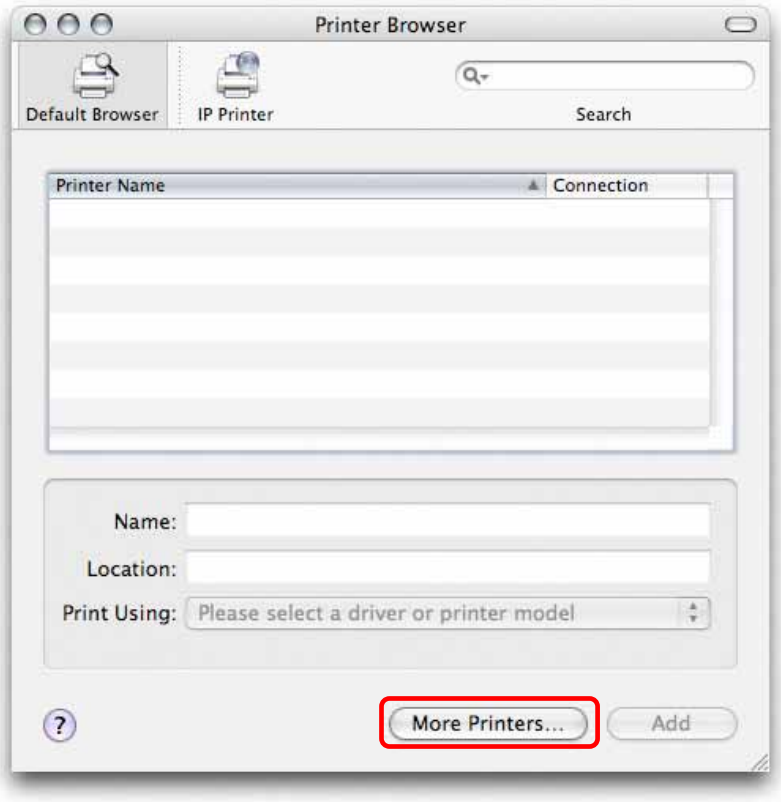
Installation on a Mac

Printing via the shared network printer will be slower than when the printer is connected directly to the USB port on the computer. After you press the Print button, please wait for the printer to receive the data.

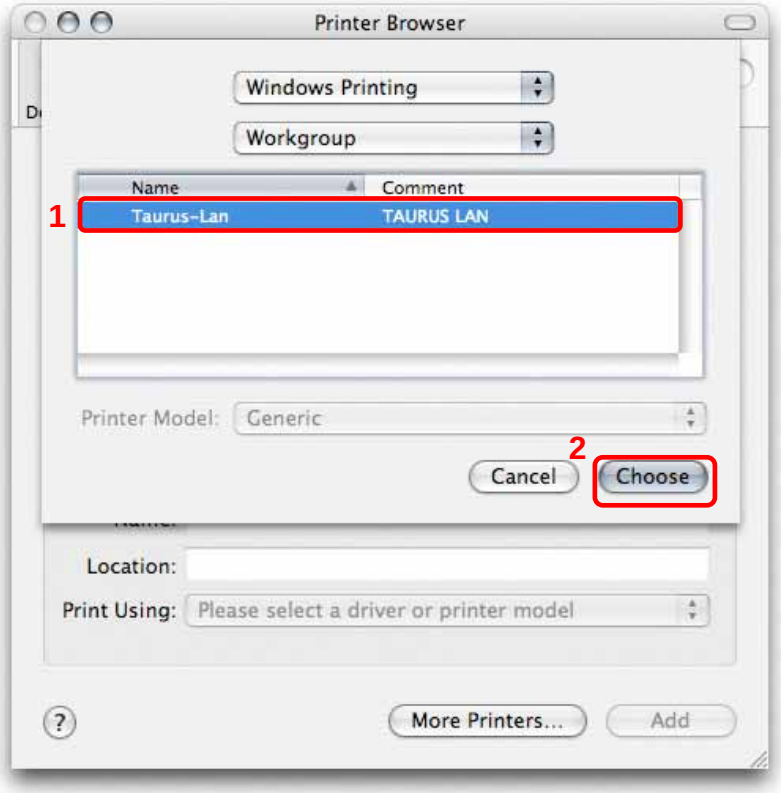
1. Start the Printer Setup Utility in the Utilities folder.



