

# User Manual

## LinkStation Pro

### Shared Network Storage



Congratulations on your new LinkStation Pro! This user manual is intended to assist you in configuring it.

Because we're constantly updating our product, the images and text in this manual may vary slightly from the images and text displayed by your LinkStation. These changes are minor and should not affect the ease of setup adversely. As time passes, future user interfaces, updated software, and later versions of this manual may be freely available for download at our web site: <http://www.buffalotech.com>.

If you run into difficulties or need additional help, feel free to contact our technical support. Contact information for Buffalo Technology and our technical support is available on pages 56 and 57.

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Begin by plugging your *power cable* and *Ethernet cable* into the back of the LinkStation as shown.



## Connect your Cables



Plug the *power cord* into a 120 volt wall socket or surge protector.

Plug the other end of the *Ethernet cable* into a hub, router, or switch in your network.





Press the *power button* on the front panel. LEDs will blink as your LinkStation boots up.

After your LinkStation has completed booting up, check the *LINK/ACT LED* on the front of the LinkStation. If it's lit, then your LinkStation is connected properly, and you can go on to page 8. If it's not lit, turn to page 7 for troubleshooting.

The LinkStation's Ethernet port will automatically adjust to use either a crossover or patch cable, so you may connect the LinkStation to your network with either type of Ethernet cable. Buffalo Technology doesn't recommend connecting the LinkStation directly to a PC.

Verify that the *LINK/ACT LED* on the front of LinkStation is lit (see page 6's picture). If it's lit, go to page 8 to continue setting up LinkStation. If the *LINK/ACT LED* is still not lit, try the suggestions below to verify that you're not suffering from common setup problems.

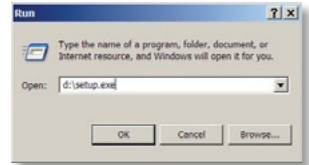
Having problems? Make sure that:

- the LinkStation and the router, hub or switch are both powered on,
- the Ethernet cable is securely plugged in at both ends, and
- the Ethernet cable is not damaged. Verify this by trying a different Ethernet cable.

If problems persist, you may contact Buffalo Technology's technical support. See pages 55 and 56 for technical support contact information.

Insert the LinkNavigator CD into your computer's CD-ROM drive.

On a PC, setup should automatically launch. If it does not, manually launch `setup.exe` by pressing *Start* and selecting the *Run...* option. When the *Run* dialog opens, type **d:\setup.exe** (where d is the drive letter of your CD-ROM drive). Press *OK* to continue.



If you are installing the software on a Mac, open the CD and click *LinkNavigator* to begin installation.



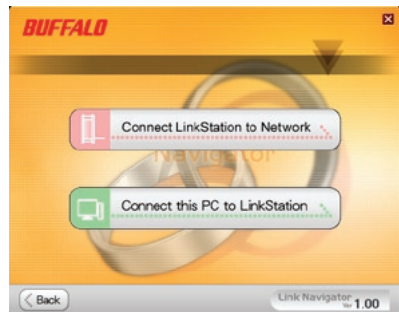




Press the *Begin Installation* button to begin.

If you're installing on a PC, click on *Connect this PC to LinkStation* (the green, lower button). Mac users can skip this step.

Click *Next* to step through the installation.



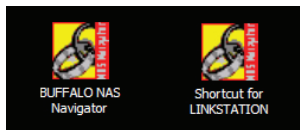


Continue pressing *Next* to step through the installation.

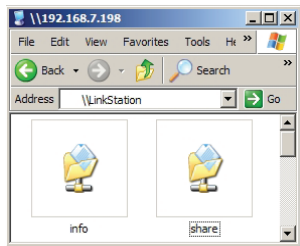
When installation is complete, you may close the installation window.



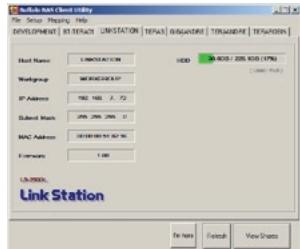
# LinkNavigator Setup is Complete!



Two new icons will be on your desktop: *Shortcut for LinkStation* and *Buffalo NAS Navigator*.



Clicking *Shortcut for LinkStation* takes you directly to the folders on your LinkStation. *Share* is the main folder that you can put files and folders in. *Info* contains a copy of your user manual.

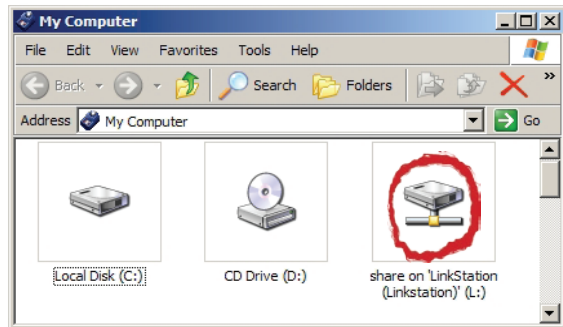
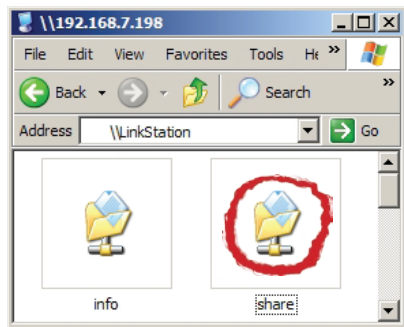


The *Buffalo NAS Navigator* icon opens the LinkStation's client utility. Turn to page 51 for more on using the NAS Navigator client utility.

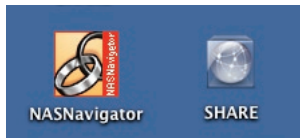
# Accessing LinkStation Data from your PC

## To Access LinkStation Data from a PC:

Your LinkStation uses “shares” (folders) to hold data. A share called “share” is already configured on your LinkStation, and you can create additional shares on page 29. To start using your LinkStation, you can either click on the *Shortcut for LinkStation* on your desktop, or you may just use *drive L* in My Computer, which setup has mapped to the default share in your LinkStation.

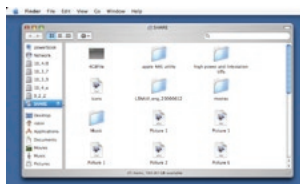


# Using your LinkStation with a Mac



After installing the LinkNavigator software, your Mac will have two new icons on the desktop.

The *Share* folder is the main folder that you can put files and folders in. *NAS Navigator* is the LinkStation's client utility.



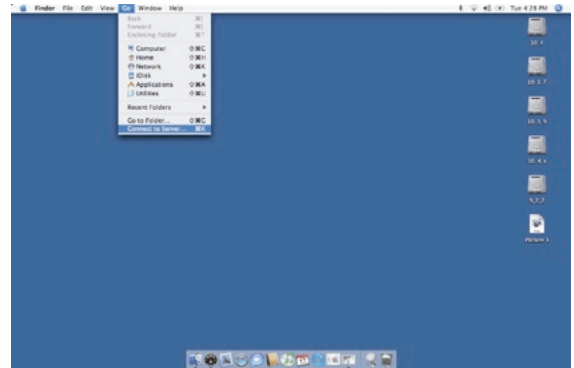
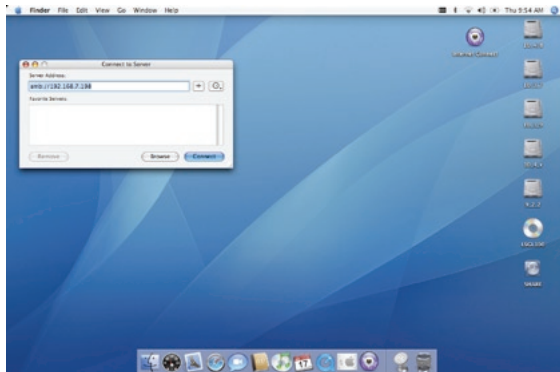
Clicking *Share* opens the main folder on your LinkStation. You can put files and folders in *Share* as though it were any other hard drive connected to your computer. You may add additional shares to your LinkStation on page 30.



