

FCC Statement

User Manual

MSS300/350 Network Player

Multimedia Digital Signage Platform
Box & LCD Integrated Solution

- SD Play Engine (Standard Definition)
- Multiple Zone Layout Support
- DVI / VGA / Video Output
- LAN & WLAN optional
- Very Compact Design
- Media Processor for Fanless operation
- CF storage for Long Lifetime



THIS DEVICE COMPLIES WITH PART 15 FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS :

THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.

THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE OPERATION. THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS "A" DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

Safety and Warranty

Safety

Please read these safety instructions carefully.

Please keep this user manual for later reference.

Please disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.

For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.

Keep this equipment away from humidity.

Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.

The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**

Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

Position the power cord so that people cannot step on it. Do not place anything over the power cord.

All cautions and warnings on the equipment should be noted.

If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

Never pour any liquid into an opening. This could cause fire or electrical shock.

Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

If any of the following situations arises, get the equipment checked by service personnel:

The power cord or plug is damaged.

Liquid has penetrated into the equipment.

The equipment has been exposed to moisture.

The equipment does not work well, or you cannot get it to work according to the user manual.

The equipment has been dropped and damaged.

The equipment has obvious signs of breakage.

DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW - 0°C (-32°F) OR ABOVE 50° C (122° F). IT MAY DAMAGE THE EQUIPMENT.

Warranty

Winmate warrants that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, Winmate will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in its original packaging to obtain warranty service.

If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W07Axxxxxxx means October of year 2007.

Revision History

Rev	Date	Note	Author
1.00	Jun 27, 2007	1. Initial draft	Bruce
1.1	Oct 17, 2007	1. Add MSS350 2. Modify scrolling message converted format	Nelson
1.2	Nov 16, 2007	1. Modify remote control	Nelson
1.3	Nov 21, 2007	1. Modify remote control	Nelson

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CHAPTER
1

Introduction

- ✓ About the Product
- ✓ Summarized Product Features
- ✓ Notice

1.1 About the Product

Network Player is the powerful engine that drives revenue generating Digital Signage solution. Equipped to handle high quality media of Video, Graphics, and the scrollable Texts; it is ideal for delivering the content according to a predefined playlist through network input. It features a better solution for easy installation and an easy-to-use network management software.

The multiple zones and layouts make this product capable of fulfilling the needs of your application. The Networking configuration can be used as a fixed IP or a DHCP Device. The robust player is following the most reliable and stable Standards of Media Files and provides so the most possible reliable playing.

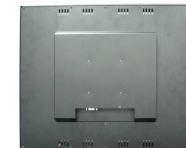
Network Player MSS300 Box



Network Player MSS350 Box



Integrated Display (7"~47")



1.2 Summarized Product Features

- ◆ Authentication/Authorization Double Protection
- ◆ Auto Media Update
- ◆ Auto Time Sync.
- ◆ CF storage for Long Lifetime
- ◆ Client IP setup
- ◆ DVI / VGA / Video Output
- ◆ File transferring
- ◆ LAN & WLAN optional
- ◆ Media Processor for Fanless operation
- ◆ Multiple Zone Layout Support
- ◆ Output resolution setting
- ◆ Output selection (DVI, S-video)
- ◆ Picture rotation
- ◆ Scrollable text message
- ◆ SD Play Engine (Standard Definition)
- ◆ Very Compact Design

Specification

- ✓ Hardware Specification
- ✓ Software Specification
- ✓ Media Format Supported
- ✓ Media Content Transferring

CHAPTER 2

2.1 Hardware Specification

Benefit List

- Only 5W power consumption
- Fanless
- 5 ~ 10 years Lifetime

Network Player Plus BOX / Integrated Display

Core Processor	RISC based media processor	
Media Decoding	H/W MPEG decoding Engine	
Internal Storage	Compact Flash 512MB (bigger size as optional)	
USB Port	USB 2.0 port for Flash Drive storage device	
Operating Temp	0 to 50°C, Humidity 5-85% @ 50°C	
Network	10/100 Base T Ethernet (RJ-45) 802.11b/g mini-PCI for wireless LAN (optional)	
Video Outputs	Network Player BOX	Integrated Display
	DVI-I (can be converted into VGA) S-Video Composite	DVI-I
Audio	Network Player BOX	Integrated Display
	Stereo Layout	Stereo 2W Speaker integrated 2x Stereo Layout
Power Supply	12V DC input	12V DC input
Power Consumption	Approx. 5W	Varies depends on panel

2.2 Media Format Supported

Text message/Picture Format

Type	Support Format	File extension
Graphics/ Pictures	JPEG file	.jpg
	24bit-Bitmap file	.bmp
Message/ Text ^{*1}	ASCII Text file	.txt
	(Converted to .png)	.jpg
		.png

Video^{*2}

Type	Support Format	File extension
Video (16:9 &4:3)	MPEG1 (VCD file)	.mpg .dat
	Support Format	
	Video Data rate ^{*3}	Up to 10.0 Mbps
	Audio codec	Max. audio data rate: 384 Kbps MPEG1-Audio-Layers II and III(mp3) *PCM not supported

¹ Depends on the size of font, the number of characters can be displayed in scrollable text area may vary. However, the message length should be less than 8000 pixels.

