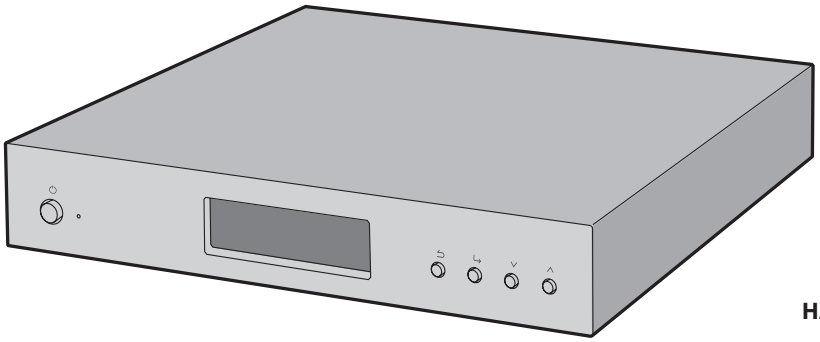
MELCO

HA-N1

User Manual



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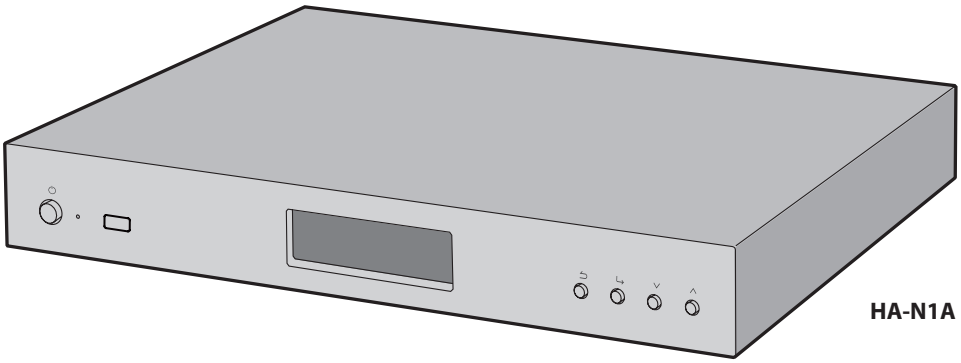

HA-N1A

melco-audio.com

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Chapter 1 Getting Started

This manual is intended to be used with the latest firmware. Functions described and sample screenshots with the manual may appear differently from the product if it is using an older version firmware. Using the latest firmware is recommended.

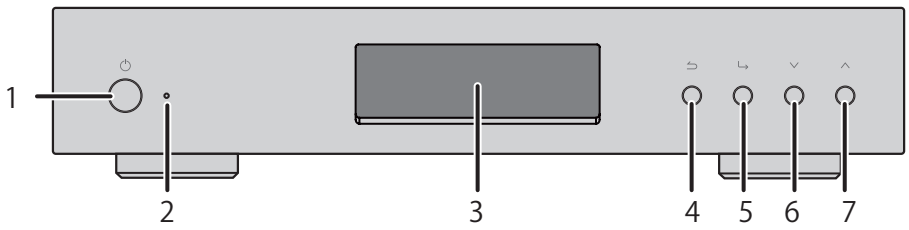
About MELCO

Melco was established by Makoto Maki in 1975 in Japan. Maki, an enthusiastic audiophile, established the company to design and manufacture the finest audio components of the time - the undoubted masterpiece of the Melco line being the turntable, introduced into the UK in 1980, which set new standards in music reproduction.
From those early beginnings Melco developed into the largest computer peripherals manufacturer in Japan, offering advanced products based on rigorous R&D, including wireless routers, Ethernet data switches and storage devices such as NAS drives.
Now the company is proud to revive the highly-respected Melco brand, offering discerning audiophiles high technology networked audio components in the spirit of those much revered early Melco products, while incorporating the very latest research into reliable high performance networked devices and storage.
'MELCO' stands for Maki Engineering Laboratory Company.

Diagrams

Front

HA-N1Z



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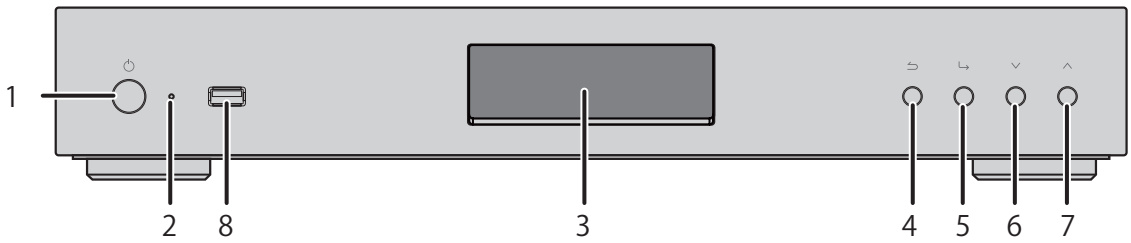
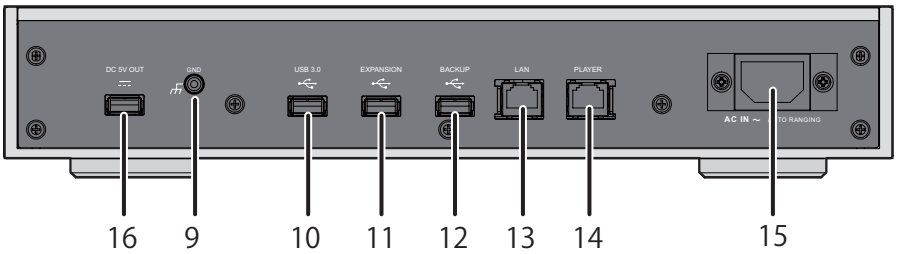
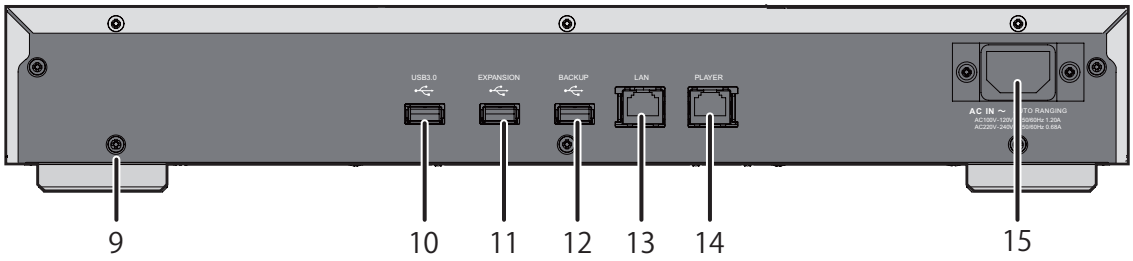


Rear

HA-N1Z



HA-N1A



1

Press to turn the power on and off.

2 Power Indicator

The LED will light up while the HA-N1 is on.

Note: The brightness of the power indicator can be changed from *Settings - Power LED Brightness*.

3 Display Panel

Displays the device's status and settings. In case of an error, displays the error message and code.

Note: The brightness of the display panel can be changed from *Settings - Brightness*. If the display is set to *Dark Mode*, the display panel will be turned off. If the display is turned off this way, you can press any button in front to relight it.

4

Back

If you press and hold this button for 2 seconds while at the home screen, the display panel will be turned off.

5

Enter

6

Scroll down.

To initialize settings, press the power button while holding down the button.

7

Scroll up.

8 USB 2.0*

For importing music files from compatible USB devices.

9 GND ( )

Grounding terminal.

10 USB 3.0* ( )

For importing music files from compatible USB devices.

11 EXPANSION* ( )

Connect a compatible USB hard drive or USB flash drive to expand the storage capacity for audio streaming.

12 BACKUP* ( )

Connect a compatible USB hard drive here to back up or restore the contents or settings of the HA-N1.

13 LAN***

Use an Ethernet cable to connect this port to a wireless router, hub, or switch on your network. Then you will be able to access the HA-N1 from computers and mobile devices on your network.

14 PLAYER**

This is a dedicated port for Network Audio Players. Use an Ethernet cable to connect this port directly to a Network Audio Player or AV receiver.

Note: If your Network Audio Player is directly connected to the player port, it will not be visible on the network when the HA-N1 is powered off. If this is an issue, connect your Network Audio Player to the router or switch instead.

15 AC IN

Use the power cable.

16 DC 5V OUT

USB power port (1 A). Not for data transfer.

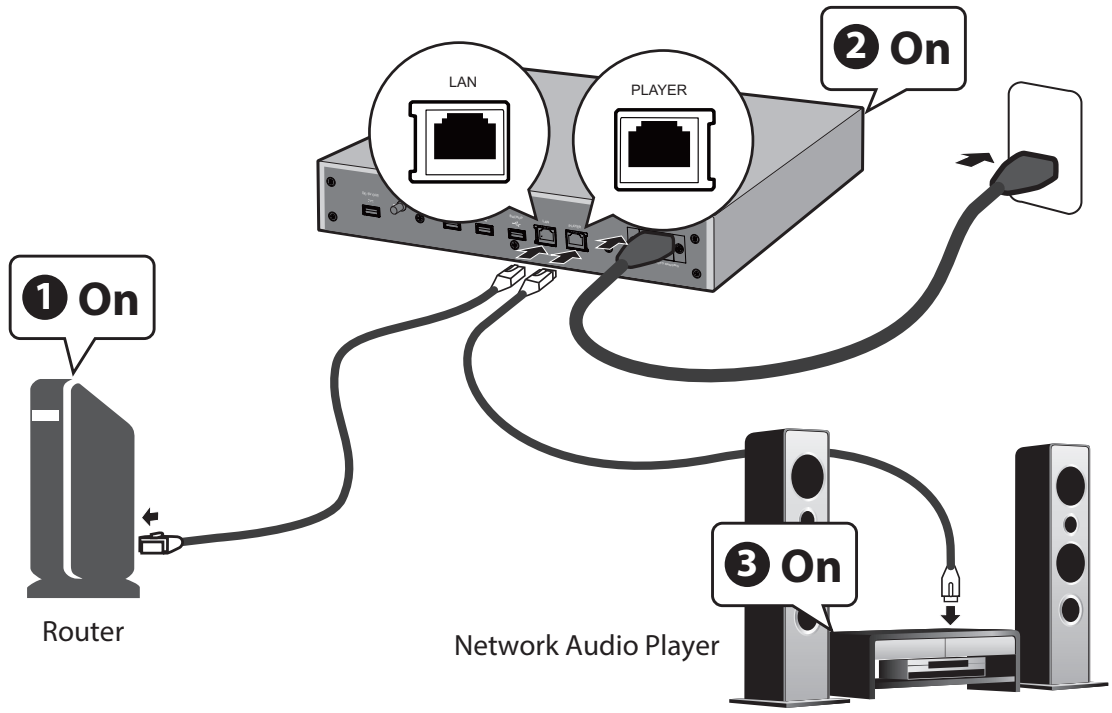
* The first partition of a connected USB device is mounted. Additional partitions are not recognized. To recognize the whole capacity, connect the USB device to "EXPANSION" or "BACKUP" port, navigate to *Settings - Drive*, select *Format Expansion Drive* or *Format Backup Drive*, and select *Erase All Data* to format all partitions. Please note that all data will be removed with this operation.

** When the Ethernet cable is connected to the network, the link LED will glow. The act LED shows network activity. On the front display panel, go to *Settings - Rear Side LED* and set to "Off" to extinguish both LEDs.

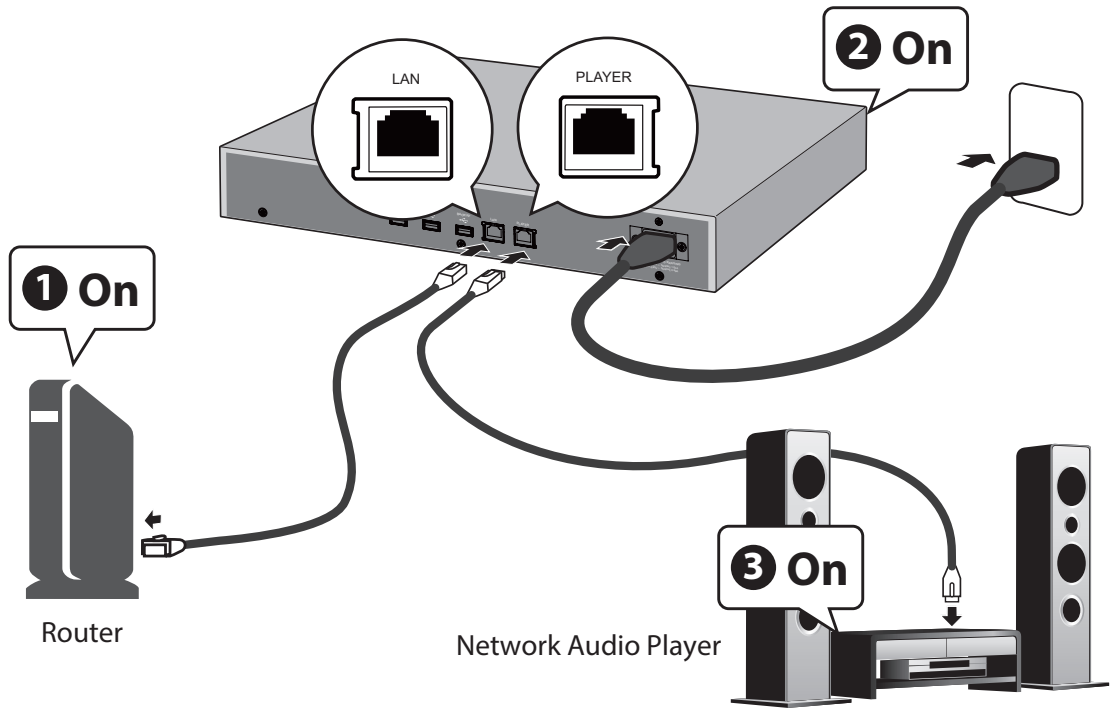
Installation

This section describes the installation of the HA-N1. If you will use a USB-DAC, refer to the "USB-DAC" section in chapter 3.

HA-N1Z



HA-N1A



Note: Give the HA-N1 plenty of space for airflow. Do not stack it with other devices that get hot.

1 Connect the HA-N1's "PLAYER" port and a Network Audio Player with the provided Ethernet cable.

2 Connect the HA-N1's "LAN" port and the routers with another Ethernet cable (sold separately).

Note: If directly connecting the Network Audio Player to the HA-N1 without connecting to the router, see the "Using Direct Mode" section in chapter 3.

3 Connect the provided power cable to the outlet.

4 Turn on the router or hub first (#1 in the picture above).

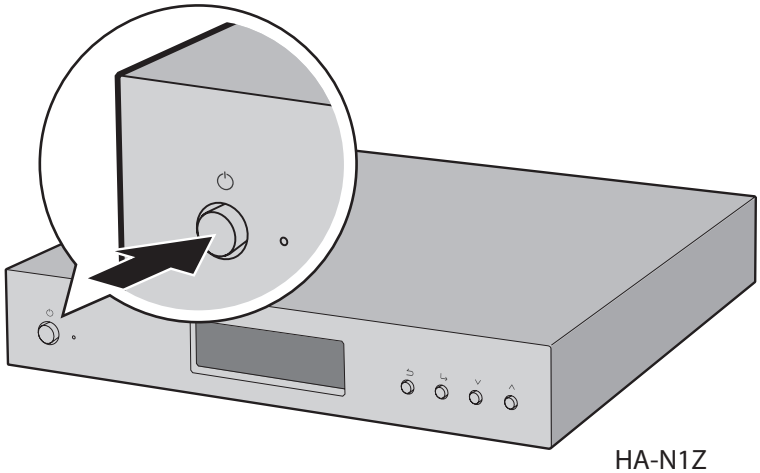
5 Then, power on the HA-N1 (#2 in the picture above).

Note: When the HA-N1 is powered down, the device connected to "PLAYER" port will not be recognized.

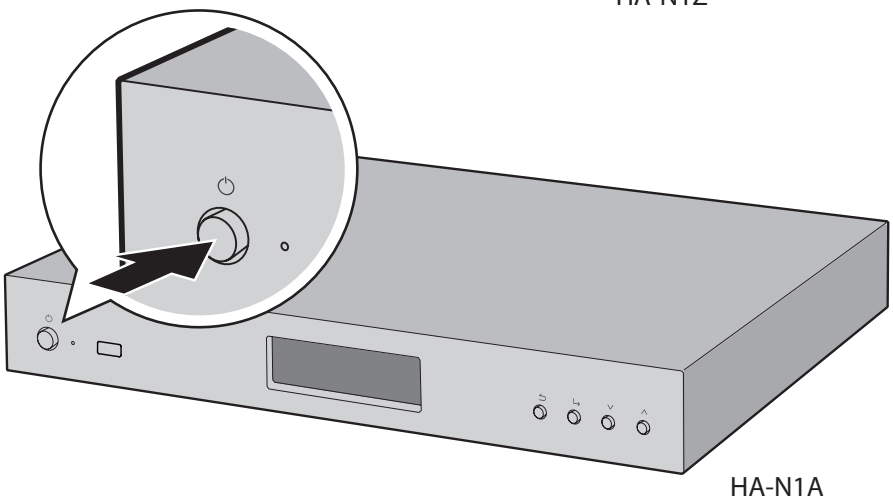
6 Finally, turn on the Network Audio Player (#3 in the picture above).