The *NAS Navigator* icon opens the LinkStation's client utility. See pages 21 and 55 for more on using the NAS Navigator client utility.

# Accessing LinkStation Data from a Mac

You can manually add LinkStation Shares (folders) to your desktop by adding them to the Mac's server list. Begin by clicking *Go*, and then choose *Connect to Server*.



In the *Server Address* field, enter your LinkStation's IP address in the form *smb://ipaddress* (where "ipaddress" is your LinkStation's IP address), and click *Connect*.

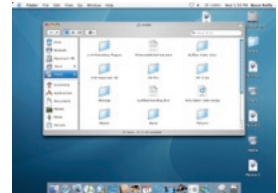
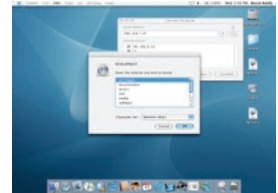
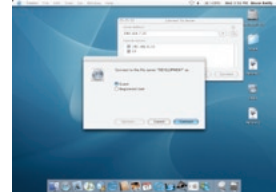
If you don't know your LinkStation's IP address, see page 16.

# Accessing LinkStation Data from a Mac

Select *Guest* and click on *Connect*. Note: If you have configured share permissions on your LinkStation, select *Registered User* and enter your Registered User credentials.

Select the volume that you want to mount, such as *share* or *share-mac*, from the list of folders on the LinkStation.

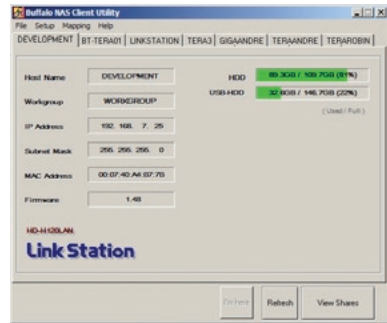
The share will open. A link to the shared folder will appear on your desktop.



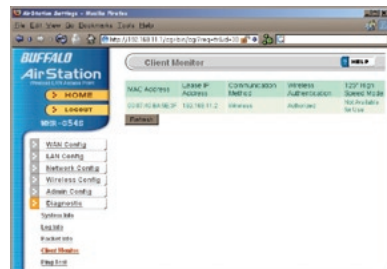
# Accessing LinkStation Data from a Mac

If you don't know your LinkStation's IP address, there are several ways to get it.

One simple method is to use the NASnavigator Client Utility (included on your CD) to find your LinkStation(s). Just click on the tab for your LinkStation and you'll be able to read its IP address. See page 52 for more on the LinkStation client utility.



You can always get the LinkStation's IP address from your router's configuration utility. Many Buffalo routers list this information on the *Client Monitor* page, as shown to the right. Consult your router's documentation for instructions on identifying the LinkStation's IP address.





LinkStation Pro has two USB 2.0 ports on the rear. These ports can be used for adding external USB Hard Drives. LinkStation will share connected USB storage devices, allowing everyone on the network to use them. Up to two external USB hard drives may be added to LinkStation Pro. To connect a USB hard drive to your LinkStation, simply plug it into one of the USB ports.

Once your USB hard drive is connected, see page 27 for configuring your LinkStation to use it. Page 29 will show you how to reformat the USB Hard Drive. Page 39 and 40 show you how to set up LinkStation to backup to a USB Hard Drive.

**Power Button** – Press and release the Power Button to turn the LinkStation on. Hold it down for three seconds to turn the LinkStation off.

**Link/Act LED** – The Link/Act LED glows green when the LinkStation is connected to a network. It blinks when the LinkStation is sending or receiving data.

**Info LED** – The Info LED blinks when you have a message waiting for you in the client utility.

**Diag LED** – The Diagnostic LED blinks to signal abnormal operation. See page 53 for a list of Diagnostic LED codes.



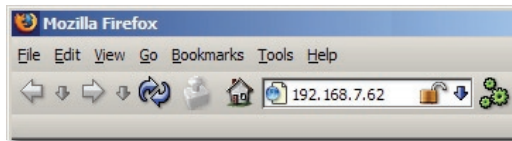
**Init button** – The red Init button allows you to return your LinkStation to factory defaults.

**10/100/1000 Mbps Ethernet Port** – Use this port to connect your LinkStation to a switch, a router, or another computer. The port is autosensing, so either a conventional Ethernet cable or a crossover Ethernet cable may be used.

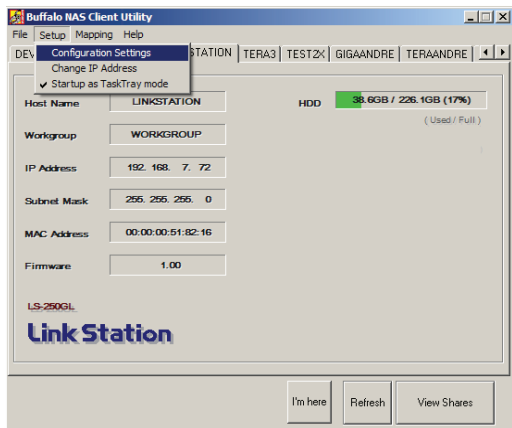
**USB Ports** – LinkStation offers two USB 2.0/1.1 ports for adding external drives. Please see the *LinkStation Expansion* section on page 16 to learn more about using LinkStation's USB Ports.



## The Configuration GUI

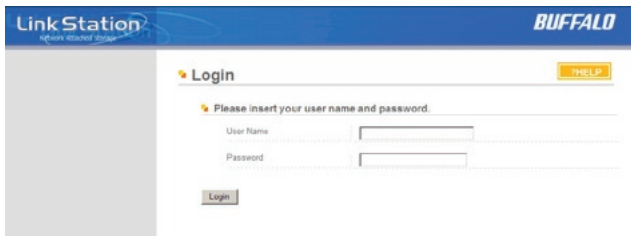


The Configuration GUI may be accessed at any time by typing the IP address of your LinkStation into the URL bar of a browser running on a computer connected to the same network as the LinkStation. This works perfectly with OS X, Linux, and other non-Windows PCs.



If you have a PC running the Buffalo NAS Client Utility, you can get to the Configuration GUI by clicking on *Setup* and choosing *Configuration Settings*.

This login prompt will appear. Enter **admin** for the user name. Until you change it, the password for the admin account will be **password**. Press the *OK* button when finished.



User name: *admin*

Password: *password*

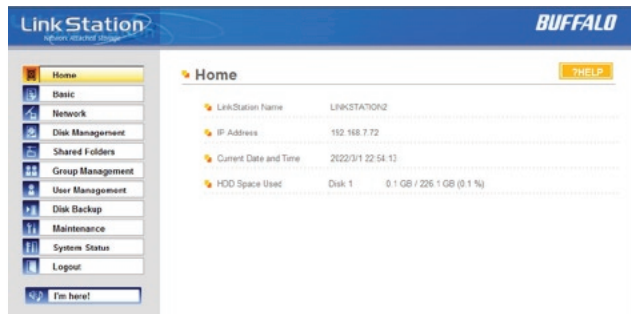
See page 36 to change your password.

