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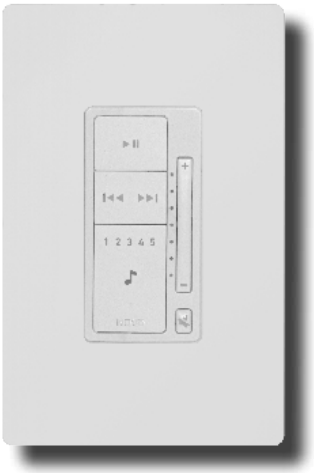
Player Portfolio Audio System

Product Manual

Includes:
NV-P100-xx Single Zone Player
NV-P200-xx Single Zone Player
NV-GW100-xx Wireless Gateway
NV-P3100-xx Three Zone Player
NV-P3500-xx Three Zone Player
NV-P300-xx Single Zone Preamplifier
NV-P10-xx POE Keypad



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Contents

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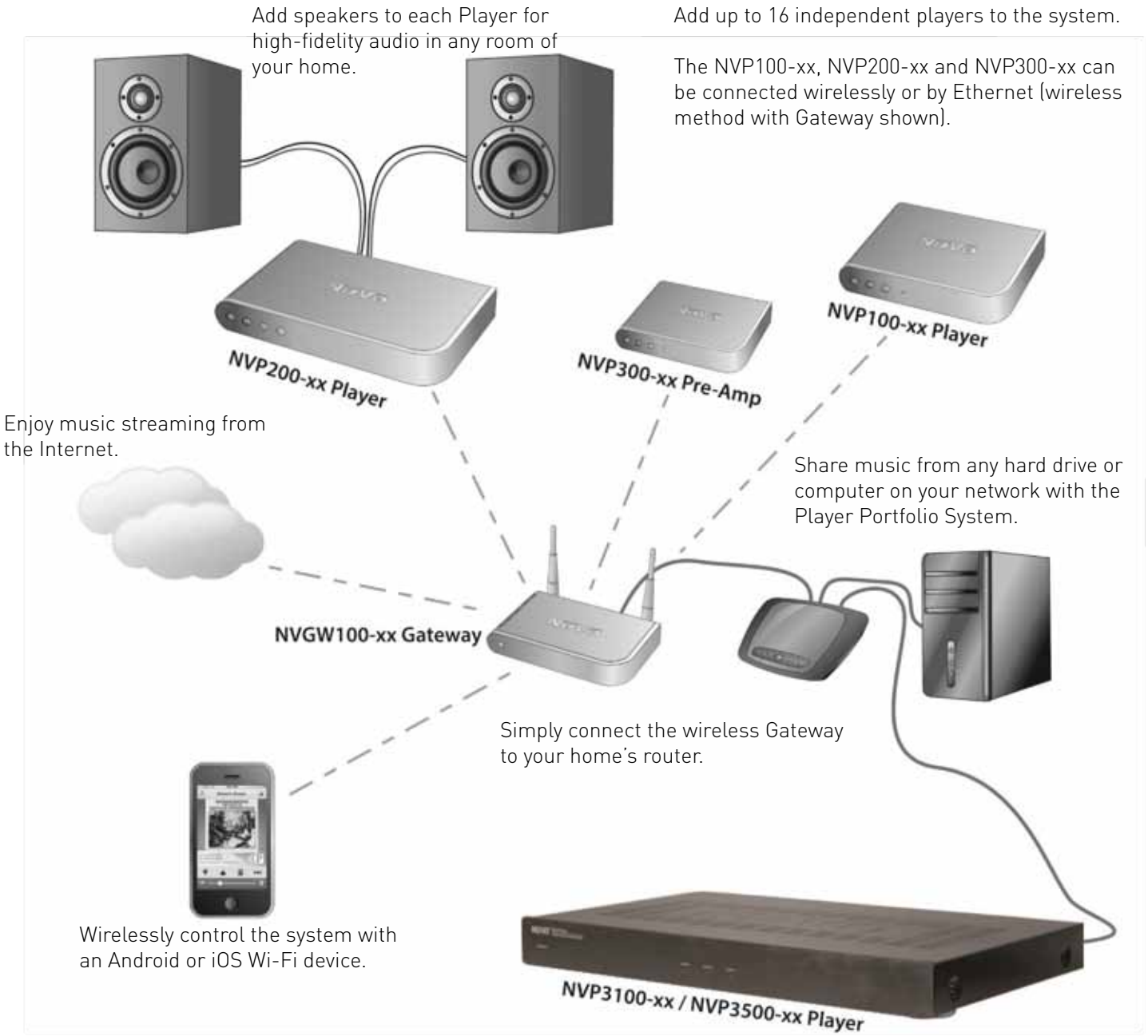
The Nuvo Wireless Audio System Product Manual

Introduction

Welcome to the exciting world of the Nuvo Player Portfolio Audio System. Now your favorite music is in any room you want it, at any time you want it, at the touch of a button on any of your Apple or Android Wi-Fi enabled portable devices. True high-fidelity music, from your own personal library or streaming from the Internet, is more affordable and accessible than you ever imagined.

This is your guide to quickly and easily filling a home with music.

The NuVo Wireless Audio System



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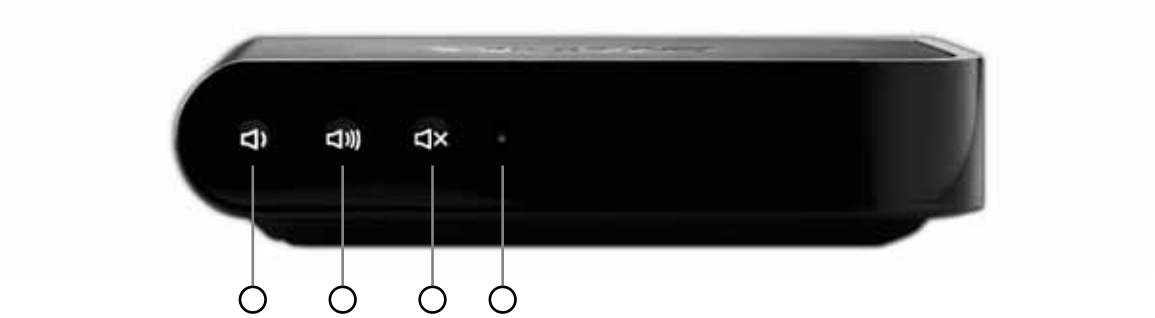
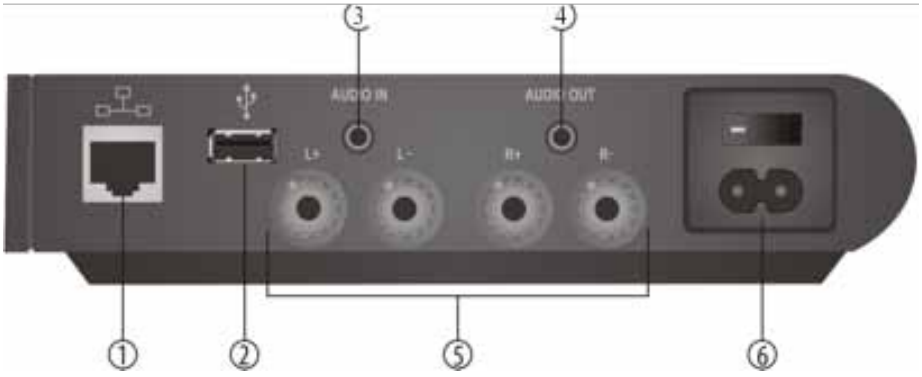
NV-P100-xx Single Zone Player Front Panel Features (Wireless or Ethernet Connectivity)



1. Volume Down: Press to decrease audio volume.
2. Volume Up: Press to increase audio volume .
3. Mute: Press to mute/un-mute audio.
4. LED Indicator: Indicates status of NVP100-xx (see table in section 6.1 for details).

NV-P100-xx Single Zone Player Back Panel Features (Wireless or Ethernet Connectivity)



1. Ethernet: This RJ45 port allows for a wired connection directly to the NVGW100-xx Gateway or directly to the network router.
2. USB**: A USB storage device can share music content with the Nuvo Player Portfolio System through this port.
3. Audio In: This 3.5mm stereo in put will accept any analog line level audio signal. The local audio source is amplified by the local player, as well as provided as an additional source selection in any other associated audio zones within the NuVo Player Portfolio Audio System.
4. Audio Out*: This 3.5mm stereo output provides the local line level audio signal to an additional amplifier, powered subwoofer, or headphones.

S. Speaker Outputs*: These binding posts provide an amplified audio signal to any connected speakers. The maximum output of the P100 is 40 Watts at 8 Ohm stereo.

6. AC: The switchable universal power supply will accept any incoming AC voltage worldwide.

* If the audio output of a video device is the source, there will be no perceptible delay in audio if a single player zone is selected. If two or more player zones are playing the audio from the video source, an audio buffer will be engaged which will add a delay between the audio and video source.

**Not all USB drives are supported natively by the USB port. USB drives should meet USB 2.0 requirements.

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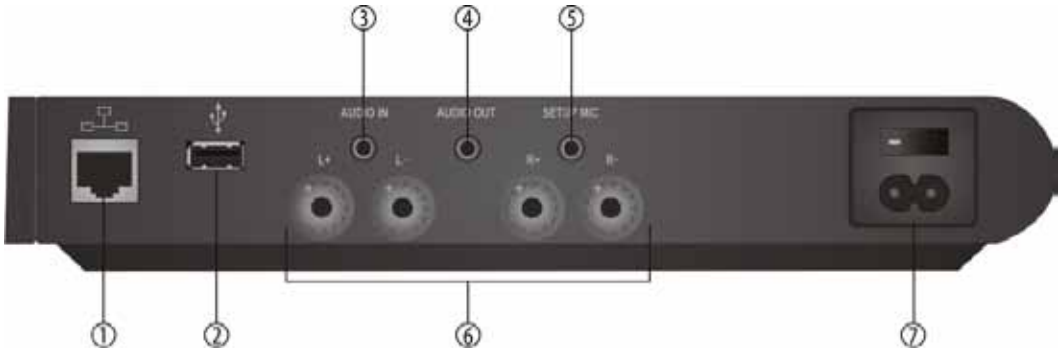
NV-P200-xx Single Zone Player Front Panel Features (Wireless or Ethernet Connectivity)

1. Volume Down: Press to decrease audio volume.
2. Volume Up: Press to increase audio volume .
3. Mute: Press to mute/un-mute audio.
4. Bluetooth: Press to cause the NVP200-xx to change to the next paired device in the list. Press and hold to break any current connections, become discoverable, and accept pairing requests.
5. LED Indicator: Indicates status of NVP200-xx (see table in section 6.1 for details).

NV-P200-xx Single Zone Player Back Panel Features (Wireless or Ethernet Connectivity)



1. Ethernet: This RJ45 port allows for a wired connection directly to the NVGW100-xx Gateway or directly to the network router.
2. USB**: A USB storage device can share music content with the Nuvo Player Portfolio System through this port.
3. Audio In: This 3.5mm stereo input will accept any analog line level audio signal. The local audio source is amplified by the local Player, as well as provided as an additional source selection in any other associated audio zones within the Nuvo Player Portfolio System.
4. Audio Out*:This 3.5mm stereo output provides the local line level audio signal to an additional amplifier, powered subwoofer, or headphones.
5. Setup Mic: This 3.5mm input is for use with future software upgrades.
6. Speaker Outputs*: These binding posts provide an amplified local audio signal to any connected speakers. The maximum output of the P200 is 120 Watts at 8 Ohm stereo.
7. AC: The switchable universal power supply will accept any incoming AC voltage worldwide.

* If the audio output of a video device is the source, there will be no perceptible delay in audio if a single player zone is selected. If two or more player zones are playing the audio from the video source, an audio buffer will be engaged which will add a delay between the audio and video source.

** Not all USB drives are supported natively by the USB port. USB drives should meet USB 2.0 requirements.

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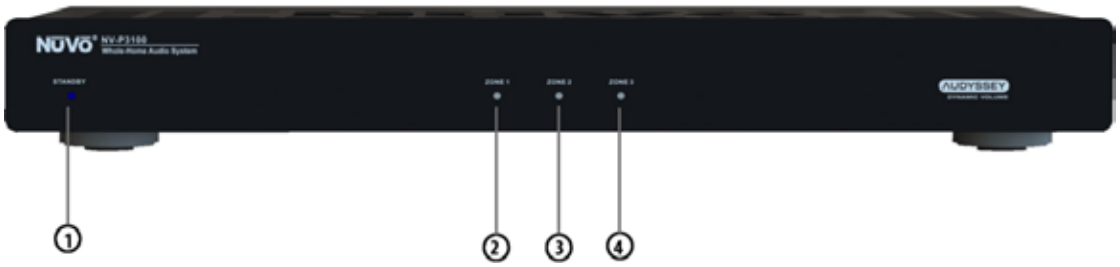
NV-P3100-xx 3-Zone Player Front Panel Features (Ethernet Connectivity)



1. Standby LED Indicator: Indicates whether the NVP3100-xx is powered on, and whether it is in active or standby mode.
2. Zone 1 LED Indicator: Indicates status of NVP3100-xx Zone 1 (see table in section 6.1for details).
3. Zone 2 LED Indicator: Indicates status of NVP3100-xx Zone 2 (see table in section 6.1for details).
4. Zone 3 LED Indicator: Indicates status of NVP3100-xx Zone 3 (see table in section 6.1for details).