² Please refer to Appendix A for all supported video formats

³ If data rate is higher than limitation, a lag might happen when playing video

	<p>MPEG2 MP@HL Multi-frames: Max. 480p or 576p</p> <p>Support Format</p> <table border="1"> <tr> <td>Video Data rate</td> <td>Up to 6.0 Mbps</td> </tr> <tr> <td>Audio codec</td> <td>Max. audio data rate: 384 Kbps MPEG1-Audio-Layers II and III(mp3) *PCM not supported</td> </tr> </table>	Video Data rate	Up to 6.0 Mbps	Audio codec	Max. audio data rate: 384 Kbps MPEG1-Audio-Layers II and III(mp3) *PCM not supported	<p>.vob .mpg .mpeg .m2p</p>
Video Data rate	Up to 6.0 Mbps					
Audio codec	Max. audio data rate: 384 Kbps MPEG1-Audio-Layers II and III(mp3) *PCM not supported					
<p>Video (16:9 & 4:3)</p>	<p>MPEG4 Multi-frames: Max. 480p or 576p</p> <p>Support Format⁴</p> <table border="1"> <tr> <td>Video Data rate</td> <td>Up to 4.0 Mbps</td> </tr> <tr> <td>Audio codec</td> <td>Max. audio data rate: 384 Kbps MPEG1-Audio-Layers II and III(mp3) *PCM not supported</td> </tr> </table> <p>DivX 3.11/4.x/5.x</p>	Video Data rate	Up to 4.0 Mbps	Audio codec	Max. audio data rate: 384 Kbps MPEG1-Audio-Layers II and III(mp3) *PCM not supported	<p>.mpg .avi .divx .xvid</p>
Video Data rate	Up to 4.0 Mbps					
Audio codec	Max. audio data rate: 384 Kbps MPEG1-Audio-Layers II and III(mp3) *PCM not supported					

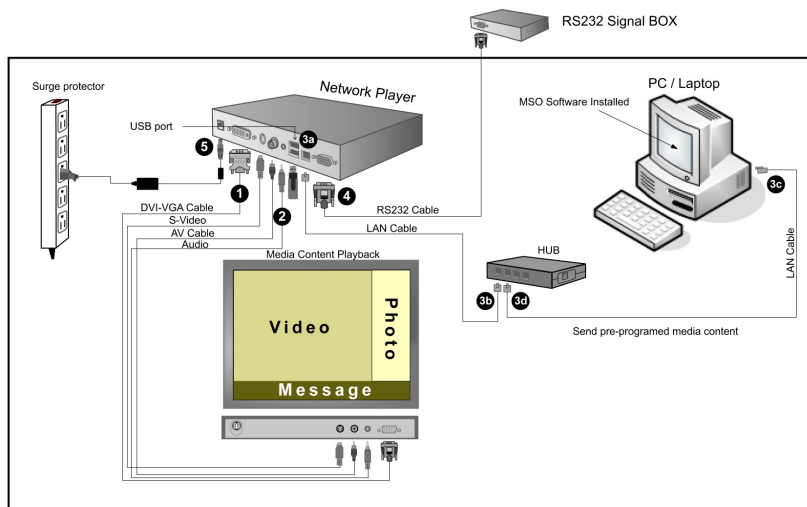
⁴ It does not support the codec of RealMedia (.rm, .rmvb) or Apple QuickTime (.mov)

