

MP115 A/V

Digital Media Player

User's Guide

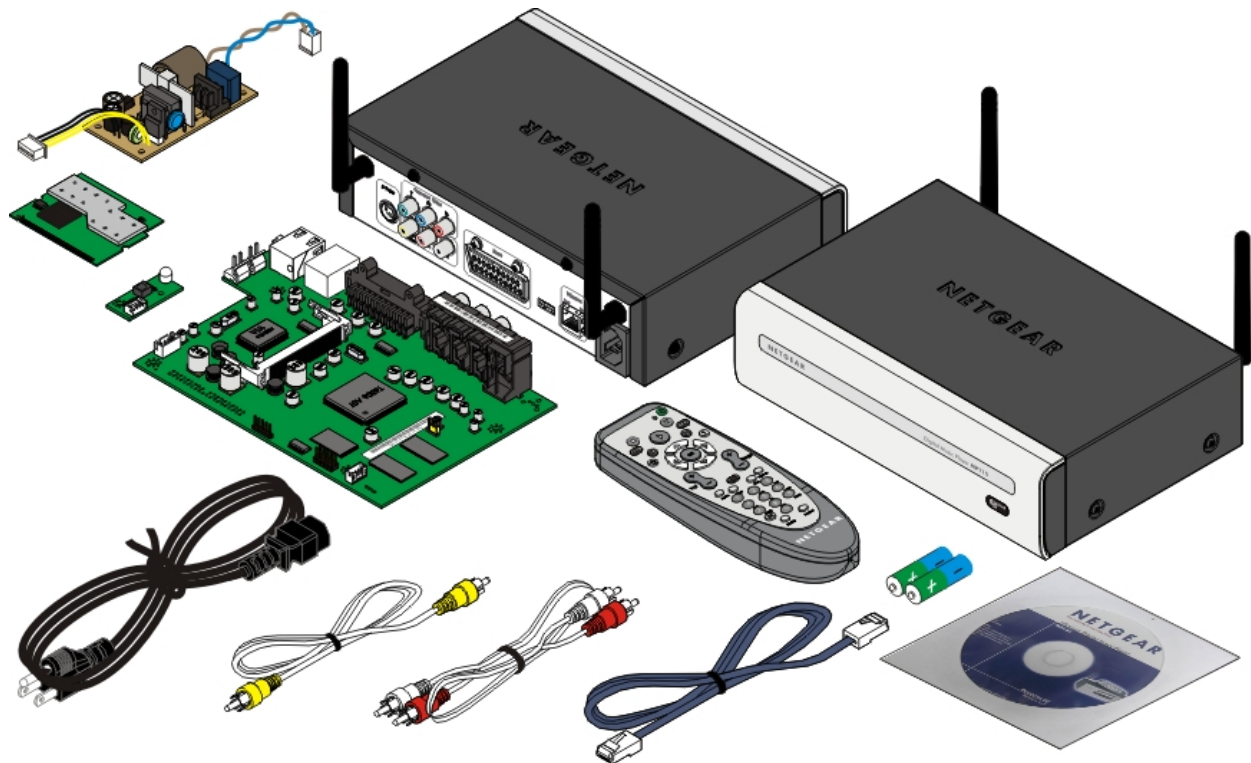


Table of Contents

History of MP115 Wireless A/V Digital Media Player User's Guide	1
1. Production Highlights	4
MP115 Digital Media Player (NA) Appearance.....	10
MP115 Digital Media Player (UK) Appearance	11
MP115 Digital Media Player Configuration Layout	12
2. Setting the MP115 Digital Media Player	13
Before Your Begin	13
Environmental Information	13
Safety Information	13
Package Contents	13
MP115 Digital Media Player Front/Rear Panel Overviews	14
Determining the Best Possible Connections	15
Connecting Your TV YPbPr Video with RCA to RCA Jacks.....	16
Connecting Your TV S-Video with S-DIN to S-DIN Jack.....	16
Connecting Your TV RGB Analog Video with RCA to RCA Jack.....	17
Connecting Your TV Composite Video with SCART to SCART Jack	17
Connecting Your TV Audio/Video with RCA to SCART Jacks	18
Connecting Your TV RGB Analog Video with RCA and Coaxial Cable via RF Modulator.....	18
Connecting a Stereo Audio Receiver (or Powered Speakers) with RCA to RCA Jacks	19
Connecting Your TV Audio with RCA to RCA Jacks	19
Connecting TV and Digital Media Player Power.....	20
3. Network Setup	21
Do You have a Network	21
Hub, Routers, and Switches	21
Network Address: Static and Dynamic.....	21
Overview of Home Networks	21
DHCP (Dynamic Host Client Protocol) Server	21
Router and Internet Connection Sharing.....	21
Wired Home Network.....	22
Preparing for Wired Setup	22
Wired Home Network Connection.....	22
Wired with Dynamic Address.....	22
Wired with Static Address	23
Wired with Crossover Cable Connection	23
Wireless Home Network.....	24
Preparing for Wireless Setup	24
Wireless Infrastructure	25
Wireless Ad Hoc.....	25
Wireless Encryption.....	26
Connecting Media Server and Network	26
Connection Information	26
Orientation of the Wireless Antenna	27

Fine Tuning the Digital Media Player Antenna (Wireless)	27
Remote Control	27
Remote Control Buttons Function	27
Remote Control Battery Installation	29
4. MP115 Digital Media Player Operation Environment Preliminary	30
Service Considerations	30
Plastic Parts	30
Cables and Connectors	30
Preventing Electrostatic Damage	30
Packaging and Transporting Precautions	30
Workstation Precautions	30
Grounding Equipment and Methods	31
5. Troubleshooting Tips (A) for Hardware	32
6. Glossary	34
7. Safety and Regulatory	34

MP115 Wireless Audio/Video Digital Media Player

User's Guide

Product Highlights

This document describes in detail the specification of a Wireless Audio/Video Digital Media Player for the MP115 designed to support UPnP compatible, and UPnP A/V conformant, networked audio/video capable of playing streaming audio (formats are supported: MP3, WMA, MAV, and AAC), video (formats are supported : MPEG1/2/4 and Divx4/5), and images (formats are supported: GIF, JPG, BMP, and TIFF) via a wired or wireless home network.

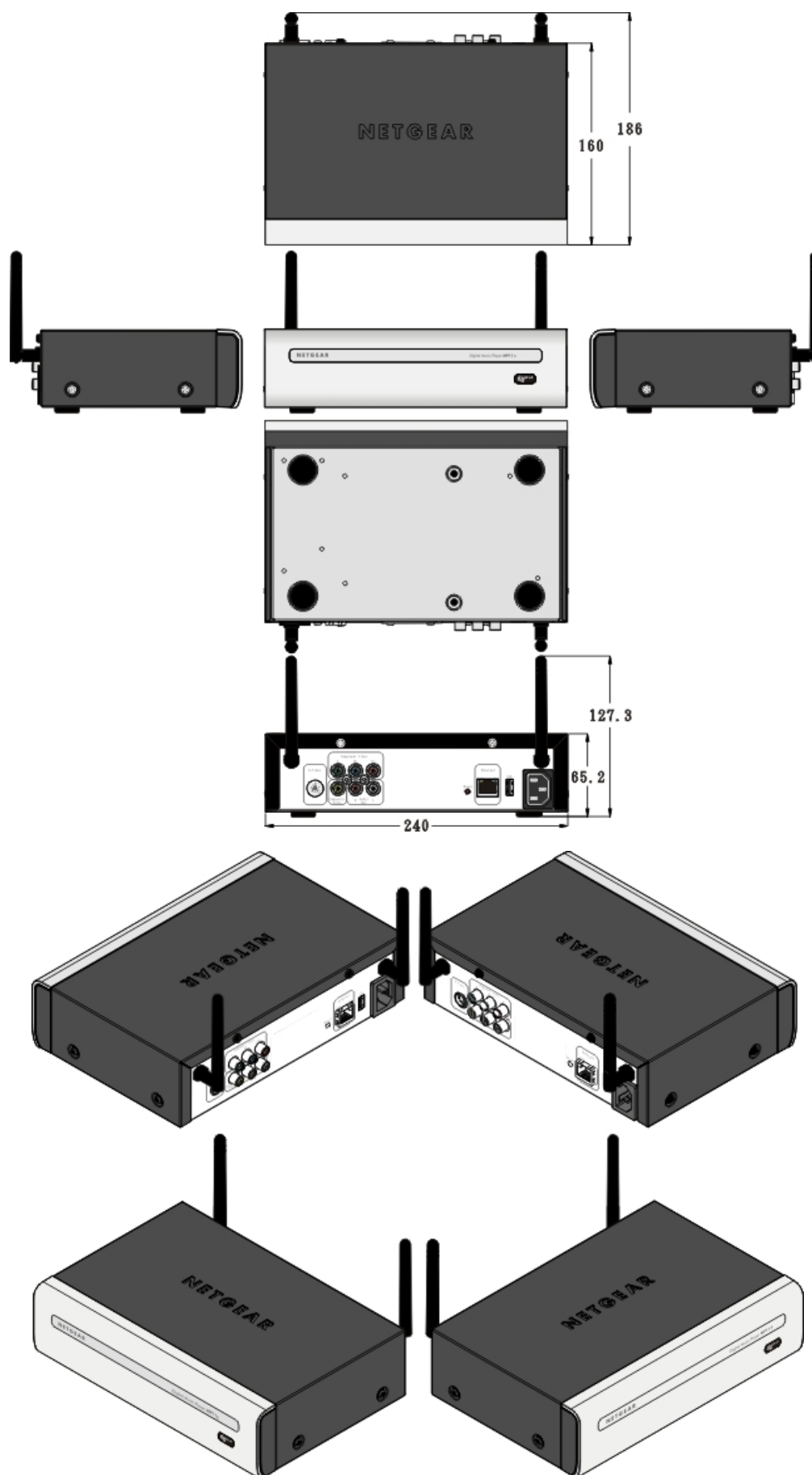
The MP115 Wireless Audio/Video Digital Media Player is a consumer product that delivers high-quality audio and video to stereos/Television (It connects to a television using either Composite Video, S-Video, Component Video, or SCART (optionally for EU versions.) throughout the home.

Use the Digital 5's Streaming Media Server software that provides the tools for managing your digital media. Digital media is organized into the Media Library, which is loaded with your existing media when media files are imported from your media file applications or your hard drive. The Streaming Media Server software also provides the interface between your PC and the Digital Media Player. The Streaming Media Server software must be running in order for the Digital Media Player to communicate with your PC, and bring the media capabilities of your PC to the comfortable confines of your living room. Now, all of the media stored in your PC can be accessed right from your entertainment center. Streaming Media is not limited to audio, but also streams video and brings all of your digital images right to your TV screen. You can opt for the convenience of current wireless networking standards or the security and reliability of good old-fashioned wires.

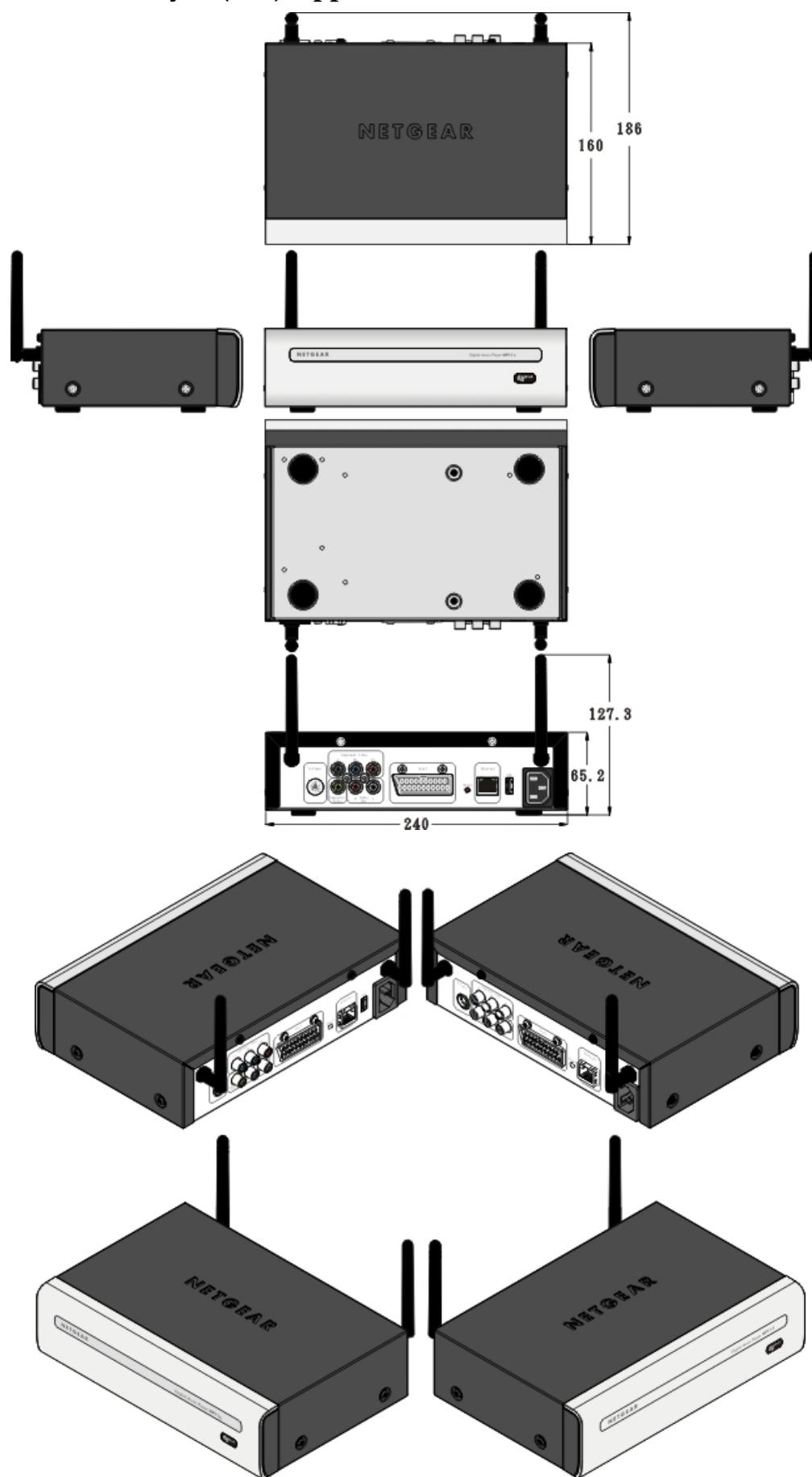
The Streaming Media is a client-server system but not in the traditional sense. It is comprised of a client and a server device. Media stored in the server is played from the client. The Digital Media Player has no permanent storage thus it is called the "client" because its purpose is to browse and playback content. The PC has permanent storage and thus it is called the "server". Image, movie, and music files can all be "saved" to the Digital Media Player from the PC. The communication between these devices is accomplished across a network, which can either be wired (using the 802.3 Ethernet standard) or wireless using the 802.11b or the 802.11g standard and shall support Atheros 108Mbps throughput with the mini-PCI interface).