Turning the HA-N1 On and Off

Connect the power cable and press the power button on the front panel to power on the HA-N1. When the home screen, which is explained in the "Displaying the Home Screen" section in chapter 2, is displayed, the boot process is complete. It will take about 20 seconds to complete.
To power off the HA-N1, press the power button. After 10 seconds, the power indicator will extinguish and the device will be powered off.



HA-N1Z



HA-N1A

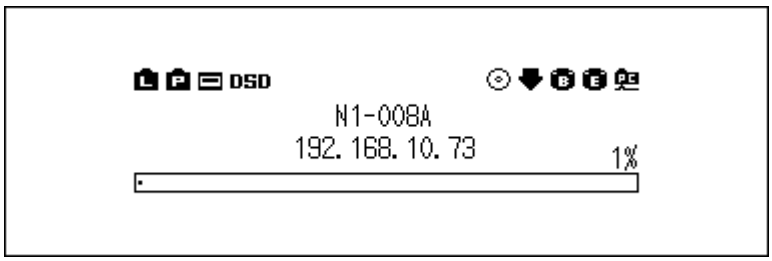
Notes:

- Do not disconnect the power cable without properly powering the device off first. You may lose music files or the HA-N1 may malfunction.
- If connecting the HA-N1 to an amplifier's AC outlet, do not configure the amplifier's power settings to shut down the HA-N1 when the amplifier is powered down.
- To power on again, wait 3 seconds after the power indicator extinguishes, then press the power button.

Chapter 2 Basic Usage

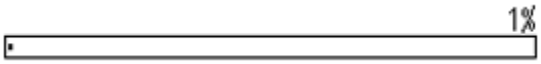
Displaying the Home Screen

Turn on the HA-N1. After it boots, the home screen will be displayed.



The home screen displays the following information:

- Friendly name
  Displays the friendly name (hostname) of the HA-N1.
- IP address
  Displays the IP address.
- Internal drive usage
  Displays the used capacity of the internal hard drive in the HA-N1, using a bar chart and a percentage (%).



Icons:

- If the "LAN" port is connected to the router or switch using the Ethernet cable, the icon will be displayed.
- While the Network Audio Player that is connected to the "PLAYER" port is on, the icon will be displayed. If it's off, the icon will be changed to .
- If an external USB device is connected to the "BACKUP" port, the icon will be displayed.
- If an external USB device is connected to the "EXPANSION" port, the icon will be displayed.
- While the icon is blinking, the HA-N1 is searching for music files. Wait until the icon stops blinking before playing any music files.
- If the shared folders on the HA-N1 are shared for computers, and file sharing is set to "On" from *Settings - SMB File Sharing*, the icon will be displayed.
- If the USB-DAC is connected to the HA-N1, the icon will be displayed.
- If the output format for converting DSD file using a USB-DAC is set to "DSD (DSD over PCM)", the DSD icon will be displayed. If "Convert to PCM" is selected, the PCM icon will be displayed.
- If an account was added and auto download is enabled, the icon will be displayed. If an account was added but auto download is disabled, the icon will be displayed. When downloading audio files, the icon will blink; if an error occurs, the icon will change to .
- When an optical drive is connected to the HA-N1, the icon will be displayed.

Importing

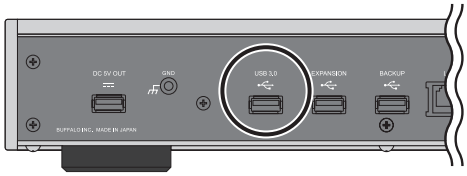
Importing Music Files from USB Devices

To import music files from a connected USB device, follow the procedure below.

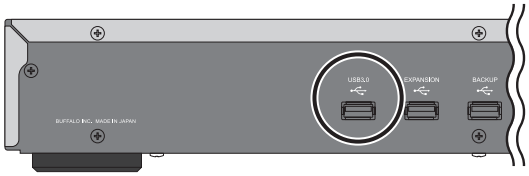
1 Turn on the HA-N1. The home screen is displayed when the HA-N1 is booted.

2 Connect the USB device that contains the music files to the USB 3.0 port.

HA-N1Z



HA-N1A



Notes:

- Use only the compatible USB devices listed on melco-audio.com.
- Connect only NTFS-formatted, FAT32-formatted, or HFS Plus-formatted USB devices.

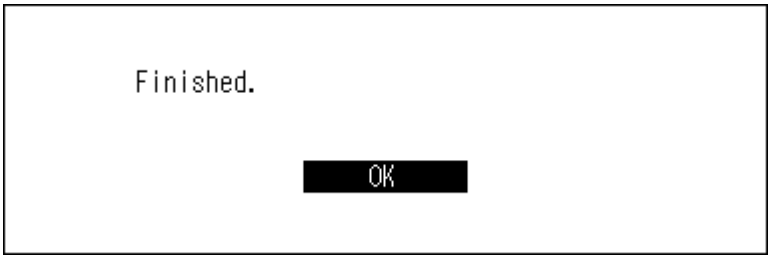
3 When the following screen is displayed on the display panel, press the ↳ button on the front. If you connect the USB device to the front USB port (HA-N1A only), the message will change to indicate importing from the front USB device.

4 Wait until music importing is finished.

Notes:

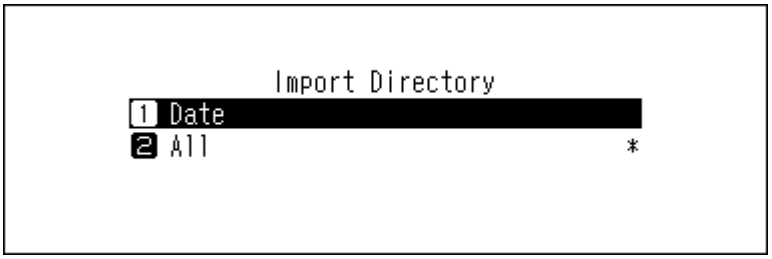
- If a filename or folder name starts with a period (.), the file or folder cannot be imported.
- If the ↰ button is pressed while importing, the import process will be canceled after the HA-N1 finishes importing the current file. If the imported file size is large, the cancellation process may take a few minutes to finish.

5 Press the ↳ button after importing finishes.



Importing files is now finished.

Note: Imported music files will be stored in the "import" folder. There are two options to store the imported data in the HA-N1:



- "Date" - If you select this option, a folder that contains the import date in the folder name will be created within the "import" folder and all imported files will be stored in that folder. Even if the same data is included in the USB device, it will be copied to the HA-N1.
- "All" - If you select this option, data will be imported into the "all" folder within the "import" folder. With this option, only files with changes will be imported to the HA-N1. Files with no changes from the previous import will not be imported.

To change these options, go to *Settings - Import Directory* and select from "Date" or "All".

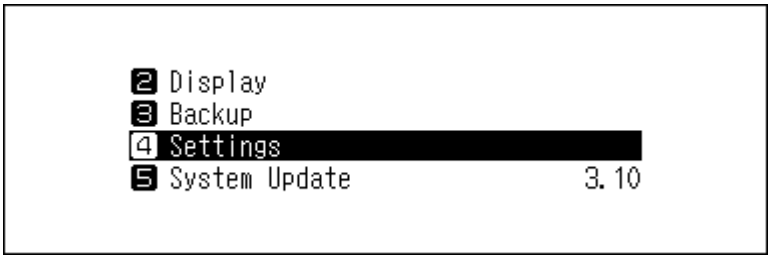
Importing Music Files from a Computer

To import music files from the computer, follow the procedure below.

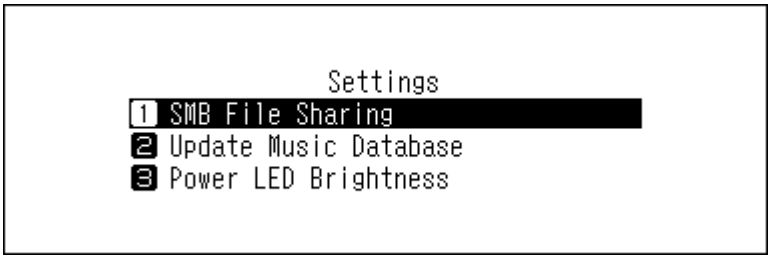
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

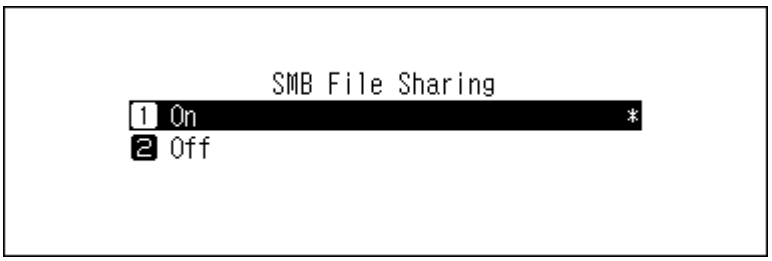
3 Press ∨ and select "Settings", then press the ↳ button.



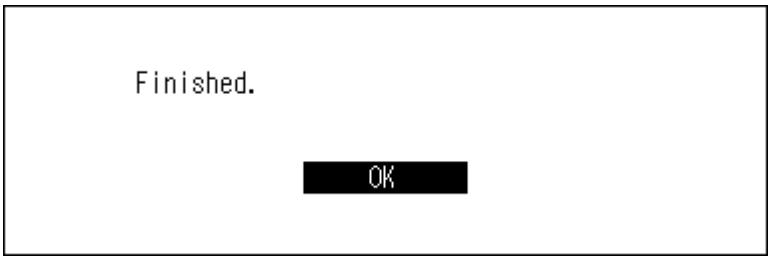
4 Press ∨ and select "SMB File Sharing", then press the ↵ button.



5 Press ∨ and select "On", then press the ↵ button.



6 When "Finished." is displayed, press the ↵ button.



7 Press the ↩ button three times to return to the home screen.

File sharing is now enabled. Go to the "Windows" or "Mac" section below for how to import from the computer.

Windows

1 Make a note of the hostname of the HA-N1 displayed in the home screen.

2 In Explorer, enter "\\(the HA-N1 hostname)" into the address bar.

3 Copy files into the "Share" folder in the HA-N1.

Note: If no shared folder is displayed, wait for 30 seconds and try again.

Importing from Windows PC is now finished.

Mac

1 Make a note of the IP address of the HA-N1 displayed in the home screen.

2 On the Mac, click *Go - Connect to Server*.

3 Enter "smb://(the HA-N1 IP address)" into the server address bar and click *Connect*.

4 Copy files into the "Share" folder in the HA-N1.

Note: If no shared folder is displayed, wait for 30 seconds and try again.

Importing from a Mac computer is now finished.

Importing Music Tracks from a Music CD

To import tracks from a music CD, follow the procedure below.

Note: Importing tracks from a music CD requires an optical drive (not included). Use only the compatible optical drive(s) listed on melco-audio.com.

1 Turn on the HA-N1.

2 Connect an optical drive to the USB 2.0 port on the front (HA-N1A only) or the USB 3.0 port on the back.

3 Insert a music CD to import its tracks.

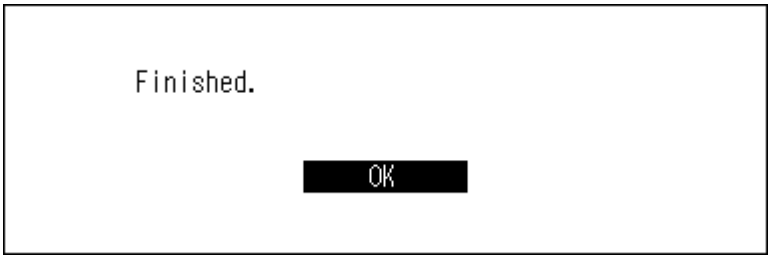
4 When the CD is detected, the HA-N1 will try to get the album information automatically. If the HA-N1 is connected to the Internet, music tracks will be imported using the acquired album information. When multiple titles are found, the following message will be displayed. Press the ↳ button and select the appropriate album title on the displayed window. The album title with the "*" mark will contain the cover art.

Once you have selected the album title, you can return to the previous window and select it again by pressing the ↰ button.

Note: If the HA-N1 is not connected to the Internet, or if the CD information is not available from the online music database, the album name and music title information will not be acquired. In such a case, the import date will be used as the album name and the track number as the filename.

5 When the "Import from CD?" message is displayed, press ∨ and select "OK", then press the ↳ button.

6 When "Finished." is displayed, press the ↵ button.



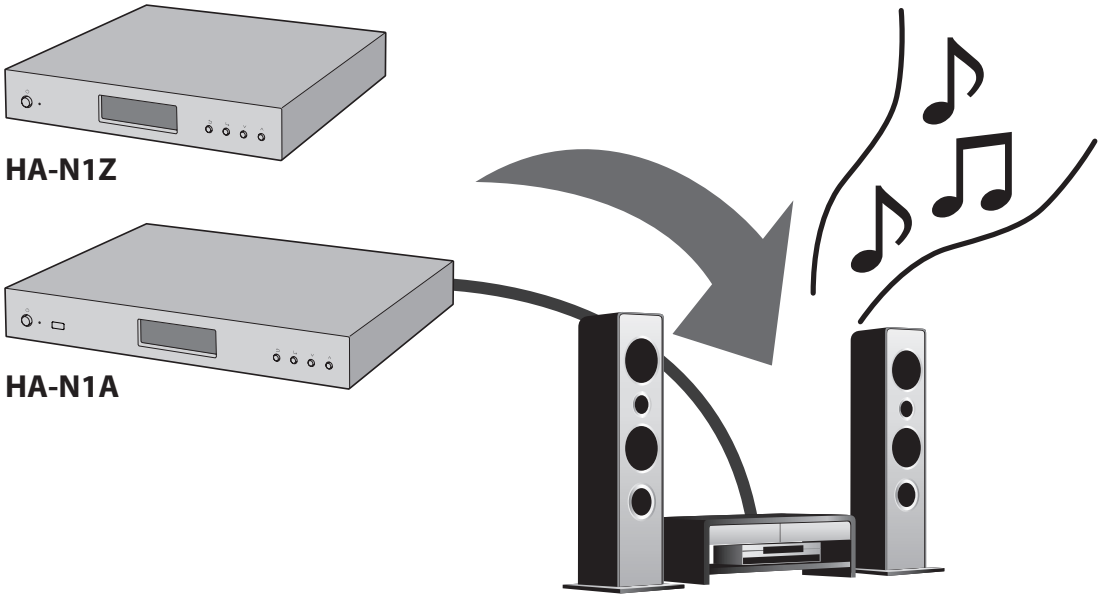
Importing tracks from the CD is now finished. To import tracks from another CD, repeat the process from step 3 above.

Notes:

- Imported tracks will be stored into the "import_CD" folder. If importing from a non-music CD, the imported data will be stored in the "import" folder, not the "import_CD" folder.
- Imported tracks that contain cover art (folder.jpg) cannot be moved or copied unless the cover art file is removed. Tracks that don't contain cover art can be moved or copied.

Streaming Music

Imported music files can be played using the Network Audio Player. Refer to your Network Audio Player's manual for detailed information on how to play music.



Network Audio Player

Display Panel While Streaming

When the HA-N1 starts streaming the music files, the display panel will show the music information.

Notes:

- If the music file is playing on a computer, the music information will not be displayed on the display panel.

- Depending on the Network Audio Player, file format, or file tag information, music information may not always be displayed properly on the display panel.

Supported File Types for Streaming

The HA-N1 supports streaming of files with the extensions below.

File Extensions	mp3, wma, wav, lpcm, pcm, ogg, m4a, mp4, 3gp, flac, m3u, mpa, aac, apl, ac3, aif, aiff, mp2, mp1, dsf, dff

Backing Up and Restoring

Backup Operations

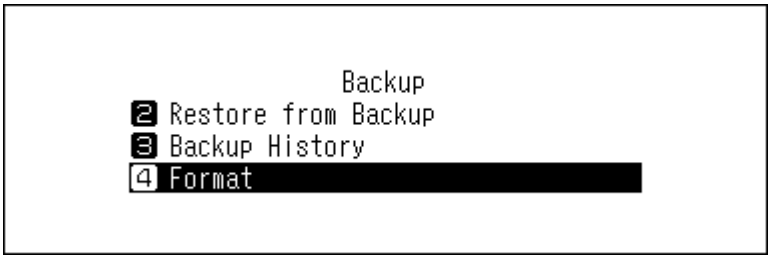
With this operation, both music files and settings are backed up. Backed up music files can be restored if the files are deleted.