NV-P3100-xx 3-Zone Player Back Panel Features (Ethernet Connectivity)

1. Ethernet: The NVP3100-xx is designed to connect directly to the network LAN. The second port enables multiple NVP3100-xx to share the same network connection within one system.
2. Speaker Outputs*: This modular connection provides a maximum 40 Watts stereo amplified signal to the connected speakers. Each zone represents an independent output.
3. Line In: This 3.5mm stereo input will accept any analog line level audio signal. The local audio source is amplified by the local Player, as well as providing it as an additional source selection in any other associated audio zones within the Nuvo Player Portfolio System. Each zone represents an independent input.
4. Trigger In: This optional input is for a 3-12 volt input trigger (for possible use with a future firmware release).
5. Line Out*: This 3.5mm stereo output provides the local line level audio signal to an additional amplifier, powered subwoofer, or headphones. Each zone represents an independent output.
6. Trigger Out: This 3.5mm output acts as a voltage (5V, 20mA) trigger for external equipment, to turn on an external amp when audio is present on the zone.
7. USB**: A USB storage drive can share music content with the Nuvo Player Portfolio System through this port. Each zone represents an independent input.
8. Setup: This button is used for each of the zone sections in the setup process to associate the zone control with the network.

* If the audio output of a video device is the source, there will be no perceptible delay in audio if a single player zone is selected. If two or more player zones are playing the audio from the video source, an audio buffer will be engaged which will add a delay between the audio and video source.

**Not all USB drives are supported natively by the USB port. USB drives should meet USB 2.0 requirements.

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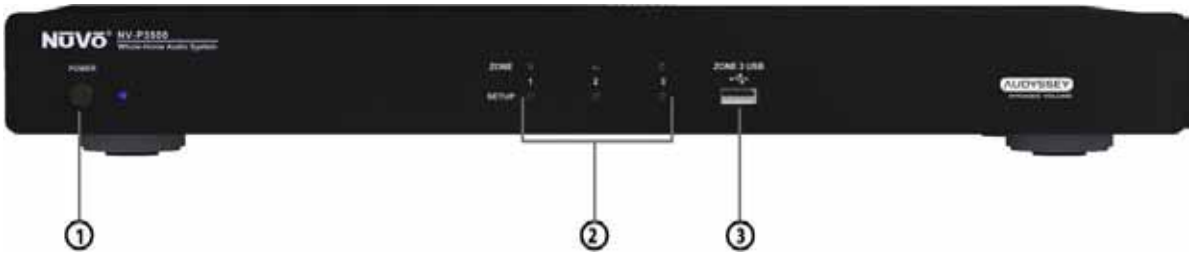
NV-P3500-xx 3-Zone Player Front Panel (Ethernet Connectivity-B&O ICE power Amplification)



1. Power Button: The Power button toggles the power on and off to the NVP3500-xx component. It is also used in the reset procedure for each of the zones.
2. Setup Buttons: Each of the three zones housed in the NVP3500-xx have a separate setup button used in the initial system setup process. These buttons are also used in the zone reset procedure. When the system is set up, each zone has an associated LED that indicates that zone's power status (see table in section 6.1 for details).
3. Zone 3 USB**: The USB input can be used to add digital music files to the system's music library. When a USB hard drive is inserted into the input, the system will recognize the drive, scan the files and automatically add them to the library.

NV-P3500-xx 3-Zone Player Back Panel Features (Ethernet Connectivity-B&O ICE power Amplification)

1. Ethernet: The NVP3500-xx is designed to connect directly to the network LAN. The second port enables multiple Players to share the same network connection within one system.
2. Zone 1 and Zone 2 USB: Any USB storage device can share music content with the Nuvo Player Portfolio System through these ports. Each port can accept a separate drive.
3. Trigger In: These optional inputs are for 3-12 volt input triggers (for possible use with a future firmware release).

   Trigger Out: These 3.5mm outputs act as a voltage (5V, 20mA) trigger for external equipment, to turn on an external amp when audio is present on the zone.
4. Line In/Line Out*: Each of the three zones have an independent RCA line input for a local analog audio source,and RCA audio output for use with an additional amplifier or subwoofer.

S. Speaker Outputs***: Each of the three zones has a modular connector that provides a maximum 200 Watts @ 4 Ohm output.

6. AC: The universal power supply will accept any incoming AC voltage worldwide .

* If the audio output of a video device is the source, there will be no perceptible delay in audio if a single player zone is selected. If two or more player zones are playing the audio from the video source, an audio buffer will be engaged which will add a delay between the audio and video source.

** Not all USB drives are supported natively by the USB port. USB drives should meet USB 2.0 requirements.

*** Bang & Oulfsen intelligent ICEpower® audio technology is used in the P3500 for superior amplification.

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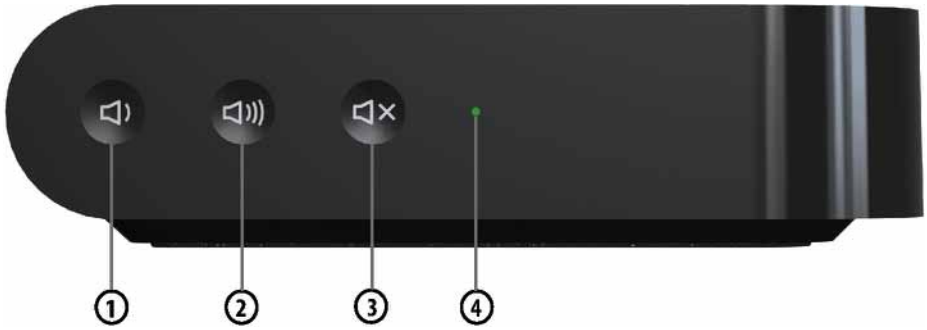
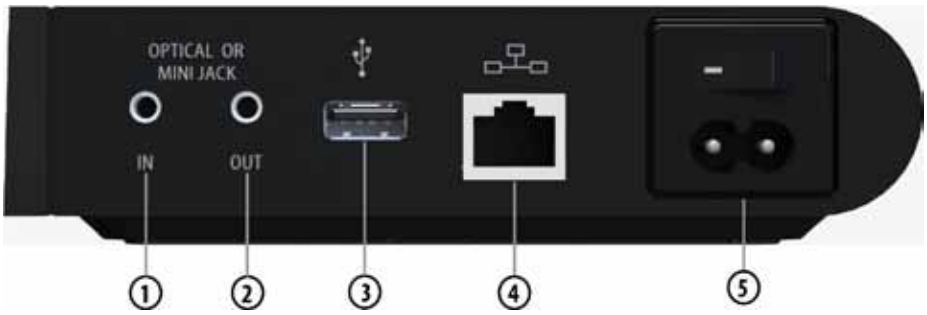
NV-P300-xx Player Preamplifier Front Panel Features (Wireless or Ethernet Connectivity)



1. Volume Down: Press to decrease audio volume.
2. Volume Up: Press to increase audio volume .
3. Mute: Press to mute/un-mute audio.
4. LED Indicator: Indicates status of NVP300 (see table in section 6.1 for details).

NV-P300-xx Player Preamplifier Back Panel Features (Wireless or Ethernet Connectivity)



1. Audio In: This is a combination 3.5mm stereo line level and mini TOSLINK optical input. This input will automatically decipher the difference between an analog line level input and TOSLINK optical input. To connect to the TOSLINK input use a standard TOSLINK cable with the supplied TOSLINK mini-adapters or use a TOSLINK to TOSLINK mini-cable. The line input is available to any player zone within the Nuvo Player Portfolio System.
2. Audio Out*: This is a combination 3.5mm stereo line level and mini TOSLINK optical output. This 3.5mm stereo output provides the local line level audio signal to an additional amplifier, powered subwoofer,or headphones. To connect to the TOSLINK input use a standard TOSLINK cable with the supplied TOSLINK mini- adapters or use a TOSLINK-to-TOSLINK minicable.
3. USB**: Any USB storage device can share music content with the Nuvo Player Portfolio System through this port.
4. Ethernet: This RJ45 port allows for a wired connection directly to the GW100 Gateway or directly to the network router.
5. AC: The switchable universal power supply will accept any incoming AC voltage worldwide.

* If the audio output of a video device is the source,there will be no perceptible delay in audio if a single player zone is selected. If two or more player zones are playing the audio from the video source, an audio buffer will be engaged which will add a delay between the audio and video source.

** Not all USB drives are supported natively by the USB port as current draw is limited to XX amps. If a device that exceeds this is used, an external power supply must be used.

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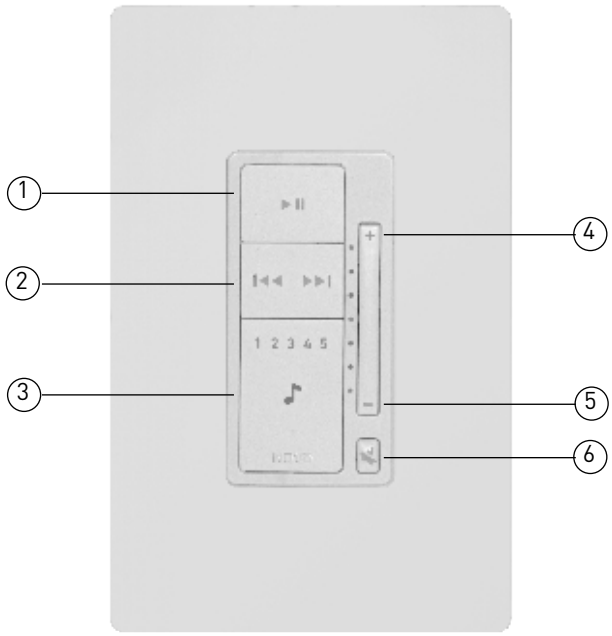
NV-P10-xx POE Keypad

The P10 Keypads require a single Cat5 or better cable. They communicate and are powered by 802.11af Power Over Ethernet. Refer to section 2.6 for installation instructions.



1. Play/Pause: Press to toggle between play and pause.
2. Skip track: Press the right side to skip forward. Press the left side to skip backwards. (Source dependant.)
3. Top 5 Favorites: Press to select and switch between the first 5 favorites saved in the system's Top 10 favorites.
4. Volume Up: Press to increase audio volume.
5. Volume Down: Press to decrease audio volume.
6. Mute: Press to mute/un-mute audio.
7. POE Ethernet connection: Connect a Cat5 (or better) Ethernet cable with a minimum of 10/100BaseT and 802.11af Power Over Ethernet.

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1.0 Setup/Installation

1.1 Network Requirements

A live Internet connection is necessary for complete setup, operation, and music enjoyment of a Nuo Player Portfolio System. Once the system is set up and running, an Internet connection is not necessary for listening to music streaming from a network source. For wired Ethernet connectivity a minimum 100mb wired network is necessary for proper communication. This should not be a problem. Today's network routers are designed to operate in the Gigabyte range. If this is not the case, you should update the installation's network equipment before you proceed with the setup. **The Nuvo Player Portfolio System uses dual band 802.11n wireless communication for robust operation. To ensure that all components are compatible and communicating correctly, it is strongly suggested network routers using the older 802.11g protocol be upgraded.**

1.2 Connecting the Gateway to the Network (If using a Nuvo NV-GW100-xx Gateway)

The NVGW100-xx Gateway is the wireless communication point for the Nuvo Player Portfolio System's wireless capable components. It requires a standard Ethernet Cat5 or 6 (four twisted pair) wire connection to the home's network. It should be a standard EIA/TIA 568A or 568B network termination if you choose to terminate the cable to a specific length, as shown in Fig. 1, or simply use a pre-terminated "network" cable (a cable is included in the package for this purpose), as shown in Fig. 2. Note this is a straight-through connection. You should never connect the Gateway using a "crossover" style cable.

Fig. 1

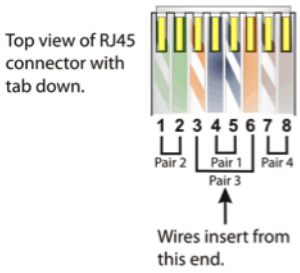
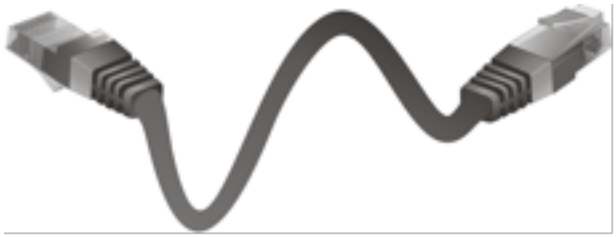


Fig. 1: EIA 568A and 568B wiring scheme for CAT5 Cable

Pin # 568A	Pin # 568B
1. Green Stripe	1. Orange Stripe
2. Green	2. Orange
3. Orange Stripe	3. Green Stripe
4. Blue	4. Blue
5. Blue Stripe	5. Blue Stripe
6. Orange	6. Green
7. Brown Stripe	7. Brown Stripe
8. Brown	8. Brown

Note: Colors listed as "stripe" are a white wire with a colored stripe.