The MP115 Digital Media Player is sophisticated piece of electronic unit and you must choose a proper working environment for the Digital Media Player. Avoid places that expose the components to dust, grease, extreme temperatures, or high humidity. An environment you'd consider suitable for a stereo receiver or TV should also serve your Digital Media Player well. Arrange the components securely on a firm, level surface, then follow the instructions as user's guide or relative documents.

MP115 Digital Media Player (NA) Appearance

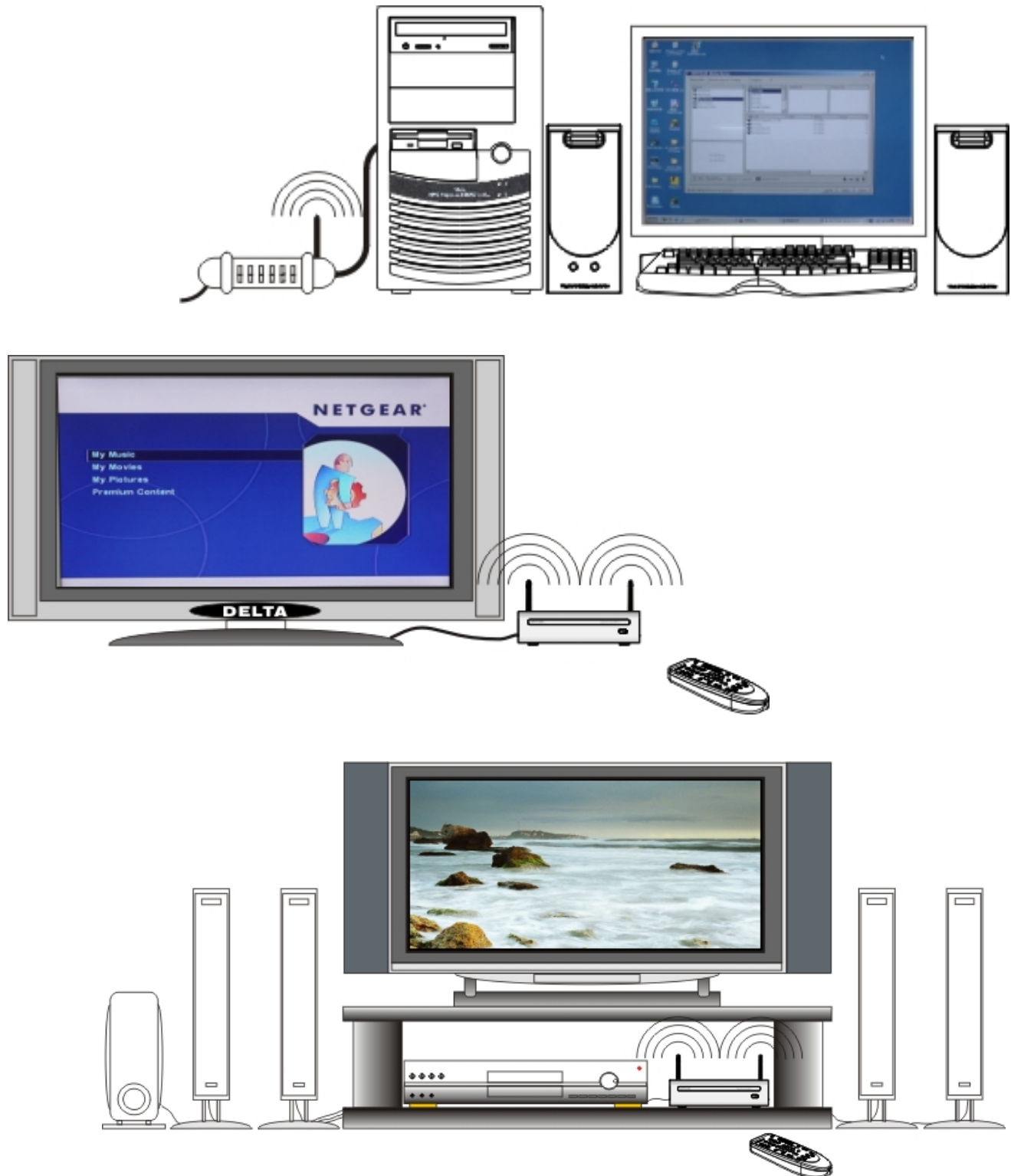


MP115 Digital Media Player (UK) Appearance



MP115 Digital Media Player Configuration Layout

Streaming Media Server is a client-server system that comprised of a client and a server device. The MP115 Digital Media Player has no permanent storage thus it is called the “client” because its purpose is to browse and playback content. The PC has permanent storage and thus it is called the “server”. Images, movies, and music files can all be served to the Digital Media Player from the PC. The communication between these devices is accomplished across a network, which can either be wired (using the 802.3 Ethernet standard) or wireless (using the 802.11b or the 802.11g standard).



Setting the MP115 Digital Media Player

Before Your Begin

- Refer to the manual of your TV, stereo receiver, or other equipment as necessary. Note the style of jacks and connectors on the other equipment. Determine how to choose different audio and video in channel on your other equipment so you can see and hear the images, movies, and music on the TV, stereo, etc.
- Disconnect all equipment from the power outlets. Connect the equipment to the power outlets only after you have finished hooking up everything. Never make or change connections with equipment connected to the power outlet.

Environmental Information

The MP115 Digital Media Player has materials that can be recycled and reused if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packing materials, and old equipment.

Safety Information

- Do not expose the MP115 Digital Media Player to excessive moisture, rain, sand, heat, or humidity.
- Place the MP115 Digital Media Player on a firm, flat surface.
- Keep the MP115 Digital Media Player away from domestic heating equipment and direct sunlight.
- When placing the MP115 Digital Media Player in a cabinet, allow enough space all around the Digital Media Player for ventilation and antenna orientation. Leave enough room in front of the Digital Media Player for the remote sensor control.
- When the MP115 Digital Media Player is turned off, it is still consuming some power. To disconnect the Digital Media Player from the power supply completely, remove the AC power plug from the power outlet.

Package Contents

Make sure you have the items are included with MP115 Digital Media Player. Note that some cables may be packed inside the egg box that holds the adapter-examine the box carefully before discarding it.

MP115 Digital Media Player Contents



Item	Content Descriptions
①	MP115 Wireless Audio/Video Digital Media Player
②	Remote Control + Batteries (R6/AA-1.5V)
③	Ethernet Cable (CAT.5 UTP)
④	RCA Stereo Audio Cable (red and white colored)
⑤	RCA Analog Video Cable (yellow colored)
⑥	AC Power Code

7	Resource CD
8	Installation Guide
9	Warranty/Support Information Card
10	User's Manual

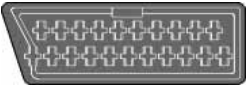
MP115 Digital Media Player Front/Rear Panel Overviews

Before you continue, please take a moment to become familiar with the locating and purpose of controls, the status panel, connectors, and ports, which are illustrated in the following:

MP115 Digital Media Player Front/Rear Panel Overviews



Appearance	Definition	Functional Descriptions
	Infrared (IR) Sensor Opening	The infrared (IR) sensor receives commands from remote control. The IR sensor is located on lower-right corner of the front of Digital Media Player.
	Dual Wireless (802.11g/b) Antenna	The wireless antenna can rotate on connector (perpendicular to the antenna base). You may want to try several different angles -90 to +90 degrees for the best reception. Minimum requirements of 802.11g/b must be met.
	S-Video Out Jack	Separate video, also called Y/C video. Separate luma (Y) and chroma (C) video signals are used, rather than a single composite video signal. By simply adding together the Y and C signals, you generate a composite video signal. The IEC 60933-5 standard specifies the S-Video connector, including signal levels. Connect an S-Video cable (not supplied) to the S-Video jack on the Digital Media Player. Connect the other ends of the S-Video cable to the S-Video jack on the TV.

	YPbPr Video Out Jacks	YPbPr is a scaled version of the YUV (YUV is the color space used by the NTSC and PAL video system.) color space, with specific levels and timing signals, designed to interface equipment together. For HDTV interfaces, 0.3V tri-level sync signals are used, while for SDTV interface, a 0.3V bi-level sync signal is present. Most use the YPbPr notation rather than Y'PbPr or Y'Pb'Pr'. The technically correct notation is Y'Pb'Pr' since all three components are derived from R'G'B'. Connect the YPbPr Video cable (which has red/green/blue marking and that not supplied) to the YPbPr Video jack on the Digital Media Player. Connect the other ends of the YPbPr Video cable to the YPbPr Video jack on the TV. Match the cable colors to the jack colors.
	Analog Audio/RCB Video Out Jacks	Connect the supplied Video cable (which has yellow markings) to Composite Video jack on the Digital Media Player. Connect the other ends of the Video cable to the Video In jack on the TV. Connect the supplied Audio cable (which has red and white markings) to the Audio Out L/R jacks on the Digital Media Player. Connect the other ends of the Audio cable to the Audio In jacks on the TV. Match the cable colors to the jack colors.
	SCART Video Out Jack	This is a 21-pin connector supported by many consumer video components in Europe. It allows mono or stereo audio, and composite, S-Video, or RGB Video to be transmitted between equipment. The IEC 60933-1 and 60933-2 standards specify the basic SCART connector, including signal levels. Connect an SCART Video cable (not supplied) to the SCART jack on the Digital Media Player. Connect the other end of the SCART Video cable to the SCART jack on the TV.
	USB Port Jack	USB 1.1 host port. The port will be used for USB disk drives and/or memory cards.
	Ethernet Port Jack	Use the supplied Ethernet cable to connect the LAN RJ45 jack to a 10BASE-T/100BASE-TX Ethernet network hub or route. The Digital Media Player will also work in 10/100Mbps Ethernet. Two Ethernet LEDs on the rear Ethernet Port jack. ▶ Link (Amber is 10Mbps and Green is 100Mbps) ▶ Activity (Green flashing)
	Reset Switch	This switch reset the Digital Media Player status that you can push once for soft reset, or push & hold to return unit to factory default configure.
	Power AC Inlet Jack	Plug the power cord (female) to the Power AC Inlet jack on the Digital Media Player. Plug the other end of the power cord (male) into an active power outlet. The Digital Media Player uses an internal power supply unit and it can automatically detect the AC line level.

Determining the Best Possible Connections

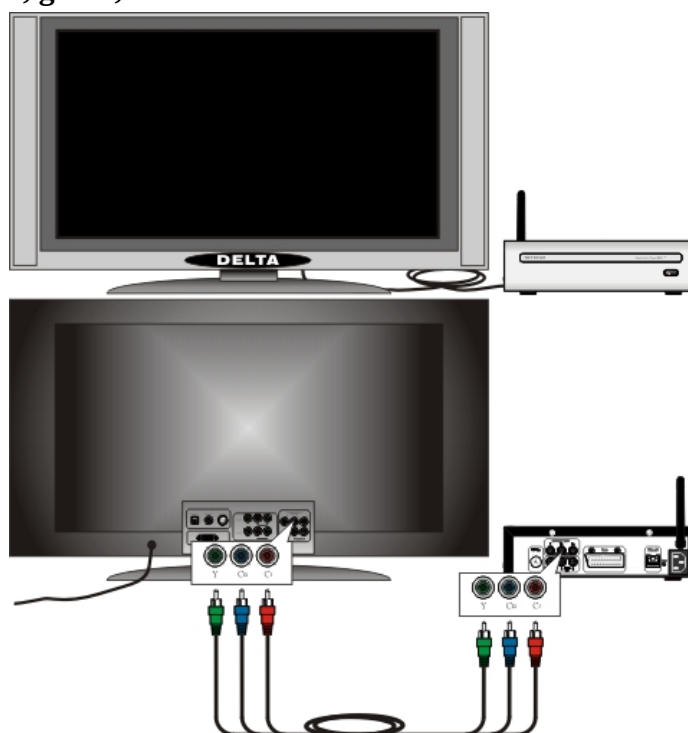
The capabilities of your existing equipment, especially your TV, will determine your connection possibilities. However, the following guidelines describe which options provide the best picture and sound quality.