If this login prompt does not appear, your DHCP server may not be functioning correctly. If DHCP is disabled, you may re-enable it, or verify that the LinkStation's IP Address is in the same range as that of your PC.

NOTE: Page 24 shows how to enable or disable DHCP, or configure the LinkStation with a Static IP Address.

Welcome to *Advanced Settings*, the configuration GUI for the LinkStation! Bookmark this page in your browser so it can be easily accessed for future configuration changes. If the LinkStation's IP Address changes, you will need to recreate the link. You can also get here by typing *http://LinkStation\_Name* into a Web browser, where *LinkStation\_Name* is the name of your LinkStation (page 23).

You are now at *Home*. Notice that the *Home* button is lit up in yellow. You can navigate this menu by clicking on the buttons at the left of the screen. Here at "Home", you can see basic information about your LinkStation's current configuration. You may close this screen by clicking *Logout* at the bottom left, or just by closing the browser window. If you have lost your LinkStation, clicking *I'm here!* at the bottom left will cause it to beep, making it easier to find.



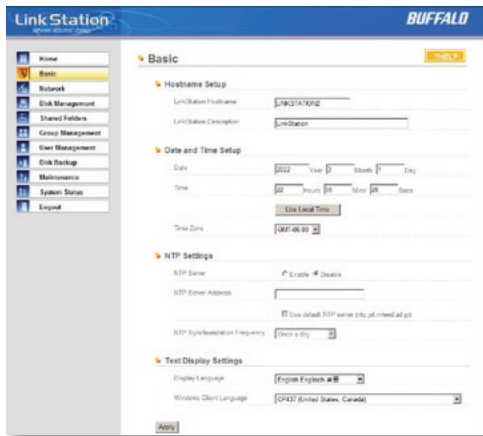
## Basic

You may modify your LinkStation's hostname and description under *Hostname Setup*. A friendly, easy-to-remember name (e.g. "LinkStation") is recommended.

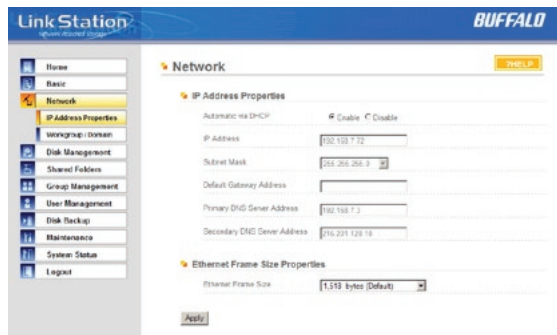
Make sure that the date and time are correct in *Date and Time Setup*. To synchronize time settings with those in your computer, press *Use Local Time*. To have your system time automatically set by an NTP server, enable *NTP Server* and enter an IP Address for the NTP server (e.g. 192.43.244.18) or use the supplied default NTP server.

Ensure that both the *Display Language* and the *Windows Client Language* are set to languages that you're comfortable with.

Once desired fields have been completed, press the *Apply* button.



## Network (IP Address Properties)



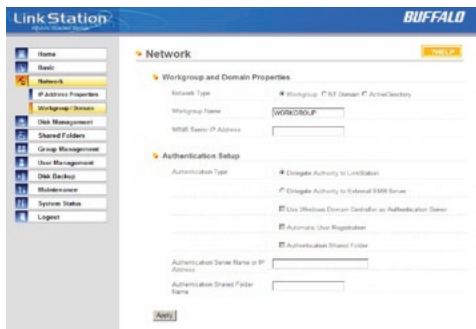
In most networks, LinkStation will get its IP Address automatically from a DHCP server. You may disable DHCP here. If DHCP is disabled and an IP Address is not set manually, it will default to *192.168.11.150*. The LinkStation's *IP Address*, *Subnet Mask*, *Default Gateway Address*, and *DNS Server address* may all be entered manually under *IP Address Properties*.

*Ethernet Frame Size* may also be set manually on this page. Only use JumboFrame settings when operating in a Gigabit environment where all other clients support the same JumboFrame setting.

Click *Apply* after making any changes.



## Network (Workgroup/Domain)



If you are unfamiliar with Domain/Active Directory networking, then leave the *Network Type* and *Workgroup Name* set to *Workgroup*.

To make your LinkStation a member of a workgroup or domain, enter the appropriate information into the fields on this page and click *Apply*. Only select *NT Domain* if you have a Windows NT Server Domain Controller on your network. Only select *Active Directory* if you have an Active Directory server on your network.

**NOTE:** If using *NT Domain*, the LinkStation must be added as a member computer in the Domain Server.

**NT Domain & Active Directory Authentication** integrate the LinkStation Pro with Windows NT Domain and Active Directory Servers. The LinkStation Pro participates as a member device in the NT Domain and Active Directory networks, allowing the LinkStation to use Users and Groups that reside on the Domain or Active Directory System. If Active Directory is used, then the LinkStation will automatically receive update information from the domain controller(s). To configure the LinkStation Pro on an Active Directory network, you must have the Domain Administrator login credentials. To configure LinkStation Pro in a Windows NT Domain or Active Directory environment, select the appropriate Network Type and enter the Domain Name and Domain Controller into the appropriate fields. In an Active Directory environment, fill out the remaining fields. The Authentication Setup fields will be automatically filled out, so no input is needed there. Once you have finished, press *Apply*.

## Disk Management (Drive Properties)

This page shows the properties for the main drive in your LinkStation Pro. If you have any USB hard drives plugged into the linkstation, their properties will appear here as well.

The screenshot shows the LinkStation Pro web interface. The left sidebar contains a navigation menu with the following items: Home, Basic, Network, Disk Management (highlighted), Drive Properties (highlighted), USB Settings, Disk Check, Disk Format, Shared Folders, Group Management, User Management, Disk Backup, Maintenance, System Status, and Logout. The main content area is titled "Disk Management" and includes a "HELP" button. It is divided into two sections: "Disk Information" and "USB Disk Information".

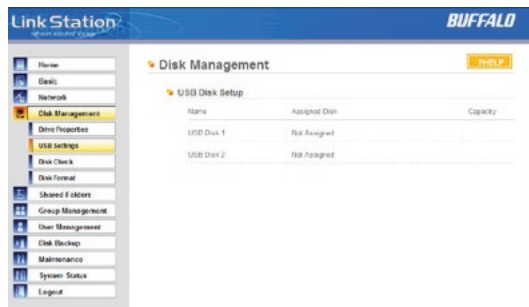
**Disk Information**

Disk 1	Status	Standard Mode
	Unit Name	WD2500JS-22MH-B0
	Total Capacity	237,042,468 kbytes
	Amount Used	40,480,432 kbytes
	Percent Used	17.08 %
	File Format	EXT3

**USB Disk Information**

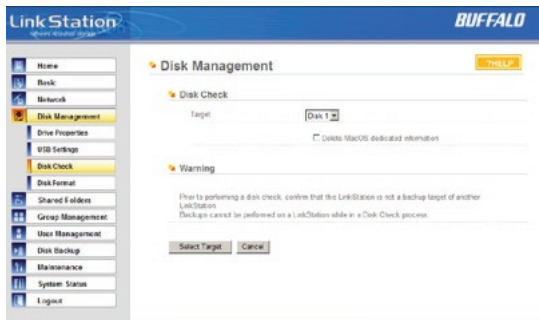
USB Disk 1	Status	Not Detected
USB Disk 2	Status	Not Detected

## Disk Management (USB hard drives)



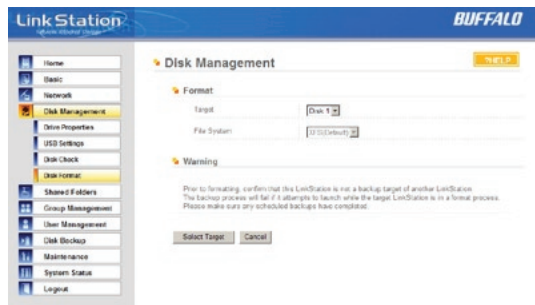
From here you can see your USB hard drives' setup information. If the hard drives' information isn't displayed properly, try restarting your USB hard drives and then restarting your LinkStation. Some USB hard drives must be reformatted from within LinkStation before they can be assigned shares. Select *Disk Format* from the left-side menu to format your USB hard disk(s).