Backup operations will vary depending on the file system of the connected USB device. Differences between backup modes are below:

File System	Mode	Files Included
NTFS-Formatted Device	Differential backup	Only files with different sizes and times from on the previous backup will be saved.
HFS Plus-Formatted Device without Journaling		
FAT32-Formatted Device	Full backup	All files will be backed up.

Notes:

- Use only the compatible USB devices listed on melco-audio.com.
- To use differential backup for FAT32 or HFS Plus-formatted device, format the USB device by selecting "Format" in the window below. All data will be erased when formatting.



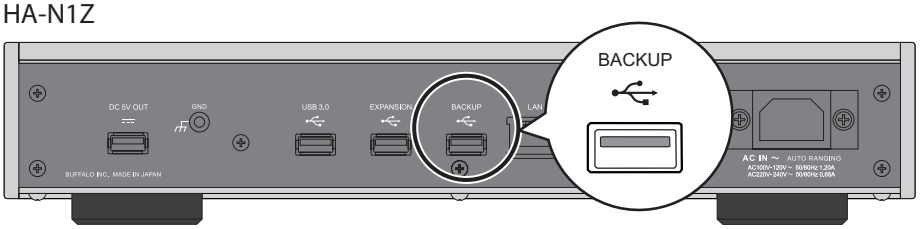
Backing Up

To back up imported music files, follow the procedure below.

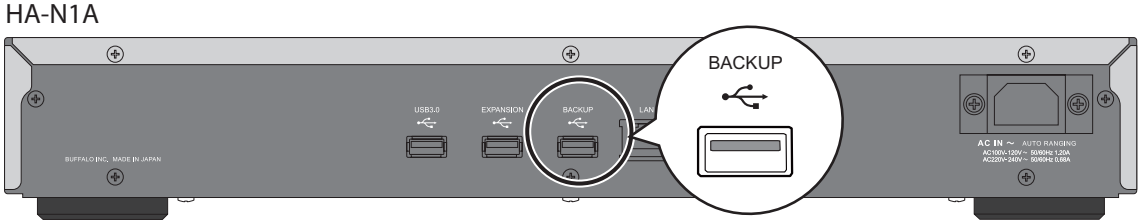
1 Turn on the HA-N1.

2 Connect the USB device (sold separately) to the "BACKUP" port. If you connect the USB device that contains the HA-N1's backup data, you can also use it for the differential backups.

HA-N1Z

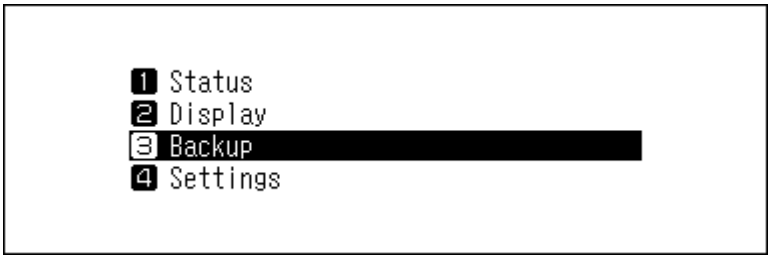


HA-N1A

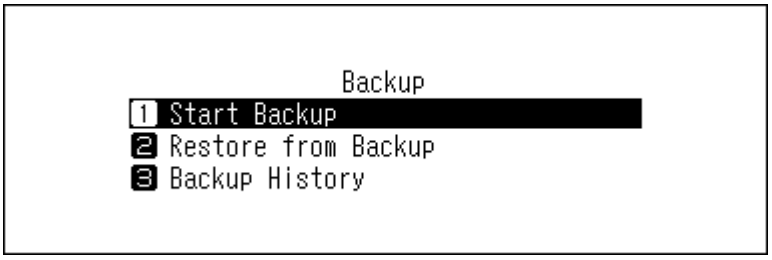


3 When the home screen is displayed, press the ↳ button on the front to show the menu.

4 Press ∨ and select "Backup", then press the ↳ button.

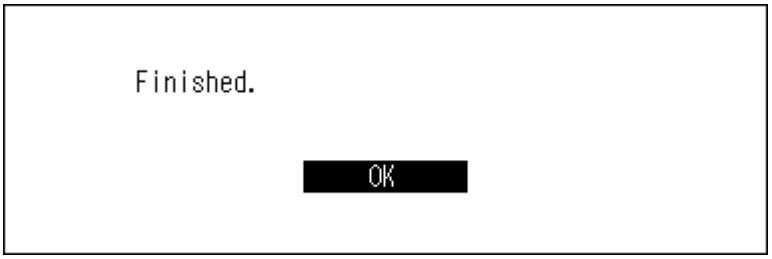


5 Select "Start Backup" and press the ↳ button.



6 When the following message is selected, the full backup will run if you select "OK". If you want to run the differential backup, select "Cancel" to stop the backup process.

7 When "Finished." is displayed, press the ↳ button.



The backup is now finished.

Notes:

- Backed up data will be saved without deleting the existing data in the USB device.
- Backed up data will be saved in the following folder:
  ".Anas.bak"-"MAC address"-"backup date and time"-"disk1"
  Normally, a folder that contains a period in its name is treated as a hidden folder. Hidden folders cannot be displayed unless a specific setting on a computer is changed. To access the ".Anas.bak" folder from a computer, change its hidden folder settings beforehand.

Restoring

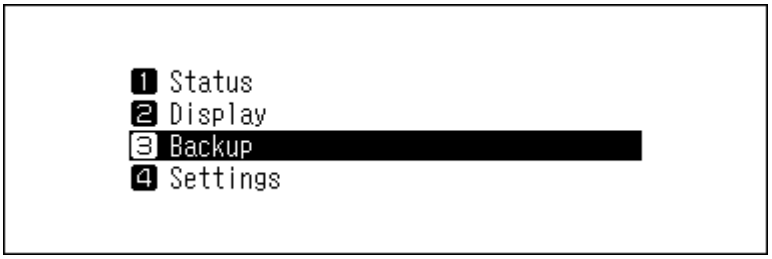
To restore the backup data, follow the procedure below. **Restoring from backup will delete all current data on the drive. If needed, back up any data before continuing.**

1 Turn on the HA-N1.

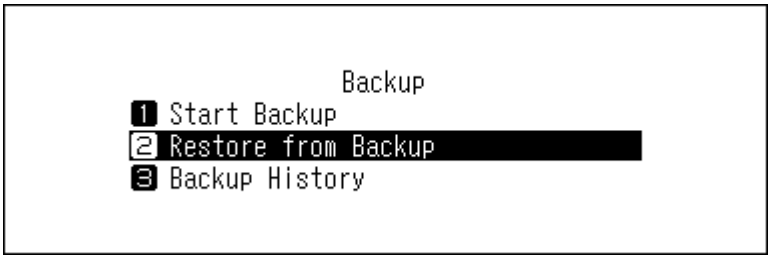
2 Connect the USB device that that contains the backup data to the "Backup" port.

3 When the home screen is displayed, press the ↳ button on the front to show the menu.

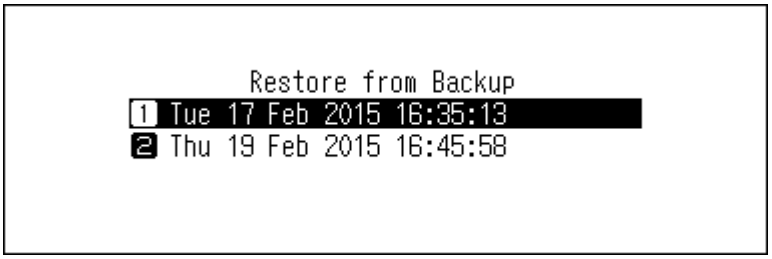
4 Press ∨ and select "Backup", then press the ↳ button.



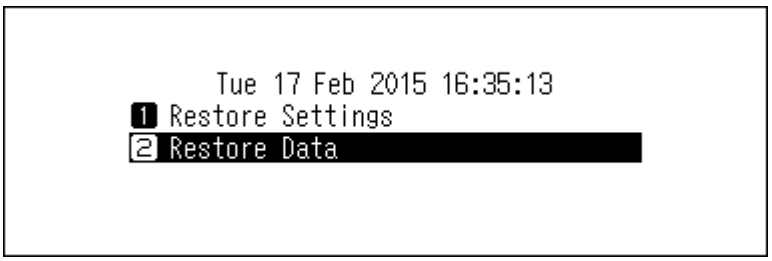
5 Press ∨ and select "Restore from Backup", then press the ↳ button.



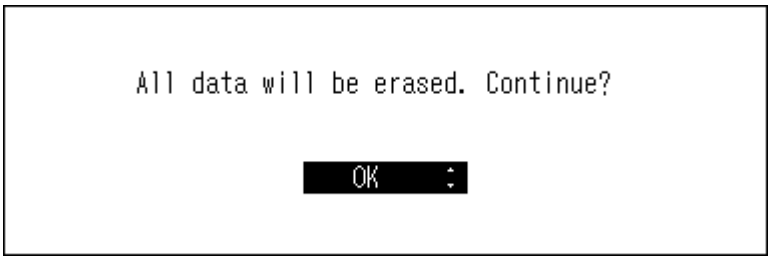
6 Press ∨ and select the date of backup, then press the ↵ button.



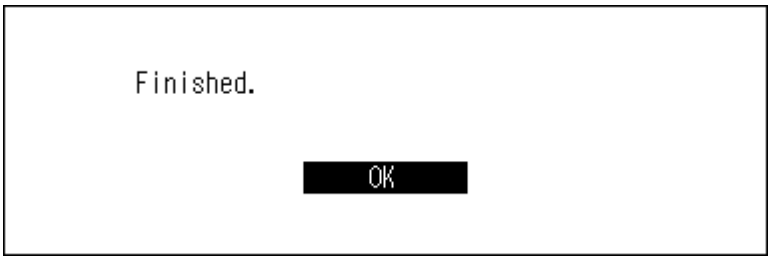
7 Press ∨ and select "Restore Data", then press the ↵ button.



8 The message "All data will be erased. Continue?" will be displayed. Make sure that all files on the drive can be erased before proceeding. To continue restoring the backup data, press ∨ and select "OK", then press the ↵ button.



9 When "Finished." is displayed, press the ↵ button. The HA-N1 will automatically restart.



The restoration is now finished.

Notes:

- To display the backup history, navigate to *Backup - Backup History*.
- To restore settings, select "Restore Settings" from step 6 above. "All settings will be initialized. Continue?" message will be displayed. Select "OK".

Deleting the Imported Music Files

There are two ways to delete the imported music files. Follow the procedure below.

Formatting the Drive

Format the drive referring the "Formatting Drives" section in chapter 3.

Note: Formatting will delete all data on the drive. If needed, back up any data before continuing.

Deleting Each File Manually

Open the HA-N1 shared folder from the computer, referring to the "Importing Music Files from a Computer" section above, and delete each file manually.

Chapter 3 Advanced Usage

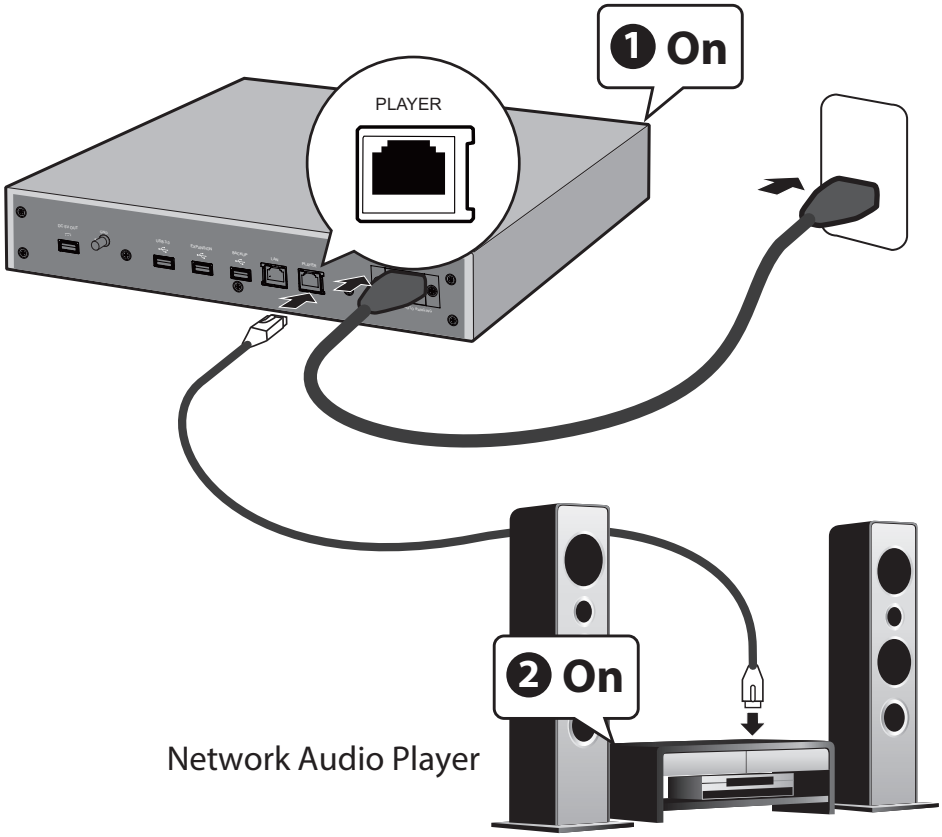
Using Direct Mode

Set the HA-N1 to direct mode if it is directly connected to the Network Audio Player with an Ethernet cable and no other devices are connected to the network. By default, network mode is configured. To configure direct mode, follow the procedure below.

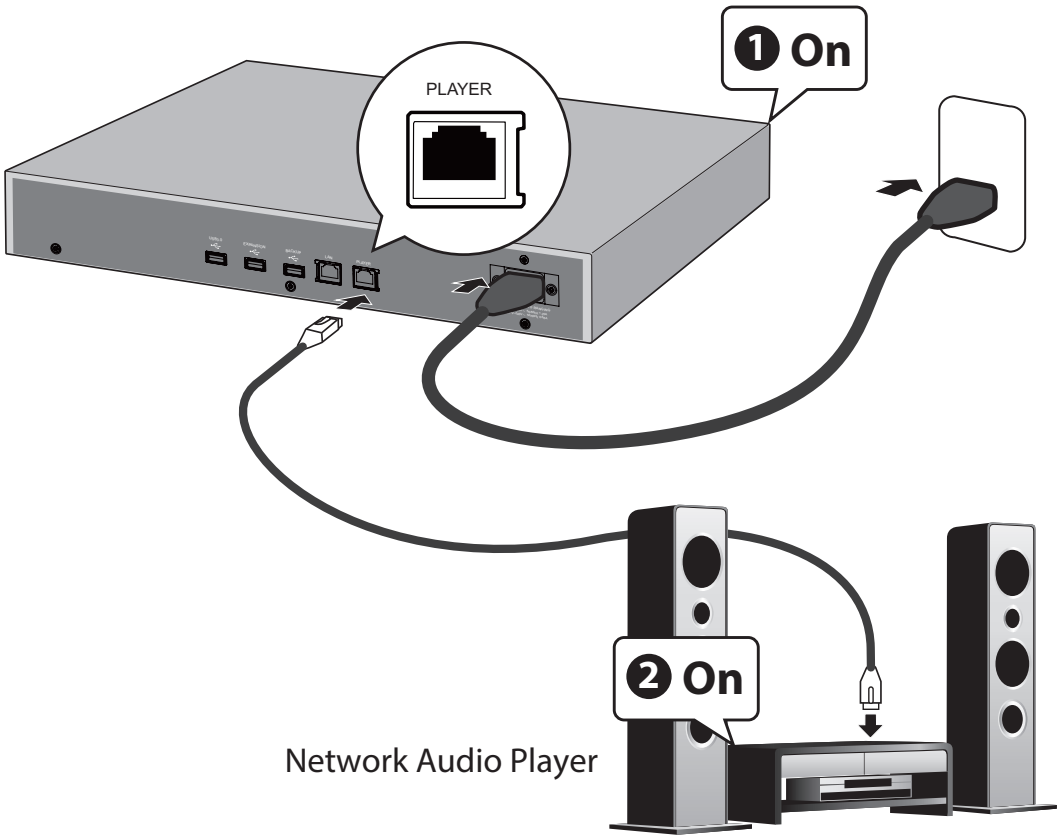
Notes:

- Direct mode is not suitable if your Network Audio Player is operated only via a remote control app on mobile devices.
- In direct mode, the HA-N1 will be the DHCP server that assigns an IP address to the Network Audio Player. Routers cannot be used.
- Files cannot be copied to the HA-N1 from the computer via the network in direct mode. Use USB devices for file copying instead.