Classification	Description
Video Connection Section	
OOOO	YPbPr video provides the best picture quality. Details are on page 16.
OOO	S-video provides excellent picture quality. Details are on page 16.
OO	RGB Analog video provides good picture quality. Details are on page 17.
OO	This is a 21-pin connector supported by many consumer video components in Europe. It allows mono or stereo audio and composite, S-video, or RGB video to be transmitted between equipment. Details are on page 17.
OO	Your TV may have only an RF-style jack, usually labeled Antenna In, or 75 ohm, or RF In. You will need an RF modulator in order to view the Digital Media Player at your TV. Details are on page 18.
Audio Connection Section	
OOO	Connect the Digital Media Player's red and white AUDIO OUT jacks to the AUDIO IN jacks on the TV, stereo receiver, or RF modulator. Details are on page 19.
OO	Connect the Digital Media Player's red and white AUDIO OUT jacks to the AUDIO IN jacks on the TV. Details are on page 19.

Connecting Your TV YPbPr Video with RCA to RCA Jacks

- If your TV has a YPbPr video input, you can use the YPbPr video cable (not included) with RCA line input jacks. Refer to the connection diagram given below, then connect the YPbPr video cable (which has red, green, blue markings) to the Digital Media Player's Y/Pb/Pr video jacks. Connect the other ends of the YPbPr video cable to the corresponding Y/Pb/Pr video jacks on the TV. Match the cable colors to the jack colors.

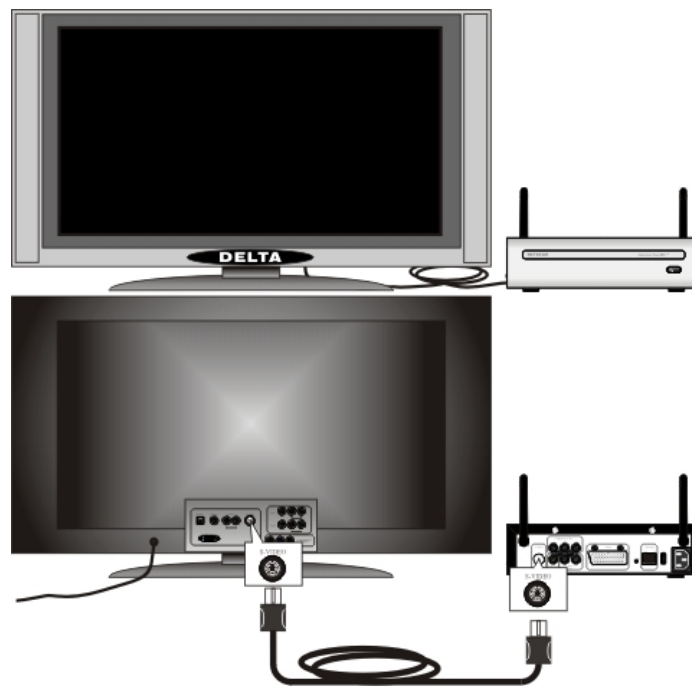
Note: On the TV, the COMPONENT VIDEO IN jacks may be labeled YUV, YPrCr, YPbCb, or YPbPr and may be red, green, and blue.



Connecting Your TV S-Video with S-DIN to S-DIN Jack

- If your TV has a S-video input, you can use the S-video cable (not included) with S-DN line input jack. Refer to the connection diagram given below, then connect the S-video cable to the Digital Media Player's S-VIDEO jack. Connect the other end of the S-video cable to the corresponding S-VIDEO jack on the TV.

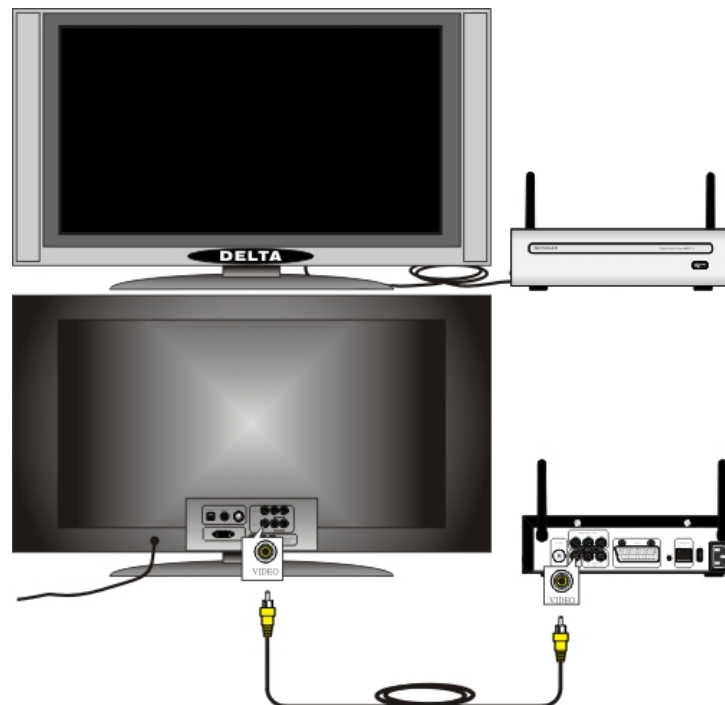
Note: On the TV, the S-VIDEO IN jacks may be labeled Y/C, S-VIDEO, or S-VHS (Super Video).



Connecting Your TV RGB Analog Video with RCA to RCA Jack

- If your TV has a RGB video input, you can use the supplied video cable with RCA line input jack (which has yellow marking). Refer to the connection diagram given below, then connect the video cable to the Digital Media Player's VIDEO jack. Connect the other end of the video cable to the corresponding VIDEO jack on the TV.

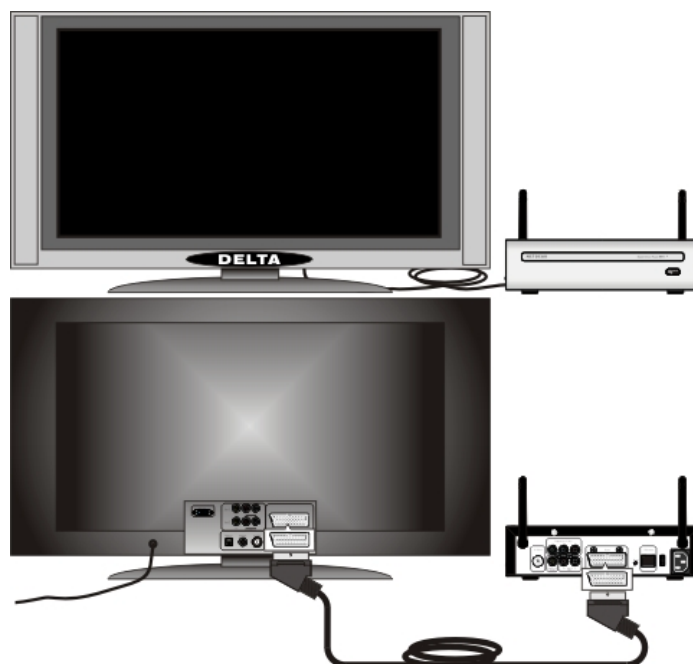
Note: On the TV, the VIDEO IN jack is usually yellow and might be labeled VIDEO, CVBS, COMPOSITE, or BASEBAND.



Connecting Your TV Composite Video with SCART to SCART Jack

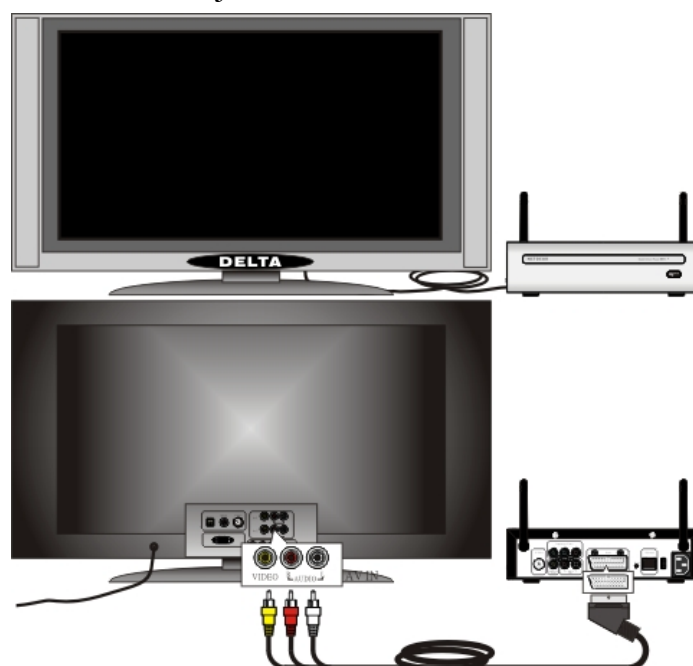
- If your TV has a SCART video input, you can use the SCART video cable (not included) with SCART line input jack. Refer to the connection diagram given below, then connect the SCART video cable to the Digital Media Player's SCART video jack. Connect the other end of the SCART video cable to the corresponding SCART video jack on the TV.

Note: The SCART video for SECAM TV in Europe only



Connecting Your TV Audio/Video with RCA to SCART Jacks

- If you have a (SCART to RCA) A/V cable (not included) that one end of the A/V cable with RCA line input jacks which has yellow, white, and red markings), and another end of the A/V cable with SCART line input jack. Refer to the connection diagram given below, then connect the SCART line input jack of the A/V cable to the Digital Media Player's SCART video jack. Connect the other ends of the A/V cable to the AUDIO L/R and VIDEO jacks on the TV. Match the cable colors to the jack colors.



Connecting Your TV Video with RCA and Coaxial Cable via RF Modulator

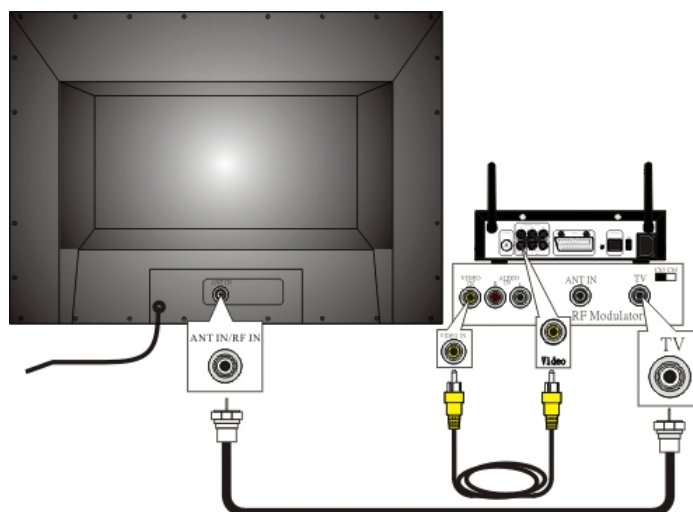
Before you begin, make sure you have an RF modulator and extra RF coaxial cables. These are not supplied with Digital Media Player, but are available from most consumer electronics retailers.

- Refer to the connection diagram given below. Connect the supplied video cable (which has yellow marking) to the Digital Media Player's VIDEO jack. Connect the other ends of the cable to the VIDEO jack on the RF modulator. The VIDEO jack on the RF modulator is usually yellow and might be labeled VIDEO, CVBS, COMPOSITE, or BASEBAND.
- You probably already have an Antenna or Cable TV signal connected to the ANTENNA IN jack on your TV. Disconnect it now from the TV. Reconnect the Antenna or Cable TV signal to the ANTENNA

IN jack on your RF modulator.

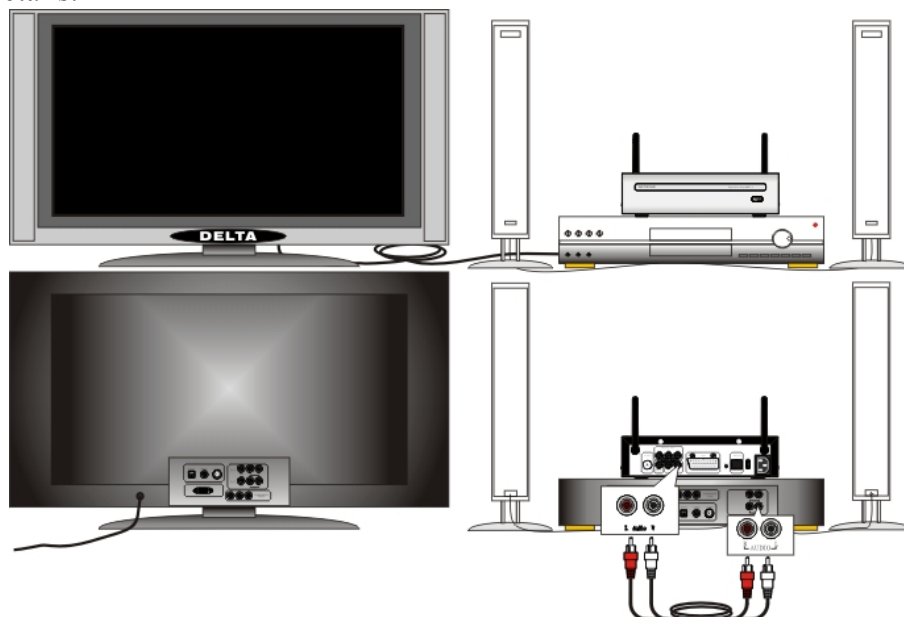
- Connect an RF coaxial cable (not supplied) to the RF OUT, ANTENNA OUT, or to TV jack on the RF modulator. The RF OUT jack may be labeled differently among different brands. Refer to the instructions provided with your RF modulator. Connect the other ends of the same RF coaxial cable to the ANTENNA IN or RF-IN jack on your TV.