CHAPTER
3

Starting Setup

- ✓ Connecting Cable
- ✓ Check Boot Screen
- ✓ Configuration
- ✓ Default Setting

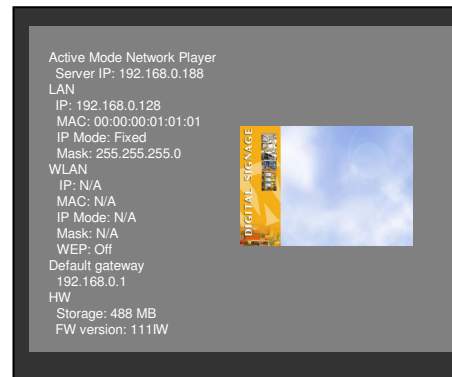
3.1 Connecting Cable



Network Player BOX

Check Boot Screen

1. Choose the video output (DVI/S-video/Composite) you would like to use and connect the cable. Connect another end of the cable to your monitor.
2. Connect audio cable (optional).
3. Configure network (optional)
 - a. Connect Ethernet cable to Network Player Plus LAN port
 - b. Connect another end of Ethernet cable to a hub
 - c. Connect Ethernet cable to your computer with MSO installed
 - d. Connect another end of Ethernet cable to the hub
4. Connect RS232 cable (optional).
5. Plug the DC end of the power adapter into the power connector of the Network Player Plus unit; then, plug the AC end to an electrical outlet. The Network Player Plus is powered up immediately.
6. You can check the firmware version, client LAN IP, system mode (active mode), and server IP in the beginning of system boot-up.



Integrated Display

Please do step 3 to step 5 above accordingly.

Default Settings

The factory setting for every Network Player Series is listed below.

4.1

Factory LAN Setting

IP mode	DHCP
IP port	8001,8002,8003*5
Server IP (the IP that NP Plus connects to automatically)	192.168.0.188

The default IP mode is DHCP and it will automatically switch to Fixed mode if no IP is assigned to Network Player unit.

IP mode	Fixed
LAN IP	192.168.0.128
LAN Subnet Mask	255.255.255.0
LAN Gateway	192.168.0.1

Factory Wireless LAN Setting

WLAN IP	192.168.252.249
WLAN Subnet Mask	255.255.0.0

⁵ If your PC is behind a firewall, please make sure port 8001, 8002, 8003 are open. Please refer to the **Troubleshooting** section in this manual for detail on setting firewall exceptions.

Remote Control (Optional)

The remote control is only available when Network Player with display (does not work with Network Player BOX). With remote control, you will be able to power on/off display, adjust volume, adjust display backlight, and other functions.

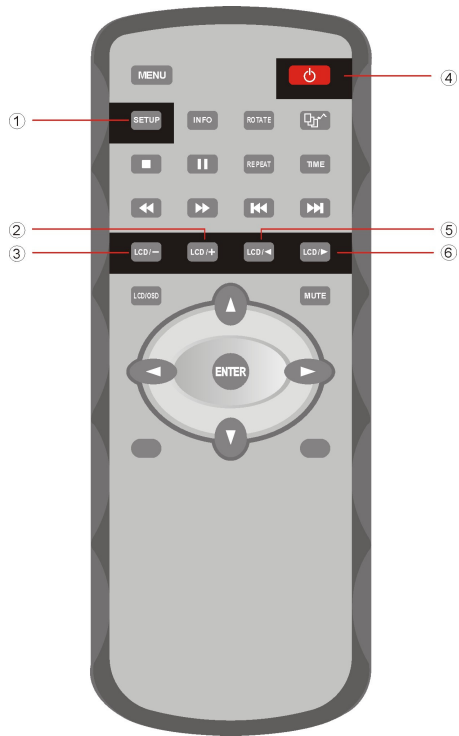
4.1 Install Battery in the Remote Control.

Insert 2 AAA battery and match the (+) and (-) on battery to the marks inside the battery compartment.

Service life of battery:

1. The battery normally last for about one year although this depends on how often and for what operations the remote control is used.
2. If the remote control unit fails to work even then it's operated near the player, please replace the battery.
3. Use 2 AAA 1.5V battery.

4.2 Remote Control Key Define*6



1	SETUP	To clean up all media files in internal storage
2	VOL. UP	Volume Up
3	VOL. DOWN	Volume Down
4	POWER ON/OFF	Switch on/off player
5	BRIGHTNESS DOWN	Decrease the brightness of display
6	BRIGHTNESS UP	Increase the brightness of display

⁶ Currently only 6 keys are programmed and ready to be used, other keys are reserved for future usage.

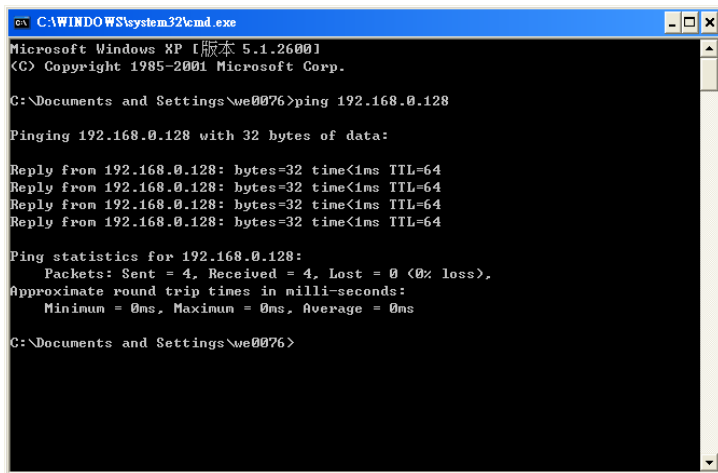
CHAPTER 5

Troubleshooting

This guide is only a reference of quick self-examination. If you cannot find description similar to the problem you are encountering, please contact our technical support for further assistance.