Fig. 2



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Make sure that the installation's router is connected to the network modem (this is generally supplied by the Internet Service Provider, or ISP) with a single Cat5 network cable. The Gateway has five Ethernet ports and acts as a standard Ethernet switch. Simply connect the included cable, or any Ethernet cable with a standard RJ45 modular plug, into one of the five ports on the back of the Gateway and connect the other end into an available port on the back of the installation's router, as shown in Fig. 3

Fig. 3

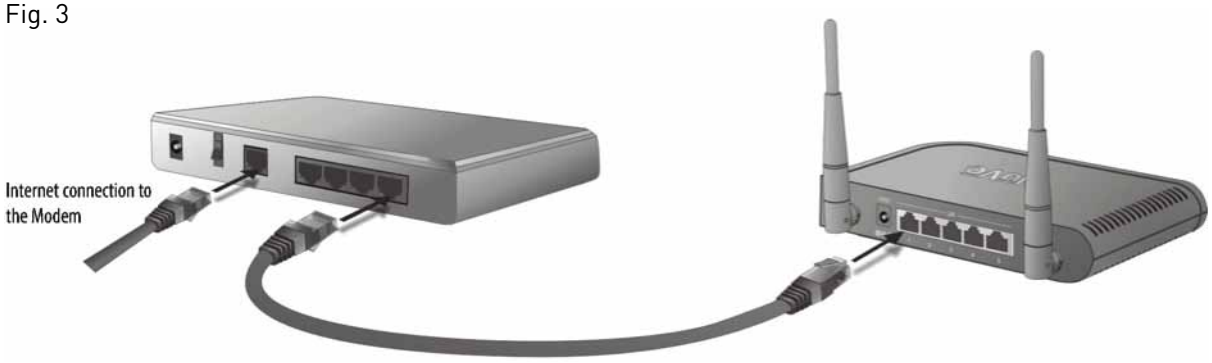
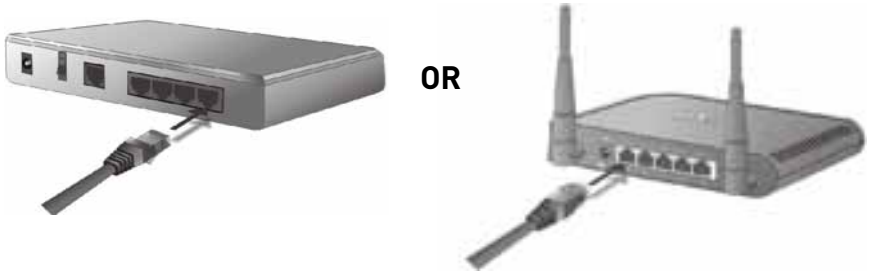


Fig. 4



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1.3 Installing the NVP3100-xx and NVP3500-xx Players

If you are installing the NVP3100-xx or NVP3500-xx rack mount component, the network connection is completed by connecting one of the NVP3100-xx's (or NVP3500-xx's) two Ethernet ports directly to the home's network using a standard Ethernet cable. Either of the two Ethernet ports will communicate when connected, as shown in Fig. 5. The second port is used for daisy chaining multiple P3100 or P3500 units for more audio zones, as shown in Fig. 6. Note that the NVP3100-xx and NVP3500-xx are not wireless devices and do not use Wi-Fi for communication.

Fig. 5

Example shown in fig. 5 and 6 using the NVP3100-xx Player

Fig. 6

1.4 Connecting Speakers to the NVP100-xx and NVP200-xx

The NVP100-xx and NXP200-xx zone players are equipped with "5-way" binding posts for connecting the amplified audio signal to speakers. Speakers can be bookshelf, floor-standing, or installed in the wall or ceiling. 16 gauge speaker wire is recommended for this purpose. The binding posts allow multiple methods for terminating the wire. The post can be unscrewed to expose a hole for the speaker wire. After stripping about 1/4 inch of insulation from the inner conductor wire , it can be inserted into the hole. Screw the post back in until it firmly secures the wire, as shown in Fig 7. An alternative method is to terminate the speaker wire into "banana" plugs and insert those into the end of the binding posts, as shown in Fig. 8. Spade, pin, and wrapping are alternative connection methods. **Be careful to keep the positive and negative speaker connections consistent at both ends. Crossing the left and right terminations will inhibit the audio quality from the amplifier.**

Fig. 7

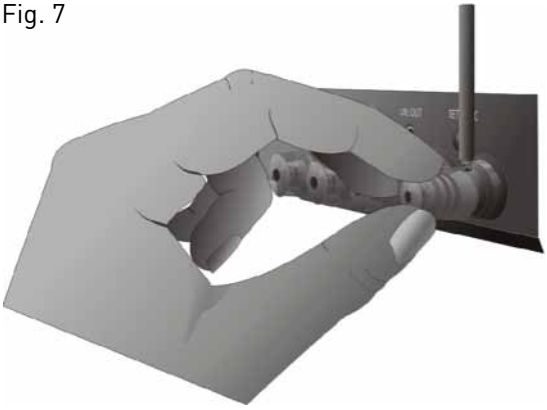

Fig. 8

1.5 Connecting Speakers to the NVP3100-xx and NVP3500-xx

The P3100 and P3500 zone players have three separate zone "euro" style speaker connectors. The speaker wire is terminated into this modular plug and then inserted into the appropriate zone output on the back panel of the P3100, as shown in Fig. 9.It is only necessary to strip about 1/8 inch of the insulation from the inner conductor for these plugs. **Be careful not to let the exposed speaker wires touch. This will short the connection and could damage the amplifier.**

Fig. 9

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2.0 Setting Up a System from the iOS or Android App

Once you have connected the system to the local network you are ready to begin adding components in their desired locations, naming those locations for local control, and creating your multi-zone music system. The process is easily done from any iPod Touch, iPhone, iPad, or Android device using the Nuvo Player app.

2.1 New Wireless System Setup - Using a WiFi Network

Download the app to your device from the iTunes App Store or the Google Play Marketplace. Make sure your device is connected to the same network as the Nuvo Player Portfolio System. Open the app and select "Set up my new system" from the initial screen, as shown in Fig. 10. "Control my system" is used to connect a new iOS or Android device to an existing system. NOTE: The Nuvo Player system is multi-lingual. Upon setting up a new system the app will automatically use the default language of your device (controller). Once the system is setup up, if another language is desired, go to SETTINGS/INTERNATIONAL/LANGUAGE and selecting another language. See Fig 10a

IMPORTANT Wireless configuration setup considerations:
NOTE: Not all wireless networks and devices are supported. The Nuvo Player Portfolio wireless capable devices are Wi-Fi Alliance Certified. Wi-Fi Alliance Certified wireless access points and routers should be used. There may be cases where non-Wi-Fi Alliance Certified devices work.

Supported network modes and encryption methods:
It is recommended that 802.11n, WPA2 be used.
802.11ac is not supported, wireless access points must be in 802.11n or 802.11n/ac mixed mode.
WEP is only supported by selecting "other" located at the bottom of the "Wireless Setup" page.
WPA2 is only supported using AES.

Unsupported network modes and encryption methods will be grayed out. The following network encryption types are not supported:

WPA1
WPA2 Enterprise
Guest networks

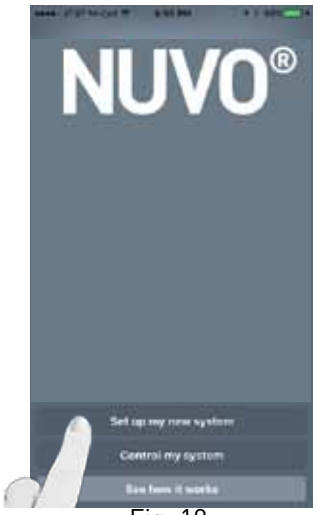

Fig. 10

Fig. 10a

Connect player to Ethernet and turn on.
Open Nuvo Player app on a tablet or smart phone connected to the same network and select "Set up my new system" Fig 10

Once a system is setup, changing the language is accomplished by going to Settings/International/Language and selecting the desired language. Fig. 10a

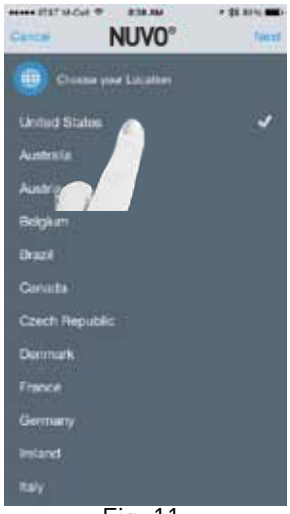

Fig. 11

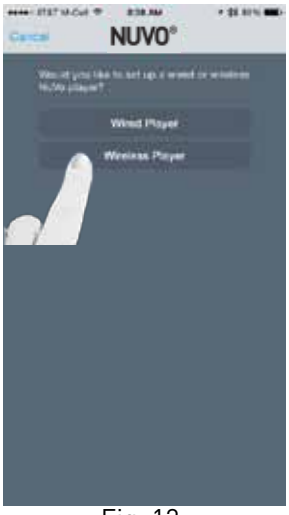

Fig. 12

Select your location and press "Next." (Fig. 11)

Select "Wireless Player." (Fig. 12)

Fig. 13

Fig. 14

Select "No" as the response to "Are you using a Nuvo Gateway?" (Fig. 13)

Ensure that the wireless zone is attached to a Ethernet connection that is on the same network as the smart phone or tablet running the Nuvo Player app, and press "Next." (Fig. 14)

Fig. 15

Fig. 16

Press the VOLUME UP and MUTE buttons simultaneously on the wireless player to initiate the binding process. (Fig. 15)

Once bound, the wireless player will show as Connected. Then press "Next." (Fig. 16)

Fig. 17

Fig. 18

Choose a name for the zone and press "Next" to enter the Wireless Setup step. NOTE: A name can be later edited by selecting "Edit Name," shown at the bottom of the app screen. (Fig. 17)

Select "Wireless Setup" to search for available wireless networks. (Fig. 18, Fig. 19)

Fig. 19

Fig. 20

After the networks have been discovered, select the network which the Nuvo Player app is connected to. (Fig. 20)

Fig. 21

Enter the password for the selected wireless network and press "Join." (Fig. 21)

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Fig. 22

Fig. 23

If the correct password is entered the app will display "Joining." Once successfully connected, select "Finish." The Player app will return to the setup screen where additional zones can be added, or the existing zone can be edited. (Fig. 22, Fig. 23)

NOTE: If the incorrect password is entered, the app will show "Connection Failed" and allow you to try again. (Fig. 24)

IMPORTANT: Do not select "Finish Setup" until all units have gone through the wireless setup.

Fig. 24

Fig. 25

If adding another zone, select "Add Another Zone" and follow the steps. The wireless network used for the previous zone's setup will be listed under "Other Devices Saved Networks." Select the saved network and press "Join" to use the stored credentials. (Fig. 26, Fig. 27)

NOTE: If the credentials have changed, select "Enter New Credentials."

IMPORTANT: Do not select "Finish Setup" until all units have gone through the wireless setup.

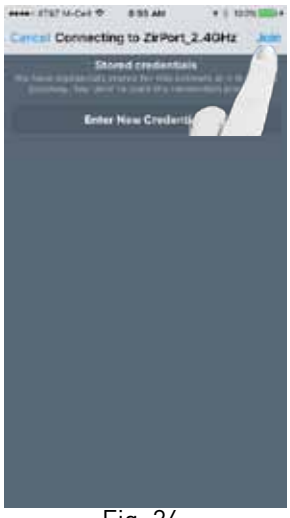

Fig. 26

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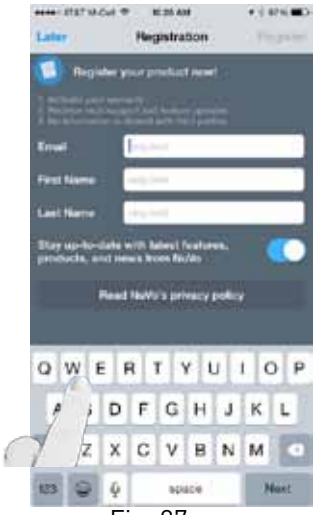

Fig. 27

Once all desired wireless players have been added and their wireless setups have been completed, select "Finish Setup" and complete the registration or select "Later."

Once registration is complete, the app will display "Setup Complete!" Select "Finish" and the Player app will jump to the home screen. (Fig. 27, Fig. 28, Fig. 29, Fig. 30, Fig. 31)

Fig. 28

Fig. 29

Fig. 30

Fig. 31

Fig. 32

Remove the Ethernet connections from the units.

NOTE: A software update may be necessary for any Nuvo components. If prompted with an update, select "Continue" to update the firmware. (Fig. 32)

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2.2 New Wireless System Setup - Using a Nuvo NV-GW100-xx Gateway

Download the app to your device from the iTunes App Store or the Google Play Marketplace. Make sure your device is connected to the same network as the Nuvo Player Portfolio System. Open the app and select "Set up my new system" from the initial screen, as shown in Fig. 33."Control my system" is used to connect a new iOS or Android device to an existing system.

Fig. 33

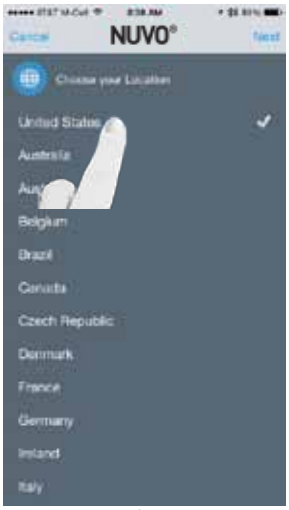

Fig. 34

Connect NV-GW100-xx to Ethernet.