Note: Your RF modulator should have a Channel 3/4 switch. The setting of this switch determines the TV channel on which you will watch materials playing on the Digital Media Player. Set the RF modulator's Channel 3/4 switch to either 3 or 4, whichever TV channel is least used in your area. If your RF modulator has a Modulator/Antenna switch, set it accordingly. Refer to the instructions that came with the RF modulator. Turn on your TV and choose channel 3 or 4. Choose the same channel to which you set the RF modulator's Channel 3/4 switch.



Connecting a Stereo Audio Receiver (or Powered Speakers) with RCA to RCA Jacks

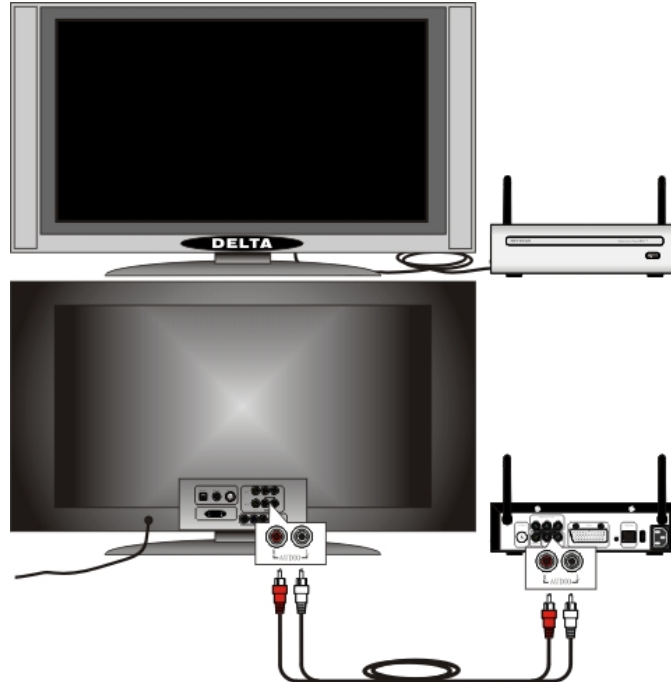
- Refer to the connection diagram given below. If you have a stereo receiver (or powered speakers) with RCA analog input. Connect the supplied audio cable to the Digital Media Player's AUDIO L/R audio jacks. Connect the other ends of the audio cable to the AUDIO L/R audio jacks on the stereo receiver (or powered speakers). Match the cable colors to the jack colors.
- Set the stereo receiver to the correct AUDIO IN channel or sound source. Refer to the stereo owner's manual for details.



Connecting Your TV Audio with RCA to RCA Jacks

- Refer to the connection diagram given below. Connect the supplied audio cable with RCA line input jacks (which has red and white markings) to the Digital Media Player's AUDIO L/R audio jacks.

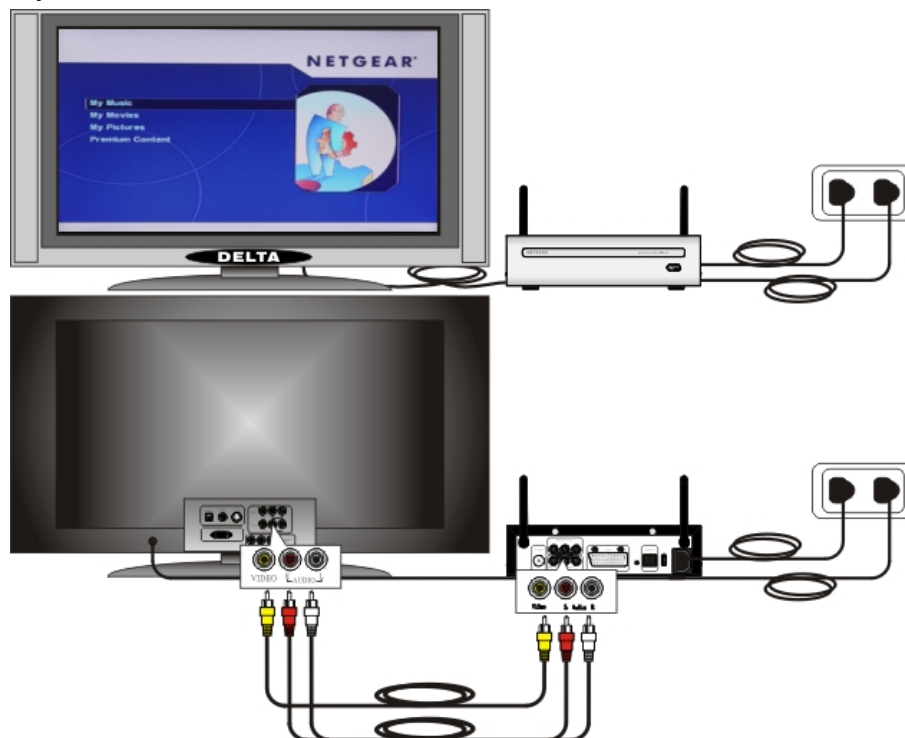
Connect the other ends of the audio cable to the AUDIO L/R audio jacks on the TV. Match the cable colors to the jack colors.



Connecting TV and Digital Media Player Power

- Plug the power cord (female) into the power inlet jack on the Digital Media Player. Plug the other end (male) of the power cord into an active power outlet. Also plug the power cord of the TV into an active power outlet. Make sure that the power cords are seated properly in Digital Media Player's receptacle and in the AC wall outlet for TV and Digital Media Player.

Turn your Digital Media Player and TV on (change TV channels downward until you see the Digital Media Player Setup Wizard screen saver on the TV). If you hooked up the audio to your stereo receiver, turn your stereo receiver on as well. Tune the proper mode to match the audio connector attached to the Digital Media Player.



Network Setup

Many books have been written about the subject of networking. Therefore, this section is only intended to provide a brief overview of how Digital Media Player works in a home network environment and covers only those issues essential to setting up a proper network for using Digital Media Player.

Do You have a Network

If you have a single PC and you connect to the Internet with a phone line, chances are you do not have a network. At a minimum, you will need a network interface card (NIC) for your PC, or a USB-to-802.11g/b dongle. You can then attach the Digital Media Player to your PC. See “Wired with Crossover Cable Connection” on page 23.

If you have a single PC and you connect to the Internet with a cable or DSL modem, check your modem connection. If the modem has only one network jack, you still don’t have a network. You will need to purchase a different modem or add a router to your network.

Note: You can create a network of PCs without access to the Internet. The Internet is simply a common reason to network PCs together.

If you have multiple PCs and can share files between them, or all of the PCs can access the Internet through a cable or DSL modem, then you do have a network. However, you will need to determine how your server PC (the PC running the media server software) is assigned a network address.

Hubs, Routers, and Switches

When PCs are networked together, each PC is attached to a central “box” with 4, 8, 16, or more connections. This box is either a hub, a router, or a switch. They all operate in a similar way, with one important different: a router will assign a network address dynamically, while a hub or switch will not.

Network Address: Static or Dynamic

A PC (or any network device) is either assigned a network address manually (a static address), or another device on the network (a DHCP server or router) assigns the address dynamically.

To determine your address settings under Windows® XP:

- Click on **Start**
- Click **All Programs**, then **Accessories**, then **Command Prompt**
- At the prompt, type **ipconfig/all**
- Look for the line **Dhcp Enabled** (you may have to scroll back to see it)

To determine your address settings under Windows® Me:

- Click on **Start**
- Click **Run...**
- At the prompt, type **winipcfg** and click **OK**
- Click **Details...** button
- Look for the line **DHCP Sercer** (if it has an address, DHCP is enabled)

If DHCP is enabled, you have a DHCP server on your network. See “Wired with Dynamic Address” on page 22.

If DHCP is not enabled, you will need to assign a static address to your Digital Media Player. Take note of the **IP Address** and **Subnet Mask** listed by the ipconfig utility, and see “Wired with Static Address” on page 23.

Note: If you cannot tell how your network addresses are assigned, then try dynamic address (DHCP) first. The Digital Media Player will display an error message if it is unable to dynamically configure its address.

Overview of Home Networks

A Home Network lets you transfer files between PCs as well as share hardware and Internet connections among several users. If you don’t have a network, you can set one up with a network starter kit, which typically includes all of hardware and software you’ll need for a small network. Be sure to get a kit that supports the Windows Plug and Play (PnP) standard, which makes it easier to install the driver software.

DHCP (Dynamic Host Client Protocol) Server

The easiest way for a device to get an IP address is to have it automatically assigned one by another device, such as a PC or router, so you don’t have to do it manually. If you’re using a cable modem or DSL, cable/DSL routers typically act as DHCP servers. You can also configure a PC as a DHCP server, as described

in

any good home networking manual.

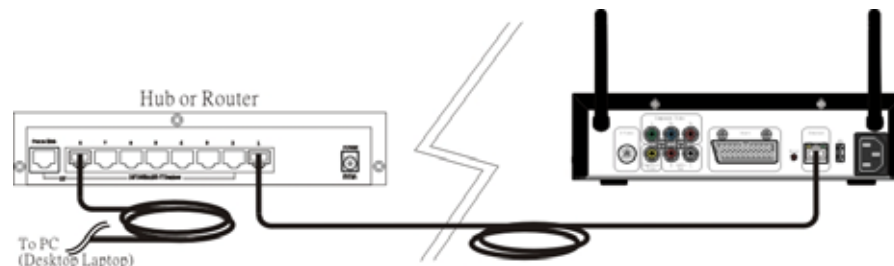
Router and Internet Connection Sharing

A “router” is a network device that forwards or “router” TCP/IP data between your network and the Internet. Routers are typically separate boxes that connect to your network and the Internet. However, Windows 98 S/E (and higher) provides a feature called “Internet Connection Sharing” (“ICS”) which lets a PC connected to the Internet act as a simple router and DHCP server. On the Internet side of a router, all of the TCP/IP data seems to be going to a single IP address, while on the network side, the router distributes the data to each node on the network, each with a distinct IP address.

Using ICS on a PC can be a daunting task because if something goes wrong, there is little user interface to help you troubleshoot. Also, if the ICS PC host crashes, every PC and Digital Media Player on the network will lose its Internet connection. Sharing a cable or DSL modem on an ICS host PC will also require two Ethernet adapters in the PC, and figuring out which one is connected can be complicated. For this reason, it's much easier to setup a separate hardware router on your network.

Wired Home Network

In a wired home network, connect the Digital Media Player to your home network hub or router. If your computer is connected directly to a cable or DSL modem, and there is only one network port on the back of the modem, you do not have a home network. To set up your network, purchase a modem or router with additional network ports. A router will allow you to share your Internet connection with other PCs, and allows the Digital Media Player access to your music and images stored on your PC.



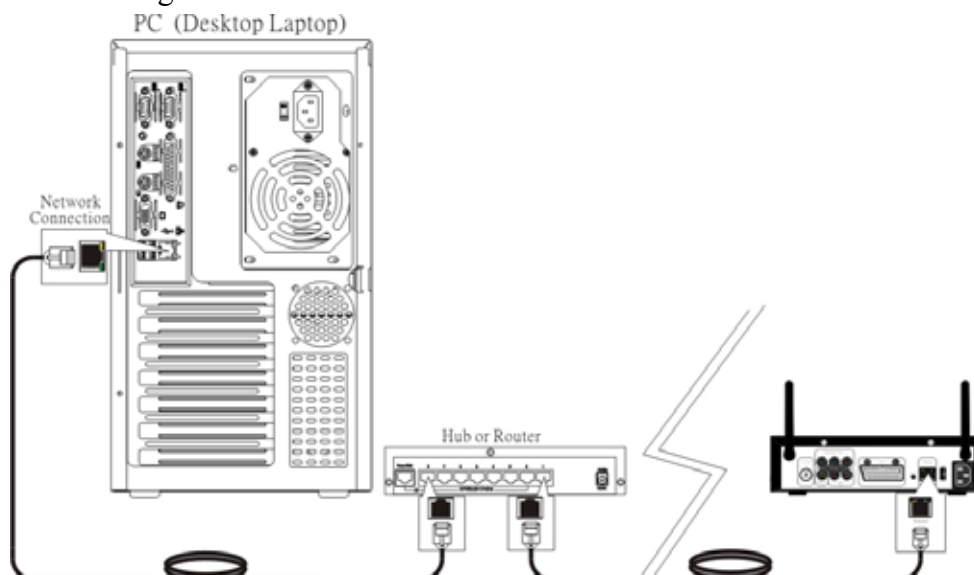
Preparing for Wired Setup

Ethernet requires network cable (called “CAT5”) used exclusively for transmitting the Ethernet signals between devices. When connecting Ethernet devices together, you’ll need an Ethernet hub, or a router, which distributes the Ethernet signal between multiple devices and controls the network traffic.