5.1 Troubleshooting Step 1: Ping your client

1. Try to “ping” your client unit to ensure the network status between you host PC and client unit. Open the “DOS prompt”, then type “ping 192.168.0.128⁷”.



```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [版本 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\we0076>ping 192.168.0.128

Pinging 192.168.0.128 with 32 bytes of data:

Reply from 192.168.0.128: bytes=32 time<1ms TTL=64
Reply from 192.168.0.128: bytes=32 time<1ms TTL=64
Reply from 192.168.0.128: bytes=32 time<1ms TTL=64
Reply from 192.168.0.128: bytes=32 time<1ms TTL=64

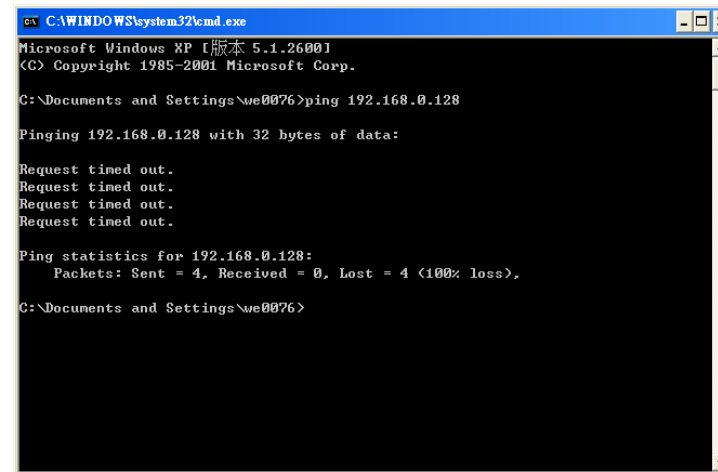
Ping statistics for 192.168.0.128:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Documents and Settings\we0076>

```

<Connection is established>

⁷ “192.168.0.128” is the default factory IP of client. If you have changed the IP, you should type the current IP of Client. You can always find the client IP information when client unit boot up.



```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [版本 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\we0076>ping 192.168.0.128

Pinging 192.168.0.128 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.0.128:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Documents and Settings\we0076>

```

<Connection is not established>

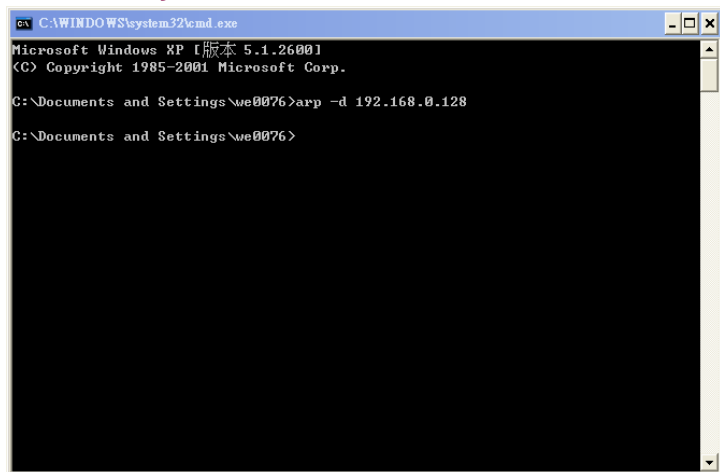
Troubleshooting Step 2: Delete ARP table

What is ARP?

Address Resolution Protocol (ARP) is a network protocol, which map the MAC address to IP address. It is used to resolve IP address to the corresponding MAC address. For more detail information, please refer to RFC 826.

If you have more than one Network Player device, before you connect to the second unit with the same IP (192.168.0.128). Please try to delete the record in the arp table.