## Disk Management (Disk Check)



Disk check checks any of your hard drives for errors. To use disk check, select the disk that you want to check from the target pulldown and click *Select Target*.

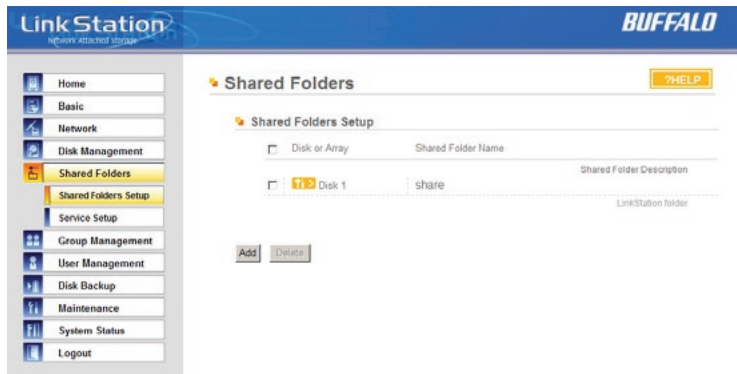
## Disk Management (Disk Format)



To format a hard drive or array, select it from the *Target Disk* drop box. Choose the file system desired from the *File System* dropdown (internal drives can only be formatted with XFS). Note that FAT32 has a 2 gigabyte single file size limit. If you choose FAT32 for your file system, you will not be able to store single files larger than 2 gigabytes on the drive. Use of the *XFS* or *EXT3* file systems is recommended. Press *Select Target Disk* when done.

Depending on the size of the target hard disk or array, a Disk Format may take several hours to complete. Performance will be slow during the disk format.

## Shared Folders



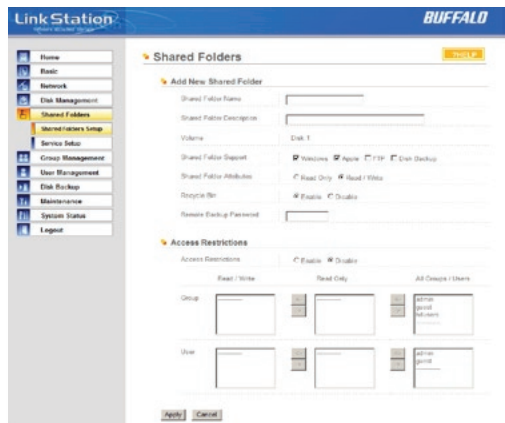
The screenshot shows the LinkStation web interface. The top navigation bar includes the LinkStation logo and the Buffalo brand name. A left sidebar contains a menu with options: Home, Basic, Network, Disk Management, Shared Folders (highlighted), Shared Folders Setup (highlighted), Service Setup, Group Management, User Management, Disk Backup, Maintenance, System Status, and Logout. The main content area is titled 'Shared Folders' and features a 'HELP' button. Below this is the 'Shared Folders Setup' section, which contains a table with columns for 'Disk or Array', 'Shared Folder Name', and 'Shared Folder Description'. The table lists 'Disk 1' with a share name of 'share' and a description of 'LinkStation folder'. At the bottom of the table are 'Add' and 'Delete' buttons.

<input type="checkbox"/>	Disk or Array	Shared Folder Name	Shared Folder Description
<input type="checkbox"/>	Disk 1	share	LinkStation folder

To begin setting up shares on your LinkStation, select *Shared Folders* from the left side menu, and then click the *Add* button under *Shared Folders Setup*.

To delete a share or shares, check the checkbox next to the shares you'd like to delete, and press the *Delete* button. Deleting shares will remove the share and erase all of the files and folders inside that share.

## Adding a new Shared Folder



To add a new shared folder, enter a name for it in the *Shared Folder Name* box and choose which *Disk Space* it will reside in. You may also choose which operating systems and features the share will support by putting the appropriate checks next to *Shared Folder Support*, and whether the share supports the Recycle Bin by putting a selecting *Enable* or *Disable*. Enter a *Shared Folder Description* and a *Remote Backup Password* if desired. Click *Apply* to build the new shared folder.

Appletalk support is available for use with legacy Macs. Checking “Apple” by *Shared Folder Support* turns on AppleTalk, letting you use your LinkStation with older Macs. Note that Appletalk files are limited to 2GB maximum filesize and 32 characters for filenames. If a folder with AppleTalk

on is accessed from a modern OS through smb, these limitations will not apply.

*Remote Backup Password* will set a password on this share for other LinkStations who want to use it as a remote backup target. This password will not affect users attempting to access the share; it only pertains to remote LinkStations trying to access this share for backup tasks.

## Shared Folders (Access restrictions)



To use *Access Restrictions* for a share, select *Enable*.

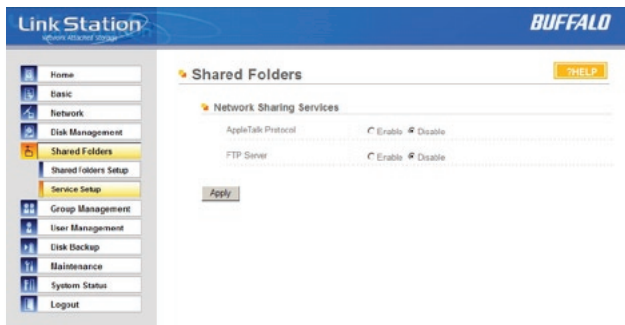
Highlight groups or users in the *All Groups/ Users* column and use the left-pointing arrow buttons (located just to the left of each box) to move individual groups or users from the *All Groups/Users* column to the *Read Only* box (if you want to give them read access only) or all the way to the *Writable* box, if you want to give them full access to the share. Right-pointing arrows will move highlighted users or groups back to the right.

Click *Apply* when you have your groups and users in the appropriate boxes.

To set up new groups and users, see pages 34 and 35.



## Shared Folders (Service Setup)

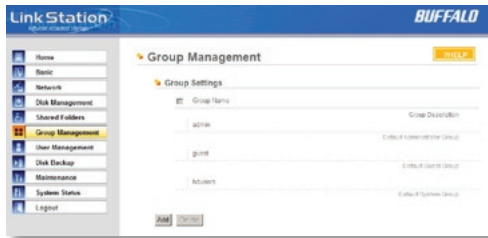


To allow FTP Access to LinkStation, choose *Enable* for *FTP Server*. To enable legacy AppleTalk support, choose *Enable* for *AppleTalk Protocol*.

**FTP Server Info:** Enabling the FTP Server will allow users to connect to shares via FTP protocol. Their username and password is used for their login credentials, and they will only have access to shares that have read-only or writeable access to on the LinkStation. The network administrator of your network may need to enable traffic on port 21 to the LinkStation for FTP to work over the Internet.

Click the *Apply* button to set up these services.