In a wired network, you attach the Digital Media Player to your network with a network cable. One end of the cable attaches to the Digital Media Player, and the other end attaches to your PC, hub, or router.

Wired Home Network Connection

In a wired home network, all PCs are connected to a network hub or router. This may also act as a cable /DSL modem for sharing an Internet connection.



Wired with Dynamic Address

Connect the Digital Media Player to your router, just as you would one of your computers. In almost

all cases, the router works as a DHCP server (i.e., it assigns network address). Set the Digital Media Player network settings to wired using DHCP addressing. From the main home screen:

- >Press **Options**
- >Select **Network Setup**
- >Set **Connection to Wired (Ethernet)**
- >Select **Address**
- >Set **Configuration to DHCP**
- >Press **left arrow** to return to Media Adapter options
- >Select **Apply Changes** to apply the network changes

Once the Digital Media Player restarts you will be returned to the main home screen. If there are no error messages, your network settings are properly configured.

Wired with Static Address

If a DHCP server is not available, you must assign the Digital Media Player static address that is valid for your network. The address must be very similar to the address used by your PC, and it cannot be in use by another network PC or device. It is best to determine the addresses of all your PCs before assigning one to your Digital Media Player. Use the method described in item “**Network Address: Static or Dynamic**” on page 21 to find the static addresses in use, and then pick an available address.

For example, you have three PCs on your network:

-PC1: 192.168.0.2; PC2: 192.168.0.17; PC3: 192.168.0.11

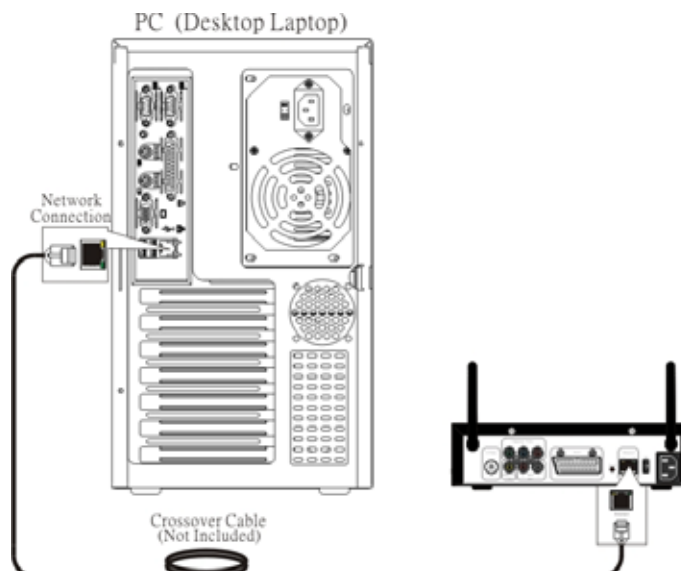
All with a netmask of 255.255.255.0. For the player, pick on unused address like 192.168.0.20 and use the same netmask of 255.255.255.0. Write the address down for future reference. To configure the Digital Media Player for the static address:

- >Press **Options**
- >Select **Network Setup**
- >Set **Connection to Wired (Ethernet)**
- >Select **Address**
- >Set **Configuration to Static**
- >Set **IP Address to 192.168.0.20**
- >Set **Netmask to 255.255.255.0**
- >Press **left arrow** to return to Media Adapter options
- >Select **Apply Changes** to apply the network changes

The Digital Media Player will restart and if the Media Server software is running, you should see your images, movies, and music content.

Wired with Crossover Cable Connection

If you don't have a home network, it is still possible to access your images, movies, and music on a PC. Connect a network crossover cable (not included) from the Digital Media Player to the network connection on your PC. If your PC does not have a network connection, you will need to purchase a network card.



Choose a static address for your PC and one for your Digital Media Player. Use a netmask of 255.255.255.0 for both. To configure the Digital Media Player for a crossover cable:

- >Press **Options**
- >Select **Network Setup**
- >Set **Connection** to **Wired (Ethernet)**
- >Select **Address**
- >Set **Configuration** to **Static**
- >Set **IP Address** to **192.168.0.2**
- >Set **Netmask** to **255.255.255.0**
- >Press **left arrow** to return to Media Adapter options
- >Select **Apply Changes** to apply the network changes

Follow the instructions that came with your network card for setting a static IP address of 192.168.0.1 on your PC.

Wireless Home Network

In a wireless home network, no network cable connection is required. For the best possible reception, rotate the wireless antenna so it extends perpendicular to the Digital Media Player.

The Digital Media Player can communicate with wireless access points (infrastructure mode) or directly to PCs with wireless network cards (ad hoc mode). Like all wireless devices, some experimentation may be necessary to find the best location for your Digital Media Player. Signal strength and quality will depend on distance, walls, and building structure.



Preparing for Wireless Setup

The Digital Media Player supports wireless networking. For the best results, you should setup and test your wireless network before attempting to use the Digital Media Player wirelessly. This will rule out any problems with your network.

- Scanning for Wireless Networks

The Digital Media Player will scan for available networks. You should know the name of your wireless network, as the Digital Media Player may pick up other wireless networks (WLANs) in your area. The network name is sometimes called the SSID.

Note: Your network must broadcast its name for the Digital Media Player to find it. Do not use silent broadcast.

- Wireless Reception

Wireless reception will vary on distance, access point manufacturer, number of walls, and environment. If possible, try setting up the Digital Media Player in an area that is close to your PC or wireless access point. Once everything is working properly, you can experiment with placement and distance.

- Wireless Infrastructure or Ad Hoc

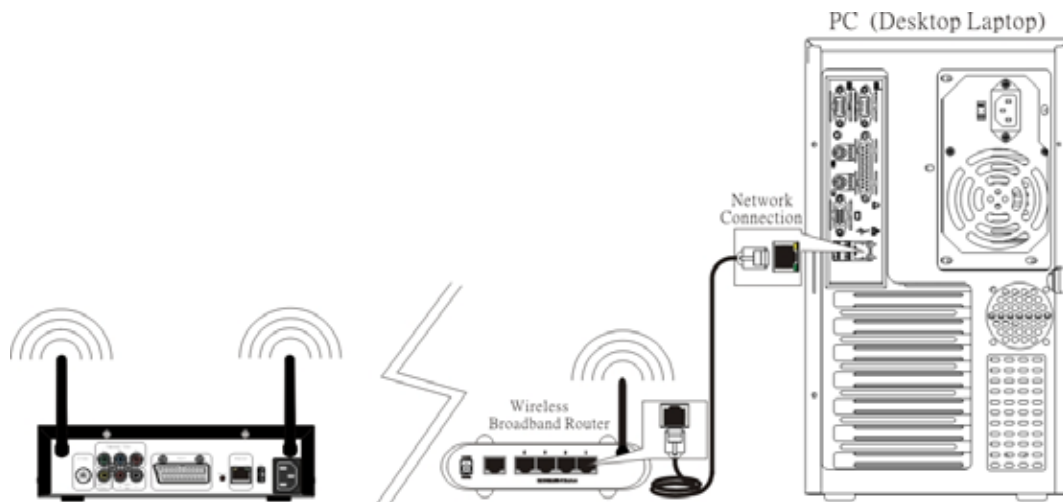
These are intimidating names for some very simple concepts.

Infrastructure mode, a wireless access point exists on the network. The access point can be in attached to a hub or router, or the router can act as a wireless access point as well. All PCs and wireless devices communicate through the access point.

If you do not have a wireless access point or router, you can use Ad Hoc mode. Ad Hoc mode allows communication between a PC with a wireless card and the Digital Media Player.

Communication occurs between the devices directly without the need for an access point.

Wireless Infrastructure

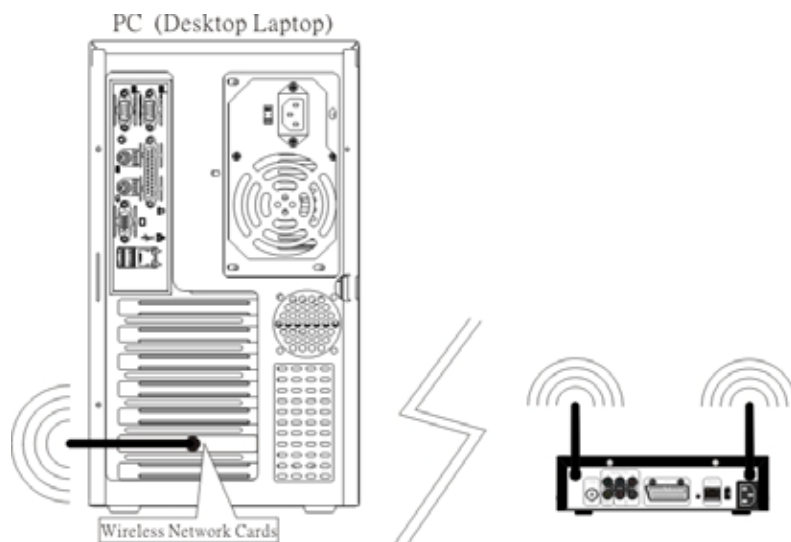


Most wireless networks communicate in Infrastructure mode. To configure the Digital Media Player network settings for wireless Infrastructure and DHCP dynamic addressing:

- >Press **Options**
- >Select **Network Setup**
- >Set **Connection** to **Wireless (Infrastructure)**
- >The Digital Media Player will scan for wireless local area networks (WLAN). Select **WLAN** to choose your wireless network if it is not already chosen.
- >Select **Address**
- >Set **Configuration** to **DHCP**
- >Press **left arrow** to return to Media Adapter options
- >Select **Apply Changes** to apply the network changes

After restarting, verify the Digital Media Player is able to play images, movies, and music.

Wireless Ad Hoc



In Ad Hoc mode, an access point does not exist and the Digital Media Player communicates directly with computers containing wireless network cards. It is similar to a static network, without wires. You will need to assign a static address to the Digital Media Player that is appropriate for your network. Use method described in the item “**Network Address: Static or Dynamic**” on page 21 to find the static addresses in use, and then pick an available address.

Note: If you have other wireless PCs or devices, determine all of the addresses before assigning one to your Digital Media Player. Do not assign the same address to more than one device. For example, you can use 192.168.0.1 for your PC, and 192.168.0.2 for your Digital Media Player. Use a netmask of 255.255.255.0 for both.

To configure the Digital Media Player network settings for wireless Ad Hoc mode and static addressing:

- >Press **Options**
- >Select **Network Setup**
- >Set **Connection** to **Wireless (Ad Hoc)**
- >Select **Address**
- >Set **Configuration** to **static**
- >Set the **IP Address** to **192.168.0.2**
- >Select **Netmask** to **255.255.255.0**
- >Press **left arrow** to return to Media Adapter options
- >Select **Apply Changes** to apply the network changes

Follow the instructions that came with your wireless network card for setting a static IP address of 192.168.0.1 on your PC.

Wireless Encryption

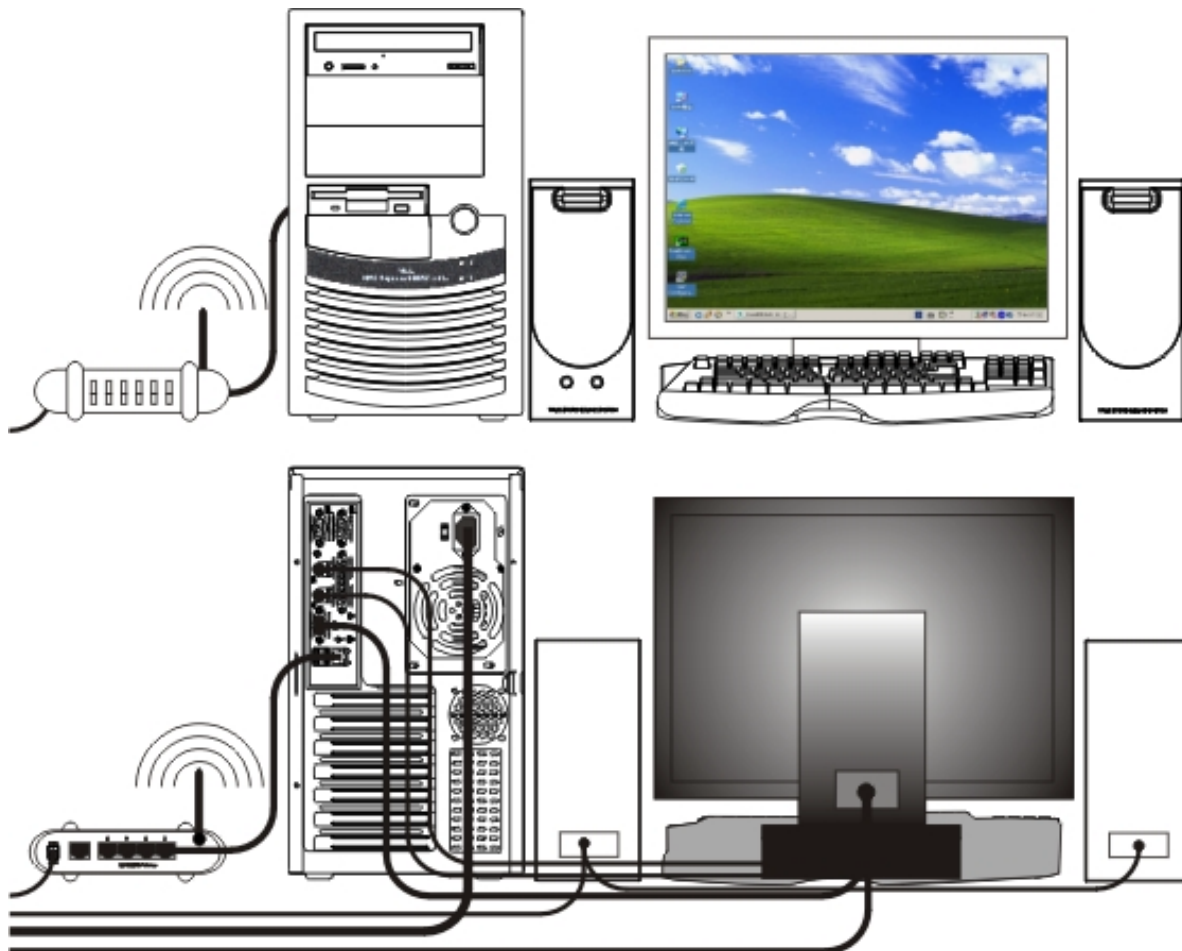
For security reasons, a wireless network can encrypt the network packets broadcast between devices. This type of encryption is called Wired Equivalent Privacy, or WEP.

