



COMPUTER CONNECTION TECHNOLOGY

802.11g – 54Mbps Wireless Projector Server

User Manual

English



LINDY No. 32500

www.lindy.com



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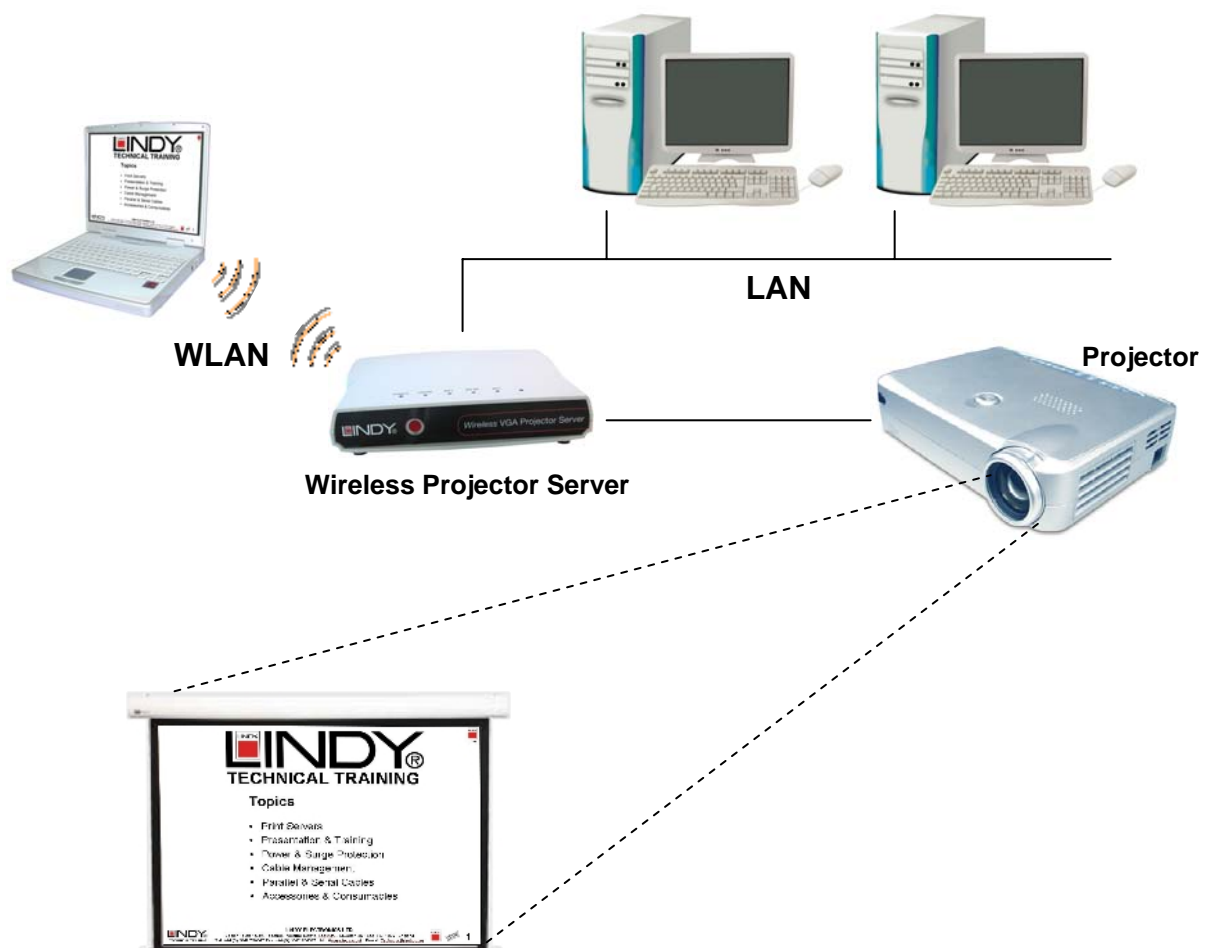
Introduction

Thank you for purchasing the LINDY Wireless Projector Server. This innovative product allows you to connect to your projector for presentations via a Wireless LAN, Ethernet network or directly, using a built-in image viewer.

The LINDY Wireless Projector Server features both an IEEE 802.11g 54Mbps WLAN and a 10/100Mb Ethernet LAN connection for maximum versatility. Additionally, the Projector Server features 32MB of internal memory for uploading PowerPoint presentations. A dedicated USB port means you can connect your USB keyboard or mouse, allowing you to conduct presentations without the need for a PC!

Features

- Allows connection to a projector or monitor via wired or wireless LAN
- Built-in image viewer for 'computer-less' presentations
- Internal 32MB memory for image storage
- IEEE802.11g (DSSS) 2.4GHz wireless connection
- Up to 128-Bit WEP encryption
- Wireless access point function
- 10/100Base-TX interface
- Supports XGA display resolutions of up to 1024 x 768 and 24-bit colour
- USB 1.1 port for connecting a keyboard or mouse
- Simple installation and operation



Specifications

Network

- Standards: IEEE 802.11g (DSSS) 2.4GHz WLAN; IEEE 802.3u (100Base-TX), 802.3 (10Base-T) LAN
- Supports AP/Client/Ad-Hoc modes
- Security: 64/128-Bit WEP Encryption
- Channels: 11 (US, Canada), 13 (Europe), 14 (Japan)
- Range: Up to 25 metres (82 feet)
- Antenna: Built-in