Open the Nuvo Player app on a tablet or smart phone connected to the same network

Select "Set up my new system." (Fig. 33)

Select your location and press "Next." (Fig. 34)

Fig. 35

Fig. 36

Answer "Yes" as the response to "Are you using a Nuvo Gateway?" (Fig. 35)

Make sure the Nuvo Gateway is powered on and connected to Ethernet and select "Next. (Fig. 36)

NUVO®

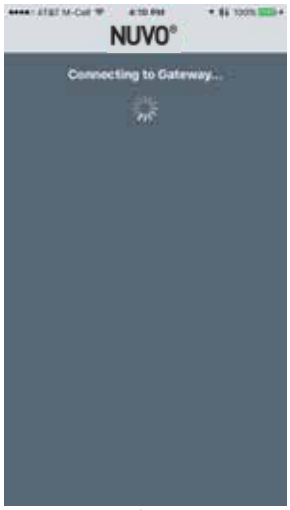

Fig. 37

Fig. 38

Press "Next" on the Gateway Connection confirmation screen. If "Connected" does not display, check the network connections and repeat the steps. (Fig. 37, Fig. 38)

Fig. 39

Fig. 40

Prepare the Nuvo player to be joined to the Gateway and press "Next." (Fig. 39)

Press the VOLUME UP and MUTE buttons simultaneously on the wireless player to initiate the binding process. NOTE: The blue LED on the Gateway will begin to flash. (Fig. 40)

Fig. 41

Fig. 42

Once bound, the wireless zone will show as Connected. Then press "Next." (Fig. 41)

NOTE: If a software update is needed, the unit will initiate installation and display "Installing Update." After it is updated, select "Next" to move to the next step of the process.

Choose a name for the zone and press "Next." NOTE: A name can be later edited by selecting "Edit Name," shown at the bottom of the app screen. (Fig. 42)

NUVO®

Fig. 43

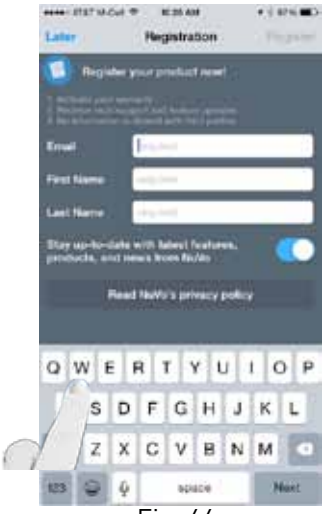

Fig. 44

If adding another zone, select "Add Another Zone" and follow the steps. (Fig. 43, Fig. 44)

Once finished adding all desired zones, select "Finish Setup" and complete the registration, or select "Later."

Fig. 45

Once registration is complete, and "Registration Complete!" is displayed, select "Done" and the app will jump to the Setup Complete screen. (Fig. 45)

Fig. 46

NOTE: A software update may be necessary for any Nuvo components. If prompted with an update, select "Continue" to update the firmware. (Fig. 46)

NUVO®

2.3 Adding a zone to an existing Wireless System - Using a Wi-Fi Network

IMPORTANT Wireless configuration setup considerations:
Supported network modes and encryption methods:
It is recommended that 802.11n, WPA2 be used.
802.11ac not supported, wireless access points must be in 80.11n or 802.11n/ac mixed mode.
WEP only supported by selecting "other," located at the bottom of the "Wireless Setup" page.
WPA2 is only supported using AES.

Unsupported network modes and encryption methods will be grayed out. The following network encryption types are not supported:

WPA1
WPA2 Enterise
Guest networks

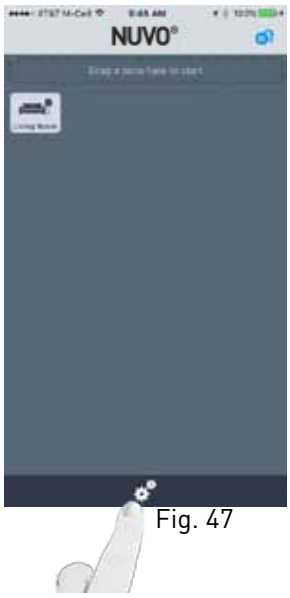

Fig. 47

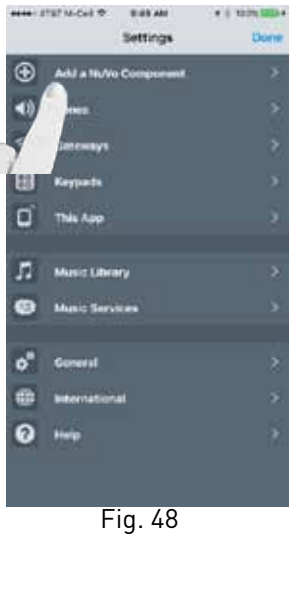

Fig. 48

Connect player to Ethernet and turn on.

Open the Nuvo Player app on a tablet or smart phone connected to the same network.

Navigate to the Settings menu by pressing the gear icon at the bottom of the home page. (Fig. 47)

Select "Add a Nuvo Component." (Fig. 48)

NUVO®

Fig. 49

Fig. 50

Select "Player" to add the component.

Then select "Wireless Player." (Fig. 49, Fig. 50)

Fig. 51

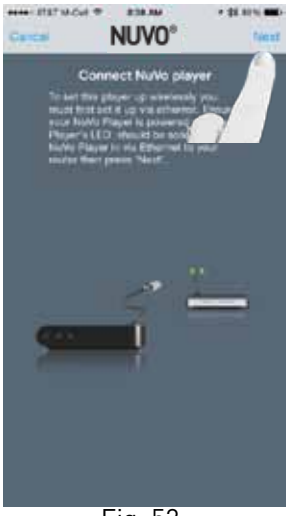

Fig. 52

Answer "No" as the response to "Are you using a Nuvo Gateway?" (Fig. 51)

Ensure that the wireless zone is attached to an Ethernet connection that is on the same network as the smart phone or tablet running the Nuvo Player app, and press "Next." (Fig. 52)

Fig. 53

Fig. 54

Press the VOLUME UP and MUTE buttons simultaneously on the wireless player to initiate the binding process. (Fig. 53)

Once bound, the wireless player will show Connected. Then press "Next." (Fig. 54)

NUVO®

Fig. 55

Fig. 56

Choose a name for the zone and press "Next" to enter the Wireless Setup step. NOTE: A name can be later edited by selecting "Edit Name," shown at the bottom of the app screen. (Fig. 55)

Once added, "Successfully added" will display. Select "Wireless Setup." (Fig. 56)

Fig. 57

Fig. 58

The app will search for available wireless networks. (Fig. 57)

After the networks have been discovered, select the network which the Nuvo Player app is connected to. (Fig. 58)

Fig. 59

Fig. 60

Enter the password for the selected wireless network and press "Join."

NOTE: The system's previously used wireless network will be listed under "Other Devices Saved Networks." Select the previously used network and press "Join" to use the stored credentials. If the credentials have changed, select another network or select "Other" and follow the steps. If the correct password is entered the app will display "Joining."

NOTE: If the incorrect password is entered, the app will show "Connection Failed" and allow you to try again. (Fig. 59, Fig. 60)

Fig. 61

Fig. 62

Once successfully connected, select "Finish." The app will show "Successfully added." Select "Done" and the app will return to the settings menu. If the wireless credentials need to be modified, select "Edit Wireless Setup" and follow the steps. (Fig. 61, Fig. 62)

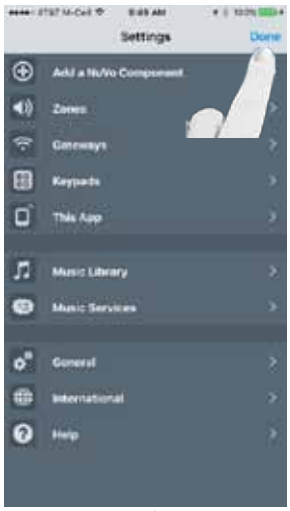

Fig. 63

Fig. 64

If no other zones are to be added, select "Done" to be returned to the Settings and Home screens. (Fig. 63, Fig. 64)

NUVO®

2.4 Adding a zone to an existing Wireless System - Using a Nuvo NV-GW100-xx Gateway

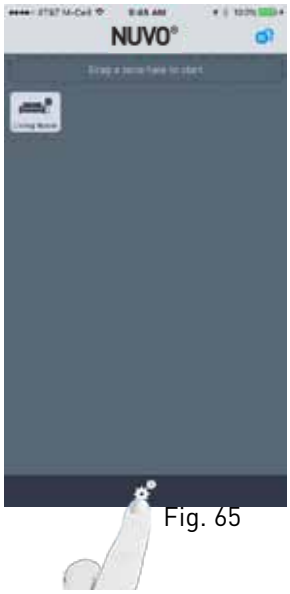

Fig. 65

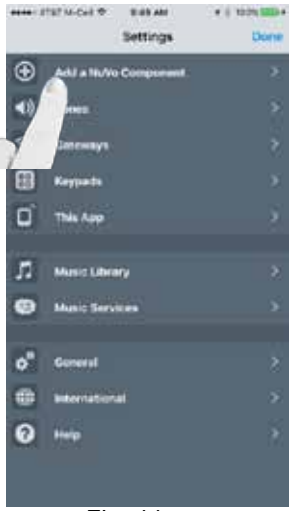

Fig. 66

Open the Nuvo Player app, making sure the smart phone or tablet is on the same wireless network as the Nuvo Player system.

Navigate to the Settings menu by pressing the gear icon at the bottom of the home page. (Fig. 65)

Select "Add a Nuvo Component." (Fig. 66)

Fig. 67

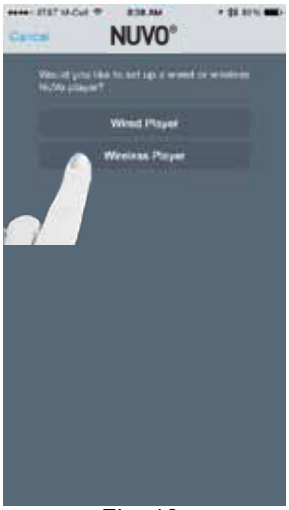

Fig. 68

Select "Player" to add the component.

Then select "Wireless Player." (Fig. 67, Fig. 68)

NUVO®

Fig. 69

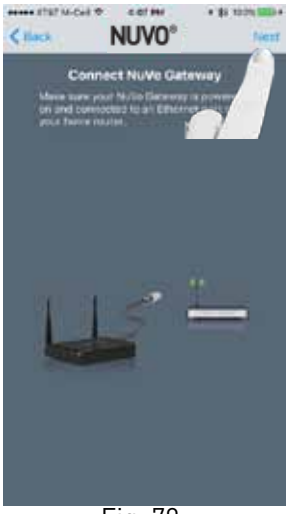

Fig. 70

Answer "Yes" as the response to "Are you using a Nuvo Gateway?" (Fig. 69)

Make sure the Nuvo Gateway is powered on and connected via Ethernet, then select "Next." (Fig. 70)

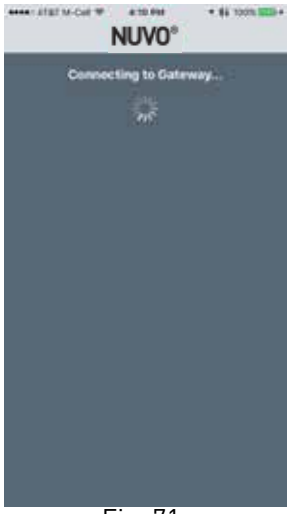

Fig. 71

Fig. 72

Press "Next" on the Gateway Connection confirmation screen. If the "Connected" message doesn't appear, check network connections and repeat steps. (Fig. 71, Fig. 72)

Fig. 73

Fig. 74

Prepare the Nuvo player to be joined to the Gateway and press "Next." (Fig. 73)

Press the VOLUME UP and MUTE buttons simultaneously on the wireless player to initiate the binding. NOTE: The blue LED on the Gateway will begin to flash. (Fig. 74)

Fig. 75

Fig. 76

Once bound, the wireless zone will show as Connected. Then press "Next."

NOTE: If a software update is needed, the unit will initiate installation and display "Installing Update." After the update has completed, select "Next" to move to the next step of the process. (Fig. 75)

Choose a name for the zone and press "Next." NOTE: A name can be later edited by selecting "Edit Name," shown at the bottom of the app screen. (Fig. 76)

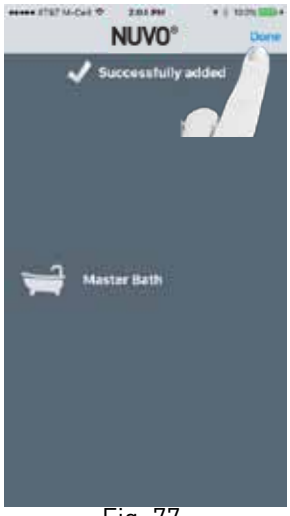

Fig. 77

Once the zone is successfully added, select "Done." (Fig. 77)

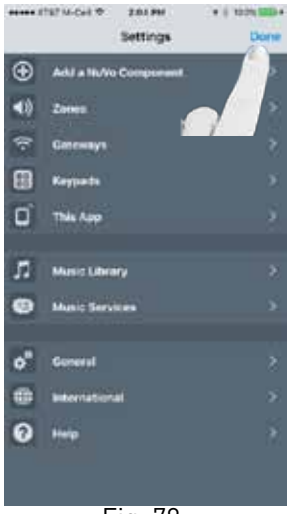

Fig. 78

Then add another zone, or select "Done." (Fig. 78)

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2.5 Changing a wireless zone bound to a Nuvo NV-GW100-xx Gateway to wireless network

Fig. 79

Fig. 80

Make sure the wireless player has been updated to the latest firmware. In order for a unit to work on a network without use of a Nuvo Gateway, the player must be running firmware version 3.0 or higher. (Fig. 79, Fig. 80, Fig. 81)

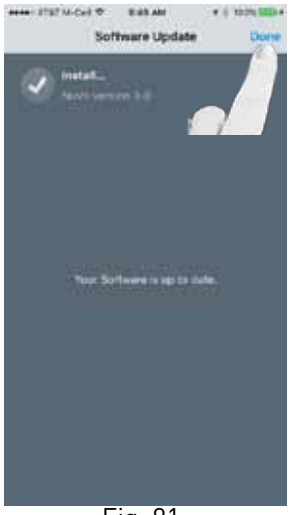

Fig. 81

Fig. 82

Navigate to the Settings menu by pressing the gear icon at the bottom of the home page. (Fig. 82)

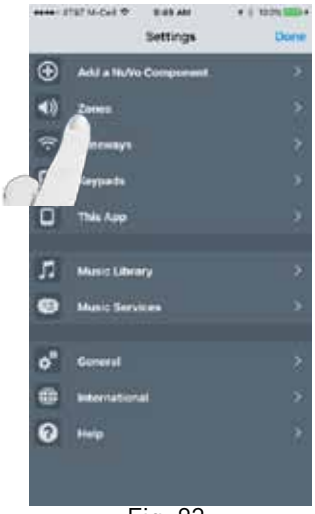

Fig. 83

Fig. 84

Select "Zones" from the Settings menu, then select a wireless zone you would like to change. (Fig. 83, Fig. 84)

Fig. 85

Fig. 86

On the zone's page, select "Wireless." (Fig. 85)

Select "NuVoHomeAudioxxxx" under "Network." The app will then search for the available Wi-Fi networks within range of the system. (Fig.86, Fig. 87)

Fig. 87

Fig. 88

Fig. 89

Fig. 90

Fig. 91

Select the network that the app is currently on, enter the password and select "Join." Fig. 88, Fig. 89)

Select "Finish" and repeat the steps for any additional wireless zones you wish to switch from the Nuvo Gateway to your home's wireless network. (Fig. 90, Fig. 91)

NOTE: If another component has already been configured onto a wireless network, the network will appear under "Saved Networks" at the top of the page. Selecting this network will automatically enter stored credentials for this network. If another network is desired, select one of the "Discovered Networks" and follow steps found in section 2.1 of this manual: Setting up a new Wireless System Without a Nuvo NV-GW100-XX Gateway.