HA-N1Z



HA-N1A



Note: Give the HA-N1 plenty of space for airflow. Do not stack it with other devices that get hot.

1 Connect the Network Audio Player to the HA-N1's "PLAYER" port (not "LAN" port) using an Ethernet cable.

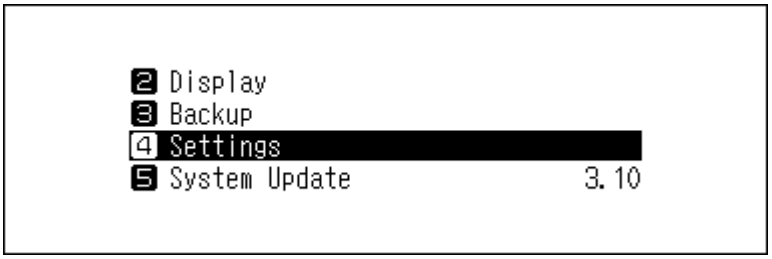
2 Connect the power cable.

3 Turn on the HA-N1 first (#1 in the picture above).

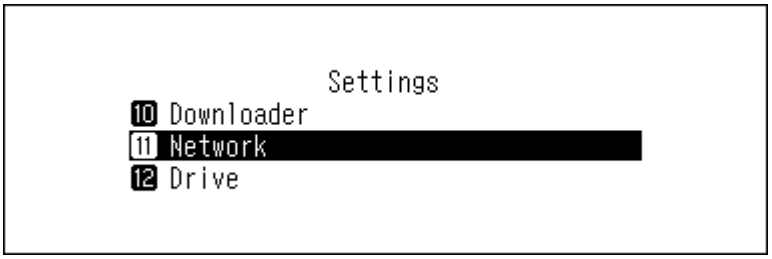
4 Then, turn on the Network Audio Player (#2 in the picture above).

5 When the home screen is displayed, press the ↳ button on the front to show the menu.

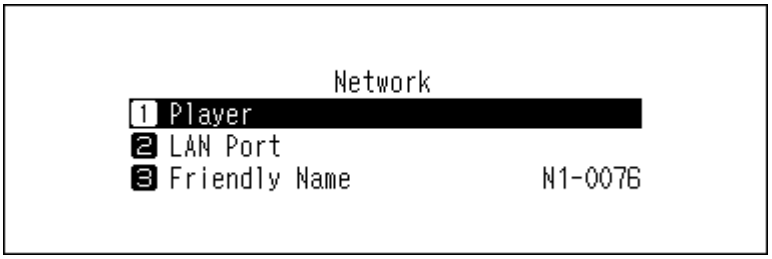
6 Press ∨ and select "Settings, then press the ↳ button.



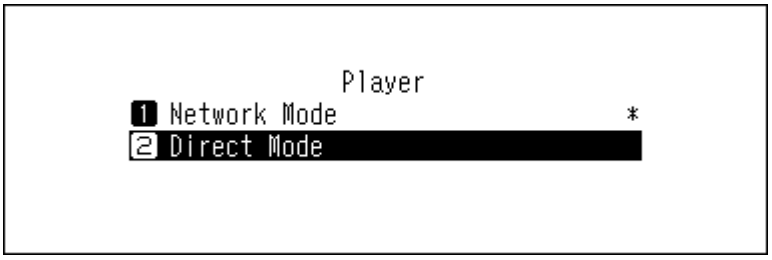
7 Press ∨ and select "Network", then press the ↳ button.



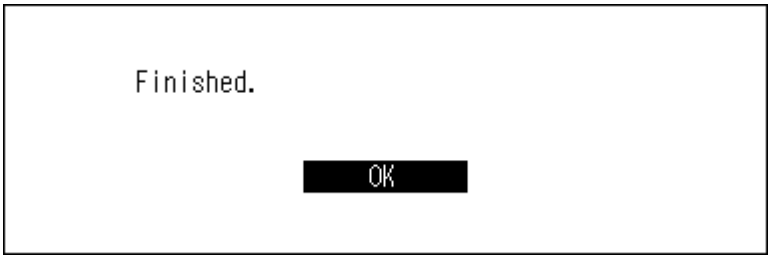
8 Select "Player" and press the ↳ button.



9 Press ∨ and select "Direct Mode", then press the ↳ button.



10 When "Finished." is displayed, press the ↳ button.



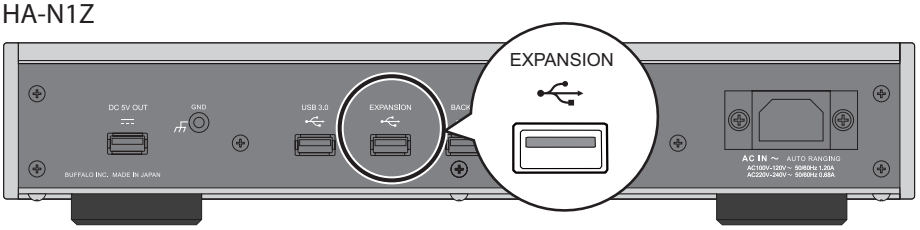
Direct mode is now configured.

Note: To connect the HA-N1 and the Network Audio Player to the network via the router or hub, use network mode instead. Select "Network Mode" at step 9 above to use network mode.

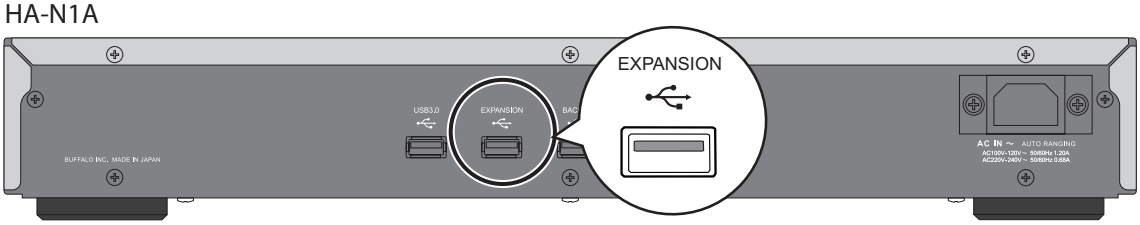
Streaming Music from USB Devices

Even if music files are not imported from the USB device that is connected to the "EXPANSION" port of the HA-N1, your Network Audio Player can play music files from the USB device.

HA-N1Z



HA-N1A



Note: Use only the compatible USB devices listed on melco-audio.com.

USB-DAC

The HA-N1 supports USB-DAC, short for "USB digital-to-analog converter". If you have a mobile device with a controller app installed, you can directly connect a USB-DAC to the HA-N1 to stream music and enjoy high-quality sound without using a computer.

Connecting a USB-DAC

Note: Use only the compatible USB-DAC device(s) listed on melco-audio.com.

1 Connect a USB-DAC to a USB port on the HA-N1. Any USB port on the HA-N1, except for DC 5V out port on the HA-N1Z series, can be used for connecting the USB-DAC.

2 Turn on the HA-N1.

3 The home screen will be displayed. Make sure the ▭ icon is shown on the home screen.

Connecting a USB-DAC is now finished.

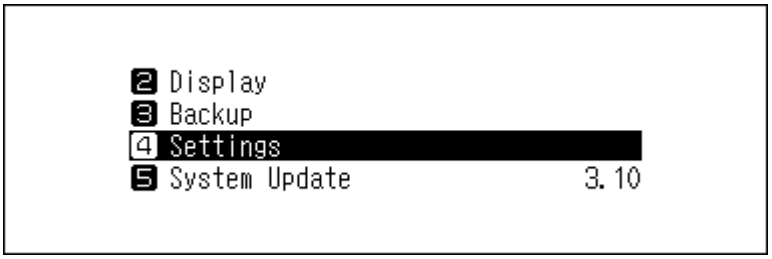
Selecting the Controller Mode

"HybridMode" is configured by default and it supports using many types of controller apps. Change the controller settings if you need to use a specific mode for your controller app. For more information about each mode and compatible apps, refer to the melco-audio.com site. To change the controller settings, follow the procedure below.

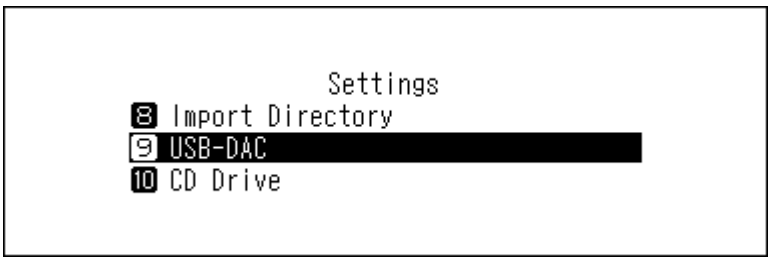
1 Turn on the HA-N1.

2 The home screen will be displayed. Make sure the ▭ icon is shown on the home screen. When it's confirmed, press the ↵ button.

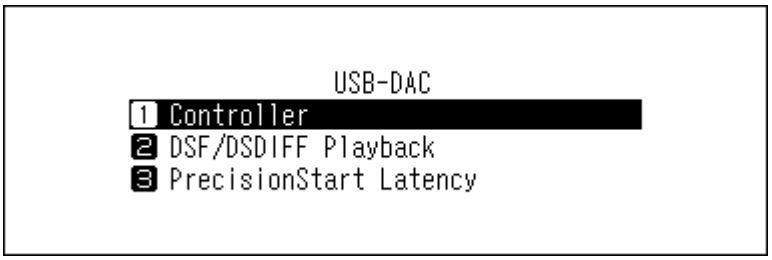
3 Press ∨ and select "Settings", then press the ↵ button.



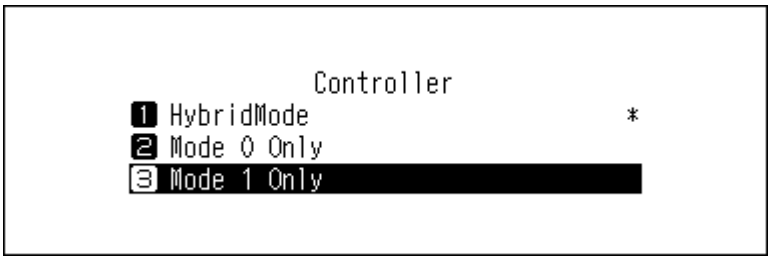
4 Press ∨ and select "USB-DAC", then press the ↵ button.



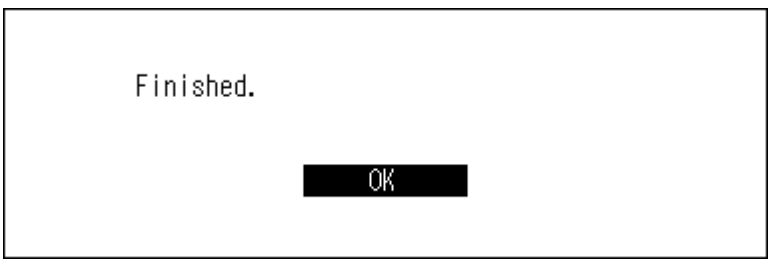
5 Press ∨ and select "Controller", then press the ↵ button.



6 Select "Mode 1 Only", then press the ↵ button.



7 When "Finished." is displayed, press the ↵ button.



Changing settings is now finished.

Configuring for USB-DAC

The HA-N1 supports two different playback modes for DSD files (.dsf, .dff). You can select from the following modes:

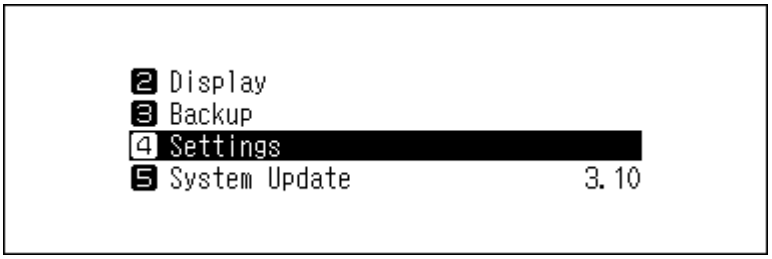
- "DSD (DSD over PCM)" - Select this option if connecting a USB-DAC that supports DSD over PCM. If using a USB-DAC that doesn't support DSD over PCM, select the other option.
- "Convert to PCM" - Select this option if connecting a typical USB-DAC. If connecting a USB-DAC that doesn't support DSD over PCM, select this option.

To configure USB-DAC on your HA-N1, follow the procedure below.

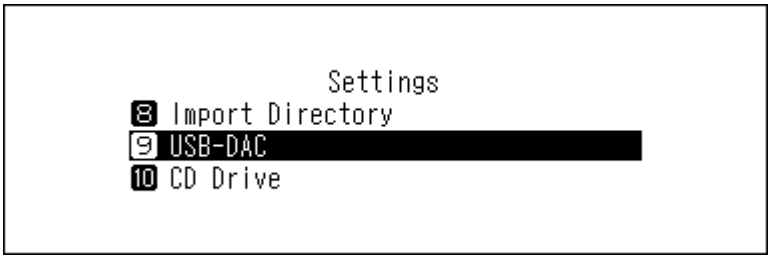
1 Turn on the HA-N1.

2 The home screen will be displayed. Make sure the ▭ icon is shown on the home screen. When it's confirmed, press the ↳ button.

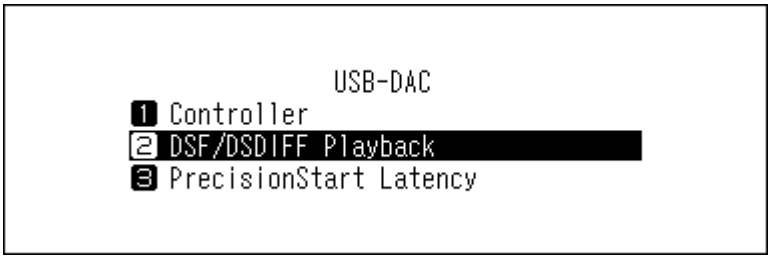
3 Press ∨ and select "Settings", then press the ↳ button.



4 Press ∨ and select "USB-DAC", then press the ↳ button.

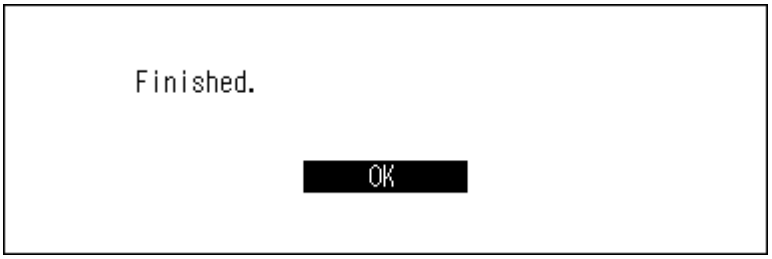


5 Select "DSF/DSDIFF Playback" and press the ↳ button.



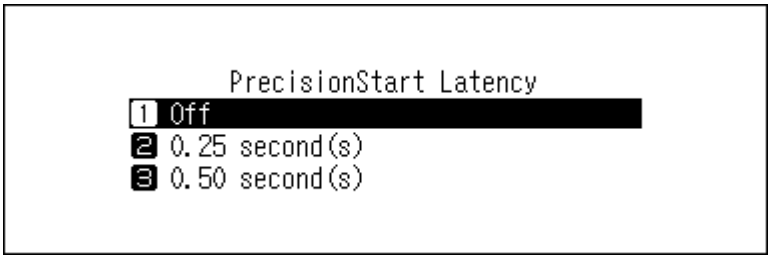
6 Select the playback mode for supported DSD files and press the ↳ button.

7 When "Finished." is displayed, press the ↳ button.



Changing the playback mode is now finished.

Note: Depending on your USB-DAC, the beginning of a music file may not count as initial playback if the sampling rate has changed between music files or if playing DSD files. In such a case, go to *Settings - USB-DAC - PrecisionStart Latency* and set a gap time. This gap time will be added to the first track of the playlist. The default gap time is 0.75 seconds.



- If the beginning of a music file is not played correctly with the default value, make the gap time longer.
- If the default value works correctly, the switch to the next music file will become faster when you make the gap time shorter.

Streaming Music Using USB-DAC

Make sure a controller app is installed on the mobile device before using it with a USB-DAC. For more detailed information about how to use the controller apps, refer to the apps' user guides.

The HA-N1's USB-DAC supports streaming for the following file types and sampling rates.

Supported File Types

File Types	File Extensions
FLAC	.flac
ALAC (Apple Lossless) / AAC	.m4a
AIFF	.aiff, .aif
WAV	.wav
DSDIFF	.dff
DSF	.dsf

Supported Sampling Rates

- PCM: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz, 352.8 kHz, 384 kHz
- DSD over PCM: 2.8 MHz, 5.6 MHz, 11.3 MHz

CD Transport

CD Transport will allow you to play music files from the optical drive that is connected to the HA-N1 using USB-DAC.