Interfaces

- VGA: 15 Way HD Female
- LAN: 100/100Mbps, RJ-45
- USB 1.1: Type A Female

General

- Internal Storage: 32MB
- Power: 5V, 2.5A
- Dimensions (WxDxH): 208 x 144 x 33mm
- Weight: 0.4kg
- Operating temperature: 0°C ~ 40°C; 32°F ~ 104°F
- Operating humidity: 10% ~ 85%, non-condensing

System Requirements (PC)

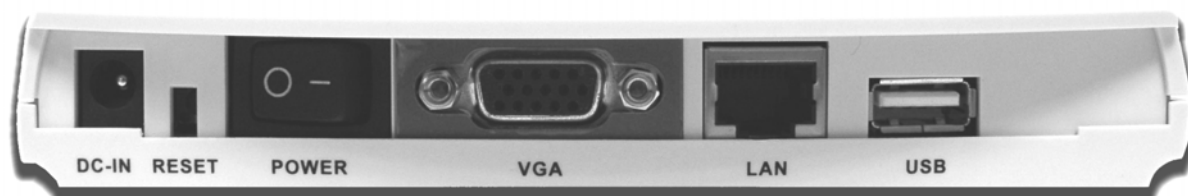
- Pentium III 500MHz or faster processor
- 128MB RAM recommended
- LAN or WLAN adapter
- Windows 2000/XP
- Web browser (IE 5.0, Netscape 4.0 or above)
- Adobe Acrobat Reader (to access on-line help)

Package Contents

- Wireless Projector Server
- Power Adapter
- Installation CD
- This manual

Overview

Rear Panel



DC-IN	Connect the power adapter here
RESET	Resets the Projector Server to factory defaults
POWER	Power ON/OFF switch
VGA	Connect the projector's video cable here
LAN	Ethernet connection
USB	For connecting a USB keyboard or mouse

LED Indicators



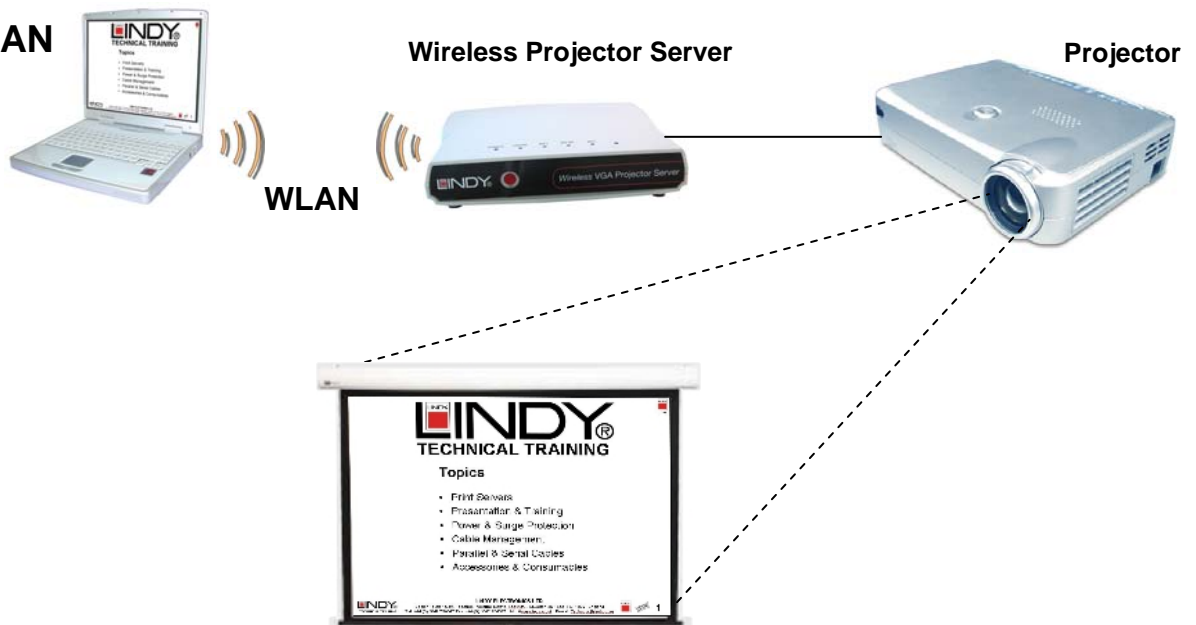
USB	Illuminates when a mouse or keyboard is connected
WLAN	Illuminates when the WLAN is active; blinks when there is traffic
LAN	Lights up when the LAN port is connected; blinks when there is LAN traffic
READY	Blinks while the system is powering up. It will illuminate steadily when the Projector Server is ready
POWER	Lights up when the projector server is powered on