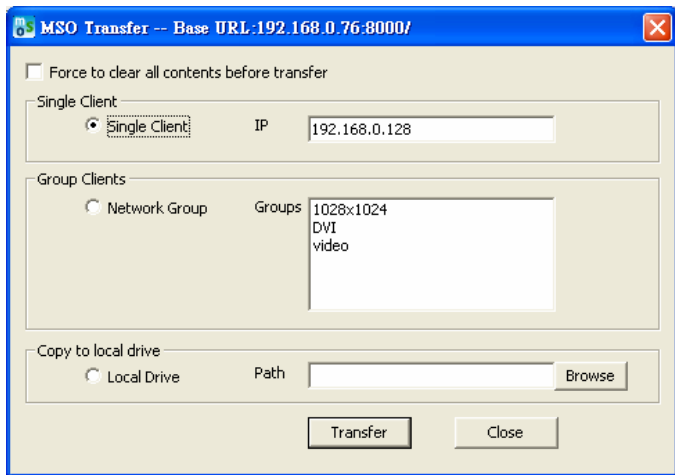
Open the “DOS prompt”, then type “arp -d 192.168.0.128”. This will delete the previous arp record.



Troubleshooting Step 3: Disable another wireless/wire network card

If the connection is established, but you still can not update the play list. In this case, chances are there are more than one network adaptor cards in you PC host.

Try to disable the others, only enable the one that is connected to the client unit, then ping the client unit again to be sure that the connection is established. The update service should bind to only one network card (IP). You could get the information (Base URL) from MSO windows title. Make sure the Base URL and client IP can connect to each other.

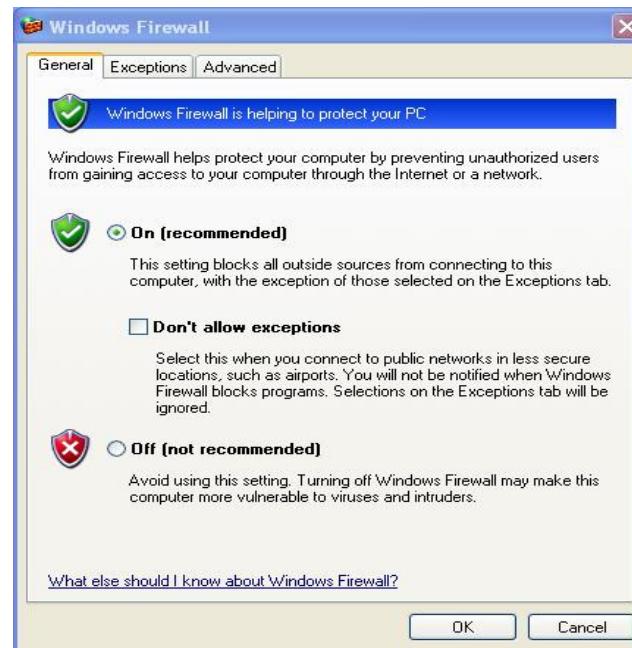


5.2 ISSUE: How to set Windows XP firewall exception

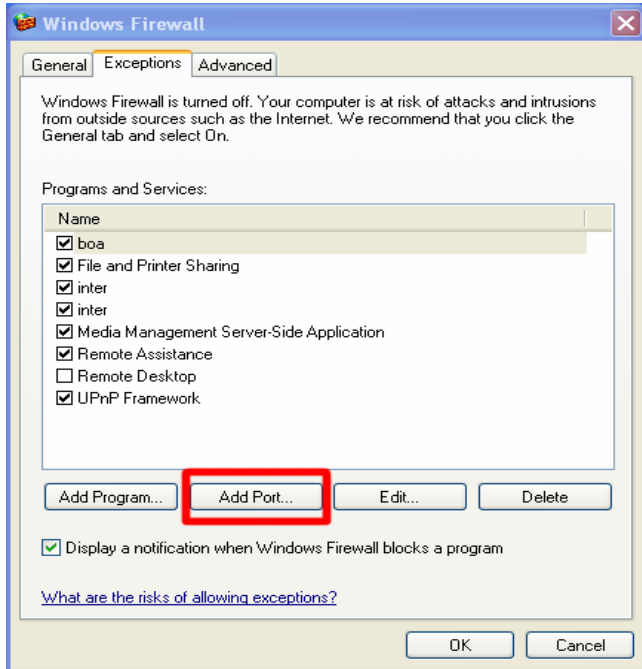
Windows XP comes with build-in firewall software that is turned on by default when you create a network connection. Firewalls are designed to protect you computer by closing unnecessary network openings, or services, on your system that viruses or hackers might use to enter your system. However, some applications like MSO need to use these openings in order to work properly.