## Group Management



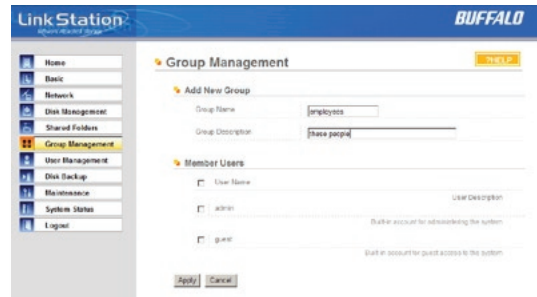
Groups allow for easier management of permissions in some networks, specifically networks with a lot of users in different departments.

To *Delete* a group, put a check next to its name and click *Delete*. To add a group to your LinkStation, click *Add*.

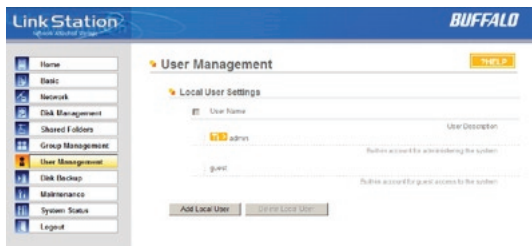
Add a name and a description to the *Add New Group* fields. Put checks next to each *Member User* that you want to be part of the group. Click *Apply* when your group is set up the way you want it.

Active Directory and Domain Groups are not shown here but are available under Share Management.

Members can be added or removed from a group at any time by editing the group. This is done by clicking on the Group name on the main Group Settings page.



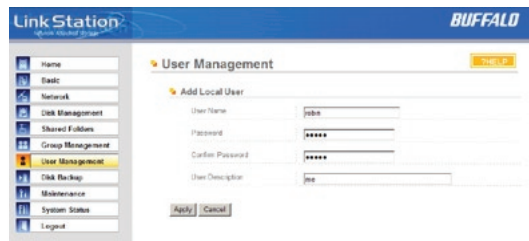
## User Management



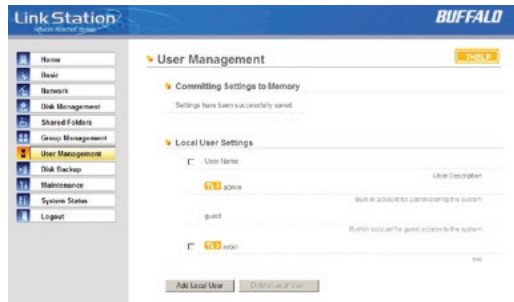
LinkStation is preconfigured with two users, *admin* and *guest*, out of the box. The *admin* and *guest* user accounts cannot be deleted. To delete any other user, put a check next to their name and click *Delete*. To add a new user, click *Add*.

The *Add New User* dialog will appear. Enter a *User Name*, *Password*, and *User Description* for the new user and click the *Apply* button. If a user will be accessing the LinkStation from a Windows 95/98 computer, their password should be 15 characters or less. Mac OS 8 and OS 9 users' passwords should be 9 characters or less.

A Domain User List will be displayed if the LinkStation Pro is a member of a Domain or Active Directory environment.

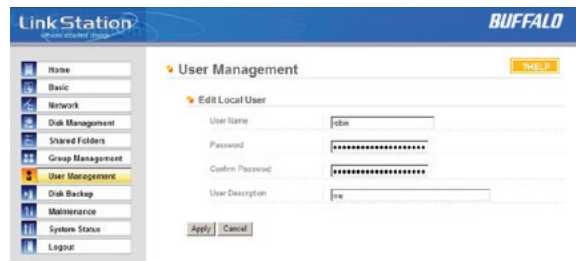


## User Management (changing passwords)

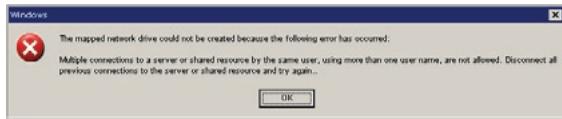


To change an account's password, click on the name of the account under *User Settings*. Note: if a user name and password are used to log into a user's windows computer or domain, the same user name and password should be used when creating the user's account on the LinkStation, or problems accessing shared folders may occur.

Enter the desired new password in both boxes and click *Apply*.



# Accessing Multiple Shares from a single PC

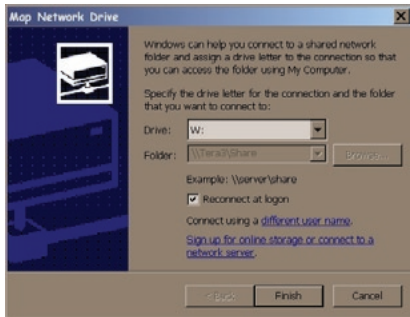


When accessing multiple shares to a Windows PC, you may see this error message.

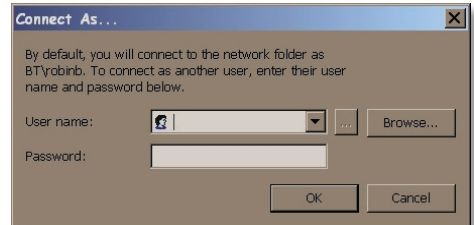
This is caused by having multiple shares to the same resource using different login credentials.

The error occurs when connecting to at least one secure, restricted share. Due to a constraint in Microsoft Windows, only one set of login credentials can access or map drive letters for a network resource such as the LinkStation. As such, only one username and password can be used while mapping drives to a PC. If unsecure, unrestricted shares are mapped and then an attempt to map a secure, restricted share is made from the same PC, this error will occur. To prevent this, you must create all mapped shares using the same login and password information. Please follow the steps on the next page to remedy this problem.

## Mapping Multiple Shares

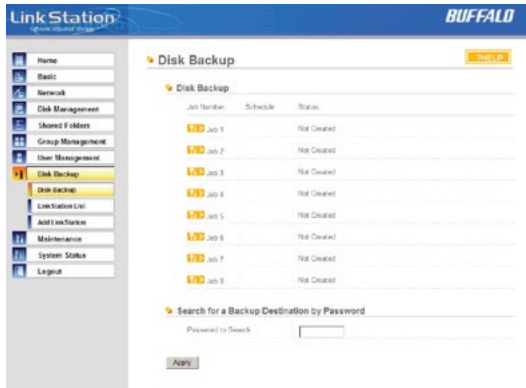


When mapping any share, select the *Connect using a different user name* option. A login and password prompt will appear. Use the username and password required by any secure, restricted shares for *all* shares. All mapped shares on a single PC must use the same username and password!



If only unrestricted shares are being mapped, then it's not necessary to set a username and password for shares. Multiple mapped drives to unrestricted shares can exist without a username or password as long as no restricted, secure shares are mapped. If an unrestricted share and a restricted share are both being mapped or accessed, use the restricted username and password for the unrestricted share login by using the *Connect using a different user name* option. This will allow a Windows PC to access both shares without any problems.

## Disk Backup



The screenshot shows the Link Station Buffalo web interface. The left sidebar contains a navigation menu with the following items: Home, Basic, Network, Disk Management, Shared Folders, Group Management, User Management, Disk Backup (highlighted), Disk Backup List, Add LinkStation, Maintenance, System Status, and Logout. The main content area is titled "Disk Backup" and features a "Disk Backup" section with a table of backup jobs. The table has columns for Job Number, Schedule, and Status. Below the table is a "Search for a Backup Destination by Password" section with a "Password to Search" input field and an "Apply" button.

Job Number	Schedule	Status
1.72 Job 1		Not Created
1.72 Job 2		Not Created
1.72 Job 3		Not Created
1.72 Job 4		Not Created
1.72 Job 5		Not Created
1.72 Job 6		Not Created
1.72 Job 7		Not Created
1.72 Job 8		Not Created

To create a backup job, click on a *Job Number*. The *Edit Backup Job* dialog will appear.