Using the Wireless Projector Server

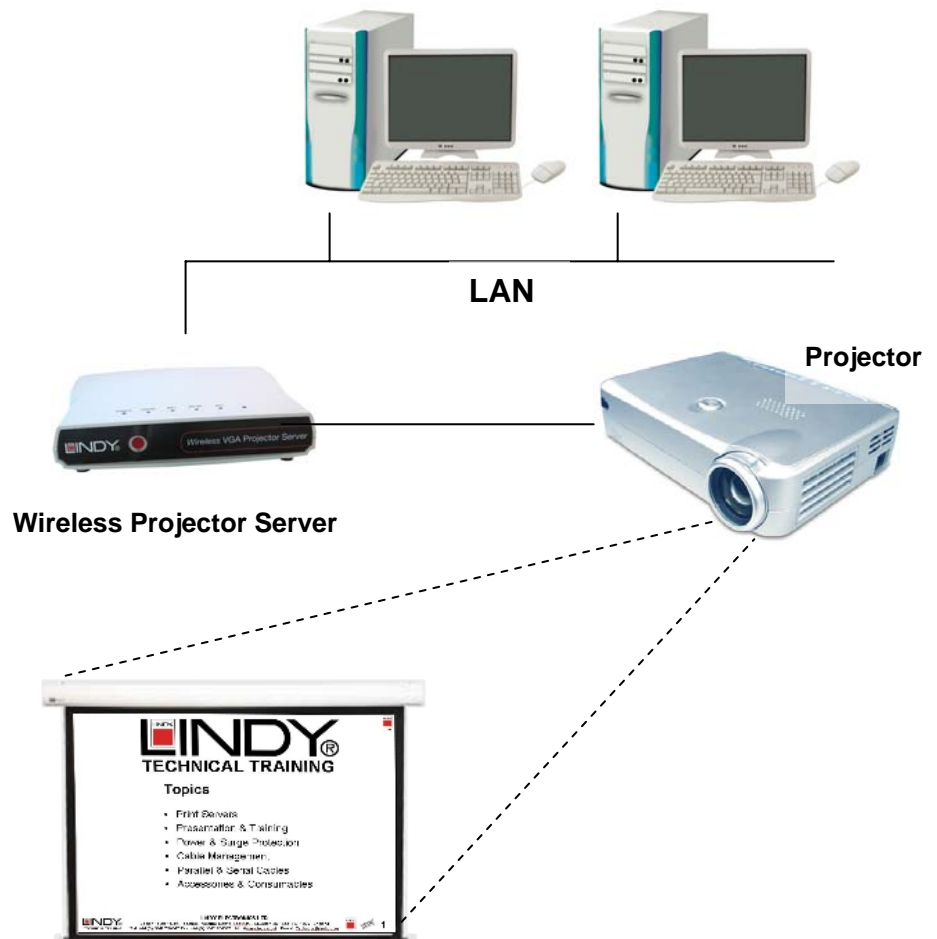
There are three ways of using the Wireless Projector Server:

- Via a WLAN
- Via an Ethernet network
- Via the built-in image viewer

Via a WLAN



Via an Ethernet network

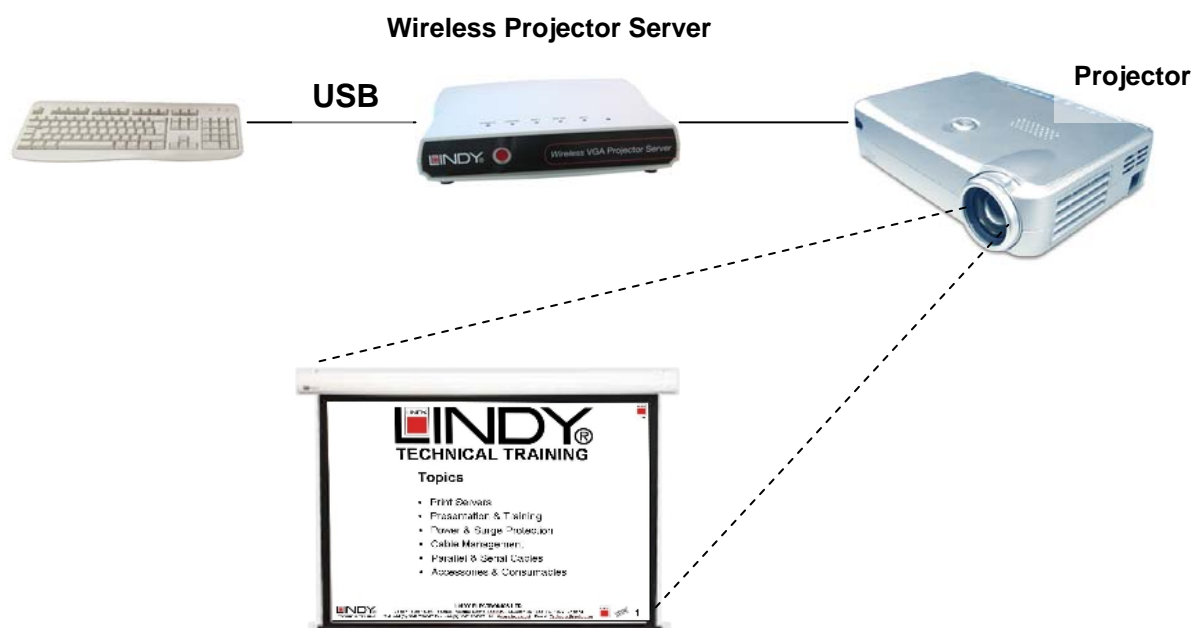


Via the built in image viewer

Step 1 – Upload the Presentation to the Projector Server's internal memory



Step 2 – Connect a USB keyboard or mouse. Conduct a presentation without a PC!