There are two levels of WEP encryption: 64 and 128 bit. You may have heard the numbers 40 and 104 bit used in conjunction with WEP encryption. These are just two different names for the same encryption method. Because there has been no official standardization of these terms, wireless vendors may use either name.

Whether you choose 64 or 128 bit is up to you. You must balance higher security versus slower network performance.

Connecting Media Server and Network

- Plug the power cord of the PC, monitor, router, powered speakers, etc. into an active power outlet. Make sure that the power cords are seated properly in the AC wall outlet. Turn them on.



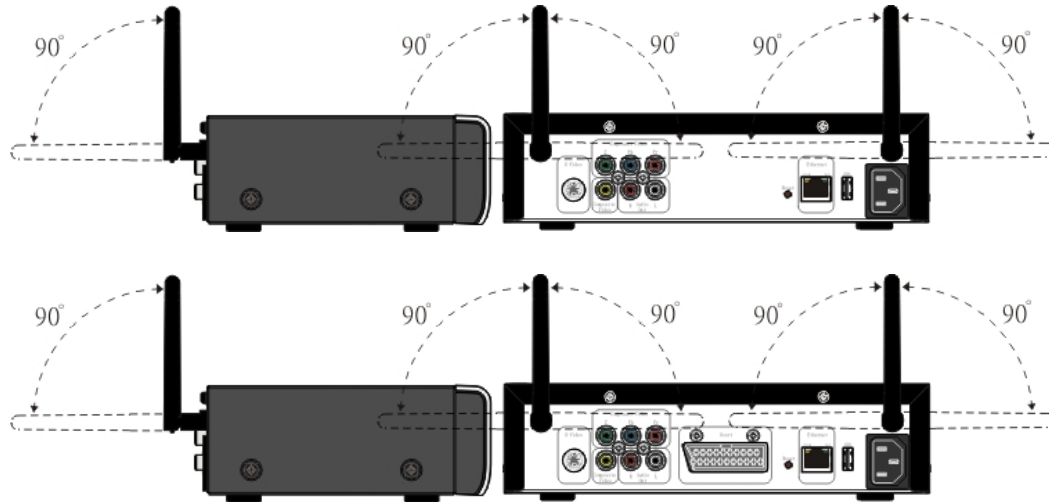
Connection Information

This section will help you to choose a proper working environment for the Digital Media Player and its

peripheral. Avoid places that expose the components to dust, grease, extreme temperatures, or high humidity. An environment you'd consider suitable for a stereo receiver and network should also serve your PC well. Arrange the components securely on a firm, level surface.

Orientation of the Wireless Antennas

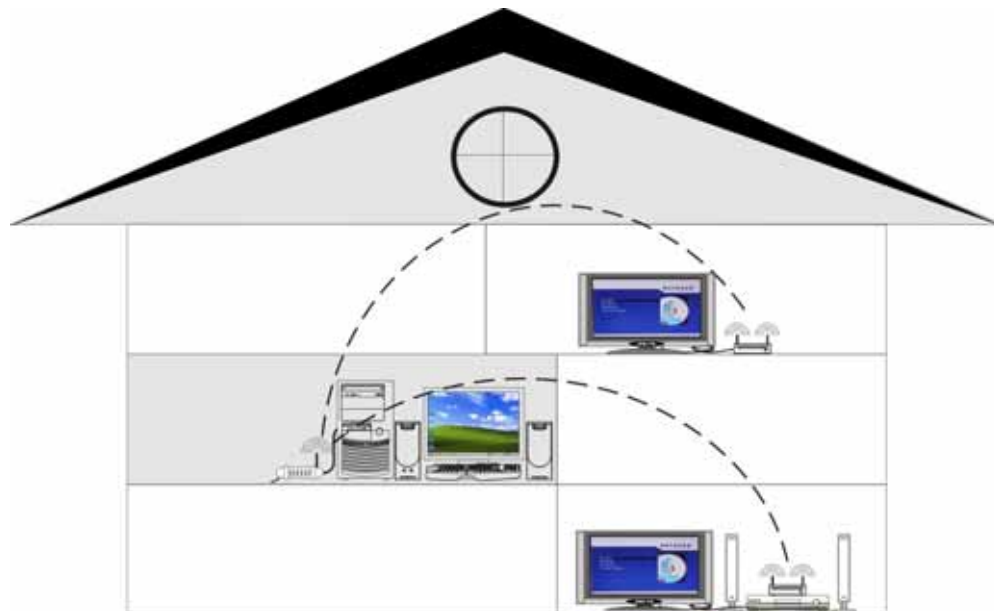
Proper orientation of the wireless antenna is important for good performance. You may find that the Digital Media Player works better with one or more of the antennas in the horizontal (flat) position. The Digital Media Player's receiver and transmitter tend to operate better in high locations, where the signal path is wider and stronger. You may also need to experiment with the position of the wireless antennas on the transmitter unit. See what position works the best for wireless antennas.



Fine Tuning the Digital Media Player Antennas (Wireless)

To get the best signal reception, the Digital Media Players should face each other using an imaginary “line of sight”. You place the transmitter and receiver in separate rooms, or even separate floors of your house, so you don't have to worry about the Digital Media Players being close to each other.

Other barriers in your house may affect the signal, so you may need to adjust the positions of the transmitter and receiver somewhat.



Remote Control

Unless stated otherwise, the remote control can operate all the features of the Digital Media Player.

Always point the remote control directly at the front of the Digital Media Player, not the TV. Point the remote at the IR (infrared) area on the front of the Digital Media Player. Make sure there are no barriers between the remote control and the Digital Media Player.

Remote Control Buttons Function

You can control the Digital Media Player from the room where you are using the infrared remote control. This section will provided a quick summary of the remote control functions.

Remote Control Buttons Function Descriptions



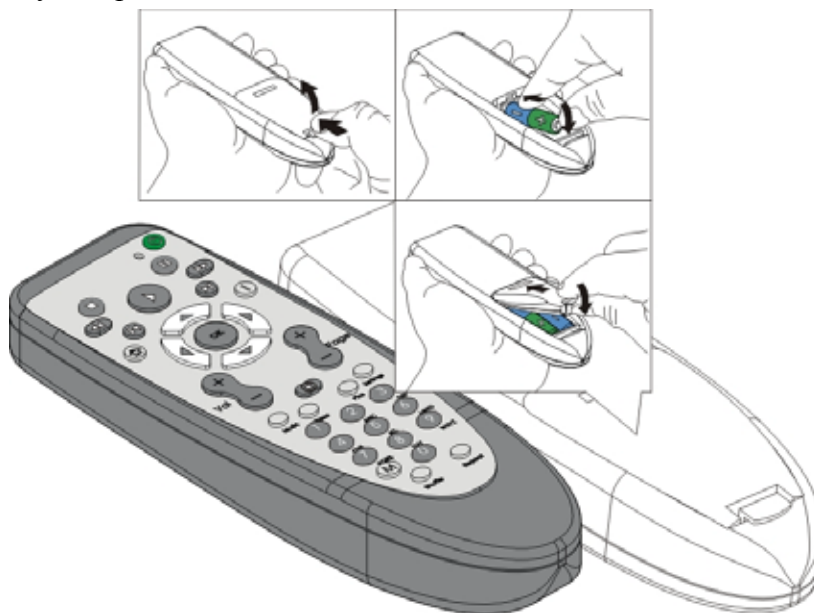
Buttons		Function Descriptions
Power		The power button turns the Digital Media Player on/off.
Light		This light appears when the remote control's button is pressing, meaning the remote control's power is on.
Stop, Play, Pause		Stop, play, or pause music tracks or image slideshows.
Rewind, Fast forward		Rewind or fast forward through a music track.
Previous, Next		Skip to previous or next track, or skip images in a slideshow.
Home		Jump directly to home menu screen.
Selection arrows, Select		Navigate the onscreen menus with the selection arrows, and press select to choose the highlighted item.
Volume up and down		Press these buttons to control the volume.
Page up and down		Use these buttons to scroll through lists of music tracks or images.
Mute		Press to silence or restore the volume. MUTE will appear on the TV screen. Press again to restore the volume (adjusting the volume at the TV will not restore the sound). Point the remote control at the Digital Media Player, not your TV.
Music		Display the music folder option when press this button on the home main screen.
Video		Display the video folder option when press this button on the home main screen.
Pics		Display the image folder option when press this button on the home main screen.
Settings		Display the preferences folder option when press this button on the home main screen. You can access the options to do the related setting for Digital Media Player as necessary.

Numbers 0 ~ 9		Press to select numbered items in a menu. During playback, press the number buttons to select a chapter (within the current Title) or Track for playback.
M		Pending.
Shuffle, Repeat		Cycle between shuffle, repeat, shuffle and repeat, and original order. Useful when playing music albums or image slideshows.

Remote Control Battery Installation

Perform the following steps before using the remote control.

- Remove the battery compartment lid on the rear of the remote control by pressing in the tab, then lifting off the lid.
- Place two AA batteries inside the battery compartment with their + and – ends aligned as indicated. Do not mix old and new batteries or different types of batteries (standard, alkaline, etc.).
- Replace the battery compartment lid.



MP115 Digital Media Player Operation Environment Preliminary

This section provides essential information for proper and safe installation and replacement service.

Service Considerations

The following sections include some of the considerations that you should keep in mind during disassembly and assembly procedures.

Note: As you remove each subassembly from the Digital Media Player, place the subassembly (and all accompanying screws) away from the work area to prevent damage.

- Plastic Parts

Using excessive force during disassembly and reassembly can damage plastic parts. Use care when handling the plastic parts. Apply pressure only at the points designated in the maintenance instructions.

- Cables and Connectors

Cables must be handled with extreme care to avoid damage. Apply only the tension required to unseat or seat the cables during removal and insertion. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing cables. Ensure that cables are routed in such a way that they cannot be caught or snagged by parts being removed or replaced. Handle flex cables with extreme care; these cables tear easily.

Caution: When servicing the Digital Media Player, ensure that cables are placed in their proper locations during the reassembly process. Improper cable placement can damage the Digital Media Player.

Preventing Electrostatic Damage

Many electronic components are sensitive to electrostatic discharge (ESD). Circuitry design and structure determine the degree of sensitivity. Networks built into many integrated circuits provide some protection, but in many cases the discharge contains enough power to alter device parameters or melt silicon junctions. A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Often the spark is neither felt nor heard, but damage occurs.

An electronic device exposed to electrostatic discharge may not be affected at all and can work perfectly throughout a normal cycle. Or the device may function normally for a while, and then degrade in the internal layers, reducing its life expectancy.

Packaging and Transporting Precautions

Use the following grounding precautions when packaging and transporting equipment:

- To avoid hand contact, transport products in static-safe containers, such as tubes, bags, or boxes.
- Protect all electrostatic-sensitive parts and assemblies with conductive or approved containers or packaging.
- Keep electrostatic-sensitive parts in their containers until the parts arrive at static-free workstations.
- Place items on a grounded surface before removing items from their containers.
- Always be properly grounded when touching a sensitive component or assembly.
- Store reusable electrostatic-sensitive parts from assemblies in protective packaging or nonconductive foam.
- Use transporters and conveyors made of antistatic belts and roller bushings. Ensure that mechanized equipment used for moving materials is wired to ground and that proper materials are selected to avoid static charging. When grounding is not possible, use an ionizer to dissipate electric charges.

Workstation Precautions

Use the following grounding precautions at workstations:

- Cover the workstation with approved static-dissipative material.
- Use a wrist strap connected to a properly grounded work surface and use properly grounded tools and equipment.
- Use conductive field service tools, such as cutters, screwdrivers, and vacuums.
- When using fixtures that must directly contact dissipative surfaces, only use fixtures made of static-safe materials.
- Keep the work area free of nonconductive materials, such as ordinary plastic assembly aids and Styrofoam.
- Handle electrostatic-sensitive components, parts, and assemblies by the case or PCM laminate. Handle these items only at static-free workstations.
- Avoid contact with pins, leads, or circuitry.

- Turn off power and input signals before inserting or removing connectors, or test equipment.

Grounding Equipment and Methods

Grounding equipment must include either a wrist strap or a foot strap at a grounded workstation.