NUVO®

2.6 Adding a Keypad to the Nuvo Player System

Download the Player app to your device from the iTunes App Store or the Google Play Marketplace. Make sure your device is connected to the same network as the Nuvo Player Portfolio System. Open the app and select "Set up my new system" from the initial screen."Control my system" is used to connect a new iOS or Android device to an existing system.

Important: The P10 Keypad requires a single Power Over Ethernet (POE) connection and needs to be connected to the same network, or subnet, of the zone it is intended to control.

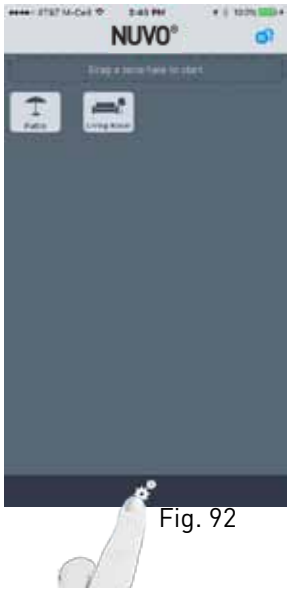

Fig. 92

Fig. 93

Navigate to the Settings menu by pressing the gear icon at the bottom of the home page. (Fig. 92)

Select "Add a component." (Fig. 93)

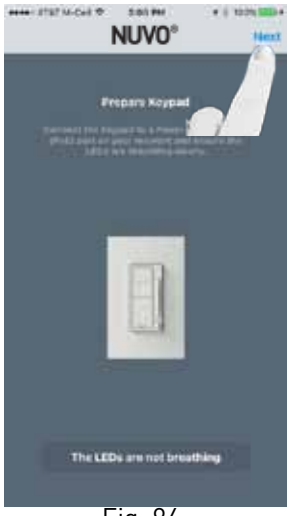

Fig. 94

Fig. 95

Ensure that the keypad is connected to a PoE network port on the same network or subnet as the zone it is intended to control. Look for the LEDs to have a breathing motion. If the LEDs are not breathing, select "The LEDs are not breathing" at the bottom of the screen. If the LEDs are breathing, select "Next." (Fig. 94)

Push the VOLUME UP and MUTE keys simultaneously to bind the keypad to the system. (Fig. 95)

Fig. 96

Fig. 97

Select the Zone that the keypad is to be associated with. (Fig. 96)

If the connection is successful "Keypad added" will be displayed, and it will show the associated zone. (Fig. 97)

Fig. 98

If no other keypads are to be added, select "Done" to return to the Settings screen. If all keypads have been added, return to the home screen. (Fig. 98)

NOTE: Up to four keypads can be assigned to a single zone. This is useful in hallways and rooms with multiple entrances.

2.7 Making an existing Ethernet connected zone wireless

1. This only applies to players that are capable of being wireless. Rackmount players do not have the wireless option.

2. To change a wireless-cabable player, follow the steps in section 2.1, if NOT using a Nuvo GW-100-xx Gateway, or in section 2.2 if using a Nuvo GW-100 Gateway.

3. Once this has been completed, remove the Ethernet connection.

2.8 Adding Additional Nuvo NV-GW100-xx Gateways to an Existing System

Up to two additional Gateways can be added to a system when additional Wi-Fi range is needed. Additional Gateways must be hardwired to the network along with the original Gateway. This can be done by plugging the new Gateway(s) into the first Gateway, into the installation's router, or a switch from the router. When a new Gateway is connected to the system it is added automatically. A notification will display on the screen noting that a Gateway has been added.

To confirm that the Gateway has been added, you can also go to Settings/Gateways for a list of connected Gateways.

NUVO®

3.0 Using the iOS and Android Control App

The Nuvo Player app for iOS and Android offers complete system control, wirelessly, from any Wi-Fi enabled phone or tablet. The iOS version is available for free download from the iTunes App Store and the Android version is available from Google Play. Both versions offer the same look and control options. When used with tablets, the display is optimized for a view of the complete system's operation on one screen.

3.1 The Dashboard

System control begins with the Dashboard. All of the available zones are represented by an icon. Your initial selection is done by dragging and dropping a zone into a new zone group, as shown in Fig. 99. This can also be done by simply tapping an inactive zone. Once a music selection is made, the related album art and Now Playing information will appear in the zone group. Zones can play music individually or you can share music by dragging and dropping multiple zones into a single group, as shown in Fig. 100.

Fig. 99

Fig. 100

To deactivate a zone and stop the music playback in that zone, simply drag the icon back into the open dashboard area below the zone groups.

3.2 Music Selection

When a zone group is activated by moving a zone icon into the zone group field (see Fig. 99), the app will go to the music navigation pane. From there, any of the available streaming services, personal music libraries, Bluetooth, Direct Stream or local line-in sources can be selected for playback. The available music choices are visible in a music selection ribbon. As you scroll across the selections with your finger, the active choice will be highlighted and the display will change accordingly, as shown in Figs. 101, 102,103 and 104.

Fig. 101

Fig. 102

Fig. 103

Fig. 104

3.3 Bluetooth® Playback

An important feature of the NVP200-xx zone player is the ability to stream music content from any Bluetooth enabled device.

To take advantage of Bluetooth streaming, make sure that your device's Bluetooth is turned on. This is done within the device's settings. When in range of a NVP200-xx, the Nuvo zone will appear in your device's Bluetooth menu. Choose the zone to "pair" your device, as shown in Fig. 105.

Fig. 105

A paired device will remain paired and available when it is within range of the paired zone. To connect a device and initiate playback, select Bluetooth as an audio source, as shown in Fig. 106, then select the desired device, as shown in Fig. 107. The app will show the selected device as "Connected," as shown in Fig. 108, and the zone player will switch to the Bluetooth stream. Music content control is made from the connected device you have selected. Tip: Ensure volume on the connected device is up and the desired content is playing before connection.

Fig. 106

Fig. 107

Fig. 108

3.4 Line In

Each player has a 3.5 mm stereo audio Line In (or RCA jacks for the NVP3500-xx) on its back panel. This input allows any local zone analog music source to be plugged in and added to the system as an additional source input. This is done by connecting a 3.5 mm stereo audio cable from the audio output on the playback device and to the input on the zone player, as shown in Fig. 109 (3.5 mm stereo to RCA adapter cable used for NVP3500-xx not shown).

Fig. 109

When a line in device is connected to a zone, select "Line In" from the app, as shown in Fig. 110. The device will appear in the "Line In" menu and be available for selection from all the zones, as shown in Fig. 111. A "Rename" utility is available by touching the arrow button next to "Line Input," which allows a specific name to be given to it in the app, as shown in Figs. 112 and 113.

Fig. 110

Fig. 111

Fig. 112

Fig. 113

3.5 Direct Stream

If audio files such as MP3, AAC, FLAC, or other audio files are resident on the smart device running the app, they can be streamed directly to a player zone by selecting tje "This Phone," "This iPad," or "This Tablet," icon, as shown in Fig. 114. When "This Phone" has been selected, all music playable by the smart device will be cataloged and listed in categories such as Artists, Albums, Tracks, Playlists, etc., similar to what is presented when using the Library Source.

Select the desired function and the app will lead the way. Once you are playing something, grouping, volume, transport mute and more will function just like it does when listening to other sources.

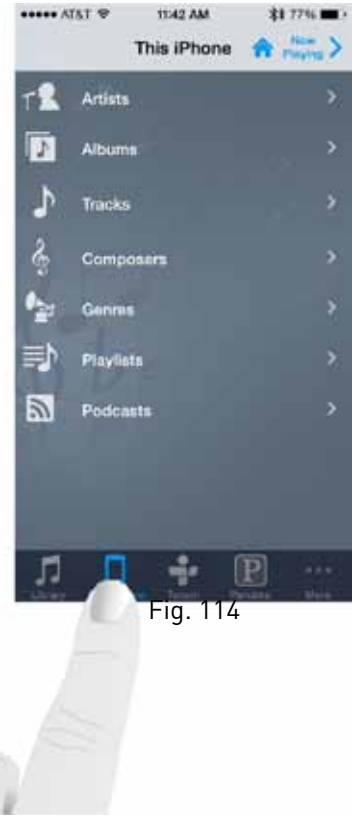

Fig. 114

NOTES: Direct streaming requirements:

A smartphone with the Nuvo Player app loaded and at a version of 1.8 or greater. Firmware version 1.8 or greater on the Player Portfolio system.

A smart device being connected to the same network as the Player system.

Operation notes:

Once a device is direct streaming to a zone, other zones can join the zone and listen but can't select content. Additional zones have transport control. Local joined zones have volume and mute control, as well as the ability to leave the group.

The number of smart devices used in a system can't exceed the number of Player zones available, i.e. a four zone system can have a maximum of four smart devices connected and streaming simultaneously, A sixteen zone system can support up to sixteen smart devices.

Any file format the smart device can play, direct stream supports.

NUVO®

3.6 Keypads

The P10 Keypads require a single Cat5 or better cable. They communicate and are powered by 802.11af Power Over Ethernet. Refer to section 2.6 for installation instructions.

General Operation

Control functions are source dependant. For instance, when playing a Pandora station, the keypad allows for skip forward control but NOT skip backward, as the Pandora service does not allow that function.

Pressing holding Play/Pause will pause all zones. Pressing a second time will resume the zone the keypad is assigned to. All other zones will remain paused.

Restarting a Keypad

If a keypad needs to be restarted for any reason, pressing and holding the Mute and Volume Down key for three seconds will restart the keypad. All credentials previously stored will remain.

Resetting a Keypad

If the keypad would ever need to be reset, pressing and holding the Volume Down and Mute for six seconds will reset the keypad. All credentials previously stored will be erased.

NUVO®

4.0 The Settings Menu

The Settings menu has several selections important to the system's control and operation. Settings is accessed through pressing the gear icon located at the bottom of the Dashboard. On the smaller format devices such as the iPhone, iPod Touch, or Android phones, if you are on the "Now Playing" screen or browsing musical selections, the Home icon at the top of the screen will always return the app to the Dashboard, as shown in Fig. 115. From there, touch the Settings button, as shown in Fig. 116 to access the Settings menu, as shown in Fig. 117.

Fig. 115

Fig. 116

Fig. 117

4.1 Zones

Selecting "Zones" in the Settings menu provides several controls for audio playback and functionality, as shown in Fig. 118. When the "Zones" button is touched , the app will display the choice of zones within the system, as shown in Fig. 119. When one of the zones is selected, its individual settings and controls will be available, as shown in Fig. 120.

Fig. 118


Fig. 119


Fig. 120


The Zone Settings menu has several zone playback choices that are simple slider adjustments or on/off choices.

Bass, Treble, and Balance: These three sliders allow individual settings for each zone.

Loudness: This on/off button allows for bass boost designed for low volume listening.

Fixed Volume Line Out: Each of the zone players has an individual audio line out. This allows the audio output of the zone to be supplied to an additional amplifier, subwoofer, or even head phones. By default, this feature is set to Off and the volume level of the zone output will adjust with the volume setting made on the app. For some uses, such as for a separate amplifier used in a sub-zone, a fixed zone output volume level is required for use with a separate volume control. For those instances, turn this feature On.

Mono: When this feature is turned on, it sums the individual left and right stereo outputs into a single identical audio output for each of the speaker terminals. This is a very useful feature in allowing a single mono speaker to provide all the stereo audio content to a zone, or you may have a large area in which the speakers would be too far apart to be in ear-shot of a single listener.

Audyssey Dynamic Volume: This is designed to level relative volume between audio selections . This feature is useful where the music is meant to be at a lower background level. It is not recommended for critical listening scenarios.