Playing a Music CD

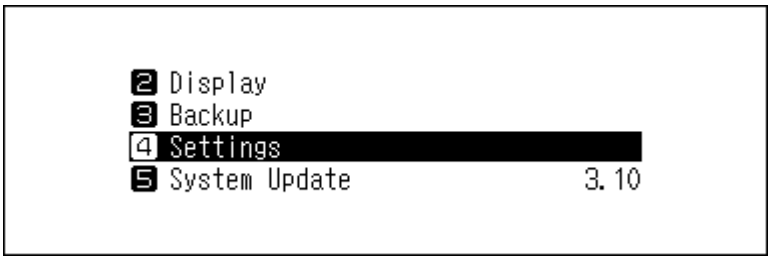
1 Turn on the HA-N1.

2 Connect an optical drive to the USB 2.0 port on the front (HA-N1A only) or the USB 3.0 port on the back.

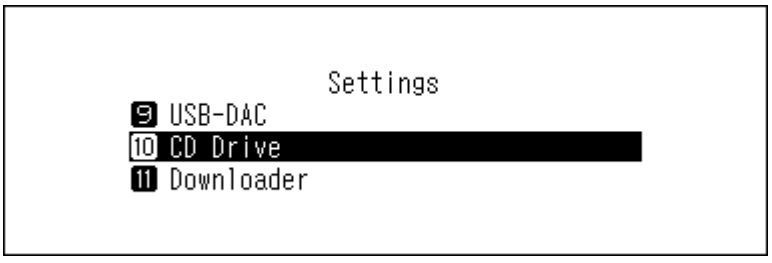
3 Connect a USB-DAC to a USB port on the HA-N1. Any USB port on the HA-N1, except for DC 5V out port on the HA-N1Z series, can be used for connecting the USB-DAC.

4 When the home screen is displayed, press the ↳ button on the front to show the menu.

5 Press ∨ and select "Settings", then press the ↳ button.

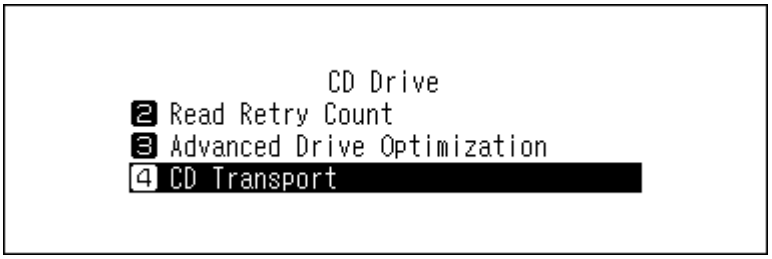


6 Press ∨ and select "CD Drive", then press the ↳ button.



7 Insert a music CD to play music tracks.

8 Press ∨ and select "CD Transport", then press the ↳ button.



Notes:

- To play another music CD, stop the current CD and remove it from the drive, then repeat from step 7.
- When the "Import from CD?" message is displayed, press ∨ and select "Cancel" to cancel the process.
- Do not disconnect the optical drives or USB-DAC while playing music tracks.
- While playing music tracks using CD Transport, the music files on the HA-N1 cannot be played by another Network Audio Player.

Operation While Playing a Music CD

You can work with the following operations using buttons on the HA-N1.

- Playback will be stopped by pressing the ↰ button while playing music.
- Playback will be suspended or resumed by pressing the ↳ button while playing music.
- The next track will be played by pressing the ∧ button while playing music.
- The previous track will be played by pressing the ∨ button while playing music.
- Album will be repeated by pressing the ∧ button while suspended. Repeat will be canceled when pressing the button again.
- The LCD panel display will switch to the song time passed or remaining time by pressing the ∨ button while suspended.

Downloader

Downloader can download audio files from streaming sites automatically. Once you purchase the audio files from a mobile device or PC, the HA-N1 can download the files from the streaming site, even if you're not at home.
Supported streaming sites are listed below:

- HIGHRESAUDIO
- OTOTOY
- e-onkyo music*

* "e-onkyo music" is not the same as "Onkyo Music". "e-onkyo music" is only for Japanese consumers and "Onkyo Music" is for overseas consumers.

Notes:

- Create an account on one of the streaming sites above before using downloader. Also, make sure the HA-N1 is connected to the Internet. You can verify if the HA-N1 is connected to the Internet from *Status - Network - LAN*.

- Do not move the folder that contains account name in its folder name to another folder. If the folder is moved, the HA-N1 may download the same audio file(s) again.

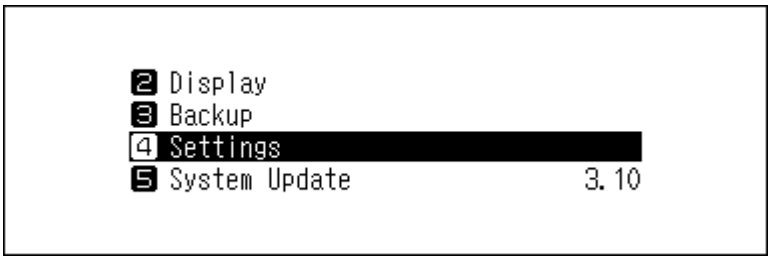
Adding Accounts

To add an account from a streaming site to the HA-N1, follow the procedure below.

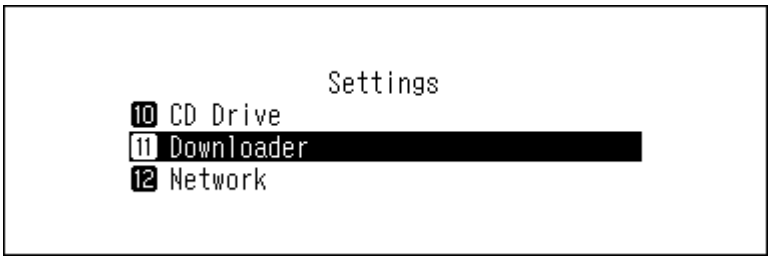
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

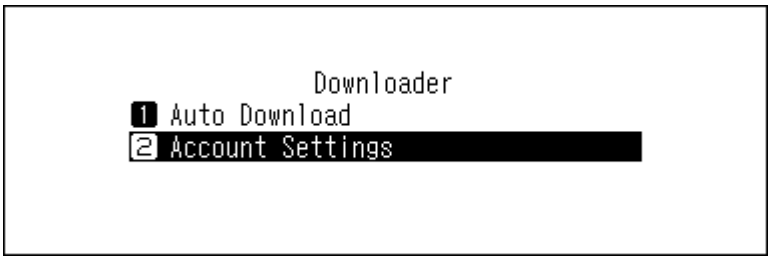
3 Press ∨ and select "Settings", then press the ↳ button.



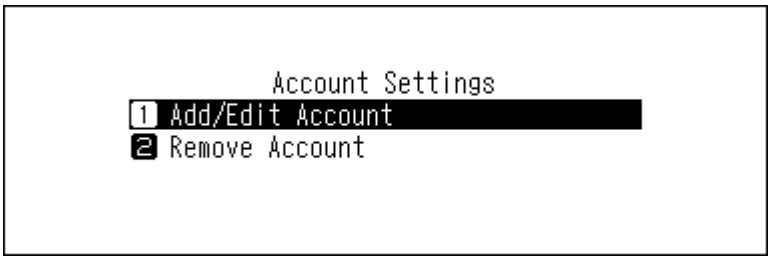
4 Press ∨ and select "Downloader", then press the ↳ button.



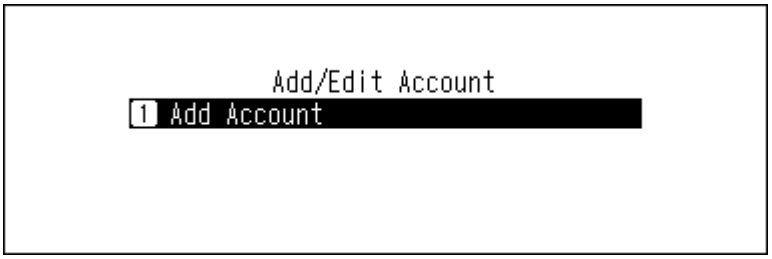
5 Press ∨ and select "Account Settings", then press the ↳ button.



6 Press ∨ and select "Add/Edit Account", then press the ↳ button.

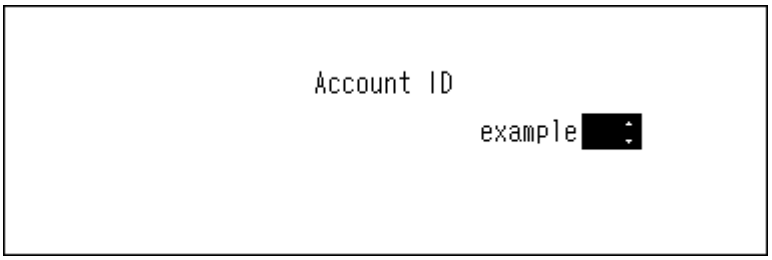


7 Press ∨ and select "Add Account", then press the ↵ button.

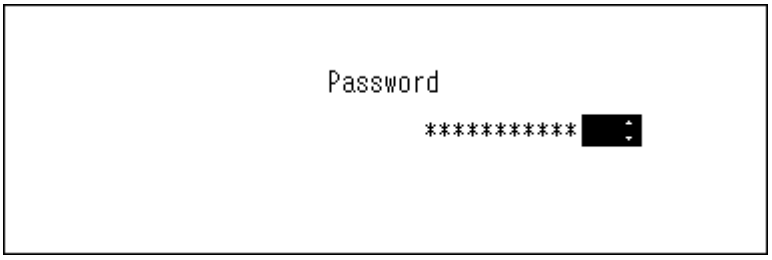


8 Select the streaming site to add an account and press the ↵ button.

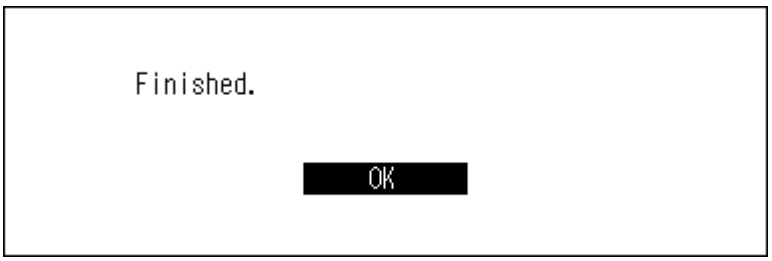
9 Enter the account ID using the ∧ and ∨ buttons, then press the ↵ button.



10 Enter the account password using the ∧ and ∨ buttons, then press the ↵ button.



11 When the credentials are authenticated, the following message will be displayed. Press the ↵ button.



An account is now added. After an account has been added, auto download will be automatically enabled.

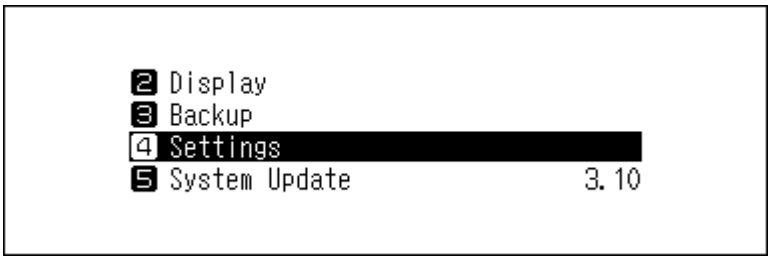
Enabling or Disabling Auto Download

To disable or enable auto download, follow the procedure below.

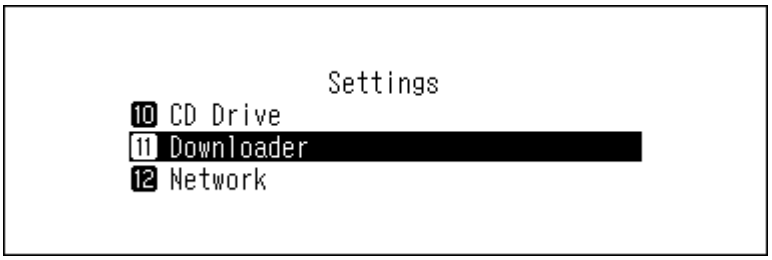
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

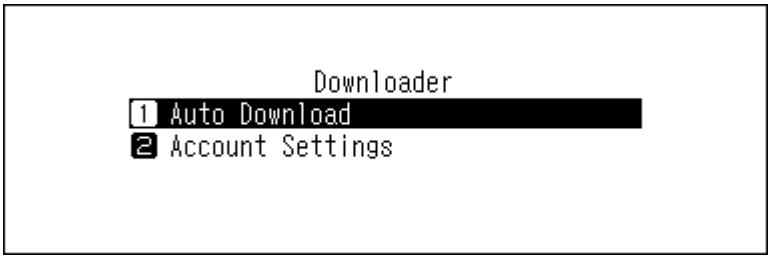
3 Press ∨ and select "Settings", then press the ↳ button.



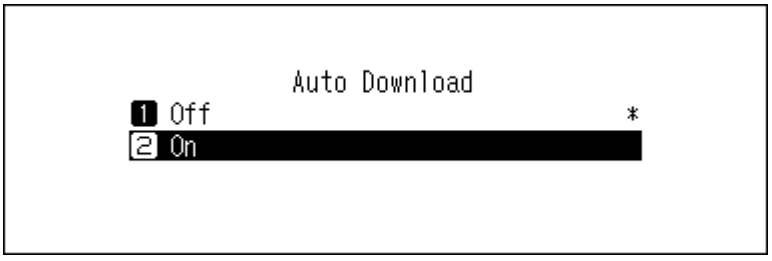
4 Press ∨ and select "Downloader", then press the ↳ button.



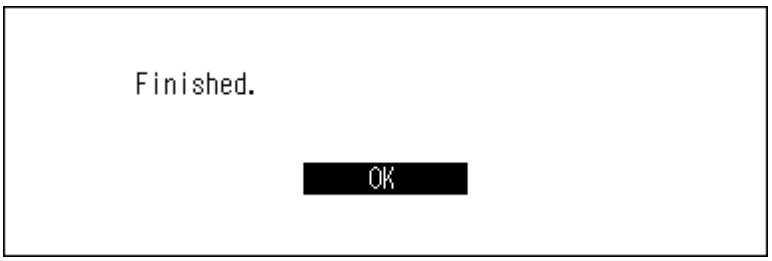
5 Press ∨ and select "Auto Download", then press the ↳ button.



6 Press ∨ and select "Off" or "On", then press the ↳ button.



7 When "Finished." is displayed, press the ↳ button.



Auto download is now enabled or disabled.

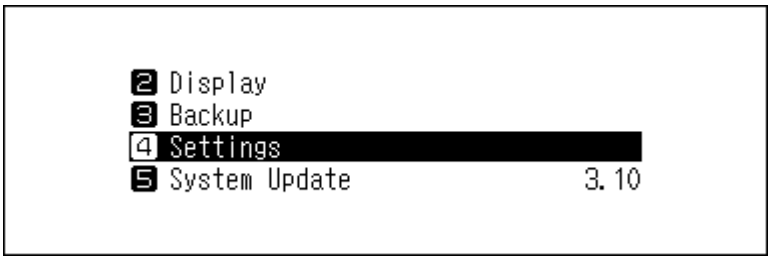
Deleting Accounts

To delete an existing account on the HA-N1, follow the procedure below.

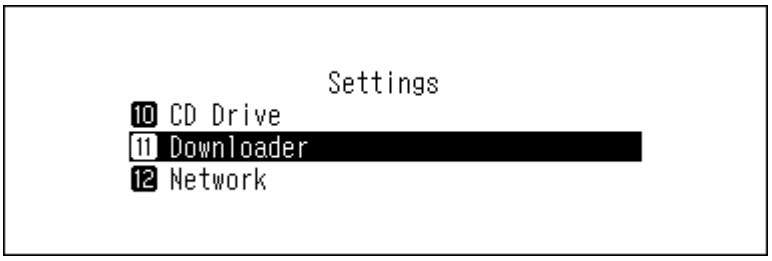
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

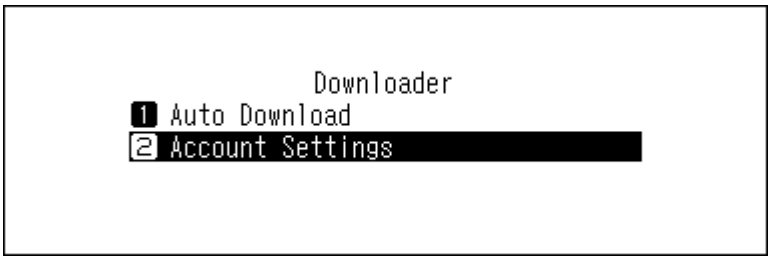
3 Press ∨ and select "Settings", then press the ↳ button.