- When seated, wear a wrist strap connected to a grounded system. Wrist straps are flexible straps with a minimum of 1 megohm $\pm$ 10% resistance in the ground cords. To provide proper ground, wear a strap snugly against the skin at all times. On grounded mats with banana-plug connectors, connect a wrist strap with alligator clips.
- When standing, use foot straps and a grounded floor mat. Foot straps (heel, toe, or boot straps) can be used at standing workstations and are compatible with most types of shoes or boots. On conductive floors or dissipative floor mats, use foot straps on both feet with a minimum of 1 megohm resistance between the operator and ground. To be effective, the conductive strips must be worn in contact with the skin.

Other grounding equipment recommended for use in preventing electrostatic damage includes:

- Antistatic tape
- Antistatic smocks, aprons, and sleeve protectors
- Conductive bins and other assembly or soldering aids
- Nonconductive foam
- Conductive tabletop workstations with ground cords of 1 megohm resistance
- Static-dissipative tables or floor mats with hard ties to the ground
- Field service kits
- Static awareness labels
- Material-handling packages
- Nonconductive plastic bags, tubes, or boxes
- Metal tote boxes
- Electrostatic voltage levels and protective materials

Table below shows how humidity affects the electrostatic voltage levels generated by different activities:

Typical Electrostatic Voltage Levels

Event	Relative Humidity		
	10%	40%	55%
Walking across carpet	35,000 V	15,000 V	7,500 V
Walking across vinyl floor	12,000 V	5,000 V	3,000 V
Motions of bench worker	6,000 V	800 V	400 V
Removing DIPS from plastic tube	2,000 V	700 V	400 V
Removing DIPS from vinyl tray	11,500 V	4,000 V	2,000 V
Removing DIPS from Styrofoam	14,500 V	5,000 V	3,500 V
Removing bubble pack from PWB	26,500 V	20,000V	7,000 V
Packing PWBs in foam-lined box	21,000 V	11,000 V	5,000 V

Note: A product can be degraded by as little as 700 volts

Table below lists the shielding protection provided by antistatic bags and floor mats.

Static-Shielding Materials

Material	Use	Voltage Protection Level
Antistatic plastic	Bags	1,500 V
Carbon-loaded plastic	Floor mats	7,500 V
Metallized laminate	Floor mats	5,000 V

Troubleshooting Tips (A) for Hardware

If you are having problems with your product, check this list of problems and possible solutions before requesting service. You may be able to solve the problem yourself.

If you need to call a customer service representative, please know the model number and serial number of your product before you call. This information is on the bottom of the product. Also, please take a moment to identify the problem you are having, and be prepared to explain this to the representative. If you believe the representative will need to help you with operations, please stay near the product. Our representatives will be happy to assist you.

I don't see the Main Screen when I turn on my Digital Media Player for the first time

- Make sure your TV is displaying the appropriate video source. You may need to use the **Input**, **Source**, **Select**, or **TV/Video** button on your TV or TV remote to change video sources. If you are having trouble changing the video source, refer to the instructions that came with your TV.
- If you did not connect the Digital Media Player directly to your TV but are instead passing the signal through your VCR, make sure your VCR is displaying the appropriate video source. You may need to use the **Input** or **Source** button on your VCR or VCR's remote control. Some VCRs only pass the signal through when they are turned off. If you are having trouble displaying the correct video source, refer to the instructions that came with your VCR.
- Make sure cables are connected to the IN jack on your TV or VCR, not the OUT jack.
- The cables you are using to connect your Digital Media Player to your TV or other equipment may be damaged or defective. Try exchanging the cables connected to the Digital Media Player with other cables that you know are working properly.
- Make sure you have firmly attached the AC power cord plug to the rear of the Digital Media Player. Also, verify the AC power cord is plugged into a working power outlet and that the outlet is not controlled by a light switch.

My remote control isn't working

- Make sure the batteries are inserted correctly.
- Try removing the batteries and reinserting them without touching any buttons on the remote control.
- Inspect or replace the batteries with new ones.
- Aim the remote at IR (infrared) sensor on the front of the Digital Media Player (not the TV).
- Remove any obstacles between the Digital Media Player and remote control. Move closer to the Digital Media Player and try the remote again.

I can't see any of my music or images

- Make sure your PC is powered on and that it has not entered standby mode. Change your PC's power settings if you want your content to always be available.
- Make sure the media server software is running on your PC. Look for the media server icon in your system tray. If necessary, start the media server software again.
- Click on the media server icon and select Setting to verify you are sharing the correct directories.
- If you are using a wireless network, try locating the Digital Media Player closer to your access point or wireless PC.
- If you are using a wired network, verify the Digital Media Player network cable is properly attached to your network hub or router, and that the hub or router has power.
- If you are using static network addresses, verify the network address and netmask are correct for your network, and that the address is not already in use by another PC or device.

I can't hear any sound when I'm playing music

- Make sure the audio cables are properly connected.
- If the audio cables are connected to your TV, the TV must be on to hear any music.
- If the audio cables are connected to your stereo receiver, make sure the stereo receiver is on and you have the correct stereo input source selected. If you are having trouble selecting the correct audio source, refer to the instructions that came with your stereo receiver.
- Make sure you did not connect the Digital Media Player's COAXIAL digital audio out jack to an analog jack on the stereo receiver. (Analog audio jacks are usually labeled as such and are usually red and white. Coaxial jack is usually orange.)
- To perform an audio test, select the **music jukebox** and then press the **options** button. Select the **audio test** option to play a brief audio test on your speakers.

Some of my music files don't appear

- The Digital Media Player supports the most common music file formats. However, there are almost an infinite variety of bit rates and sample rates. If a file does not appear on the Digital Media Player, it most likely uses an unsupported rate.
- The files may be copy protected. To share your files turn copy protection off when you rip them.
- The following sample rates are supported: 4, 8, 16, 22.05, 24, 32, 44.1, 48, 88.2, and 96KHz.
- For best results, rip your music files at 128Kbps or higher, with a sample rate of 44.1KHz.
To check the bit and sample rates of a music file, right click on the filename and select **Properties**. Select the **Summary** tab and scroll to bottom of the list.
The file to the right has a bit rate of 128Kbps and a sample rate of 44KHz.
In most cases, you don't need to worry about the sample rate unless you come across a file that will not play appear on your Digital Media Player. Use the above procedure to check the file setting for supported rates.

I created a playlist on my PC, but it doesn't appear on my Digital Media Player

- Make sure the playlist file is located in a folder shared by your Digital Media Player. Copy the playlist to your shared music folder, or click on the media server icon to add or change your folder options.
- Make sure you save the playlist in the industry standard **.m3u** playlist format. This is the only format supported by your Digital Music Player. Load your playlist into your music software and select **Save As ...** then choose the **.m3u** format.

My Digital Media Player can't find my access point

- Verify that your access point is not broadcasting silently.
- Try moving the Digital Music Player closer to your access point.
- Check your WEP setting. See "Wireless Encryption" on page 20.

My Digital Media Player finds my access point, but won't connect

- Most likely your WEP settings are incorrect. See "Wireless Encryption" on page 20.
- Try resetting and power on the access point.

How do I reset my Digital Media Player?

- Under normal circumstances, you should not need to reset your Digital Media Player. However, to fully reset the Digital Media Player, disconnect the AC power cord from the rear. Wait a few seconds, then plug the AC power cord in.
- Or, you can push the reset switch on the rear of the Digital Media Player. Push the once for soft reset, or push & hold to return the Digital Media Player to factory default configure.

What version of Firmware do I have?

- From the Main Menu screen, press the Setting button on the remote control and select **Maintenance** option. The firmware version will be listed.

Glossary

10BaseT/100BaseTX: These are Ethernet standard, which operated at 10Mbps/100Mbps (megabits per second). Also known as simply Ethernet.

802.11: Standard specifying the characteristics for wireless local area networks.

Access Point: An internetworking device that seamlessly connects wired and wires networks together.

Ad Hoc: One of two types of wireless networking, usually used for smaller networks. PCs communicate directly with each other without an access point.

Album: An album of music released by an artist, or a group of images stored in a folder on a hard drive.

BMP: A Microsoft™ Windows® standard for storing bitmapped images.

AUDIO OUT jacks: Jacks on the rear of the Digital Media Player that send audio to another equipment (TV, stereo receiver, etc.).

Color system: There are various systems for transmitting television signals, for example PAL, SECAM, and NTSC. NTSC is the most common color system in the United States of America.

Component Video YPbPr jacks: The Video Out jacks on the rear of the Digital Media Player that send high-quality video to a TV that has Component Video In jacks. The jacks on the Digital Media Player are red, blue, and green.

Cable Modem: A class of modem that is used for connecting to a cable TV network, which offers Internet service.

Category 5: A type of cabling used by Ethernet networks. Category 5 cable is rated for 100Mbps.

Crossover Cable: Most network cables are straight-through cables. A crossover cable has the send and receive connections swapped, which is useful when connecting two network devices together without a hub, router, or switch.

DHCP: Dynamic Host Configuration Protocol. Some music files have security built in so they cannot be copied.

DSL Modem: A class of modem used for connecting a digital subscriber line.

Digital: Sound that has been converted into numerical values. Digital sound is available when you use the Digital Media Player's SPDIF COAXIAL and SPDIF OPTICAL jacks, which sends audio through multiple channels instead of two channels as analog does.

Dolby® Digital: A surround sound system that provides 5.1 channel sound as used in movie theaters.

Ethernet: A popular network technology for connecting PCs and other devices. Also called 10BaseT/100BaseTX.

Folder: Another name for a subdirectory on a PC. A folder contains other files, such as music or images.

Genre: A type of music, such as rock, country, or classical. There are many music genres.

GIF: Graphical Interchange Format. A popular format for storing images.

Hub: A device that interconnects PC and network devices, sometimes amplifying the signals between them.

Icon: A small graphical picture.

ID3 Tag: A tagging system that allows the storage of music information such as artist, song title, and album title within the music file.

Infrastructure: One of two types of modes used for wireless networking. PCs and devices communicate through a common access point. Access points transmit data to PCs equipped with wireless network adapters, which can roam within a certain range of the access point.

IP Address: Internet Protocol address, sometimes referred to as a network address. This is a series of twelve numbers that uniquely identifies a client on the network. For example, 192.168.0.1.

Jack: A jack is a socket for attaching the cables.

JPEG: JPEG stands for Joint Photographic Experts Group. However, what people usually mean when they use the "JPEG" is the image compression standard they developed. JPEG was developed to compress still images, such as photographs, a single video frame, something scanned into the PC, and so forth. You can run JPEG at any speed that the application requires. For a still picture database, the algorithm doesn't have to be very fast. If you run JPEG fast enough, you can compress motion video-which means that JPEG would have to run at 50 or 60 fields per second. This is called motion JPEG or M-JPEG. You might want to do this if you were designing a video editing system. Now, M-JPEG running at 60 fields per second is not as efficient as MPEG 2 running at 60 fields per second because MPEG was designed to take advantage of certain aspects of motion video.

LAN: Local Area Network. A small network that typically spans a single building or campus.

Luma: As mentioned in the definition of chroma, the NTSC and PAL video systems use a signal that has two pieces: the black and white part, and the color part. The black and white part is the luma. It was the luma component that allowed color TV broadcasts to be received by black and white TVs and still remain viewable.

Mbps: Abbreviation for megabits per second.

Modulator: A modulator is basically a circuit that combines two different signals in such a way that they can be pulled apart later. What does this have to do with video? Let's take the NTSC system as an example, although the example applies equally as well to PAL. The NTSC system may use the YIQ or YUV color space, with the I and Q or U and V signals containing all of the color information for the picture. Two 3.58MHz color subcarriers (90 degrees out of phase) are modulated by the I and Q, or U and V components and added together to create the chroma part of the NTSC video.

MP3: An MPEG audio file. This is a very popular format for storing digital music.

MPEG: MPEG stands for Moving Picture Experts Group. This is an ISO/IEC (International Standards Organization) body that is developing various compression algorithms. MPEG differs from JPEG in that MPEG takes advantage of the redundancy on a frame-to-frame basis of a motion video sequence, whereas JPEG does not.

MPEG1: MPEG1 was the first MPEG standard defining the compression format for real-time audio and video. The video resolution is typically 352x240 or 352x288, although higher resolutions are supported. The maximum bit rate is about 1.5Mbps. MPEG1 is used for the Video CD format.

MPEG2: MPEG2 extends the MPEG1 standard to cover a wider range of applications. Higher video resolutions are supported to allow for HDTV applications, and both progressive and interlaced video are supported. MPEG2 is used for the DVD-Video and SVCD formats, and also forms the basis for digital SDTV and HDTV.

MPEG4: MPEG4 uses an object-based approach, where scenes are modeled as compositions of objects, both natural and synthetic, with which the user may interact. Visual objects in a scene are described mathematically and given a position in a two- or three-dimensional space. Similarly, audio objects are placed in a sound place. Thus, the video or audio object need only be defined once; the viewer can change his viewing position, and the calculations to update the audio and video are done locally.

Classical "rectangular" video, as from a camera, is one of the visual objects defined in the standard. In addition, there is the ability to map images onto computer-generated shapes, and a text-to-speech interface.

Network: A collection of PCs, printers, and devices that are connected together in order to share resources.

Network Cable: A cable similar to a telephone line, except large. A telephone cable typically has four wires

, and a network cable has eight. Also called an RJ45 cable.