Connecting the Projector Server

Connecting to an Ethernet network:

1. Connect one end of a standard CAT5 or higher UTP Ethernet cable to the Projector Server's LAN port.
2. Connect the other end of the Ethernet cable into a network hub or switch. (The maximum distance between the Projector Server and hub/switch is 100m)

Connecting the power:

1. Plug the power adapter jack into the DC-IN socket on the Projector Server
2. Connect the power adapter into a mains outlet
3. Switch on the power at the rear of the Projector Server. The Power and LAN LED's will illuminate and READY LED will flash while the Projector Server initializes. If the LAN LED is not lit, please check your Ethernet cable connection.

Connecting a Projector (or monitor):

1. Connect the VGA cable from your Projector/monitor to the Projector Server's VGA port.
2. Power on the projector/monitor to complete installation.

Configuring the Projector Servers network address:

The default IP address setting of the Projector Server is set to 'Dynamic IP enabled'. When connected to a LAN with a DHCP (Dynamic Host Configuration Protocol) service the Projector Server's IP address will be automatically set. For fixed IP network settings Dynamic IP should be disabled **(See Pages 19 – 21)**

Connecting to a Wireless Network:

Set up a wireless LAN connection to the Projector Server in the same way that you would a Wireless Access Point:

1. Power up and connect the Projector Server to your projector or monitor. Ensure the WLAN Adapter in your PC is properly configured and functioning correctly
2. Move the mouse pointer over the network tray icon on the right hand side of the Windows task bar. Make sure the Projector Server, identified by its ESSID as shown in the Main Console Menu **(see Page 13)**, is linked to the adapter:



Main Console Menu showing Projector Server's ESSID

Wireless network connection on Windows taskbar showing link to the Projector Server.

Installing the Player Utility (Meeting Gateway)

Each PC which needs to access the Projector Server (either wirelessly or over a wired LAN) needs to have the Projector Server's utility, called Meeting Gateway, installed. Please follow the instructions below to install the software. Repeat for each required PC.

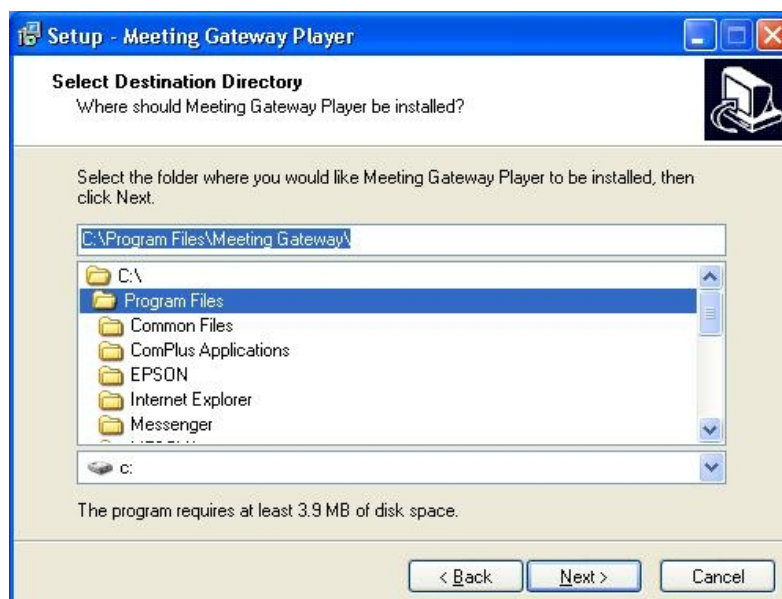
1. Insert the supplied utility CD into your CD-ROM drive
2. The setup utility should run automatically. If it does not, then select **Start** from the Windows taskbar, and then choose **Run**. In the command box type:

x:\player_setup.exe (where **x** is the letter of your CD-ROM drive)

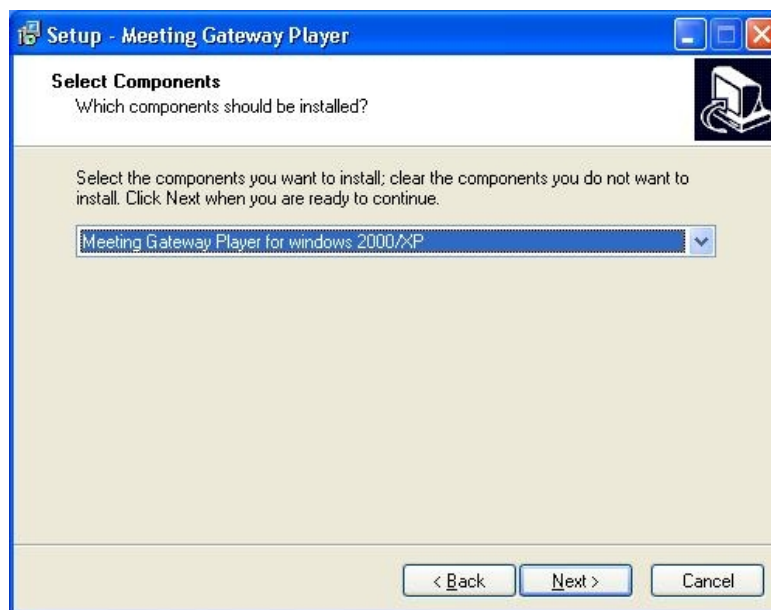
3. The following welcome screen will appear. Click **Next** to continue:



4. The setup utility will choose a default folder in which to install the utility files. Click **Next** to accept the default folder:



5. Select the component from the list and click **Next**:



6. Once the installation has completed click **Finish**:



7. The Meeting Gateway program icon will be created on your desktop:



Using the Player Utility

Launch the Meeting Gateway Player Utility by double clicking the icon on the desktop.