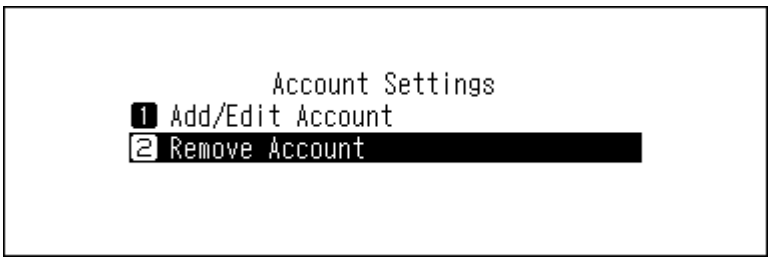
4 Press ∨ and select "Downloader", then press the ↳ button.



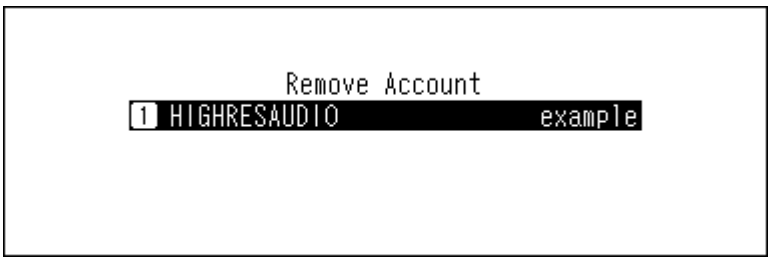
5 Press ∨ and select "Account Settings", then press the ↳ button.



6 Press ∨ and select "Remove Account", then press the ↵ button.

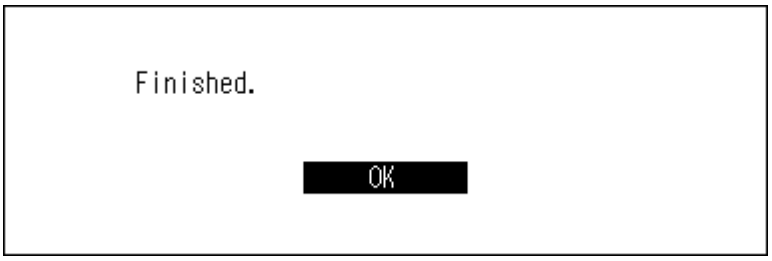


7 Select the account to be deleted and press the ↵ button.



8 Press ∨ and select "OK", then press the ↵ button.

9 When "Finished." is displayed, press the ↵ button.



The account is now deleted.

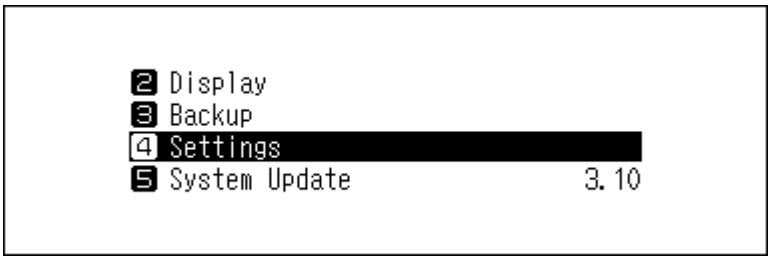
Changing RAID Mode

The HA-N1 series is configured with a spanned array by default.
To change the RAID mode from the default, follow the procedure below. **Changing the RAID mode will delete all data on the drive. If needed, back up any data before continuing.**

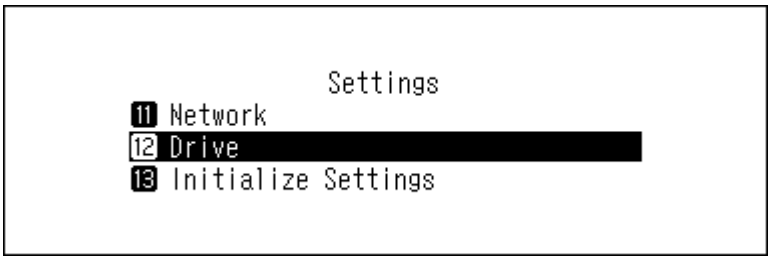
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

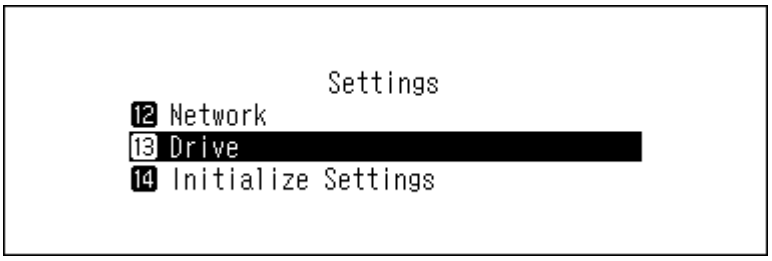
3 Press ∨ and select "Settings", then press the ↳ button.



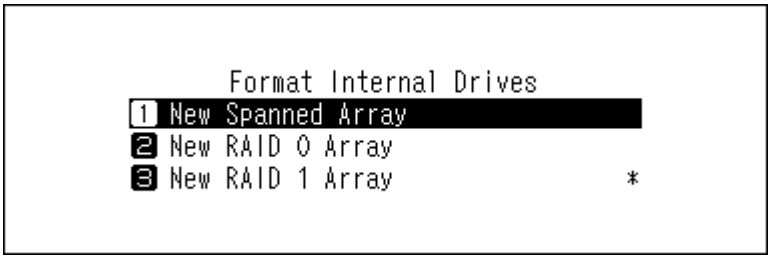
4 Press ∨ and select "Drive", then press the ↳ button.



5 Press ∨ and select "Format Internal Drives", then press the ↳ button.



6 Select the RAID mode to configure and press the ↳ button.



Notes:

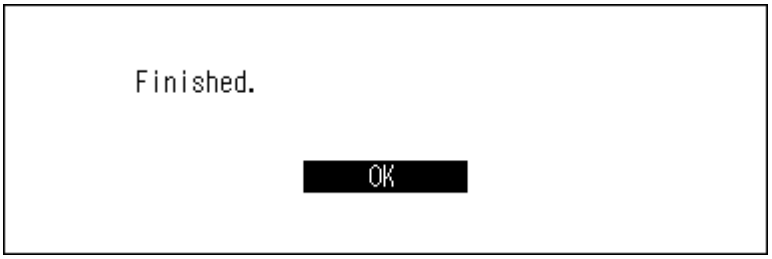
- **Spanned**
  Combines 2 drives in the HA-N1 into a single array. The usable disk space is the total space of all drives used. Data is written to the first drive, then the second drive once the first drive becomes full. If a single drive in the array fails, then all data in the array is lost.
- **RAID 0**
  Combines 2 drives in the HA-N1 into a single array. The usable disk space is the total space of all drives used. This simple RAID mode offers faster performance than a spanned array. If a single drive in the array fails, then

all data in the array lost. RAID 0 offers the least redundancy among the three RAID modes. In terms of saving your data safely, using RAID 0 is not recommended.

- **RAID 1**
  Combines 2 drives in the HA-N1 into a mirrored array. The available space in the array is the capacity of a single drive. Identical data is written to each drive. If a drive is damaged, data can be recovered by replacing the damaged drive. As long as one drive in the array remains undamaged, all data in the array can be recovered.

7 The message "All data will be lost. Continue?" will be displayed. Make sure that all files on the drive can be erased before proceeding. To continue changing the RAID mode, press ⌄ and select "OK", then press the ↳ button.

8 When "Finished." is displayed, press the ↳ button.



Formatting Drives

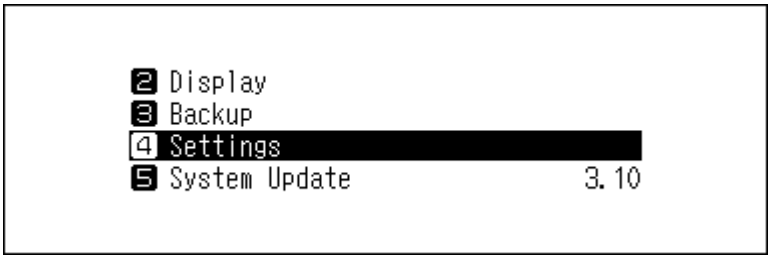
To format internal drives in the HA-N1 or connected USB devices, follow the procedure below. **Formatting will delete all data on the drive. If needed, back up any data before continuing.**

Formatting Internal Drives

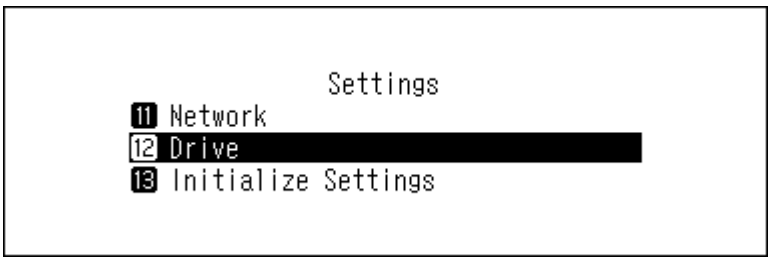
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

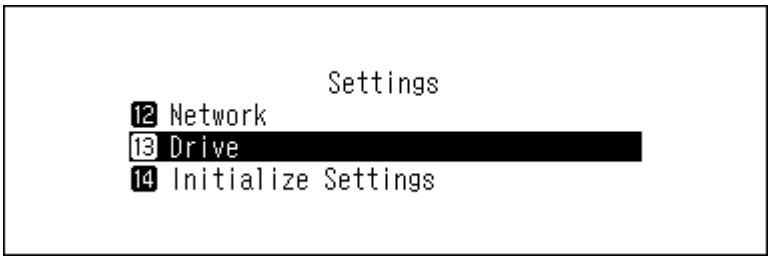
3 Press ∨ and select "Settings", then press the ↵ button.



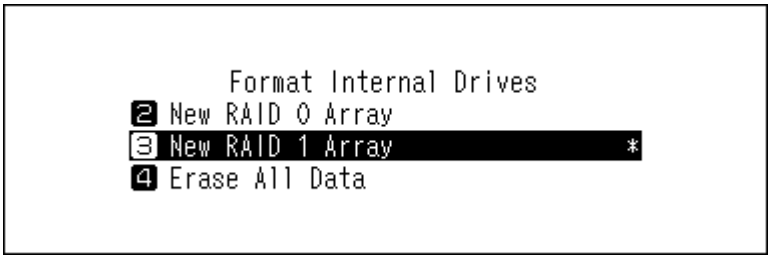
4 Press ∨ and select "Drive", then press the ↵ button.



5 Press ∨ and select "Format Internal Drives", then press the ↵ button.

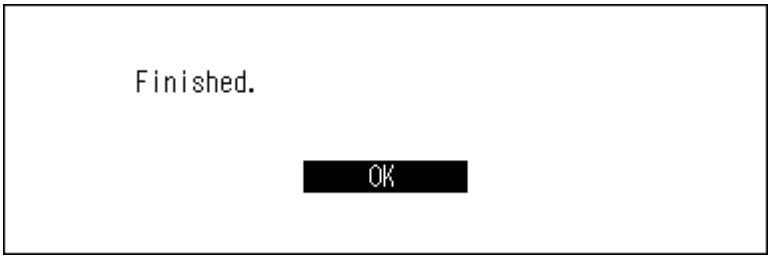


6 Select the current RAID mode and press the ↵ button. If you want to change the current RAID mode, refer to the "Changing RAID Mode" section above.



7 The message "All data will be lost. Continue?" will be displayed. Make sure that all files on the drive can be erased before proceeding. To continue formatting, press ∨ and select "OK", then press the ↵ button.

8 When "Finished." is displayed, press the ↳ button.



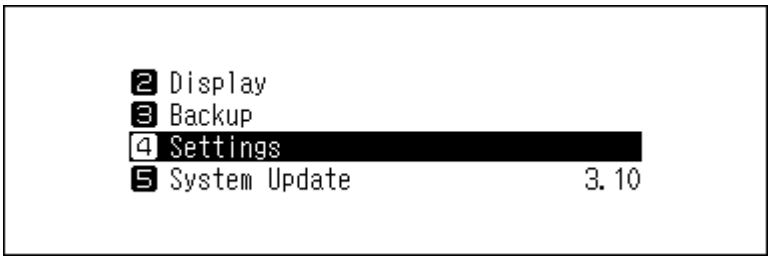
Formatting Connected USB Devices

This will format the USB device to NTFS. Be aware that a USB device formatted to NTFS will become read-only when connected to Mac OS.

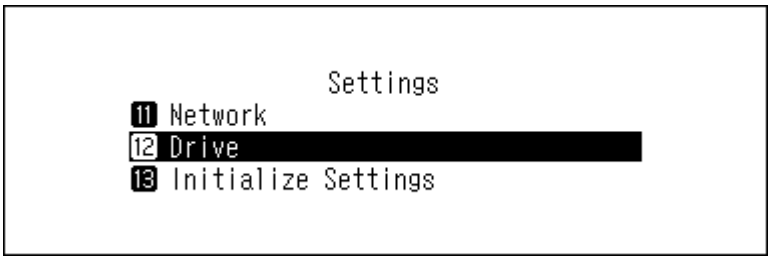
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

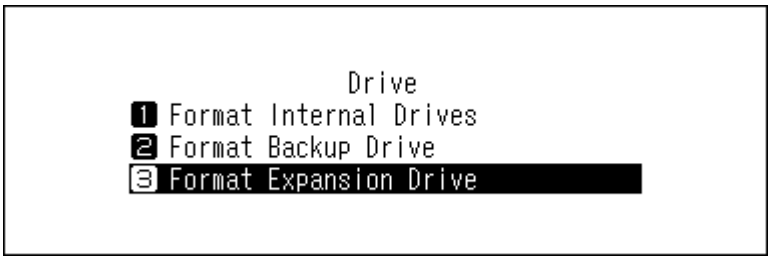
3 Press ∨ and select "Settings", then press the ↳ button.



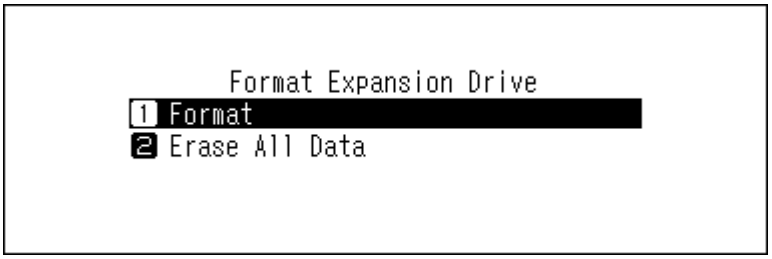
4 Press ∨ and select "Drive", then press the ↳ button.



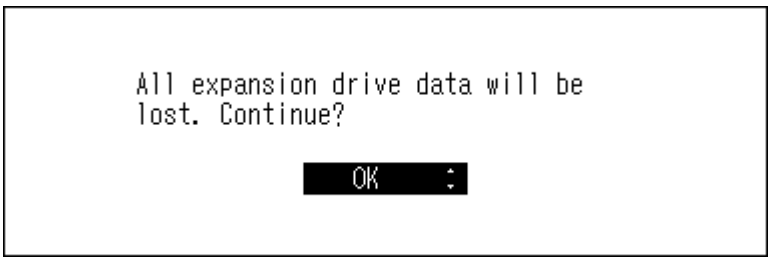
5 Press ∨ and select either the backup or expansion drive, then press the ↳ button.



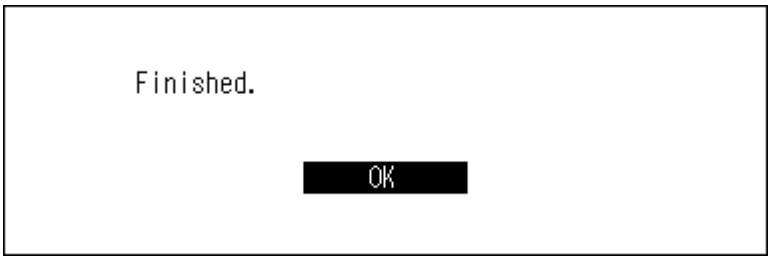
6 Press ∨ and select "Format", then press the ↵ button.



7 The message "All (backup/expansion drive) data will be lost. Continue?" will be displayed. Make sure that all files on the drive can be erased before proceeding. To continue formatting, press ∨ and select "OK", then press the ↵ button.