2. Select More Printers

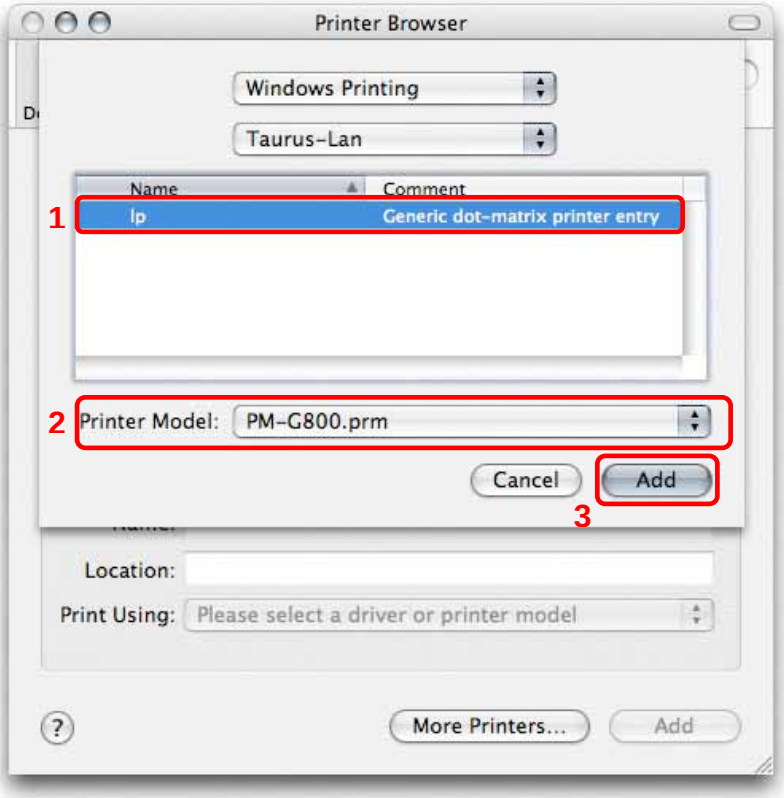


3. Select Windows Printing and the workgroup your computer and Taurus LAN belong to. Browse for the Taurus LAN, select it and hit Choose.

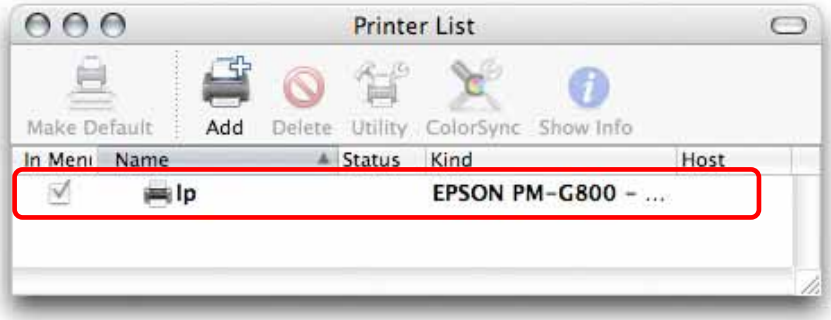


4. Enter the login and password, which can either be your admin login or the login of a user account.

5. Select the lp printer from the list, browse for the corresponding printer model to install the correct printer driver and hit Add.