## Disk Backup (Edit Backup Job)

**Edit Backup Job**

Job Number: Job 1

Backup Job Schedule:  Not Scheduled  Immediately  Every day  Every week

Backup Date:

Backup Time:  Hour  Minute

Encrypted Transfer:  Enable  Disable

Compressed Transfer:  Enable  Disable

Overwrite Backup:  Enable  Disable

Differential Backups

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**Backup Source and Destination Folders**

Local Backup Shared Folder  Destination Backup Shared Folder

Choose a source and destination folder for backup and click Select

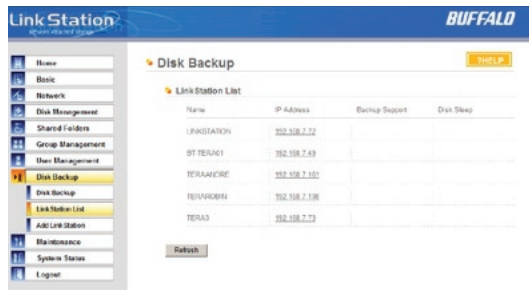
A *Backup Job* can run regularly on a daily or weekly schedule, or immediately by appropriate choices in the *Backup Job Schedule* field. *Date* and *Time* for the backup may be entered, and *Encryption* and *Compression* enabled or disabled. Enable *Overwrite Backup* to have each scheduled backup write over the previous backup, or *Differential Backups* to backup only files changed since the previous backup.

Select the folder to be backed up from the *Local Backup Shared Folder* dropdown, and the destination for the backup files from the *Destination Backup Shared Folder* dropdown. The destination folder may be on a USB drive attached to the LinkStation, or another LinkStation on the network. Click on *Select* to approve the backup targets.

Click the *Apply* button when your backup job is set up the way you want it, or *Clear Job* to stop a job from running again.



## Disk Backup (LinkStation List)



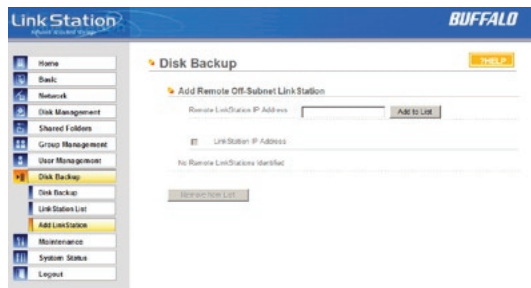
The screenshot shows the Buffalo LinkStation web interface. The left sidebar contains navigation options: Home, Basic, Network, Disk Management, Shared Folders, Group Management, User Management, Disk Backup (selected), Add LinkStation, Maintenance, System Status, and Logout. The main content area is titled 'Disk Backup' and contains a sub-section 'LinkStation List'. Below this is a table with columns for Name, IP Address, Backup Support, and Disk Sleep. A 'Refresh' button is located at the bottom left of the table.

Name	IP Address	Backup Support	Disk Sleep
LINKSTATION	192.168.2.72		
BT TERAG1	192.168.7.49		
TERAHCORE	192.168.7.101		
TEU/VAPORE1	192.168.7.136		
TERA3	192.168.7.73		

The LinkStation list shows other LinkStations in your network that you can configure network backups to.

Press *Refresh* to get a list of LinkStations on your network.

## Disk Backup (Add LinkStation)



To add a remote LinkStation to your network, enter its numerical IP Address in the *Remote LinkStation IP Address* field and click the *Add to List* button. For remote LinkStation backups, make sure both firewalls are configured to allow traffic in and out of their networks.

Note: Disk Backups between two LinkStations use port 8873 for encrypted backups and port 873 for backups with no encryption.

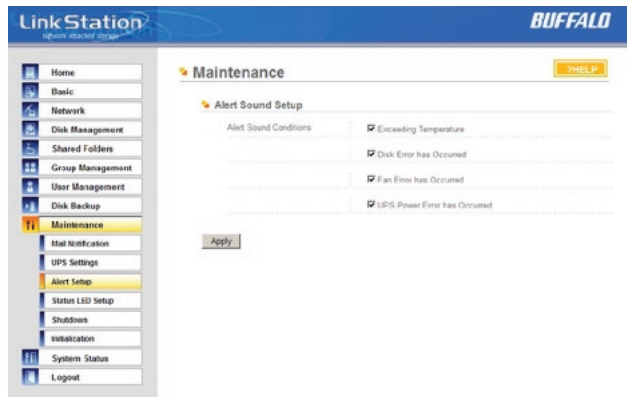
## Maintenance (Notification)

The screenshot shows the Buffalo LinkStation web interface. The left sidebar contains a navigation menu with options: Home, Basic, Network, Disk Management, Shared Folders, Group Management, User Management, Disk Backup, Maintenance (highlighted), UPS Settings, Alert Setup, Status LED Setup, Shutdown, Initialization, System Status, and Logout. The main content area is titled 'Maintenance' and includes a 'Help' button. Under the 'Mail Notification' section, there are several fields: 'Mail Notification' (checked), 'SMTP Server Address' (empty), 'Subject' (set to 'LinkStation Status Report'), and five 'Recipient Mail Address' fields (all empty). There are also checkboxes for 'HDD Status Report', 'Disk Fail', 'Fan Fail', and 'Combiner Backup', all of which are checked. At the bottom, there is a 'HDD Status Sending Time' field set to '1' and a 'Send Test Message' button.

If your LinkStation is remotely managed, you may choose to receive nightly status reports and be notified of any disk events by email. To set this up, enable *Mail Notification* and enter the IP Address of your SMTP server\* in the *SMTP Server Address* field. Select a *Subject* line for the emails (i.e. “LinkStation Status Report”) and enter the email address of each person you want to receive notification emails into a *Recipient Mail Address* field.

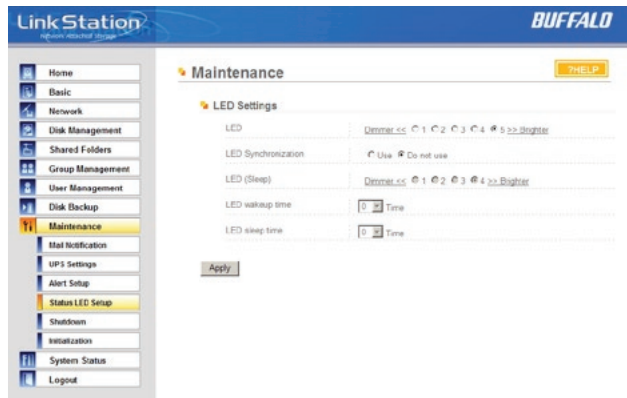
\* SMTP server must be an *open* type server. Currently, there’s no provision for entering a username or password.

## Maintenance (Alert Settings)



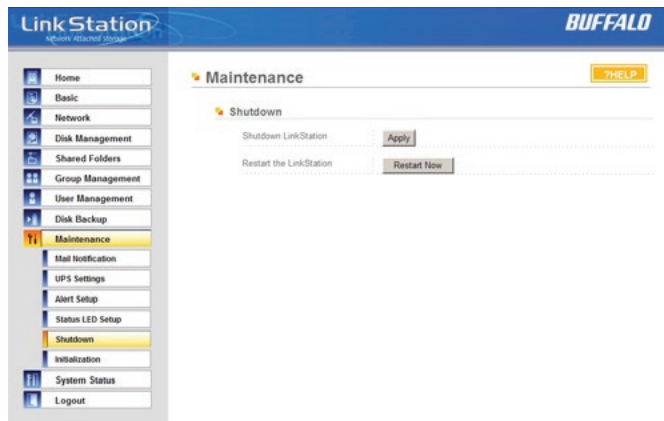
Alerts can be configured on the LinkStation to make audible noises when a problem is detected. Along with the audible noise, alert emails will be sent out if *Mail Notification* was properly configured. Please select the features you would like to receive an audible sound alert from and then press the *Apply* button.