Note: Some personal firewall software may block connection of the Player Utility to the Projector Server. Disable the personal firewall software when using the Player Utility, or configure the firewall to allow connections on ports 4000, 4001 and 5900.

The Player Utility will search for connected Projector Server's and a menu will appear:



Help: Access the on-line help. (Requires Acrobat Reader)

Search: Searches for all available Projector Servers on the network. The results are displayed in the central drop down list

Connect: Clicking this button connects to the selected Projector Server (displayed in the drop down list). Once connected to the Projector Server your computer's display will be output on the projector connected to the Projector Server.

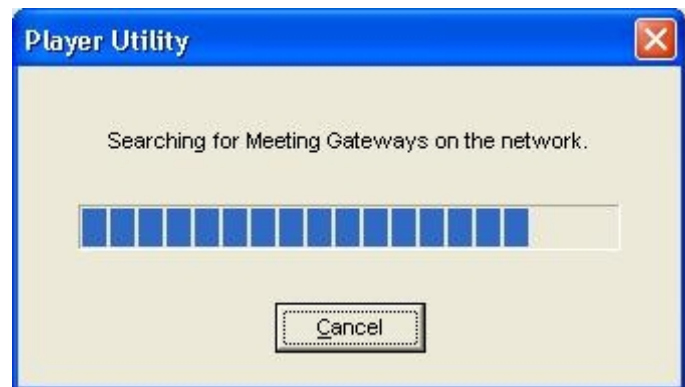
Options: Provides the following connection options: Low Speed / High Quality
High Speed / Low Quality (Less Colour)

Upload: Click here to upload your presentations to the Projector Server's internal memory (see Page 12)

Disconnect: Click this button to end your session and make the Projector Server available to other users

Searching and Connecting to a Projector Server

1. Click **Search** to begin searching for available Projector Servers. (You can also type the Projector Servers IP address in the drop down box). If no Projector Servers are initially found, continue clicking **Search** until the dialog box below appears:



2. When a Projector Server has been found it will appear in the drop down list:
3. Click **Connect** to connect to the Projector server:
4. Once connected to the Projector Server your computer's display will be output by the projector connected to the Projector Server
5. The Player Utility needs to remain running while you are connected to the Projector Server, so minimize the window by clicking the button on the Windows taskbar:



Disconnecting from a Projector Server

1. Maximize the Player Utility by clicking the Program button on the Windows taskbar
2. Click **Disconnect** to end a current session and make the Projector Server available to other users:

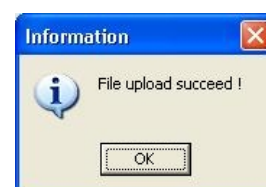
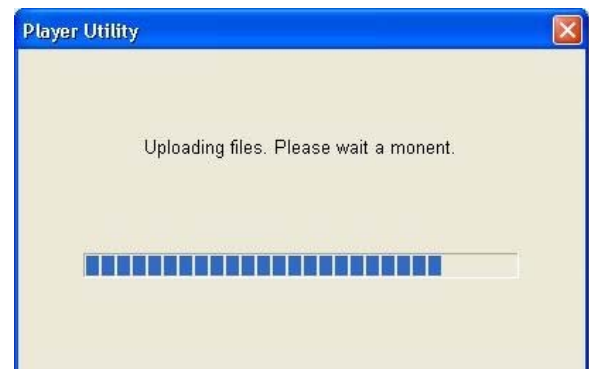
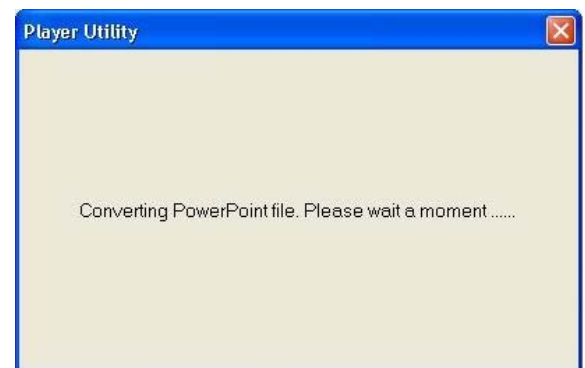
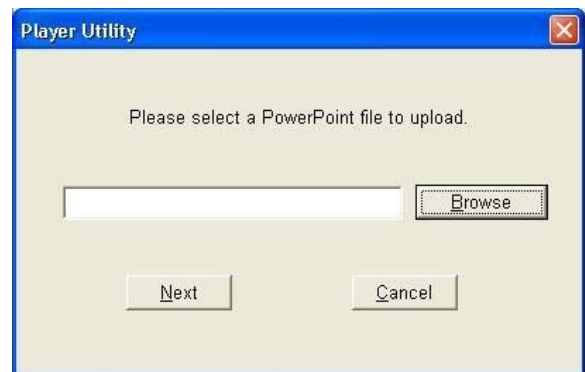
Uploading a presentation to the Projector Server

The Projector Server provides the option of console based 'PC-less' presentations. The Player Utility's **UPLOAD** function converts your PowerPoint presentations into a series of jpeg files which are then transferred to the Projector Server's built-in memory.