8 When "Finished." is displayed, press the ↵ button.



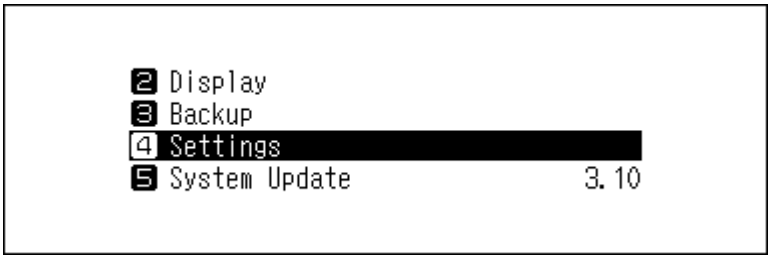
Erase Data on the HA-N1 Completely

Under some circumstances, data from formatted drives can be recovered. This disk erasure process in this section does a much more thorough job of erasing data. This procedure is recommended for removing all data from a drive in a way that makes it nearly impossible to recover with current tools. All data on the drives is completely erased.

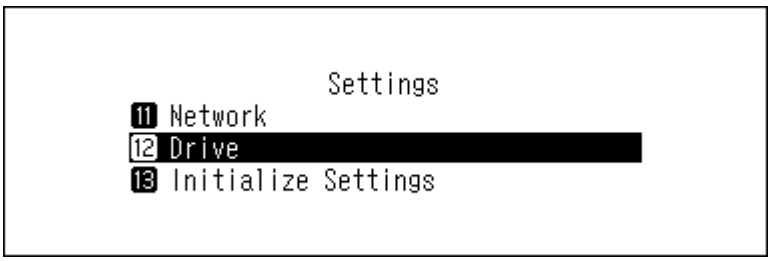
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↵ button on the front to show the menu.

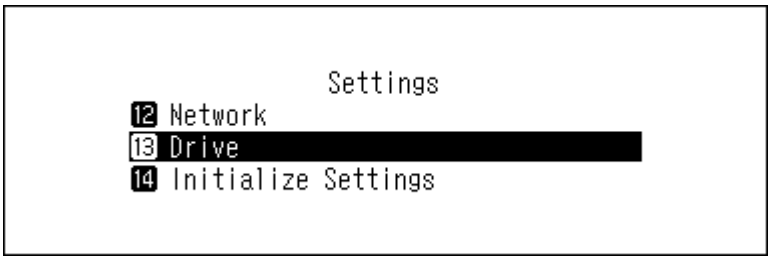
3 Press ∨ and select "Settings", then press the ↵ button.



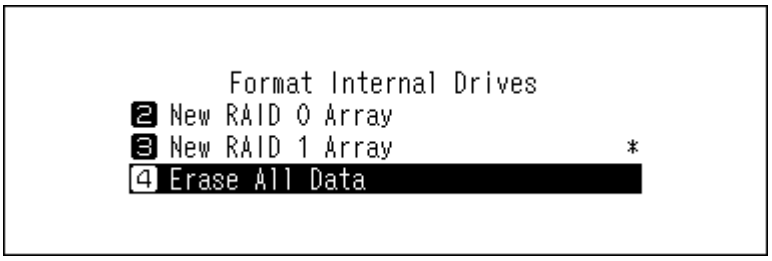
4 Press ∨ and select "Drive", then select the ↵ button.



5 Press ∨ and select the drive for complete format, then press the ↵ button.

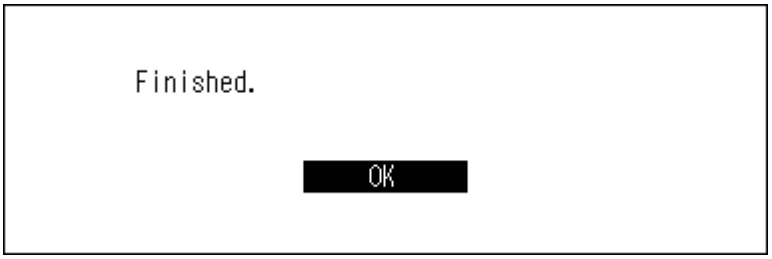


6 Press ∨ and select "Erase All Data", then press the ↵ button.



7 The message "All (backup/expansion drive) data will be lost. Continue?" will be displayed. Make sure that all files on the drive can be erased before proceeding. To continue formatting, press ∨ and select "OK", then press the ↳ button.

8 When "Finished." is displayed, press the ↳ button.



All data on the HA-N1 will be permanently erased.

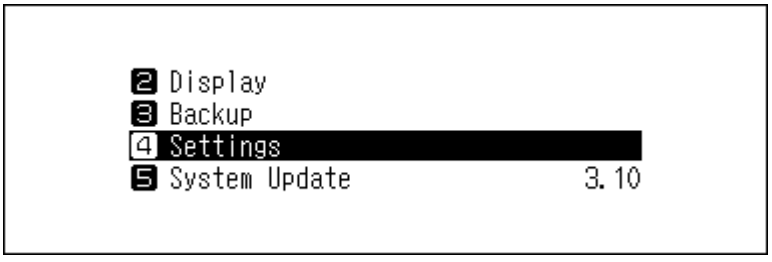
Changing the IP Address

To change the IP address of the HA-N1, follow the procedure below.

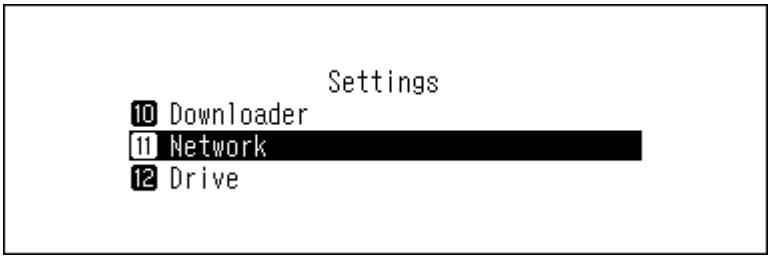
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

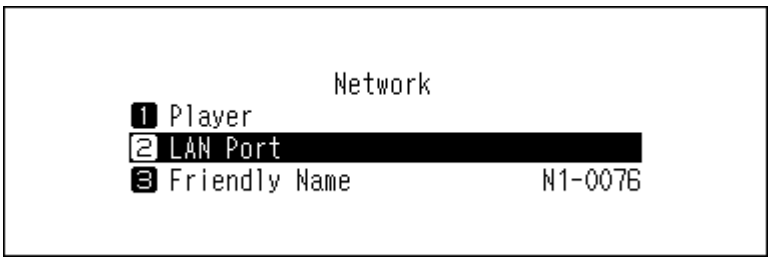
3 Press ∨ and select "Settings", then press the ↳ button.



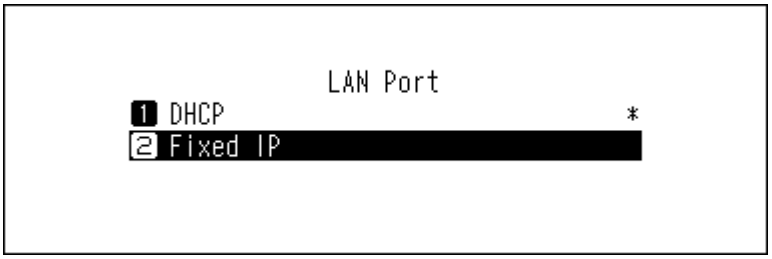
4 Press ∨ and select "Network", then press the ↵ button.



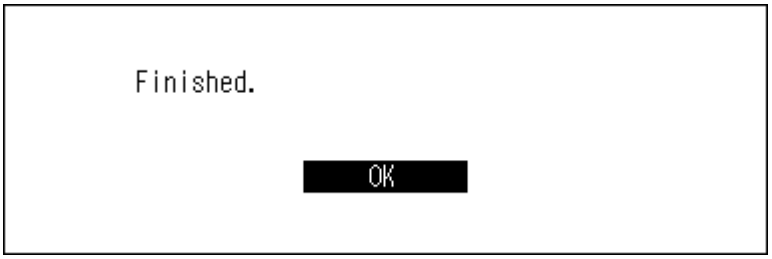
5 Press ∨ and select "LAN Port", then press the ↵ button.



6 Select whether to automatically acquire the IP address from the DHCP server or configure a fixed IP address and press the ↵ button.



7 When "Finished." is displayed, press the ↵ button.



IP address is now configured properly.

Notes:

- To obtain the IP address from the DHCP server automatically, the DHCP server on the router should also be enabled.
- If "Fixed IP" is selected, enter the desired IP address, subnet mask, default gateway, and DNS server in the displayed screen.

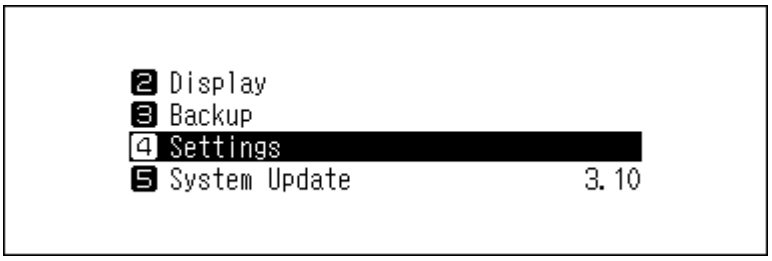
Changing Friendly Name (Hostname)

To change the friendly name (hostname) of the HA-N1, follow the procedure below. After the procedure is finished, the HA-N1 will automatically restart so any importing or playing of files will be aborted. We recommend waiting for these operations to finish before changing the friendly name.

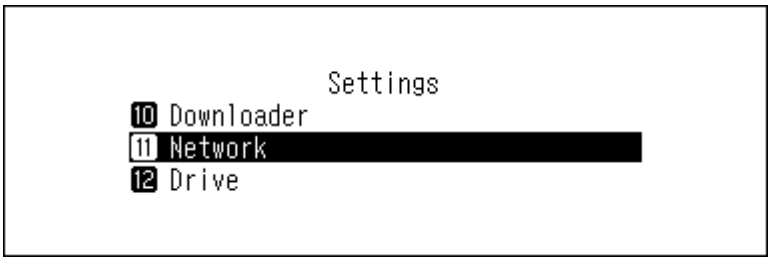
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

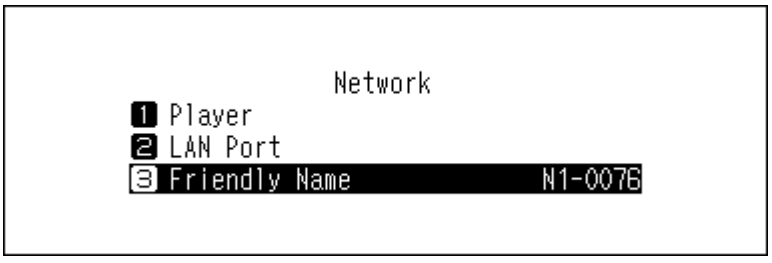
3 Press ∨ and select "Settings", then press the ↳ button.



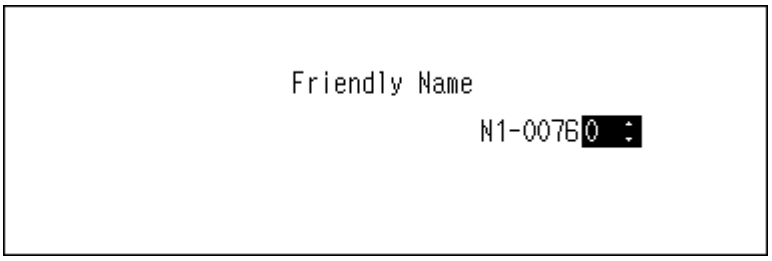
4 Press ∨ and select "Network", then press the ↳ button.



5 Press ∨ and select "Friendly Name", then press the ↳ button.



6 Enter the new friendly name (hostname) using the ∨ and ∧ buttons, then press the ↳ button.



Notes:

- Friendly name may contain 0–9, A–Z, and hyphens (-).
- When you press the ⮌ button, the entered characters are deleted from the right side. To change the friendly name, press the ⮌ button and delete all characters except for the first, then enter the new friendly name. If you delete all the characters, the display will go back to the previous screen.

7 When you press the ↳ button, the entered character is determined and another character can be selected. Press the ↳ button twice to stop configuring the friendly name.

8 If "Finished." is displayed, press the ↳ button.

9 If "Restarting..." is displayed, press the ↳ button. The HA-N1 will restart.

New friendly name (hostname) is configured.

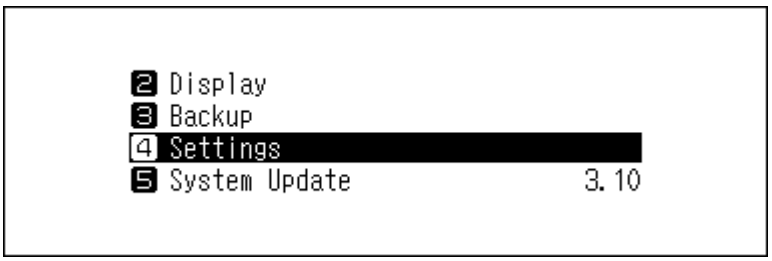
Configuring Date and Time

To configure the time settings, follow the procedure below.

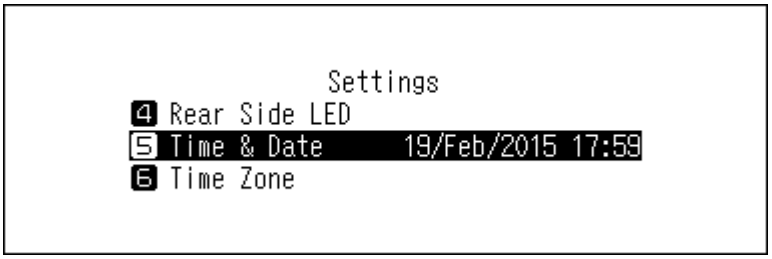
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

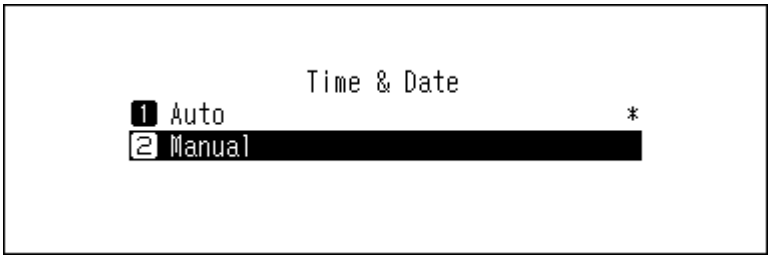
3 Press ∨ and select "Settings", then press the ↳ button.



4 Press ∨ and select "Time & Date", then press the ↳ button.



5 Select whether to configure the time settings automatically or manually, then press the ↵ button. To automatically configure the time settings, the HA-N1 should be able to connect to the Internet.



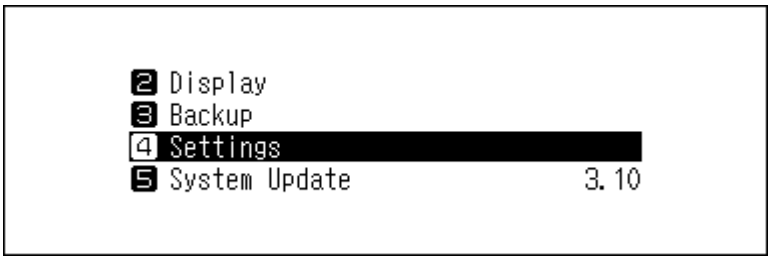
6 Follow the instructions on the display.

Time Zone Settings

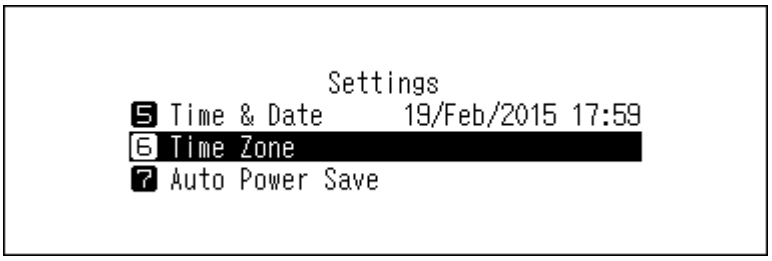
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↵ button on the front to show the menu.

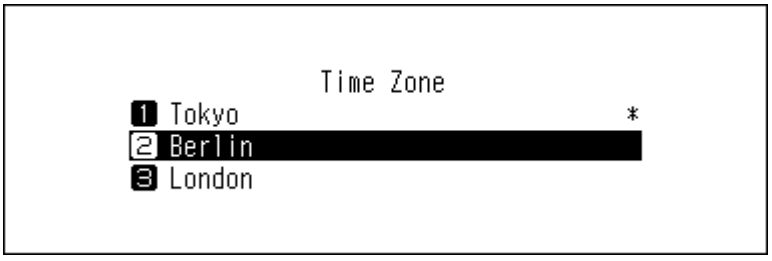
3 Press ∨ and select "Settings", then press the ↵ button.