To enable the openings for MSO, do the following steps:

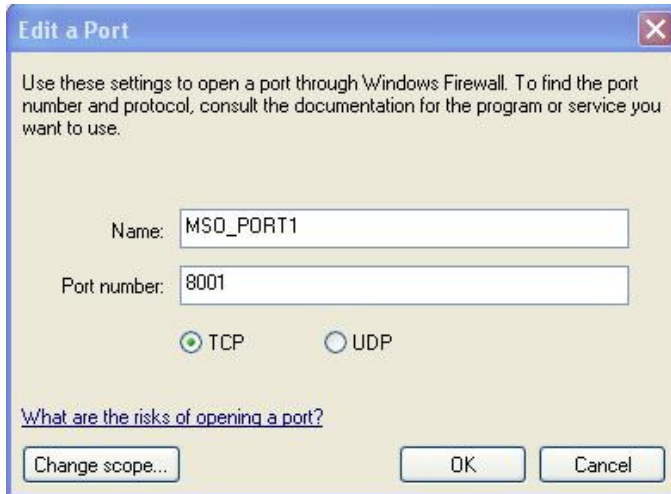
1. Click **Start-> Control Panel-> Network and Internet Connection-> Windows Firewall.**



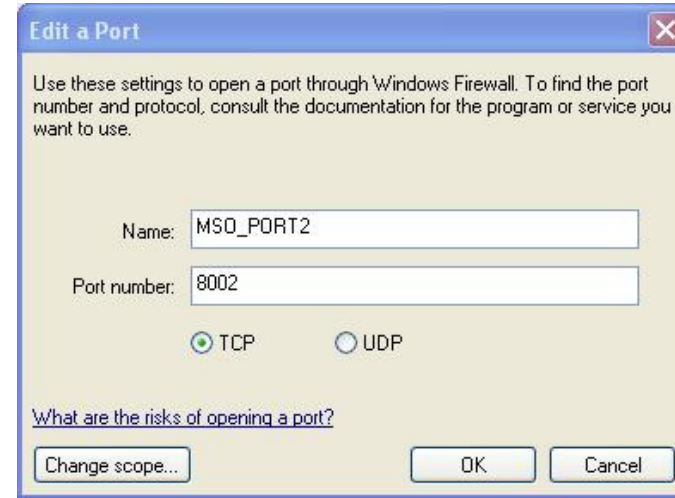
2. In the General tab, check **“On (recommended)”**, and uncheck **“Don’t allow exceptions”**.
3. In **“Exceptions”** tab, click **“Add Port”** button.



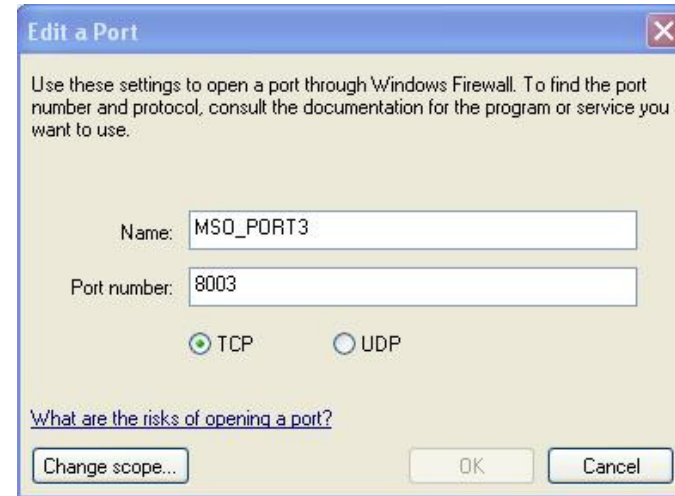
4. In the “Add a Port” window, type **MSO_PORT1** in **Name** text edit, **8001** in **Port number**. Click **OK** button to accept the value.