If you touch the zone icon and name at the top of the "Zones Settings" screen, as shown in Fig. 121, the zone icon page will appear. From there you can change a zone's icon and name, as shown in Fig. 122.

Fig. 121

Fig. 122

The "Advanced"section has a single selection, as shown in Fig. 123. It allows the NVP100-xx, NVP200-xx, or the NVP300-xx wireless communication to be set at the default 2.4 GHz band or the higher 5 GHz, as shown in Fig. 124. In most settings 2.4 is preferred. The exception is a scenario in which there are many wireless networks operating in close proximity. Since most network traffic is in the 2.4 GHz band, audio streaming could be a challenge. In these instances, the zone can be changed to 5 GHz where there is more streaming bandwidth and the traffic is much lower. **Note that the 5 GHz wireless range is lower than 2.4. Multiple Gateways can be installed to increase the wireless range when needed, see section 2.8: Adding Additional Gateways to an Existing System.**

Fig. 123

Fig. 124

When this setting is changed, the NVP100-xx or NVP200-xx will go offline momentarily, causing the front panel LED to flash red. When the LED returns to solid white, the zone is back on the network and ready to resume normal operation. **This wireless band selection only applies to the NVP100-xx, NVP200-xx, and NVP300-xx players. This feature will not be active if you are using the NVP3100-xx or NVP3500-xx.**

The NVP100-xx and NVP200-xx have a "quick change" function for toggling between 2.4 and 5 GHz communication. Simply press and hold the front panel MUTE button for about six seconds, until you see the LED flash, as shown in Fig. 125. Let go of the button. The LED will flash red momentarily as the zone is reconnecting at the new frequency. When the process is complete, the LED will return to a solid white state. At that point the zone will be fully operational.

Fig. 125

4.2 Gateways

The Gateway selection allows you to view and change important settings to the Gateway(s) operation. When "Gateway" is selected, as shown in Fig. 126, the app will show the Gateways present in the system, as shown in Fig. 127. The Gateway page will show "Name," "Serial Number," and "Wireless,"as shown in Fig. 128.

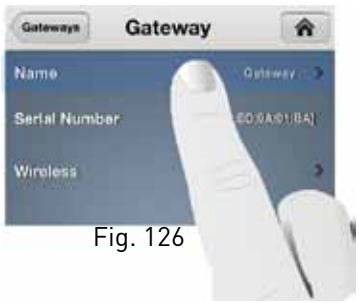

Fig. 126

Fig. 127

Fig. 128

When "Name" is selected, a screen with a keyboard will allow the name of the chosen Gateway to be edited, as shown in Fig. 129. This is useful if you are using more than one Gateway in a system. "Wireless" shows the current channel selection for 2.4 and 5 GHz broadcast, as shown in Fig. 130. The default is "Autoselect," but when that feature is turned off and "Channel" is selected, a manual channel select choice will appear, as shown in Fig. 131.

Fig. 129

Fig. 130

Fig. 131

4.3 Controller

When "Controller" is selected, as shown in Fig. 132, a page will appear with the app's current software version number, as shown in Fig. 133. It also has a "Reset" button which will disassociate the app from the system. The screen will display its original preconfigured state, as shown in Fig, 134.

Fig. 132

Fig. 133

Fig. 134

4.4 Add a Nuvo Component

See section 2.2: Adding Zones to an Existing System.

4.5 Music Library

Existing personal music is easily shared with the entire system by plugging a USB storage device into the USB port on the back panel of any of the zone players, as shown in Fig. 135. The player will automatically scan the drives content and add it with its associated album art to the system's music library. **Not all USB drives are supported natively by the USB port. USB drives should meet USB 2.0 requirements.**

Fig. 135

Another way to add music is to use the Music Share software, **see section 5: The Music Share Software**. Once music is added and you select "Music Library," as shown in Fig. 136, the Music Library screen will display the number of songs and file size of the accumulated library, as shown in Fig. 137. It will also show the individual sources for music content. An additional selection ,"Add Share," will allow you to type in the network path to a directory or shared drive with music content, as shown in Fig.138. When a new library is added, it may take time for the content to be refreshed. The length of time depends on the amount of content.

Fig. 136

Fig. 137

Fig. 138

New music shares will appear in the music library as "Refreshing" while the files of the library are scanned. Once the refresh is completed, the content will be available for browsing and playback.

4.6 Music Services

When "Music Services" is selected, as shown in Fig. 139, the active streaming music services on the system will be displayed, as shown in Fig.140. It also provides a button for adding new services. Most services require an online subscription account. The associated user name and password for the account must be added in this selection for the service to be active on the system.

Fig. 139

Fig. 140

Note that music service availability is based on your region. The cost, functionality, and terms of subscription vary by service and are a function of the service provider.

4.7 System

When "System" is selected, as shown in Fig. 141, the menu will display three important choices for information about the components of the system, as shown in Fig. 142. The first choice, "About," gives specific component information for each zone, as shown in Fig. 143.

Fig. 141

Fig. 142

Fig. 143

"Software Update" will show any software updates that may be available, and allow for easy updating, as shown in Figs. 144 and 145. Typically any updates will pop up on the app. An important advantage for the user is that the update is already downloaded in the background and once "Install" is selected all the zones in the system will automatically be updated.

Fig. 144

Fig. 145

"Registration" will open the product warranty registration page, as shown in Figs. 146 and 147. The opportunity to register the product is offered at the initial setup of the system. If the registration is completed at that time, this system selection is not necessary.

Fig. 146

Fig. 147

4.8 International

The "International" selection, as shown in Fig. 148, provides a "Location" setting, as shown in Fig. 149. When a country location is set, as shown in Fig. 150, the legal 5 GHz wireless broadcast channel is set for the selected region. This is an important selection if you are using the 5 GHz wireless band for communication, see section 4.1: Zones "Advanced."

Fig. 148

Fig. 149

Fig. 150

4.9 Help

The "Help" button, as shown in Fig. 151, has links to contact Nuvo directly or reference information on the system's components,as shown in Fig. 152.

Fig. 151

Fig. 152

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4.10 Using Spotify Connect

The Spotify service works by using Spotify Connect. Music, Playlists and Radio stations are selected within the Spotify App then directed to the NUVO Player zones (rooms) by using the Spotify Picker. Spotify will be launched by selecting the Spotify logo under the available music services on the NUVO Player 3.1 or above Controller app Fig 151, You may also launch the Spotify app directly, it is not required to open it through the NUVO Controller. Once the Spotify app is open and music has been selected, look to the bottom of the screen to see the Spotify Picker. Figs 152, 153

Fig. 151

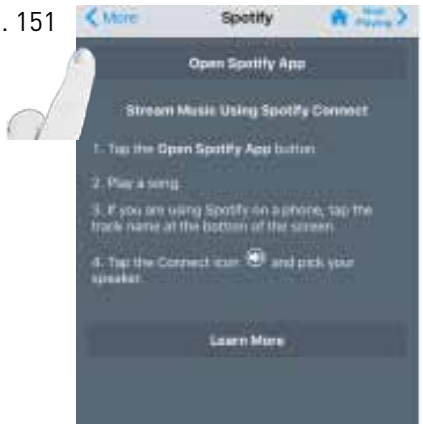

Fig. 152

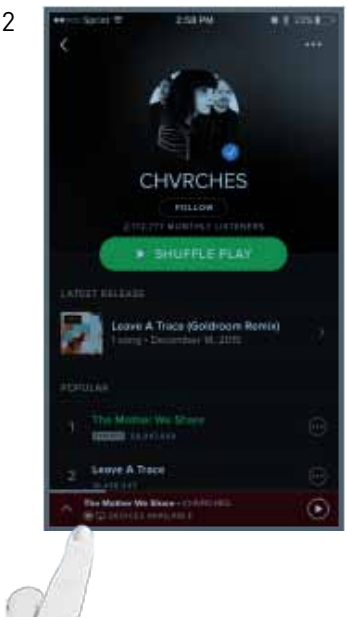

Fig. 153

Once the Spotify Picker is activated, all available Player Portfolio zones will be displayed Fig 154. Select the zone/room you would like the audio to be routed to. The following screen will be displayed on the Player Portfolio Controller app when the room or group of rooms playing Spotify are selected Fig155.

Fig. 154

Fig. 155

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5.0 The Music Share Software

The Music Share Software allows music content from either shared network locations, or libraries contained on personal computers, to be streamed from any zone in the system.

1. From your computer, go to http://www.legrand.us/resources-and-downloads/software-downloads to download the music share software.
2. Follow the prompts for installing the software.
3. When the software is opened, it will connect to the network and display a blank music share page, as shown in Fig. 156.

Fig. 156

4. Click on the "Add new" button at the top of the window. The music share choices will open in the next window, as shown in Fig.157. "My Music" folder is the default location for Windows Media Player libraries. If your music is stored on a Mac computer, or your preferred music library software is in iTunes, then select "iTunes media folder."When a selection is made, you will see a progress window, as shown in Fig.158.

Fig. 157

Fig. 158

5. You can also choose to share a specific folder or drive on the network. The "A specific folder..."choice will open Windows Explorer, as shown in Fig. 159. From there you can choose a shared folder with music content or a drive that is shared with the network.

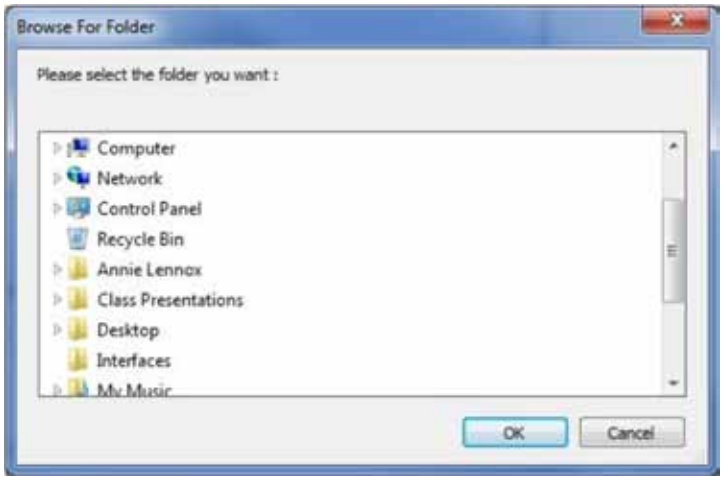

Fig. 159

6. All shared folders and drives will be displayed in the software, as shown in Fig. 160. The software can be opened at any time and content can be added or removed. Note that if you are sharing a personal library located on a personal computer hard drive, the software must actually be downloaded to that computer before the share is created. Once the share directory is created, it is not necessary to keep the Music Share Software open, although the computer hosting the music content must be active on the same network as the system for that content to be available for music playback.

Fig. 160

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6.0 Troubleshooting

6.1 Front Panel LEDs

An important indicator of each zone's operation is the LED light on the front panel of the zone players. The color of the LED, and its solid or flashing state, provides a visual reference for the player's status of operation. Refer to the chart for an explanation of the functions and LED status.

LED Color	State of Zone Player	Explanation
	Not Lit	Zone player is not powered on.
	Solid White	Zone player is connected to the network and in normal operation.
	Flashing White	Zone player processor is busy; it should return to solid white.
	Solid Red	Hard failure. There is no network communication. Reboot by turning the power off and back on.
	Flashing Red	If the LED is flashing Red, its state indicates that the zone player is no longer seeing the network.
	Solid Green	Uninitialized state. It will become solid white when the zone player is added to a system and acquires a network address.
	Flashing Green	Busy uninitialized state. This is normal during the zone setup process. The LED will turn white at the completion of the zone setup. It also means that the zone is updating to a new version. Do not unplug during this process. At the completion of the update it will return to solid white.
	Solid Cyan	Zone is muted. When it is taken out of mute, it will return to solid white.
	Flashing Blue	This indicates that the P200 is in Bluetooth discovery mode.

6.2 Not Connected

A common indicator for lack of communication with the system is the app's "Not Connected" screen, as shown in Fig. 161. This screen appears when the controller is unable to see the zones in the system. There are several potential causes and remedies for this state that are important for troubleshooting.

Fig. 161

1. Look in the network settings of your control device and verify that it is connected to the same network as the Gateway and zone players.
2. This may sound relatively simple, but check the power status of the zone players. They should have a solid white (cyan if in Mute) LED light on the front panel.
3. Make sure that one or more of the players are not offline. This state would be indicated by a flashing red LED on the front panel. This can occur as a momentary state, in which case the LED will return to a solid white when the network connection is restored. This is often corrected by simply turning off and restoring power to the player. Once it is rebooted it should have a solid white LED on the front panel. If that does not restore a connection, reset the player defaults by turning the power off and back on. When the front panel LED lights up, follow the steps outlined in section 6.3: Restoring Defaults. When that process is complete the player will have a solid green LED. Repeat the zone player setup procedure from the Player app, see section 2.2: Adding Zones to an Existing System. When the zone is reconnected, the front panel LED should once again be solid white.
4. If you are using a Gateway, check its connection to the network's router. Reboot if necessary by unplugging the power cable and plugging it back in. This resets the Gateway and puts it back into channel auto select. If there is conflicting traffic on a given Wi-Fi channel, this will often correct the situation.
5. Occasionally home routers go offline. This is typically corrected by rebooting the router.

6.3 Restoring Defaults

An important troubleshooting step is to restore defaults on a zone player. If a hard failure occurs, which results in a solid red LED, or the boot up process does not complete correctly, which will result in a flashing white LED, you should follow these steps to return the player to its original factory state. Once a zone is reset, repeat the setup procedure from the Player app.