You will need either a USB mouse (with scroll wheel) or USB keyboard to conduct the Slide Show.

Note: You must have Microsoft PowerPoint installed on your PC to use the Player Utilities UPLOAD function!

1. Launch the Player Utility and click the **UPLOAD** button:
2. Click **BROWSE** to search for the required PowerPoint file
3. Click **NEXT**. PowerPoint will be launched and a box will appear stating that the PowerPoint file is being converted.
4. Once the PowerPoint presentation has been converted the files will be uploaded to the Projector Server.
5. After the file upload has completed, click **OK**.
6. Click **DISCONNECT** to complete the upload procedure



Projector Server Console Operation

Note: For Console operation you must use a mouse (with scroll wheel) or keyboard attached to the USB port at the rear of the Projector Server. Make sure you connect the mouse/keyboard before powering on the Projector Server!

The Main Console Screen

After you have connected the Project Server and powered up you will see the Main Console Screen:



IP: The IP Address of the Projector Server

Host Name: The name of the Projector Server

ESSID: The network name for other wireless devices to identify and connect to the Projector Server

Channel: Shows the currently selected wireless channel.

ESSID: The network name for other wireless devices to identify and connect to the Projector Server

From the main console screen you can access the slide show sub-menus by pressing the **ENTER** key on your keyboard or the left button on your mouse

Using the Projector Server Console

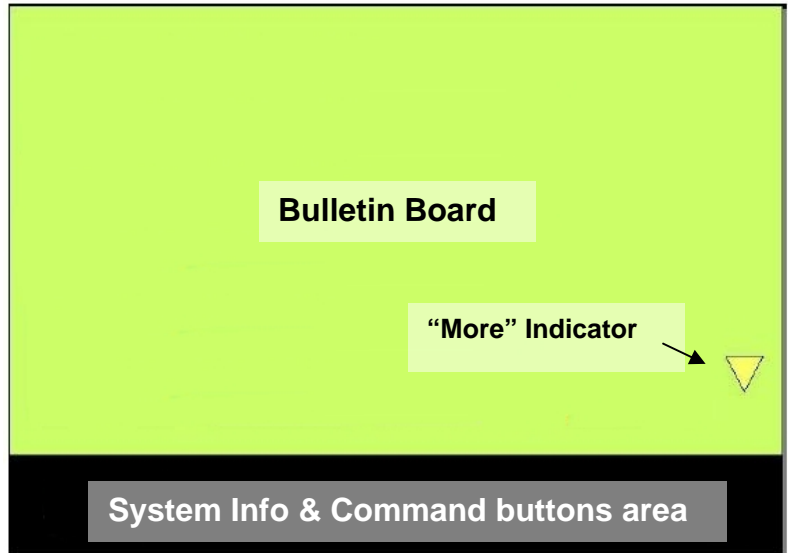
There are three menus within the Projector Server Console: **Console Screen**, **Slide Show Menu**, and **Slide Show Listing**. All of these menus are made up of the following operating components:

Bulletin Board: Used to display items for menu operations.

“More” Indicator: Eight items can be displayed in the bulletin board area at one time. If there are more than eight items a “More” indicator will appear to remind you of the additional non-displayed items.

System Info: System information such as available memory is displayed in this area.

Command buttons: The various command buttons are displayed here.



Command buttons



Play



Auto-Play





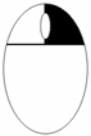


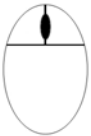




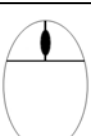
Delete





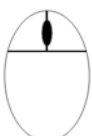



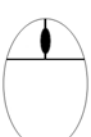
Exit

Keyboard/Mouse Operation

Keyboard/Mouse operation within the Slide Show Menu and Show Listing

Function	Keyboard Action	Mouse Action
Switch between Bulletin Board and Command Button Areas	 or 	Right-click 
Move between items	 and 	Scroll-wheel Forward/backward 
Select	 or 	Left-click 
Exit		Press the Scroll-wheel 

Keyboard/Mouse operation during Slide Show playback

Function	Keyboard Action	Mouse Action
Next/Previous Slide	 and 	Scroll-wheel Forward/backward 
Next Slide		Left-click 
Return to Slide Show Listing		Press the Scroll-wheel 

The Slide Show Menu

The Slide Show Menu allows for simple 'PC-less' presentations using just a USB keyboard or mouse.

When a PowerPoint file is uploaded to the Projector Server, each slide is converted into a jpeg image and stored in the Projector Server's internal memory.

Note: Because the PowerPoint presentation needs to be converted into jpegs, animation effects are not available during 'PC-less' slideshow presentations!



Play



Auto-Play



Delete

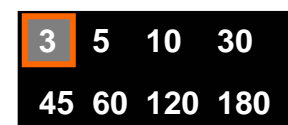


Exit

Uploaded Files: The uploaded files are numbered and displayed in the bulletin board area. Each file is represented by a thumbnail view of its first slide.

Play: Plays the selected file.

Auto-Play: Select this button to automatically advance to the next slide at preset time intervals. Upon activating Auto-Play a box will appear which provides the option to repeat the slide show (**REP**) and allows you to select the duration (in seconds) each slide displays before the next one appears.