5. Click “Add Port” again in “Exceptions” tab, enter the following value in “Add a Port”, then Click OK.

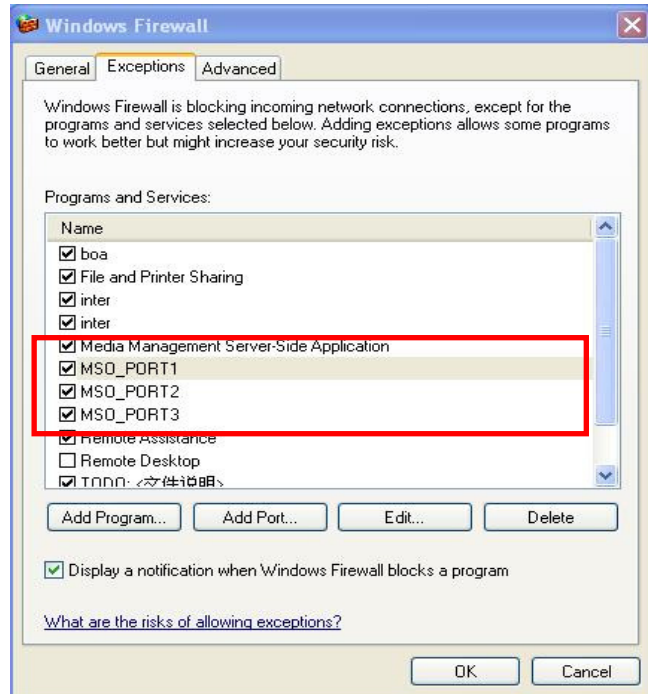


6. Click “Add Port” again in “Exceptions” tab, enter the following value in “Add a Port”, then Click OK.



Exception	Name	Port number	Protocol
1	MSO_PORT1	8001	TCP
2	MSO_PORT2	8002	TCP
3	MSO_PORT3	8003	TCP

6. Click on the “Exception” tab to ensure the two exceptions are added.



7. Click **OK** to confirm the firewall setting.

CHAPTER
6

Update Firmware using USB Flash Drive

Prerequisites

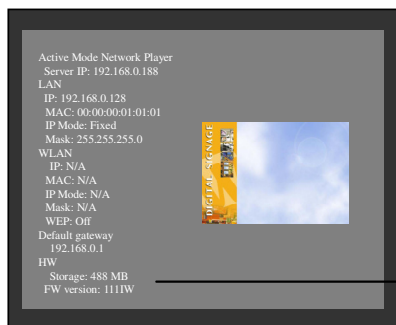
- A USB 2.0 flash drive bigger than 32MB

Things to Know Before You Update

- All media contents will be deleted if update firmware via USB. Choose LAN as the update option if you would like to keep media contents.
- Firmware differs between Network Player models. Make sure you download the appropriate firmware for your Network Player.
- As a measure of protection, ensure that critical files on your USB flash drive are backed up.
- Each version of firmware is only compatible with the same version of Media Signage Organizer (MSO).

Check Firmware Version

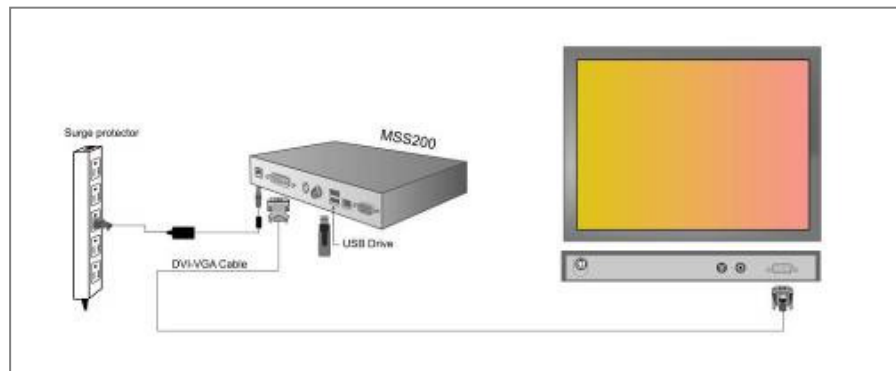
You will be able to check the firmware version of Network Player in the beginning of system boot up.



→ **Firmware Version**

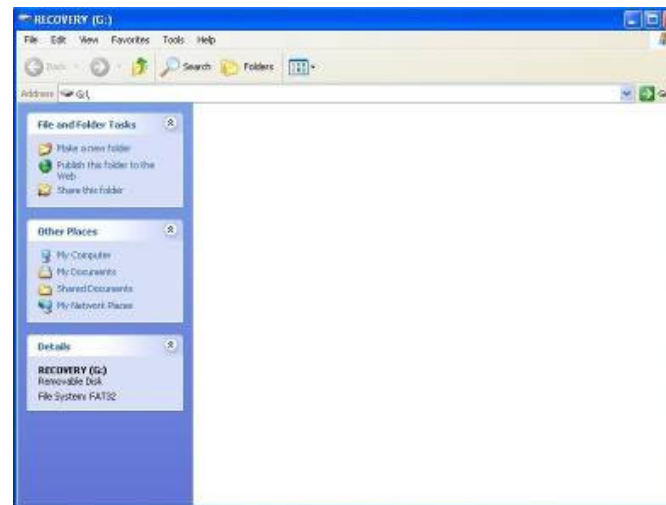
Environment Setup

Network Player BOX Firmware Update



Firmware Update Process

Step1. Clear all data from your USB Flash drive.



Step2. Extract the updateall_xxx.rar into the root directory of USB flash drive.