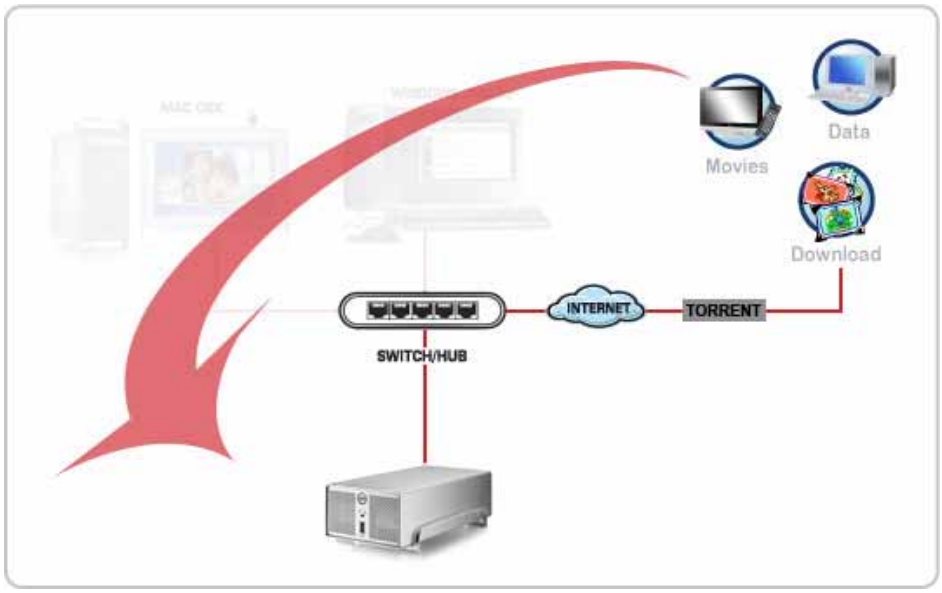


6. Done, your printer has been set up and you can now print the first page.



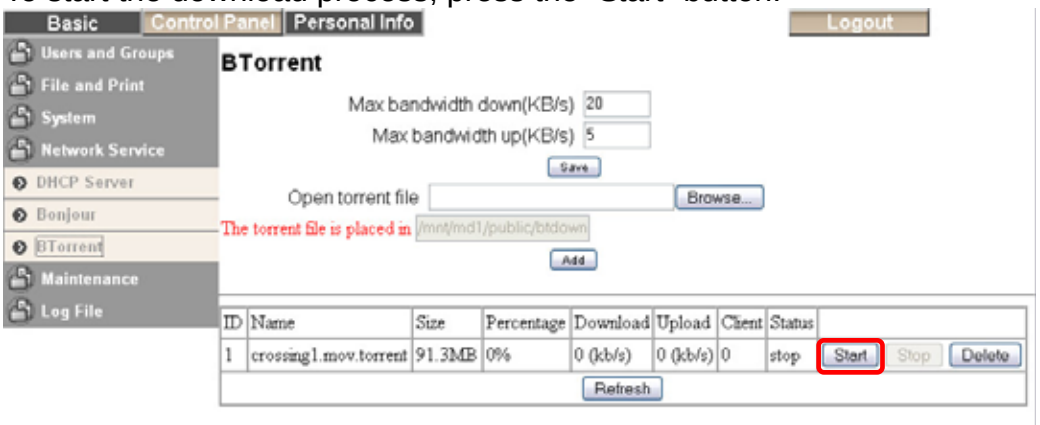
BTorrent

Used in conjunction with its built-in BitTorrent™ client, the Taurus LAN can be set to download media files from the Internet and have it saved directly to the internal SATA hard drives. You can then turn off your computer and go about other things.