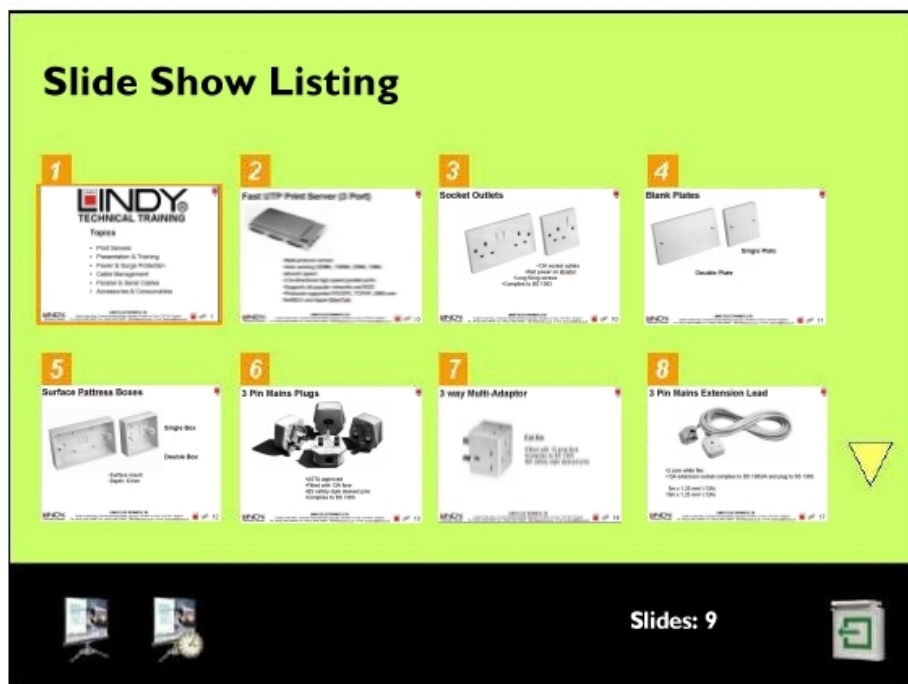
Delete: Deletes the selected file. A message box will appear prompting you to confirm the deletion:



Exit: Returns to the Main Console Menu

Slide Show Listing

The Slide Show Listing screen serves as the control panel during slide show playback.



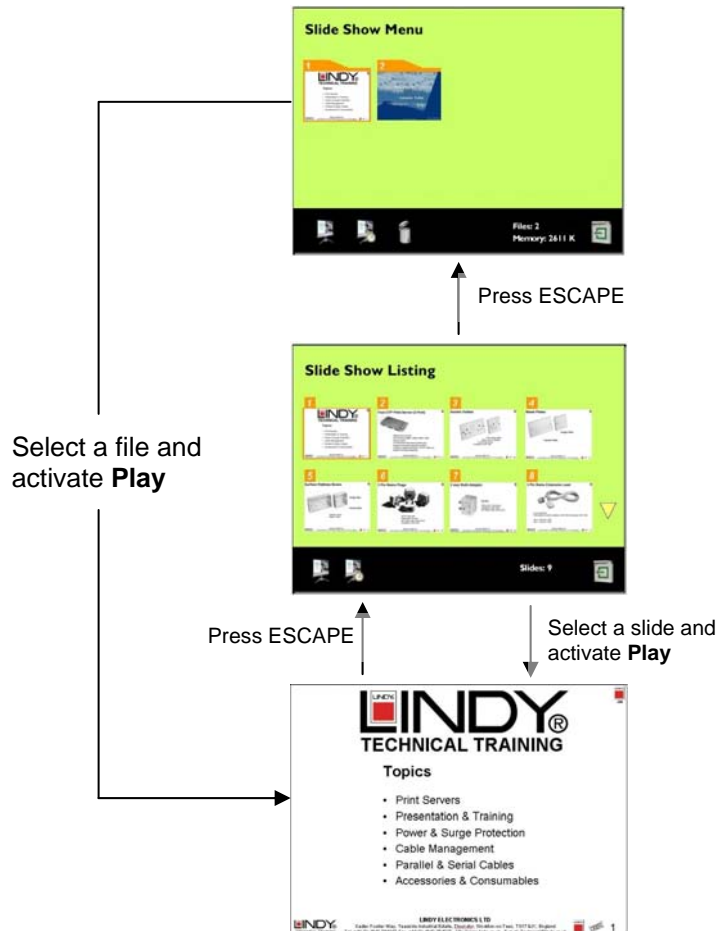
The Bulletin Board displays all of the slides in the selected file. Each slide is numbered and is represented by its thumbnail view.

You can move to a selected slide and start slide playback from that point by pressing the ENTER key or clicking the LEFT BUTTON on the mouse.

Conducting a Slide Show

There are three Slide Show modes: **Slide Show Menu**, **Slide Show Listing** and **Slide Show Play**.

Their relationship is illustrated below:



Note: See **Page 15** for keyboard and mouse controls

1. From the Slide Show Menu select the desired file.
2. Activate the **Play** button in the command bar to display slide by slide images.
3. During Slide Show playback you can press the ESCAPE key on your keyboard or the SCROLL WHEEL on your mouse to enter the Slide Show Listing.
4. When you reach the last slide in the presentation use the next slide command (press the ENTER key on your keyboard or left-click your mouse) to move to the first slide in the presentation.
5. To end the slide show press ESCAPE or the mouse SCROLL WHEEL to return to the Slide Show Listing.
6. From the Slide Show Listing press ESCAPE or the mouse SCROLL WHEEL to return to the slide show menu.