APPENDIX

A

Supported Video Format Table

Note that this table lists all video formats supported by Network Player Plus unit; other formats not in the list are not guaranteed to have the best playback result.

Video Resolution	Type	BitRate	Framerate	Audio
720*576	avi	4M	30fps(Interlace)	MP3 320kBit/s 48000Hz ,Stereo
720*576	avi	4M	30fps(NonInterlace)	MP3 320kBit/s 48000Hz ,Stereo
720*576	avi	4M	25fps(Interlace)	MP3 128kBit/s 44100Hz ,Stereo
720*576	avi	4M	25fps(NonInterlace)	MP3 128kBit/s 44100Hz ,Stereo
720*480	avi	4M	23.97fps(NonInterlace)	MP3 128kBit/s 44100Hz ,Stereo
720*480	avi	4M	29.97fps(NonInterlace)	MP3 128kBit/s 44100Hz ,Stereo
720*480	avi	4M	29.97fps(Interlace)	MP3 128kBit/s 44100Hz ,Stereo
720*480	avi	4M	25fps(NonInterlace)	MP3 128kBit/s 44100Hz ,Stereo
720*480	avi	4M	25fps(Interlace)	MP3 128kBit/s 44100Hz ,Stereo
720*480	avi	4M	30fps(NonInterlace)	MP3 320kBit/s 48000Hz ,Stereo
720*480	avi	4M	30fps(Interlace)	MP3 320kBit/s 48000Hz ,Stereo
720*480	avi	4M	24fps(NonInterlace)	MP3 128kBit/s 48000Hz ,Stereo
640*480	avi	4M	30fps(Interlace)	MP3 128kBit/s 44100Hz ,Stereo
640*480	avi	4M	30fps(NonInterlace)	MP3 128kBit/s 44100Hz ,Stereo
640*480	avi	4M	29.97fps(Interlace)	MP3 128kBit/s 44100Hz ,Stereo
640*480	avi	4M	29.97fps(NonInterlace)	MP3 128kBit/s

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				44100Hz ,Stereo
640*480	avi	2M	24fps(NonInterlace)	MP3 128kBit/s 48000Hz ,Stereo
640*480	avi	4M	25fps(Interlace)	MP3 128kBit/s 44100Hz ,Stereo
640*480	avi	4M	25fps(NonInterlace)	MP3 128kBit/s 44100Hz ,Stereo
640*480	avi	4M	23.97fps(NonInterlace)	MP3 128kBit/s 44100Hz ,Stereo
640*480	avi	4M	30fps(Interlace)	MP3 320kBit/s 48000Hz ,Stereo
640*480	avi	4M	30fps(NonInterlace)	MP3 320kBit/s 48000Hz ,Stereo
640*480	mpeg1	4M	30fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
640*480	mpeg1	4M	24fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
640*480	mpeg1	4M	23.97fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
640*480	mpeg1	8M	30fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
352*240	mpeg1	4M	30fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
352*240	mpeg1	4M	24fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
352*240	mpeg1	4M	23.97fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
352*288	mpeg1	4M	30fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
352*288	mpeg1	4M	24fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
352*288	mpeg1	4M	23.97fps(1:1)	MP2 384kBit/s 48000Hz ,Stereo
352*288	mpeg1	4M	30fps(4:3 NTSC)	MP2 384kBit/s 48000Hz ,Stereo
352*288	mpeg1	4M	30fps(4:3 PAL)	MP2 384kBit/s

Network Player Series

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				48000Hz ,Stereo
352*288	mpeg1	4M	30fps(16:9 NTSC)	MP2 384kBit/s 48000Hz ,Stereo
352*288	mpeg1	4M	30fps(16:9 PAL)	MP2 384kBit/s 48000Hz ,Stereo
720*576	mpeg2	4M	23.97fps(Non Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*576	mpeg2	4M	23.97fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*576	mpeg2	4M	24fps(NonInterlace)	MP2 384kBit/s 48000Hz ,Stereo
720*576	mpeg2	4M	24fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*576	mpeg2	4M	25fps(NonInterlace)	MP2 384kBit/s 48000Hz ,Stereo
720*576	mpeg2	4M	25fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	23.97fps(Non Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	23.97fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	24fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	24fps(NonInterlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	25fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	25fps(NonInterlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	2997fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	2997fps(NonInterlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	30fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	4M	30fps(NonInterlace)	MP2 384kBit/s

				48000Hz ,Stereo
720*480	mpeg2	8M	30fps(Interlace)	MP2 384kBit/s 48000Hz ,Stereo
720*480	mpeg2	8M	30fps(NonInterlace)	MP2 384kBit/s 48000Hz ,Stereo