Process for the NVP100-xx and NVP200-xx players:

1. Turn off the power using the power switch on the back panel above the AC plug.
2. Turn the power back on and look for a white LED to light up.
3. As soon as you see a white LED, touch the Volume UP and Volume down buttons simultaneously,as shown in Fig. 162.
4. When the LED appears green, release the buttons.
5. The LED will flash green, then white.
6. When the LED becomes solid green, the process is complete and the defaults have been restored.

Fig. 162

Process for the NVP3100-xx and NVP3500-xx players (these steps must be performed on each zone output independently):

1. Turn off the power using the power switch on the back panel above the AC plug.
2. Turn the power back on and look for a white LED to light up.
3. As soon as you see a white LED, touch the zone setup button,as shown in Fig. 163 (setup button on front panel of P3500).
4. When the LED appears green, release the button.
5. The LED will flash green, then white.
6. When the LED becomes solid green, the process is complete and the defaults have been restored.

Fig. 163

Process for the NVGW100-xx Gateway

1. Press and hold the "Connect" button until the LED begins a rapid flash,as shown in Fig. 164.
2. Wait for the flashing LED to return to a solid state.
3. Once the LED is solid green the reset is complete.

NOTE: If you have reset defaults on all of the zones of the system, it is a good idea to also reset the Gateway as well before reinitiating the system setup.

Fig. 164

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6.4 System Diagnostics

A valuable tool for diagnosing system performance is the built-in system diagnostic utility. This can be accessed across the network from any computer or Wi-Fi enabled device through a web browser. To access the diagnostics page, enter a zone's IP address into the browser address window followed by a forward slash (/) and the text "diagnostics.fcgi,"as shown in Fig. 165. This will open the diagnostics window as shown in Fig. 166

Fig. 165

Fig. 166 NUVO®

The advantage of the diagnostics utility is that it provides a view of all of the zones on the network from that particular zone's view. At the bottom of the window are a series of buttons, two of which can be advantageous for the installer. On is the Site Survey button (labeled impriv ra0 get_site_survey). This opens a new window that shows all of the neighboring networks in view of the zone, and the channel those networks are operating on depending on whether the zone is set at 2.4 GHz or 5 GHz, as shown in Fig.167. If there is significant traffic at the displayed frequency across the available channels, it is a good idea to change frequency. Overloading of channel traffic generally is associated with 2.4 GHz. This issue rarely occurs at 5 GHz.

Fig. 167 NUVO®

Networked Audio SDK

ra0 get_site_survey:

Ch	SSID	BSSID	Security	Siganl(%)	W-Mode	ExtCH	NT	WPS	DPID
36	NuVoHomeAudio9A009A	00:25:ed:9a:00:9b	WPA2PSK/AES	57	11a/n	NONE	In	NO	
36	NuVoHomeAudio9A01AA	00:25:ed:9a:01:ab	WPA2PSK/AES	78	11a/n	NONE	In	NO	
36	belkin.076.5GHz	ec:1a:59:14:20:78	WPA2PSK/AES	31	11a/n	NONE	In	YES	
40	NuVoHomeAudio9A00B4	00:25:ed:9a:00:d3	WPA2PSK/AES	73	11a/n	NONE	In	NO	
40	NuVoHomeAudio9A00E4	00:25:ed:9a:00:e5	WPA2PSK/AES	63	11a/n	NONE	In	NO	
40	dlink_media	00:18:e7:e1:7a:19	WPA1PSKWPA2PSK/TKIPAES	52	11a/n	NONE	In	YES	
44	NuVoHomeAudio9A0086	00:25:ed:9a:00:87	WPA2PSK/AES	83	11a/n	NONE	In	NO	
44	MikeKlein	58:6d:8f:c2:48:76	WPA1PSKWPA2PSK/TKIPAES	68	11a/n	ABOVE	In	YES	
48	NuVoHomeAudio9A0068	00:25:ed:9a:00:69	WPA2PSK/AES	83	11a/n	NONE	In	NO	
149	BrianGW_2_4	00:25:ed:9a:00:e1	WPA2PSK/AES	57	11a/n	NONE	In	NO	
149	NuVo Wireless	34:bd:c8:86:69:50	WPA2PSK/AES	26	11a/n	NONE	In	NO	
149	NuVoHomeAudio9A00A8	00:25:ed:9a:00:a9	WPA2PSK/AES	63	11a/n	NONE	In	NO	
153	NETGEAR-5G	74:44:01:48:60:b0	NONE	26	11a/n	BELOW	In	YES	
153	NuVo Wireless	00:26:cb:13:ee:b0	WPA2PSK/AES	100	11a	NONE	In	NO	
153	PeteCisco_5	58:6d:8f:c2:46:55	NONE	47	11a/n	BELOW	In	YES	
157	NuVoHomeAudio9A00CE	00:25:ed:9a:00:cf	WPA2PSK/AES	63	11a/n	NONE	In	NO	
157	Pete_5	28:cf:da:b1:b4:44	WPA2PSK/AES	73	11a/n	ABOVE	In	NO	
161	BachroomNuVo	98:fc:11:7d:66:8a	WPAPSK/TKIP	100	11a	NONE	In	YES	
161	NuVoHomeAudio9A0084_2	e0:46:9a:7c:54:16	WPA2PSK/AES	68	11a/n	NONE	In	YES	
165	NuVoHomeAudio9A00C4	00:25:ed:9a:00:c5	WPA2PSK/AES	78	11a/n	NONE	In	NO	
165	NuVoHomeAudio9A00B8	00:25:ed:9a:00:b9	WPA2PSK/AES	100	11a/n	NONE	In	NO	

Another useful tool is the button labeled ‘’iPerf.” This is a built-in throughput test for all of the zones in the system. When iPerf is selected, the system will run a test across all zones that measures the available throughput to each of the zones, as shown in Fig. 168. The results appear as: green, meaning good throughput; yellow, meaning marginal but still acceptable; and red, meaning not good enough to support necessary audio streaming. The result to be concerned about is red . If a zone result is red, the solutions are to move the zone to a better location, wire it directly to the network, try 5 GHz communication as opposed to 2.4, see section 4.1 zones page 20, or add an additional Gateway for additional Wi-Fi coverage .

Fig. 168

Zones/Gateways	Gateway 2	
	Tx	Rx
Nook	43.7 Mbits/sec 0.270 ms [5G] 22205/41395 (54%)	63.5 Mbits/sec 4.463 ms [5G] 721/28092 (2.6%)
Living Room	42.0 Mbits/sec 0.165 ms [5G] 23874/42108 (57%)	75.6 Mbits/sec 0.202 ms [5G] 830/33026 (2.5%)
Pool	(testing)	(testing)
Garage		
Game Room	39.0 Mbits/sec 0.336 ms [5G] 23857/40804 (58%)	71.1 Mbits/sec 0.543 ms [5G] 683/30984 (2.2%)
Bedroom		

6.5 Advanced Network Management

A popular practice is to prioritize home network traffic by creating VLANs (Virtual Local Area Networks) to provide better performance for streaming audio and video. This work should only be done by a network administrator. The practice uses configurable network switches that allow specific ports to be grouped for their specific VLAN communication. Each of the VLANs are considered broadcast domains. The concept of broadcast domains is very important to proper communication among the components of the Nuvo Player Portfolio System. For all zones to communicate properly they must be on the same broadcast domain. Make sure that the switch ports being used for the Nuvo Player Portfolio System are operating on the same VLAN.

Another potential issue with zone communication can be the way in which port security has been configured. Since the components of the system are continually sending packets of information back and forth, it is important that the switch ports being used are open to all network traffic. If they are not, this will impede the necessary communication across the entire system.

On any managed switch, speed and duplex must be set on the ports being used by the Nuvo Player Portfolio System to auto negotiate. This is the way in which the zones communicate. The common mistake would be to set the ports to gigabit communication which will cause a communication mismatch with the zones.

For more advanced troubleshooting, please visit http://www.legrand.us/nuvo/troubleshooting.

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7.0 Specifications

NV-GW100-xx Gateway

System Information

LAN Connection	5 LAN-RJ45-10/100/1000 Mbps
Wireless Connection	2 TX x 2 RX MIMO, IEEE 802.11a/b/g/n Dual Band - Concurrent
Wireless Data Rate	Up to 300Mbps

Power Requirements

Power Supply	12V DC, 1.0A
Input Voltage	100-240VAC, 50/60 Hz
Rated Power	12W

Regulatory Approvals

Controller	
EMC	FCC, IC, CE-EMC, C-Tick
Power Supply	
Safety	cULus, GS Mark, CE-LVD
EMC	FCC, IC, CE-EMC, C-Tick
Environmental Compliance Europe	RoHS

Operating Temperature 0˚C to 40˚C

Physical Specifications

Unit Size (mm)	32.8H x 176.5 W x 133 D (Including antennas)
Unit Size (inch)	1.29 H x 6.95 W x 5.24 D (including antennas)
Unit Weight (kg)	0.55
Unit Weight (pounds)	1.21

Shipping Specifications

Unit Size (mm)	240 D x 230 W x 65.6 H
Unit Size (inch)	9.45 D x 9.06 W x 2.58 H
Unit Weight (kg)	0.90
Unit Weight (pounds)	1.98

NuVo reserves the right to change specifications without notice.

NUVO®

NV-P100-xx Player

Input/Output Connectors

Line Input	1 - TRS 3.5 mm stereo jack
Line Output	1 - TRS 3.5 mm stereo jack
Speaker Output	4 - Gold 5-way binding post
USB 2.0 Connection (Type A)	1
Local Area Network (LAN)	1 - RJ45

Supported Audio Formats

Music File (USB or over network)	MP3 (.mp3)
	WMA (.wma)
	AAC (.acc)
	Ogg Vorbis (.ogg)
	FLAC (.flac)
	WAV (.wav)

Internet Radio

Pandora
Sirius/XM
Rhapsody
TuneIn
Deezer
Napster

Playlist Support

WPL
M3U
PLS
iTunes

IP Control

Apple iTouch®
Apple iPhone®
Apple iPadd®
Android Mobile
Android Tablet

Network Connectivity

LAN (Wired Connection)	10/100Base-T Ethernet
Wireless Connection	MIMO 2TX + 2 RX Channels
	IEEE 802.11 a/b/g/n

Amplifier Output

Rated Output Power (8 ohm)	40W (20W x 2)
Two channels driven 20 Hz-20KHz@0.5% distortion	
Rated Distortion (1/2 Power)	0.20%
Speaker Impedance	6-8 ohms
Frequency Response (20 - 20 kHz)	+/-0.5dB
Damping Factor	50+
Signal-to-Noise Ratio, rated output:	94dBA-weighted

Line Output

Output Level	0-2.0V RMS
Output Impedance	5 Ohms
Signal-to-Noise Ratio,rated output	88dBA-weighted

Line Input

Input Impedance	10 KOhms
Input Overload	2.3 V RMS

Audio Processing

Audyssey Dynamic Volume™	
Bass Equalization	+/- 12 dB range
Treble Equalization Balance	+/- 12 dB range

Regulatory Approvals

Safety:	cTUVus, CE-LVD
EMC:	FCC, IC, CE-EMC, C-Tick
Environmental Compliance Europe	RoHS

Power Requirements

Input Voltage:	100-240VAC, 50/60 Hz
Power Consumption (max):	70W
Power Consumption (typical - 1/8 audio power):	13W

Operating Temperature

0˚C to 40˚C

Physical Specifications

Unit Size (mm)	42H x 187W x 115D
Unit Size (inch)	1.65H x 7.36W x 4.53D
Unit Weight (kg)	0.613
Unit Weight (pounds)	1.35

Shipping Specifications

Unit Size (mm)	240D x 230W x 65.5H
Unit Size (inch)	9.45D x 9.06W x 2.58H
Unit Weight (kg)	1.30
Unit Weight (pounds)	2.87

NuVo reserves the right to change specifications without notice.

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NV-P200-xx Player

Input/Output Connectors

Line Input	1 - TRS 3.5 mm stereo jack
Line Output	1 - TRS 3.5 mm stereo jack
Setup Mic: (Audyssey)	1 - TS 3.5 mm stereo jack
Speaker Output	4 - Gold 5-way binding post
USB 2.0 Connection (Type A)	1
Local Area Network (LAN)	1 - RJ45

Supported Audio Formats

Music File (USB or over network)	MP3 (.mp3)
	WMA (.wma)
	AAC (.acc)
	Ogg Vorbis (.ogg)
	FLAC (.flac)
	WAV (.wav)

Internet Radio

Pandora
Sirius/XM
Rhapsody
TuneIn
Deezer
Napster

Playlist Support

WPL
M3U
PLS
iTunes

IP Control

Apple iTouch®
Apple iPhone®
Apple iPadd®
Android Mobile
Android Tablet

Network Connectivity

LAN (Wired Connection)	10/100Base-T Ethernet
Wireless Connection	MIMO 2TX + 2 RX Channels
	IEEE 802.11 a/b/g/n

Amplifier Output

Rated Output Power (8 ohm)	120W (60W x 2)
Two channels driven	20 Hz-20KHz@0.5% distortion
Rated Output Power (4 ohm)	120W (60W x 2)
Two channels driven	20 Hz-20KHz@0.5% distortion
Rated Distortion (1/2 Power)	0.20%
Speaker Impedance	4-8 ohms
Frequency Response (20 - 20 kHz)	+/-0.5dB
Damping Factor	65+
Signal-to-Noise Ratio, rated output:	92dBA-weighted

Line Output

Output Level	0-2.0V RMS
Output Impedance	5 Ohms
Signal-to-Noise Ratio,rated output	88dBA-weighted

Line Input

Input Impedance	10 KOhms
Input Overload	2.3 V RMS

Audio Processing

Audyssey Dynamic Volume™	
Bass Equalization	+/- 12 dB range
Treble Equalization Balance	+/- 12 dB range

Regulatory Approvals

Safety:	cTUVus, CE-LVD
EMC:	FCC, IC, CE-EMC, C-Tick
Environmental Compliance Europe	RoHS

Power Requirements

Input Voltage:	100-240VAC, 50/60 Hz
Power Consumption (max):	150W
Power Consumption (typical - 1/8 audio power):	31W

Operating Temperature

0˚C to 40˚C

Physical Specifications

Unit Size (mm)	42H x 229W x 127D
Unit Size (inch)	1.65H x 9.02W x 5.0D
Unit Weight (kg)	1.11
Unit Weight (pounds)	2.45

Shipping Specifications

Unit Size (mm)	260D x 240W x 65.5H
Unit Size (inch)	10.24D x 9.45W x 2.58H
Unit Weight (kg)	2.0
Unit Weight (pounds)	4.41

NuVo reserves the right to change specifications without notice.