## Maintenance (Status LED Settings)



Adjust the brightness of the LEDs on your LinkStation's front panel here. Press *Apply* to update the settings.

## Maintenance (Shutdown)



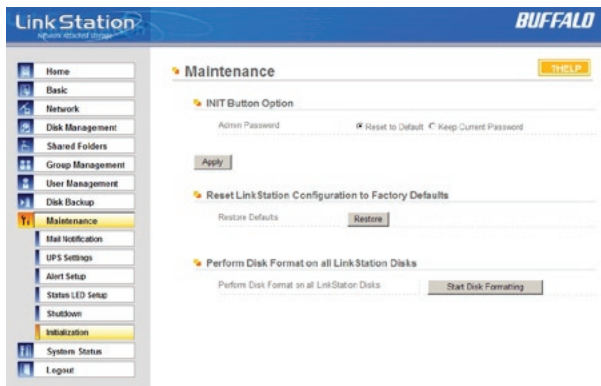
From the *Shutdown* page, press *Apply* to shutdown LinkStation. This has the same function as holding down the power button on the front of LinkStation, but may be done remotely. Turning on the LinkStation after a shutdown requires a physical button push on the front of LinkStation. The *Restart Now* button simply reboots the LinkStation, bringing it back to functionality after about 120 seconds.

## Maintenance (Initialization)

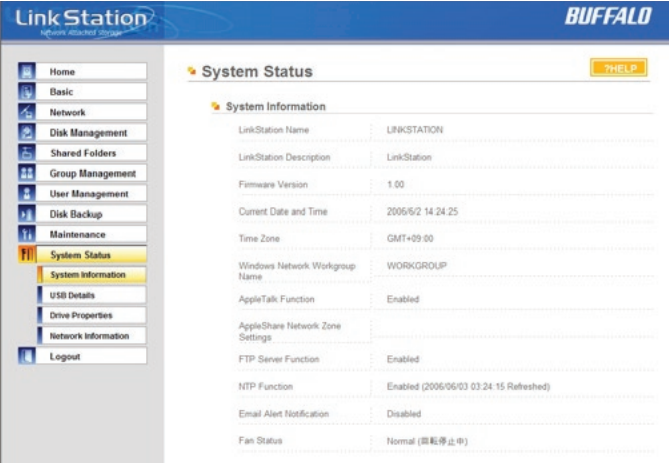
Initialization is a reset procedure that restores all settings back to the default, out of box, configuration. All configuration, users, groups, and backup jobs are lost, but actual data and shares on the hard are NOT lost. If you want all data to be erased, reformat the drive.

Specify whether the LinkStation shall keep its administrator password after a initialization or whether the password should be reset to the default password (default password is *password*). Press the *Apply* button once you make the selection.

Press the *Restore* button to begin the initialization process; this will restore all settings to factory defaults but will NOT erase the data on the hard drives. *Start Disk Formatting* begins a complete disk format that will erase all information on the LinkStation's internal hard drives. This cannot be undone.



# System Status (System Information)



The screenshot shows the LinkStation web interface. The left sidebar contains navigation links: Home, Basic, Network, Disk Management, Shared Folders, Group Management, User Management, Disk Backup, Maintenance, System Status (highlighted), System Information (highlighted), USB Details, Drive Properties, Network Information, and Logout. The main content area is titled 'System Status' and contains a 'System Information' section with the following details:

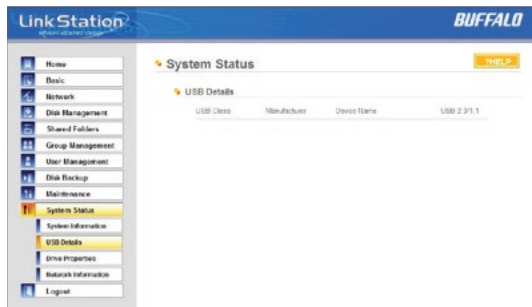
LinkStation Name	LINKSTATION
LinkStation Description	LinkStation
Firmware Version	1.00
Current Date and Time	2006/6/2 14:24:25
Time Zone	GMT+09:00
Windows Network Workgroup Name	WORKGROUP
AppleTalk Function	Enabled
AppleShare Network Zone Settings	
FTP Server Function	Enabled
NTP Function	Enabled (2006/06/03 03:24:15 Refreshed)
Email Alert Notification	Disabled
Fan Status	Normal (回転停止中)

This page shows you the System Information for your LinkStation.

Firmware updates are occasionally available from [www.buffalotech.com](http://www.buffalotech.com) for the LinkStation Pro. These must be executed from a Windows PC on the same network. Your router, switch, or hub should pass through ports 8873 and 22939 for this to work (most do).



## System Status (USB Details)

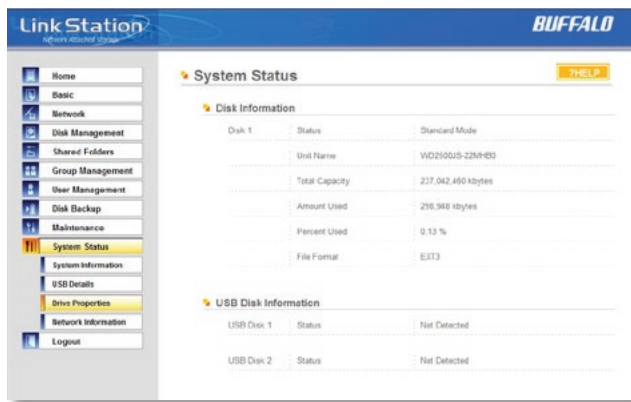


The screenshot displays the LinkStation web interface. The top navigation bar includes the LinkStation logo and the Buffalo logo. A left-hand sidebar contains a menu with options: Home, Basic, Network, Disk Management, Shared Folders, Group Management, User Management, Disk Backup, Maintenance, System Status (highlighted), System Information, USB Details (highlighted), Drive Properties, Network Information, and Logout. The main content area is titled 'System Status' and features a 'HELP' button. Underneath, the 'USB Details' section is active, showing a table with columns for 'USB Class', 'Manufacturer', 'Device Name', and 'USB 2.0/1.1'. The table is currently empty, indicating no USB devices are connected.

USB Class	Manufacturer	Device Name	USB 2.0/1.1
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This page shows you details on USB hard drives and UPSs plugged into your LinkStation. In this example, no USB hard drives are plugged in to the LinkStation.

## System Status (Drive Properties)



The screenshot displays the 'System Status' page in the Link Station interface. The left sidebar contains navigation options: Home, Basic, Network, Disk Management, Shared Folders, Group Management, User Management, Disk Backup, Maintenance, System Status (highlighted), System Information, USB Details, Drive Properties (highlighted), Network Information, and Logout. The main content area is titled 'System Status' and includes a 'HELP' button. It is divided into two sections: 'Disk Information' and 'USB Disk Information'.