The Administrator Utility

The Projector Server's Administrator Utility is a browser based utility which allows you to modify or change the password, network and encryption settings. To configure the network and encryption settings, some basic knowledge of Ethernet and TCP/IP protocols is essential.

Accessing the Administrator Utility

Note: It is recommended that you disable the proxy server in your browser. The proxy server may block your access to the Projector Server!

1. Set up the Projector Server (**See Page 7**). The Main Console Screen will appear. Ensure the Projector Server is connected to your LAN or WLAN.
2. Make a note of the IP address shown in the lower part of the Main Console Screen.
3. Open a web browser (MS Explorer or Netscape) on your PC and enter the IP address as noted in Step 1:

IP: 169.254.1.1



4. Enter the password (**default: 654321**) and click **LOGIN**.

Using the Administrator Utility

The Administrator Utility consists of four sections that allow you to configure different settings. After making changes you need to click on the **Save** button within each section and then click **Re-boot** to reboot the Projector Server and make the changes effective. The exception is in the password section; clicking **Apply** here changes the password immediately without the need to reboot!

Log Out: Exits the Administrator Utility and returns to your previous web page

Re-boot: Closes the Administrator Utility and reboots the Projector Server to update changes

Change Password: Sets a new password to access the Administrator Utility. Click **Apply** to save changes.

- **New Password** - Enter your new password here (case sensitive)
- **Confirmation** – Re-enter the password

System: Here you can change the Host Name (Network identification) and default language. Click **Save** and **Re-boot** to save changes.

- **Host Name** – Enter a new host name here

Networking: You can modify various network settings here. Click **Save** and **Re-boot** to save changes.

- **IP** - The Projector Server's IP address can be set here
- **Mask** – The Subnet Mask can be set here
- **Gateway** – The Gateway address can be input here
- **Network Name (ESSID)** – The network name (ESSID) allows other wireless devices to identify and connect to the Projector Server. If there are multiple Projector Servers nearby, a unique name for each is necessary. Use a different network name and channel from a nearby Access point to avoid wireless interference problems.
- **Channel** – Here you can select a wireless channel from the drop down list.
- **Dynamic IP** – Click the Dynamic IP button to enable or disable automatic network address setting. You must have the DHCP (Dynamic Host Configuration Protocol) service on your network in order to use the Dynamic IP function. For fixed IP network settings, Dynamic IP should be disabled and the user should enter the parameters manually.

Encryption: The Encryption section allows the user to set the encryption keys for the WEP (Wired Equivalent Privacy), a data privacy mechanism based on a shared encryption key algorithm as defined in the IEEE 802.11 standard. If you enable the WEP setting on the Projector Server, all other wireless devices to be connected to it should use WEP with the same encryption keys. Click **Save** and **Re-boot** to save changes.

- **WEP Encryption** – Three settings: **Disable**, **64 Bits** or **128 Bits** can be chosen from the drop down list. Note – some wireless devices may not support 128 Bit encryption.
- **WEP Key Entry** – Here you can manually enter a set of four keys. For 64 Bit encryption, each key must consist of exactly 10 hexadecimal characters. For 128 Bit encryption, each key must consist of exactly 26 hexadecimal characters.

Note: The hexadecimal characters are: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, a, b, c, d, e and f. Make sure you enter the hexadecimal characters when setting up WEP keys on your PC as well!

- **Default TX Key** – Select which key to use when transmitting data. Make sure the PC's WEP encryption key exactly matches the Projector Server's.

It is highly recommended that you always enter all four sets of WEP keys to ensure smooth communications with other WLAN devices. When WEP encryption is enabled, the selected WEP key of the sending device must match exactly with that of the receiving device.

For example, if you select **Key 2** as the Projector Server's default TX key, then the receiver's (the PC's WLAN adapter) **Key 2** must contain exactly the same encryption codes. Then, if you select **Key 3** as your PC's default TX key, then the receiver's (Projector Server) **Key 3** must contain exactly the same encryption codes. Therefore, under these two circumstances, your PC's **Key 2** and **Key 3** encryption settings must match those of the Projector Server.

Note: The Projector Server's four WEP keys are labelled 1 through 4 respectively. Some WLAN devices WEP keys are labelled 0, 1, 2 and 3. In such instances the Projector Server's **Key 1** must match with the devices **Key 0**, **Key 2** with **Key 1** and so on.

Troubleshooting

Common Problems and Solutions

- Some personal firewall software may block connection of the Player Utility to the Projector Server. Disable the personal firewall software when using the Player Utility, or configure the firewall to allow connections on ports 4000, 4001 and 5900.
- If the WLAN utility on your PC indicates that your WLAN card is already linked to the Projector Server, but the Player Utility can not connect, please check that the WEP setting and the WEP keys on your computer are the same as those on the Projector Server.

Frequently Asked Questions

Can I connect to the Projector Server to a computer through the internet?

No. Although the Projector Server uses standard internet protocols, most companies will have a firewall to restrict traffic.

Can I play a game or watch movies through the Projector Server?

No. The Projector Server is designed for business graphics and presentations only.

FCC Warning

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

- Reorientate or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

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



For Home and Office Use
Tested to comply
with FCC Standards

LINDY No. 32500