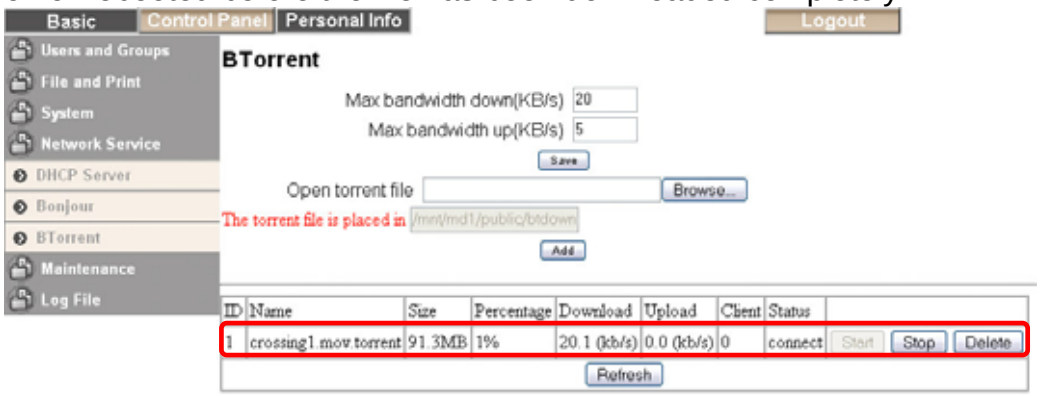


1. Browse the internet for the media files you would like to download and store the torrent files on your local drive.
2. Login to the web interface and go to BTorrent in the Network Service menu.
3. Press the “Browse” button and locate your previously downloaded torrent file. Once selected, press the “Add” button to add the file to the download queue.

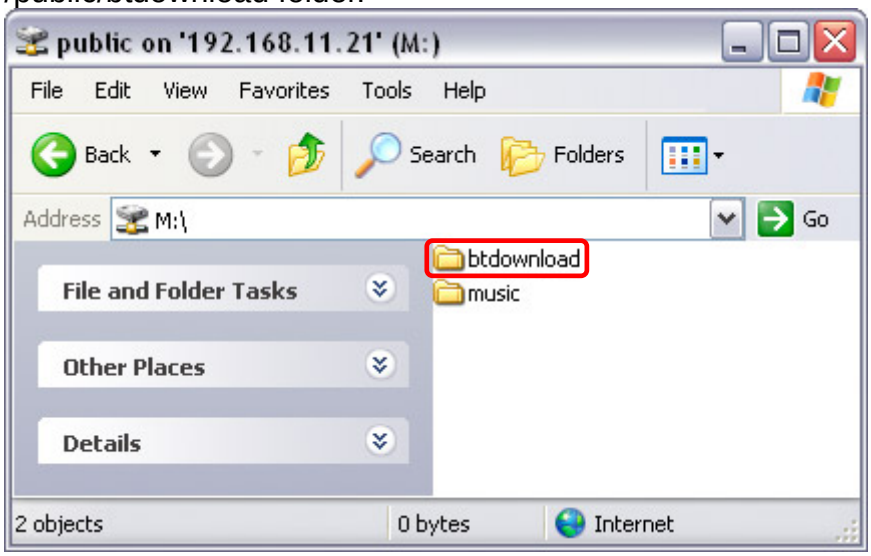
4. To start the download process, press the “Start” button.



5. The file is now being downloaded and if you like, you can turn off your computer. Remember to start the download process again if the Taurus LAN has been turned off or rebooted before the file has been downloaded completely.



6. Once the file has been downloaded, you can delete it from the download list and access the media file on your Taurus LAN. All files will be stored in the /public/btdownload folder.



Note: The BitTorrent™ client on the Taurus LAN is using the TCP protocol and the ports 6881-6889. Make sure those ports are not blocked by your router or its firewall and if necessary, set up port forwarding, so that the traffic for those ports is forwarded to your Taurus LAN.

Note: The BitTorrent™ client on the Taurus LAN can download 5 files at the time with a maximum of 40 files in the queue.

Note: Before turning off the Taurus LAN, we recommend first stopping all current downloads. After the device has been rebooted or turned off, the partial downloads will have to be started again to continue the download process.

Note: If after pressing the "Add" button the new file does not appear on the list, refresh the page or click on "BTorrent" in the "Network Service" area.

Chapter 6 - Appendix

Specifications

Application	• One or two 3.5" SATA-I or SATA-II HDD (1.5Gb/s) • 20GB -1TB per HDD (maximum of 2TB in total) • RAID (EXT2, EXT3), non RAID (FAT32, EXT2, EXT3) • For RAID 0 & 1, two hard drives of identical capacity are recommended
Interfaces	• 2 USB 2.0 High Speed ports (upstream) • 1 RJ-45 Ethernet port 10/100/1000Mbps Base-TX
Supported USB devices	Mass Storage class drives (FAT32) and USB printers
UPnP	Supports UPnP v1.0
Power Supply	External Power Adapter universal auto-switching Input: AC 100-240V Output: DC +5V/4.2A, +12V/3A

Technical Terms

Description for terms and abbreviations used in this manual.