NUVO®

NV-P3100-xx Player

Input/Output Connectors

Line Input	3 - TRS 3.5 mm stereo jack
Line Output	3 - TRS 3.5 mm stereo jack
Trigger Input	3 - TS 3.5 mm stereo jack
Trigger Output	3 - TS 3.5 mm stereo jack
Setup Mic: (Audyssey)	1 - TS 3.5 mm stereo jack
Speaker Output	3 - (4 contact) Pluggable
USB 2.0 Connection (Type A)	3
Local Area Network (LAN)	1 - Dual RJ45

Supported Audio Formats

Music File (USB or over network)	MP3 (.mp3)
	WMA (.wma)
	AAC (.acc)
	Ogg Vorbis (.ogg)
	FLAC (.flac)
	WAV (.wav)

Internet Radio

Pandora
Sirius/XM
Rhapsody
TuneIn
Deezer
Napster

Playlist Support

WPL
M3U
PLS
iTunes

IP Control

Apple iTouch®
Apple iPhone®
Apple iPadd®
Android Mobile
Android Tablet

Network Connectivity

LAN (Wired Connection)	10/100Base-T Ethernet
	Internal Ethernet switch to 3 independent zone nodes

Amplifier Output (typical of 3 zones)

Rated Output Power (8 ohm)	40W (20W x 2)
Two channels driven	20 Hz-20KHz@0.5% distortion
Rated Distortion (1/2 Power)	0.20%
Speaker Impedance	6-8 ohms
Frequency Response (20 - 20 kHz)	+/-0.5dB
Damping Factor	50+
Signal-to-Noise Ratio, rated output:	92dBA-weighted

Line Output

Output Level	0-2.0V RMS
Output Impedance	5 Ohms
Signal-to-Noise Ratio,rated output	91dBA-weighted

Line Input

Input Impedance	10 KOhms
Input Overload	2.3 V RMS

Audio Processing

Audyssey Dynamic Volume™	
Bass Equalization	+/- 12 dB range
Treble Equalization Balance	+/- 12 dB range

Regulatory Approvals

Safety:	cTUVus, CE-LVD
EMC:	FCC, IC, CE-EMC, C-Tick
Environmental Compliance Europe	RoHS

Power Requirements

Input Voltage:	100-240VAC, 50/60 Hz
Power Consumption (max):	200W
Power Consumption (typical - 1/8 audio power):	42W

Operating Temperature

0˚C to 40˚C

Physical Specifications

Unit Size (mm)	44H x 430W x 250D
Unit Size (inch)	1.73H x 16.93W x 9.84D
Unit Size with feet (mm)	54H x 430W x 250D
Unit Size with feet (inch)	2.13H x 16.93W x 9.84D
Unit Weight (kg)	2.81
Unit Weight (pounds)	6.20

Shipping Specifications

Unit Size (mm)	565D x 328W x 130H
Unit Size (inch)	22.24D x 12.91W x 5.12H
Unit Weight (kg)	3.50
Unit Weight (pounds)	7.72

NuVo reserves the right to change specifications without notice.

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NV-P3500-xx Player

Input/Output Connectors

Line Input	3 - Dual RCA
Line Output	3 - Dual RCA
Trigger Input	3 - TS 3.5 mm stereo jack
Trigger Output	3 - TS 3.5 mm stereo jack
Speaker Output	3 - (4 contact) Pluggable
USB 2.0 Connection (Type A)	3 (Zone 3 on Front)
Local Area Network (LAN)	1 - Dual RJ45

Supported Audio Formats

Music File (USB or over network)	MP3 (.mp3)
	WMA (.wma)
	AAC (.acc)
	Ogg Vorbis (.ogg)
	FLAC (.flac)
	WAV (.wav)

Internet Radio

Pandora
Sirius/XM
Rhapsody
TuneIn
Deezer
Napster

Playlist Support

WPL
M3U
PLS
iTunes

IP Control

Apple iTouch®
Apple iPhone®
Apple iPadd®
Android Mobile
Android Tablet

Network Connectivity

LAN (Wired Connection)	10/100Base-T Ethernet
Internal Ethernet switch to 3 independent zone nodes	

Amplifier Output (typical of 3 zones)

Bang & Olufsen Ice Power Amplifiers	
Rated Output Power (1KHz/1% Distortion)	4 Ohm - 200W (100W x 2)
	6 Ohm - 150W (75W x 2)
	8 Ohm - 100W (50W x 2)
Total Harmonic Distortion (1/2 Power)	100Hz - 0.003%
	1KHz - 0.003%
	6.67KHz - 0.020%
Speaker Impedance	6-8 ohms
Frequency Response (20 - 20 kHz)	+/-0.5dB
Damping Factor	80+
Signal-to-Noise Ratio, rated output:	100dB

Line Output

Output Level	0-2.1V RMS
Output Impedance	470 Ohms
Signal-to-Noise Ratio (IHF-A)	100dB

Line Input

Input Impedance	100K Ohms
Input Overload	2.3 V RMS

Audio Processing

Audyssey Dynamic Volume™	
Bass Equalization	+/- 12 dB range
Treble Equalization	+/- 12 dB range
Balance	
Loudness compensation	

Regulatory Approvals

Safety:	cTUVus, CE-LVD
EMC:	FCC, IC, CE-EMC, C-Tick
Environmental Europe	RoHS

Power Requirements

Input Voltage:	100-240VAC, 50/60 Hz
Power Consumption	
Maximum	680W
Typical (music)	260W
UL60065 (1/8th power)	120W

Operating Temperature

0˚C to 40˚C

Physical Specifications

Unit Size without feet (mm)	44H x 430W x 250D
Unit Size without feet (inch)	1.73H x 16.93W x 9.84D
Unit Size with feet (mm)	54H x 430W x 250D
Unit Size with feet (inch)	2.13H x 16.93W x 9.84D
Unit Weight (kg)	3.50
Unit Weight (pounds)	7.70

Shipping Specifications

Unit Size (mm)	565D x 328W x 130H
Unit Size (inch)	22.24D x 12.91W x 5.12H
Unit Weight (kg)	4.90
Unit Weight (pounds)	10.80

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NV-P300-xx Preamplifier

Input/Output Connectors

Line Input	1 - TRS 3.5 mini TOSLINK Combo Receiver
Line Output	1 - TRS 3.5 mini TOSLINK Combo Receiver
USB 2.0 Connection (Type A)	1
Local Area Network (LAN)	1 - RJ45

Supported Audio Formats

Music File (USB or over network)	MP3 (.mp3)
	WMA (.wma)
	AAC (.acc)
	Ogg Vorbis (.ogg)
	FLAC (.flac)
	WAV (.wav)

Internet Radio

Pandora
Sirius/XM
Rhapsody
TuneIn

Playlist Support

WPL
M3U
PLS
iTunes

IP Control

Apple iTouch®
Apple iPhone®
Apple iPadd®
Android Mobile
Android Tablet

Network Connectivity

LAN (Wired Connection)	10/100Base-T Ethernet
Wireless Connection	MIMO, 2 TX + 2 RX Channels
	IEEE 802.11a/b/g/n

Line Output-Digital

Sample Rates	44.1KHz-192KHz
Bit Rate	24B
Signal-to-Noise Ratio, rated output	>120 dB SNR
THD+n	<0.0005%
Frequency Response	+/-0.1 dB 20 Hz to 20 KHz

Line Input-Digital

Sample Rates	44.1KHz-192KHz
Bit Rate	24B
Signal-to-Noise Ratio, rated output	>120 dB SNR
THD+n	<0.0005%
Frequency Response	+/-0.1 dB 20 Hz to 20 KHz

Line Output-analog

Output Level	0-2.0V RMS
Output Impedance	5 Ohms
Signal-to-Noise Ratio, rated output	>100dB SNR
THD+n	<0.005%
Frequency Response	+/-0.5 dB 20 Hz to 20KHz

Line Input-analog

Input Impedance	10 KOhms
Input Overload	2.0 V RMS
Signal-to-Noise Ratio, rated output	>100dB SNR
THD+n	<0.005%
Frequency Response	+/-0.5 dB 20 Hz to 20 KHz

Audio Processing

Audyssey Dynamic Volume™	
Bass Equalization	+/- 12 dB range
Treble Equalization	+/- 12 dB range
Balance	

Regulatory Approvals

Safety:	cTUVus, CE-LVD
EMC:	FCC, IC, CE-EMC, C-Tick
Environmental Europe	RoHS

Power Requirements

Input Voltage:	100-240VAC, 50/60 Hz
Power Consumption (max)	10W
Power Consumption (typical)	5.1W

Operating Temperature

0˚C to 40˚C

Physical Specifications

Unit Size (mm)	38H x 145.5W x 90.5D
Unit Size (inch)	1.5H x 5.73W x 3.56D
Unit Weight (kg)	0.2
Unit Weight (pounds)	0.5

Shipping Specifications

Unit Size (mm)	240D x 230W x 65.5H
Unit Size (inch)	9.45D x 9.06W x 2.58H
Unit Weight (kg)	1.30
Unit Weight (pounds)	2.87

NuVo reserves the right to change specifications without notice.

All Player Products

Smart Device Operating System Requirements:

iOS 6 or greater required
Android 2.1x or greater required

NUVO®

NV-P300-xx Preamplifier

Input/Output Connectors

Line Input	1 - TRS 3.5 mini TOSLINK Combo Receiver
Line Output	1 - TRS 3.5 mini TOSLINK Combo Receiver
USB 2.0 Connection (Type A)	1
Local Area Network (LAN)	1 - RJ45

Supported Audio Formats

Music File (USB or over network)	MP3 (.mp3)
	WMA (.wma)
	AAC (.acc)
	Ogg Vorbis (.ogg)
	FLAC (.flac)
	WAV (.wav)

Internet Radio

Pandora
Sirius/XM
Rhapsody
TuneIn

Playlist Support

WPL
M3U
PLS
iTunes

IP Control

Apple iTouch®
Apple iPhone®
Apple iPadd®
Android Mobile
Android Tablet

Network Connectivity

LAN (Wired Connection)	10/100Base-T Ethernet
Wireless Connection	MIMO, 2 TX + 2 RX Channels
	IEEE 802.11a/b/g/n

Line Output-Digital

Sample Rates	44.1KHz-192KHz
Bit Rate	24B
Signal-to-Noise Ratio, rated output	>120 dB SNR
THD+n	<0.0005%
Frequency Response	+/-0.1 dB 20 Hz to 20 KHz

Line Input-Digital

Sample Rates	44.1KHz-192KHz
Bit Rate	24B
Signal-to-Noise Ratio, rated output	>120 dB SNR
THD+n	<0.0005%
Frequency Response	+/-0.1 dB 20 Hz to 20 KHz

Line Output-analog

Output Level	0-2.0V RMS
Output Impedance	5 Ohms
Signal-to-Noise Ratio, rated output	>100dB SNR
THD+n	<0.005%
Frequency Response	+/-0.5 dB 20 Hz to 20KHz

Line Input-analog

Input Impedance	10 KOhms
Input Overload	2.0 V RMS
Signal-to-Noise Ratio, rated output	>100dB SNR
THD+n	<0.005%
Frequency Response	+/-0.5 dB 20 Hz to 20 KHz

Audio Processing

Audyssey Dynamic Volume™	
Bass Equalization	+/- 12 dB range
Treble Equalization	+/- 12 dB range
Balance	

Regulatory Approvals

Safety:	cTUVus, CE-LVD
EMC:	FCC, IC, CE-EMC, C-Tick
Environmental Europe	RoHS

Power Requirements

Input Voltage:	100-240VAC, 50/60 Hz
Power Consumption (max)	10W
Power Consumption (typical)	5.1W

Operating Temperature

0˚C to 40˚C

Physical Specifications

Unit Size (mm)	38H x 145.5W x 90.5D
Unit Size (inch)	1.5H x 5.73W x 3.56D
Unit Weight (kg)	0.2
Unit Weight (pounds)	0.5

Shipping Specifications

Unit Size (mm)	240D x 230W x 65.5H
Unit Size (inch)	9.45D x 9.06W x 2.58H
Unit Weight (kg)	1.30
Unit Weight (pounds)	2.87

NuVo reserves the right to change specifications without notice.

NV-P10-xx POE Keypad

Power Requirement	802.3af Class 1
Line Input	1 - TRS 3.5 mini TOSLINK Combo Receiver
Ethernet	10/100BaseT Minimum

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