**Disk Information**

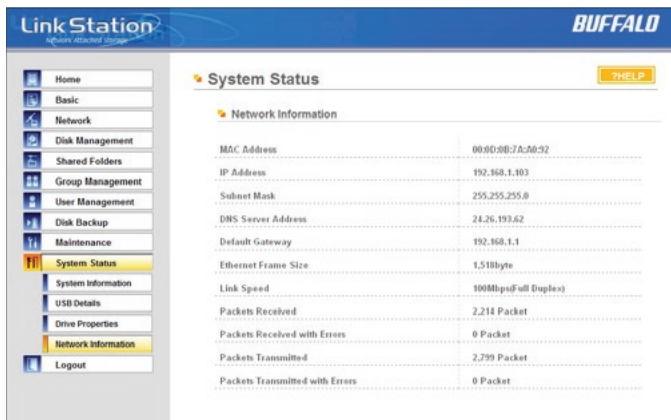
Disk 1	Status	Stencord Mode
	Unit Name	VD2100J3-Z2M-030
	Total Capacity	237,042,460 bytes
	Amount Used	258,940 bytes
	Percent Used	0.13 %
	File Format	EXT3

**USB Disk Information**

USB Disk 1	Status	Not Detected
USB Disk 2	Status	Not Detected

This page shows you the properties of all hard drives in and attached to your LinkStation.

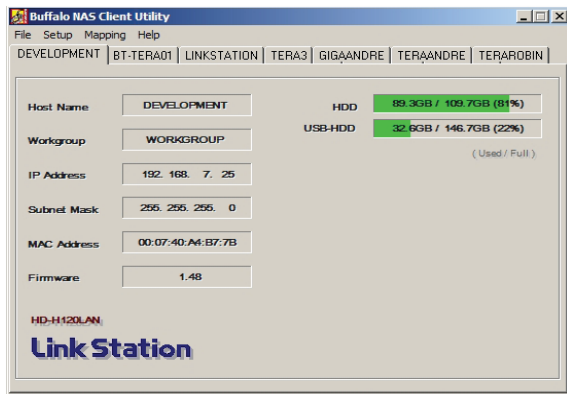
## System Status (Network Information)



The screenshot displays the Link Station web interface. The left sidebar contains a navigation menu with the following items: Home, Basic, Network, Disk Management, Shared Folders, Group Management, User Management, Disk Backup, Maintenance, System Status (highlighted), System Information, USB Details, Drive Properties, Network Information, and Logout. The main content area is titled 'System Status' and includes a 'HELP' button. Underneath, the 'Network Information' section displays the following data:

MAC Address	00:80:08:7A:28:92
IP Address	192.168.1.103
Subnet Mask	255.255.255.0
DNS Server Address	24.26.193.62
Default Gateway	192.168.1.1
Ethernet Frame Size	1,518byte
Link Speed	100Mbps(Full Duplex)
Packets Received	2,214 Packet
Packets Received with Errors	0 Packet
Packets Transmitted	2,799 Packet
Packets Transmitted with Errors	0 Packet

This page shows you the System Information for your network connection.



This is the *Buffalo NAS Client Utility*. Installed on your PC, it allows you to access each of the LinkStations (and TeraStations) on your network. Click *Refresh List* to get tabs for each of your LinkStations. Each tab shows the Host Name, Workgroup, IP Address, and Subnet Mask of the associated LinkStation, as well as the version of firmware it's running.

With a LinkStation's tab selected, you can click on the *View Shares* button to go directly to its root share. Clicking the *Setup* pulldown menu and selecting *Browser Management* takes you to the browser management tool that we began exploring on page 20. And clicking *Setup* and choosing *Modify IP Address* takes you to the following screen . . .

## IP Address Setup

IP Address Setup

Acquire IP Address Automatically via DHCP

New IP Address

IP Address    192    168    1   

Subnet Mask    255    255    255    0

Administrator Password   

OK    Cancel

Here, you may enter your *IP Address* and *Subnet Mask* manually, or enable your LinkStation to acquire them automatically from a DHCP server. You'll need the administrator password to use this screen. Press *OK* when you're done.

## Disk Errors

If LinkStation encounters a disk error, it will be reported in the LinkStation status on the top of any of the Web-Based configuration screens. Run a *Disk Scan* in the event of this error. If that doesn't work, try a reformat. Reformatting the drive will delete all of the data on it so try to backup any data you can before beginning. Finally, if none of the above solutions help, then please contact Technical Support for further assistance.

## LED Flash Codes:

- 3 flashes - Partition problem with hard drive. Reformat the hard drive.
- 4 flashes - Fan problem.
- 5 flashes - ROM problem.
- 6 flashes - Hard Drive can not be recognized.
- 7 flashes - Problem with motherboard (RAM, LAN, or Hard Drive controller).

LAN Standards:	IEEE 802.3u; IEEE 802.3ab; IEEE 802.3
Transmission Types:	1000BASE-T: 8B1Q4, PAM5; 100BASE-TX: 4B5B MLT-3; 10BASE-T Manchester Coding
Access Media:	CSMA/CD
Media Interface:	RJ-45
USB Standard:	USB 2.0 Hi-Speed (HS) Full-Speed (FS) Low-Speed (LS)
USB Connector:	USB A Connector (2)
Data Transmission Speed:	Max: 480 Mbps (HS Mode) Max: 12 Mbps (FS Mode)
Electric Current:	120V A/C
Power Consumption:	~21W (Varies slightly with drive size)
Dimensions:	2.4" x 6.3" x 8.5" (60 x 160 x 216 mm.)
Weight:	~3.5 lbs (x.x kg.) (Varies with drive size)
Operating Environment:	41°-95° F, 5°-35° C; 20-80% non-condensing

Buffalo Technology USA Inc.  
4030 West Braker Lane, Suite 120  
Austin, TX 78759-5319

### GENERAL INQUIRIES

Monday through Friday  
8:30am-5:30pm CST

**Direct:** 512-794-8533 | **Toll-free:** 800-456-9799 | **Fax:** 512-794-8520 | **Email:** [sales@buffalotech.com](mailto:sales@buffalotech.com)

### TECHNICAL SUPPORT

North American Technical Support by phone is available 24 hours a day, 7 days a week. (USA and Canada).

**Toll-free:** (866) 752-6210 | **Email:** [info@buffalotech.com](mailto:info@buffalotech.com)



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Phone: +353 61 70 80 50

Email: *helpdesk@buffalo-technology.ie*

\*Calls cost 8.5p per minute

Technical Support Operating Hours

Monday - Friday (GMT)

9:00 AM - 6:00 PM Monday-Thursday

9:00 AM - 4:30 PM Friday

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For each individual product and revision, please send one individually packaged self addressed padded CD shipping envelope, containing a blank CD-R to the following address:

**Buffalo Technology USA Inc.**  
**4030 W. Braker Lane Suite 120**  
**Austin, TX 78759**  
**Attn. GPL Department**

Within the envelope containing the self addressed padded CD shipping envelope, please include a bank draft or money order for \$20 (USD) (Made out to: Buffalo Technology) to cover our handling fee, postage and CD preparation. The CD-R should have the name of the product and revision number clearly written on the actual CD-R (not on the insert).

We do not send GPL source in bulk on a DVD. And order confirmation is not required by the GNU General Public License.

We are more than happy to comply with your request; however, we must ask you to comply with our GPL distribution policy, which complies with the GNU General Public License.

Sincerely,  
Buffalo Technology GPL Department

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For each individual product and revision, please send one individually packaged self addressed padded CD shipping envelope, containing a blank CD-R to the following address:

**Buffalo Technology Ireland Ltd**  
**Free Zone East, Shannon, Co. Clare**  
**Ireland**  
**Attn. GPL Department**

Within the envelope containing the self addressed padded CD shipping envelope, please include a bank draft or money order for €20 (Euro) (Made out to: Buffalo Technology) to cover our handling fee, postage and CD preparation. The CD-R should have the name of the product and revision number clearly written on the actual CD-R (not on the insert).

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