BitTorrent™
BitTorrent is the name of a peer-to-peer (P2P) file distribution client application and also of its related file sharing protocol, both of which were created by programmer Bram Cohen. BitTorrent is designed to distribute large amounts of data widely without incurring the corresponding consumption in costly server and bandwidth resources. For more details, please refer to www.bittorrent.com.

Torrent™
A torrent can mean either a .torrent metadata file or all files described by it, depending on context. The torrent file contains metadata about all the files it makes downloadable, including their names and sizes and checksums of all pieces in the torrent. It also contains the address of a tracker that coordinates communication between the peers in the swarm.

EXT2
The ext2 or second extended file system is a file system mostly found on Linux Operating Systems.

EXT3
The ext3 or third extended file system is a journalled file system mostly found on Linux Operating Systems.

FAT32
File Allocation Table (FAT) is a file system developed by Microsoft for MS-DOS. The FAT file system is considered relatively uncomplicated, and is consequently supported by virtually all existing operating systems for personal computers.

NTFS
NTFS or New Technology File System is the standard file system of Windows NT and its descendants. NTFS has several improvements over FAT but is not compatible with other Operating Systems or most like only accessible in read only mode.

LAN
A Local Area Network (LAN) is a computer network covering a small local area, like a home, office, or small group of buildings such as a home, office, or college.

FTP
FTP or file transfer protocol is a commonly used protocol for exchanging files over any network that supports the TCP/IP protocol (such as the Internet or an intranet). There are two computers involved in an FTP transfer: a server (Taurus LAN) and a client (user's computer).

SMB
Server Message Block (SMB) is a network application-level protocol mainly applied to share files, printers, serial ports, and miscellaneous communications between nodes on a network.

FAQ

Q: Some of the functions and menus are not available!
A: Many of the functions require a hard drive to be installed. Make sure you have at least one HDD installed and that it is formatted using EXT2 or EXT3.

Q: I lost my password, what do I do?
A: Press the reset button and hold it for 5 seconds to reset the device to its default settings. The default login is admin/admin. Be aware that resetting the device will erase all user and group accounts plus some other settings.

Q: I can not access the web configuration interface, what's the correct IP?
A: See Chapter 2 about how to login. If none of these instructions help, turn on your device and wait for it to boot, then press and hold the reset button for 5 seconds to reset its IP address and server name.

Q: FTP access on my Mac doesn't work properly!
A: The FTP utility on the Mac will be able to read the data on the network storage but you can not write new data to the drive. To upload files, you will need to install a dedicated FTP application.

Q: I want to restart or turn off the server but it doesn't work!
A: Make sure that there are no current file transfers in process or any other disk activity. Close any other applications that might still be accessing the Taurus LAN and then try again.

Q: What port is the BitTorrent client on the Taurus LAN using?
A: The BitTorrent client is using the TCP protocol and the ports 6881-6889.

Q: How many files can the BitTorrent client download at the same time?
A: It can download 5 files at the time with another 40 in the queue.

Q: Does the Taurus LAN support SSH or Telnet access?
A: No, the Taurus LAN does not support SSH, Telnet or TFTP access.

Q: Why does the torrent file not show up on the list after pressing the "Add" button?
A: If the new file does not show up or the page stays blank, refresh the page or click on the "BTorrent" link in the "Network Service" area to reload the page.

Q: How do I create shares on the second drive of the Taurus LAN?
A: When the hard drives are used as two independent drives (non-RAID), it is only possible to create shares on the main drive. The path to the drive is fixed, so it is not possible to create shares on the second hard drive.

It is however possible to access the second drive via network (SMB or FTP) but all files stored on that HDD will be similar to the public folder. All users have access to it and can modify the files.

About this Manual

This manual was written using the Taurus LAN model PDD-LNU2SS and the v2.6.3 firmware revision. Images and descriptions may therefore slightly vary between this manual and the actual product you have.