NIC: Network Interface Card. Also called a network adapter, a NIC is a device that connects a PC to a network. Usually this is a card that installs in the PC.

PC: A personal computer.

Playlist: A file containing a list of music files used to play tracks in a particular order. The most common playlist format is m3u.

PNG: Portable Network Graphics. A popular graphics file format for storing images.

Ripping: A slang term for converting a music CD into compressed music files. Music tracks are ripped from the CD, compressed, and stored digitally on a hard drive.

RGB: Red-Green-Blue. A top-quality video connection where red, green, and blue components of the picture are carried through separate wires. This also is referred to as the component video connection.

Router: A device similar to a hub. A router moves data between different network segments, and allow all users in a network to share a single connection to the Internet.

SCART jack: A SECAM video system. This is another color video format similar to PAL. The major differences between the two are that in SECAM the chroma is FM modulated and the R-Y and B-Y signals are transmitted line sequentially. SECAM stands for Sequentiel Couleur Avec Memoire or Sequential Color with Memory.

Server: A PC or software program that provides services to clients. In this document, the term server refer to the media software running on a PC.

SNR: Signal-to-noise ratio is the magnitude of the signal divided by the amount of unwanted stuff that is interfering with the signal (the noise). SNR is usually described in decibels, or "dB" for short; the bigger

the number, the better looking the picture.

SSID: Service Set Identifier. A network ID unique to a network. Only clients and Access Points that share the same SSID are able to communicate with each other. This string is case-sensitive.

SPDIF COAXIAL jack: Sends digital audio to a stereo receiver, allowing you to adjust the volume at stereo receiver. The stereo receiver must have a Coaxial In jack. This connection provides the 5.1 channel surround sound as heard in movie theaters. The SPDIF COAXIAL jack on the Digital Media Player is orange.

Note: SPDIF short for Sony/Philips Digital InterFace. This is a consumer interface used on transfer digital audio. A serial, self-clocking scheme is used, base on a coax or fiber interconnect.

The audio samples may be 16-24 bits each. 16 different sampling rates are supported, with 32, 44.1, and 48KHz being the most common. IEC 60958 now fully defines this interface for consumer and professional applications.

SPDIF OPTICAL jack: Sends digital audio to a stereo receiver, allowing you to adjust the volume at stereo receiver. The stereo receiver must have an Optical In jack. This connection provides the 5.1 channel surround sound as heard in movie theaters. The SPDIF OPTICAL jack on the Digital Media Player is gray.

Static Address: A network address that does not change and usually assigned manually.

S-Video: Produces a clear picture by sending separate for the luminance and the color. Separate video, also called Y/C video. Separate luma (Y) and chroma (C) video signals are used, rather than a single composite video signal. By simply adding together the Y and C signals, you generate a composite video signal. The IEC 60933-5 standard specifies the S-Video connector, including signal levels.

Switch: A devices similar to a hub, but smarter. It improves network performance by reducing competition for bandwidth.

System Tray: The Windows system tray, usually located in the lower-right corner of the display.

VIDEO OUT (Composite Video) jack: Yellow jack on the rear of the Digital Media Player that sends video to a TV.

WEP: Wired Equivalent Privacy. A method of encryption designed to give wireless networks the same security found on wired networks.

Wi-Fi: Wireless Fidelity. Another term for wireless networking using the 802.11 standard.

WLAN: Wireless Local Area Network. A wireless LAN does not use cable to transmit signals, but rather uses radio to transmit packets through the air.

WMA: Windows Media Audio file. A popular format for storing audio files, created by Microsoft™ and used by Windows Media Player.

YIQ: YIQ is a color space optionally used by the NTSC video system. The Y component is the black-and-white portion of the image. The I and Q parts are the color difference components; these are effectively nothing more than color placed over the black and white, or luma, component. Many people use the YIQ notation rather than Y'IQ or Y'I'Q'. The technically correct notation is Y'I'Q' since all three components are derived from R'G'B'.

YPbPr: YPbPr is scaled version of the YUV color space, with specific levels and timing signals, designed to interface equipment together. For HDTV interfaces, a 0.3V tri-level sync signals are used, while for SDTV interfaces, a 0.3V bi-level sync signal is present. Most use the YPbPr notation rather than Y'PbPr or Y'Pb'Pr'. The technically correct notation is Y'Pb'Pr' since all three components are derived from R'G'B'.

YUV: YUV is the color space USED BY THE NTSC and PAL video systems. As with the YIQ color space, the Y is the luma component while the U and V are the color difference components. Many people use the YUV notation when they actually mean YCbCr data. Most use the YUV notation rather than Y'UV or Y'U'V'. The technically correct notation is Y'U'V' since all three components are derived from R'G'B'. YUV is also the name for some component analog interface on consumer equipment. Some manufacturers incorrectly label YCbCr. THX certification requires it to be labeled YPbPr.

Specifications and Regulatory

This section defines the general requirements for physical, electrical, mechanical, safety, and EMC of MP115 by client and DELTA/DHBU. These requirements help to ensure that items shipped to client are received in satisfactory condition. The related notices are as following:

Item	Description
Features	
Product Name	MP115 Wireless Audio/Video Digital Media Player
Versions Needed	NA (North America), UK (United Kingdom)
Hardware	
Case	Metal with plastic front bezel
External Dimensions	240(L) x 186(W) x 127.5(H) mm
Weight	
Power Supply	Uses an internal power supply. 100~240V/50~60Hz/~0.35A input localized plug throughout the world, and automatically detect the AC line level. +12V/-1.25A/15W (max.) output to main board
Power Cable	1.8m 3-prong electrical plug with safety rating of 18 AWG/3C black power cable, or the power cable will change to localize throughout the world
Standby Mode	Instant on/off
Memory (Flash/RAM/DRAM)	4MB Flash (upgradeable firmware)/8MB SDRAM/32MB DRAM
CPU	Ali® T6306 Media Adapter Multimedia Processor
MAC Address Range	NETGEAR specified
10/100Mbps Ethernet Port	1 RJ-45 Ethernet port (IEEE 802.3i/3u), connect to an Ethernet 10BASE-T/100BASE-TX network, Port loopback, Link integrity, Auto-detect port speed; Link/Activity LEDs in jack
Ethernet Port LEDs	Link/Activity for Ethernet in RJ-45 jack
Uplink Button or Auto-MDIX	Auto-MDI/MDIX, Auto uplink
Ethernet Cable	CAT5 Ethernet cable (10ft.) that colored BLUE
Wireless (Atheros mini-PCI wireless card)	• IEEE 802.11g/b wireless LAN interface operating in the 2.4GHz ISM Band and support Atheros 108Mbps throughput • Supports 802.11g/b infrastructure and peer-to-peer (Ad-Hoc) mode • Supports Wired Equivalent Privacy (WEP) with 64/128-bit key, WPA, and AES • Supports DHCP or static IP addressing • RF transceiver for 802.11 g/b
Wireless Channels	By region, country code limit channel selection (NA: 1~11, Europe: 1~13, Japan: 1~14)
Antenna	• External antenna gain (max.: $\geq 2\text{dBi}$, average: $\geq 1.5\text{dBi}$) • Internal antenna gain (max.: $\geq 1\text{dBi}$, average: $\geq 0\text{dBi}$) • Rotation on connector (perpendicular to the antenna base (-90 to +90 degrees) • Bandwidth: 2400~2484MHz, at return loss $\leq -10\text{dB}$ • External/Internal RF power handling: 200mW
Peak Antenna Gain	$>2\text{dBi}$, when antenna integrated to the unit

Average Antenna Gain	>0dBi, when antenna integrated to the unit
Antenna Yield	>50%, when antenna integrated to the unit
Antenna Diversity	Want
Typical Transmit Power	17dBm at 8% PER, at the antenna port with 802.11g/b data transmission
Minimum Transmit Power	14dBm at 8% PER, at the antenna port with 802.11g/b data transmission
Receiver Sensitivity at 11Mbps	≤82dBm at 8% PER, at the antenna port
Receiver Sensitivity at 1Mbps	≤90dBm at 8% PER, at the antenna port
Maximum Receive Signal	>+10dBm at 8% PER, at the antenna port
Current Consumption at Power Save Mode	<80mA
Audio Out	Must, RCA (L, R) stereo; Fixed output
Dolby	Digital 5.1
Audio Maximum Output	1.8Vpp@30mA max load, 1Vrms, 24-bit, 96KHz DAC
Signal-to-Noise	85dB
THD+N	-78dB, A weighted
Crosstalk	-66dB@1KHz
Frequency Response	20Hz~20KHz ±1dB
DAC Resolution	16 bits
Video Out	Composite Video RCA (Yellow)
S-Video Out	S-Video S mini-DIN (4-pin female)
YPbPr Video Out	Component Video RCAx3 (Red/Green/Blue)
SCART Video Out	Composite Video SCART (21-pin male)
Video Output Signals	
S-Video Cable	Stuffing option, 1.5m S-Video cable (DIN 4-pin female-to-DIN 4-pin female that plug its cable connector into the DIN jack marked “S-Video” on the rear panel of Digital Media Player
RCA Video Cable	1.5m video cable (RCA-to-RCA that the RCA connector colored Yellow) The cable connector colored Yellow must be connected to the RCA jack marked with the letter “Composite Video” on the rear panel of Digital Media Player
RCA Audio Cable	1.5m audio cable (RCA-to-RCAx2 that the RCA connectors colored red/white, 2 wires) - The connector colored Red must be connected to the RCA jack marked with the letter “Audio Out/R” on the rear panel of Digital Media Player - The connector colored White must be connected to the RCA jack marked with the letter “Audio Out/L” on the rear panel of Digital Media Player
Reset Switch	- Push once: soft reset - Push & hold: returns unit to factory default configure
USB Port	Single USB 1.1 host port that will used as Manufactory Tool.

IR Remote Receiver	Must, good axis and range
IR Remote	Provided by Philips (RC6 codes)
Leakage Current	<0.7mA@240VAC, <0.25mA@100VAC
Operating Temperature	0~40°C
Operating Humidity	10~90% RH
Storage Temperature	-20~70°C
Storage Humidity	5~95% RH

Software

Software Version	
UPnP AV	Content Discovery (CDS) and Control Point
DHCP Client/Server	Client
Network Protocols	Must, ARP, IP, ICMP, TCP, UDP, RTP/RTSP
Client OS Support	Windows 98/Me/2000/XP (Minimum Pentium 500MHz processor, 128MB memory, and 20MB free disk space on at least one PC); Want: MacOS 8+iTunes, Linux settings and configuration (Browsers: IE5 ⁺ , Netscape 4.7 ⁺)
Web Server Support	
Audio Files Support	AAC, WAV, WMA, MP3
MP3 Bitrates	16~320Kbps, 44.1, 32, 22.05, 16, 11.025, 8KHz
WMA Bitrates	32~192Kbps, 44.1, 32, 22.05KHz
Playlist Files	PLS, M3U, WPL, ASX
File Tags	ID3 1.1, 2.3 ⁺
Internet Radio	• MP3 (Shoutcast, Icecast, Live365) • WMA (Windows Media, Yahoo Launch) • Real (Real MusicPass)
Music Services	Rhapsody, (Yahoo Pressplay, Real MusicPass, MusicMatch)
Picture Files Support	JPEG, GIF, BMP, TIFF

Video Files Support	MPEG-1 (1.41Mbps, 352x240, 30fps; MPEG-2 up to 8Mbps, 720x480, 30fps); MPEG-4, DivX
Open API	Want (For plug-ins)
Presets	Want (0~9, Playlist and Internet radio, etc.)
Minimum Tracks	Want (30,000)
Maximum Users	3
Wireless Users	3
Typical Users	1
Multiple Server Support	Up to 5 (Content servers)
Multiple Unit Support	Up to 5 (Simultaneous operation of 5 networked music adapters on network)

Certifications-Safety

US: UL 60950	Must (Test report, Product label, Certification; may release products earlier in different countries as certifications become available, NETGEAR ID is 85TK)
Canada: C UL	Must (Test report, Product label, Certification)
Europe: CE Mark LVD	Must (Test report, Product label, Certification)

Certifications-EMI

US: FCC Part 15 Class B	Must (Test report, Product label, Certification)
Canada: ICES-003	Must (Product label)
Europe: CE	Must (Test report, Product label, Declaration of conformity (CISPR 22))

Certifications-Wireless

US: FCC Part 15C	Must (Test report, Product label, Certification, NETGEAR ID is PY3-MR814)
Canada: RSS-139-1 & RSS-210	Must (Test report, Product label, Certification, NETGEAR ID is 4054-MR814)
Europe: CE R & TTE	Must (Test report, Product label, Certification (Austria, France, Germany, Italy, Ireland, Netherlands, Norway, Spain, Swiss, Sweden, UK, NETGEAR ID is 0560xxxx))

Hereby, **NETGEAR**, declares that this device is in compliance with the essential requirements and other relevant provisions of the R&TTE Directive 1999/5/EC. This device will be sold in the following EEA countries: Belgium Denmark Germany Greece Spain France Ireland Italy Luxemburg Netherlands Austria Portugal Finland Sweden United Kingdom Switzerland Norway Iceland Cyprus Czech Republic Estonia Hungary Latvia Lithuania Malta Slovakia Poland Slovenia

FEDERAL COMMUNICATIONS COMMISSION

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE

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 radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.