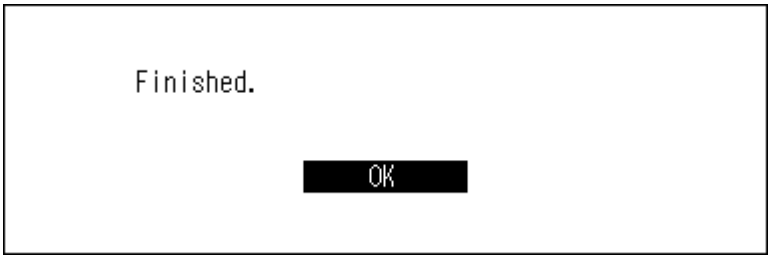
4 Press ∨ and select "Time Zone", then press the ↵ button.



5 Select the time zone to configure and press the ↵ button.



6 When "Finished." is displayed, press the ↳ button.



The time zone setting is changed.

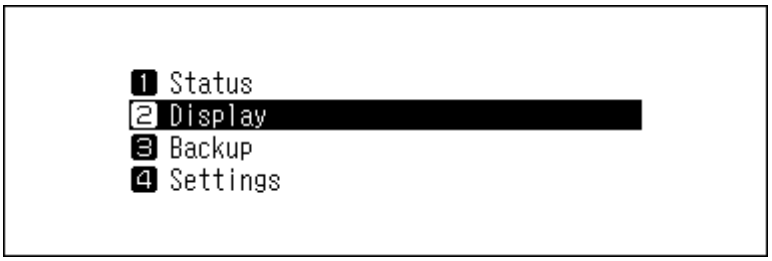
Display and LED Settings

Changing Display Brightness

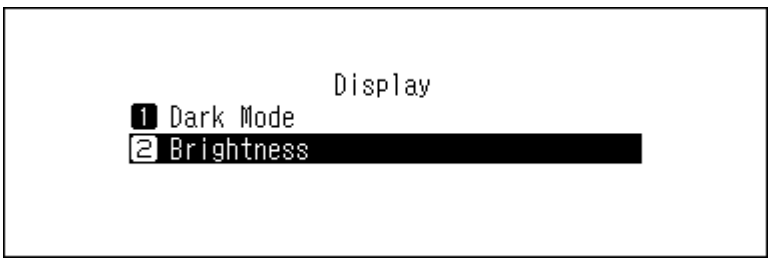
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

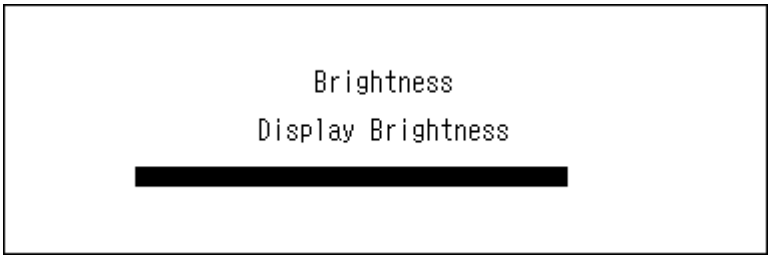
3 Press ∨ and select "Display", then press the ↳ button.



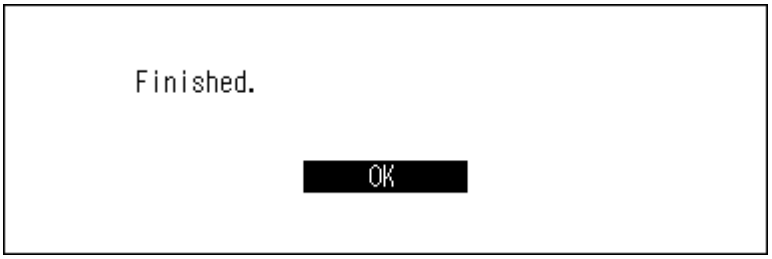
4 Press ∨ and select "Brightness", then press the ↳ button. If you select "Dark Mode" on the screen, the display panel turns off. You can also turn off the display panel by pressing and holding the ⮌ button for 2 seconds while at the home screen. While the display panel is off, press any button on the front to relight the display.



5 Press the ∨ or ∧ button to change the brightness. Press ↵ if it's done.



6 When "Finished." is displayed, press the ↵ button.



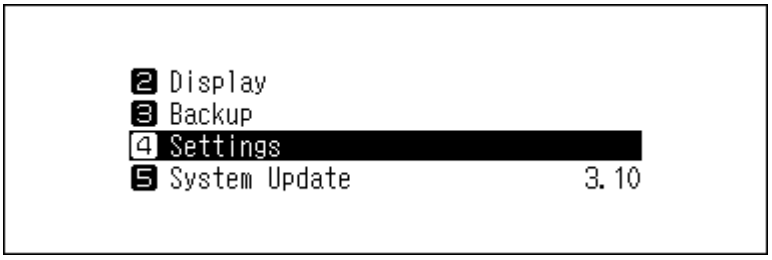
The display brightness is now changed.

Changing Power LED Brightness

1 Turn on the HA-N1.

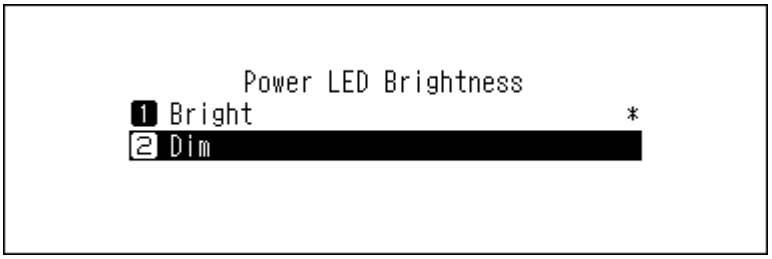
2 When the home screen is displayed, press the ↵ button on the front to show the menu.

3 Press ∨ and select "Settings", then press the ↵ button.

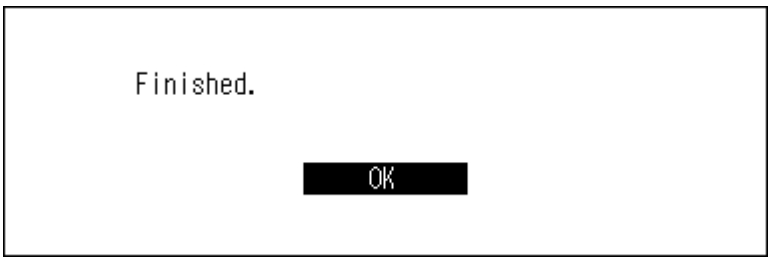


4 Press ∨ and select "Power LED Brightness", then press the ↵ button.

5 Select "Bright" or "Dim", then press the ↵ button.



6 When "Finished." is displayed, press the ↵ button.



The power LED brightness is now changed.

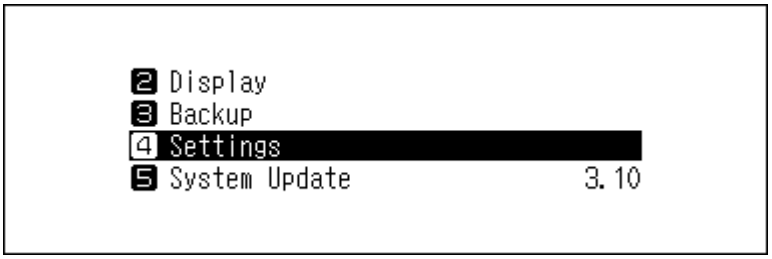
Turning Off Rear-Side LED

The rear-side LED is located at the back of the HA-N1, the "LAN" and "PLAYER" ports. The LED shows the network activity, so you will not be able to check for network activity if the rear-side LED is turned off. Verify any network activity by checking that the HA-N1 is connected to the network properly beforehand.

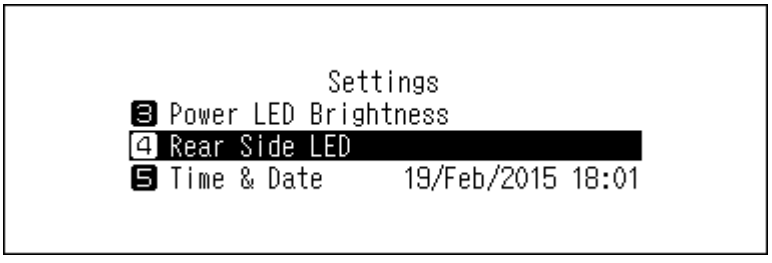
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↵ button on the front to show the menu.

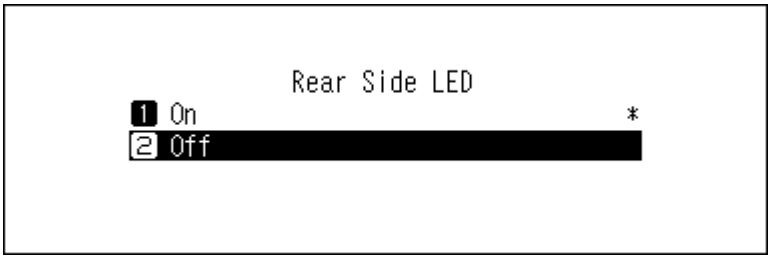
3 Press ∨ and select "Settings", then press the ↵ button.



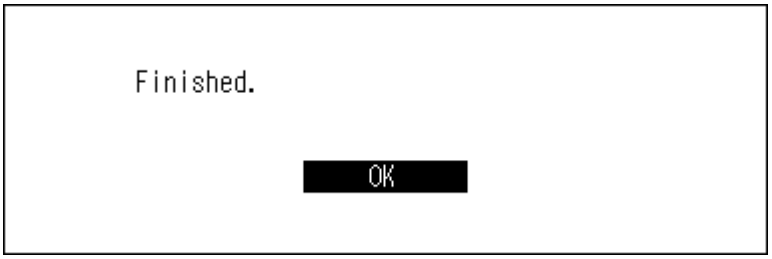
4 Press ∨ and select "Rear Side LED", then press the ↵ button.



5 Select "Off", then press the ↳ button.



6 When "Finished." is displayed, press the ↳ button.



The rear-side LED will extinguish.

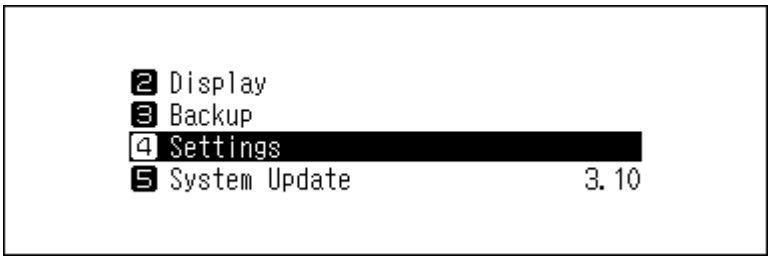
Auto Power Save

If auto power save is enabled, the HA-N1 will automatically power off after music stops playing and a specific amount of time passes. Auto power save is set to "15 minutes" by default, and it helps you save power in case you forget to turn off the device. Auto power save will not shut off the HA-N1 while the Network Audio Player that is connected to the "PLAYER" port is on or while a USB-DAC or an optical drive is connected. To change the time setting or turn off auto power save, follow the procedure below.

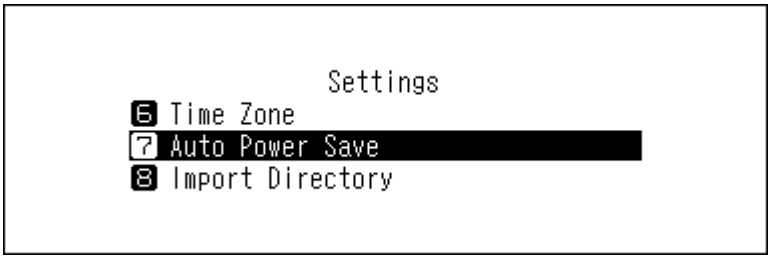
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

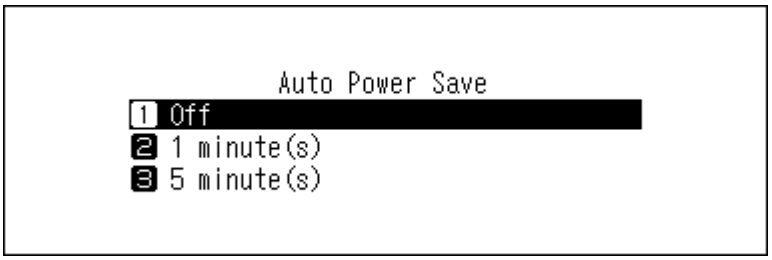
3 Press ∨ and select "Settings", then press the ↳ button.



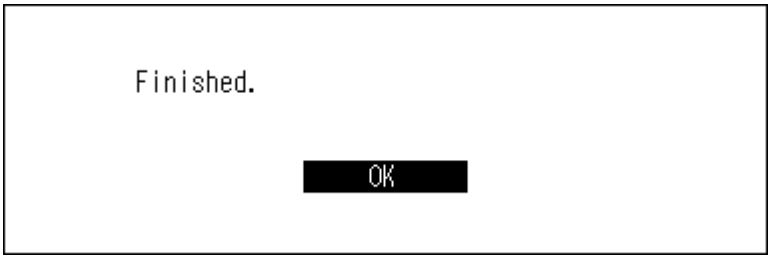
4 Press ∨ and select "Auto Power Save", then press the ↵ button.



5 Press ∨ and select the desired time setting, then press the ↵ button.
If you want to disable auto power save, select "Off".



6 When "Finished." is displayed, press the ↵ button.



Auto power save is now configured.

If the HA-N1 is powered off by auto power save, the power button will not automatically revert to the "off" position. To turn the HA-N1 on, press the power button to return it to the "off" position, and then press it again to power on the device.

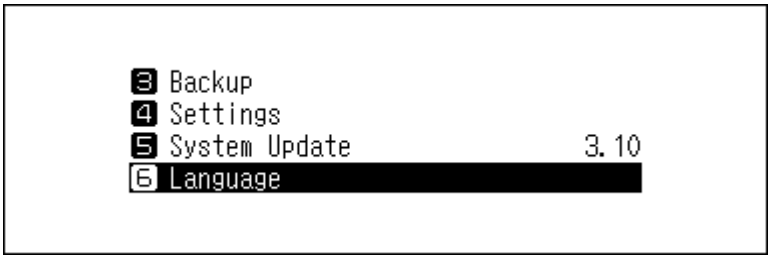
Changing Display Language

To change the display language, follow the procedure below.

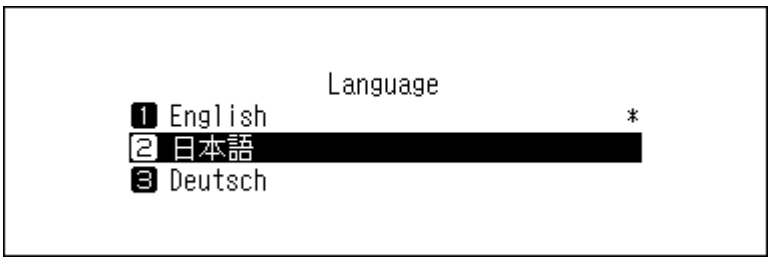
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↵ button on the front to show the menu.

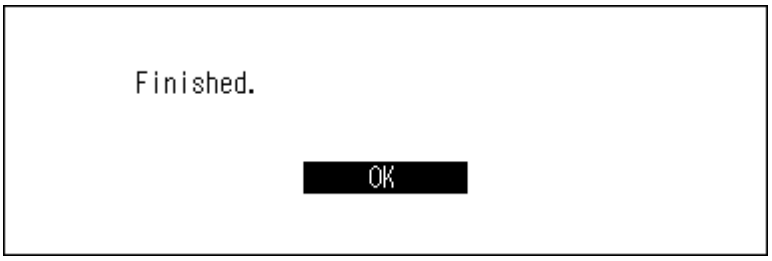
3 Press ∨ and select "Language", then press the ↵ button.



4 Select the language, then press the ↵ button.



5 When "Finished." is displayed, press the ↵ button.



The display language is now changed.

Updating the Firmware

To update the HA-N1's firmware version to the latest one, follow the procedure below.

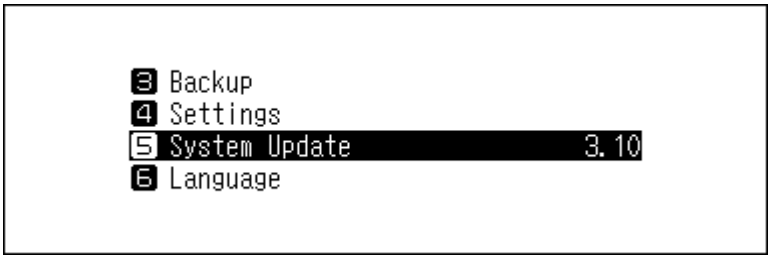
Updating via the Network

Note: To update the firmware via the network, the HA-N1 should be connected to the Internet. If the HA-N1 is in direct mode, use another Ethernet cable and connect it to the LAN port and the router.

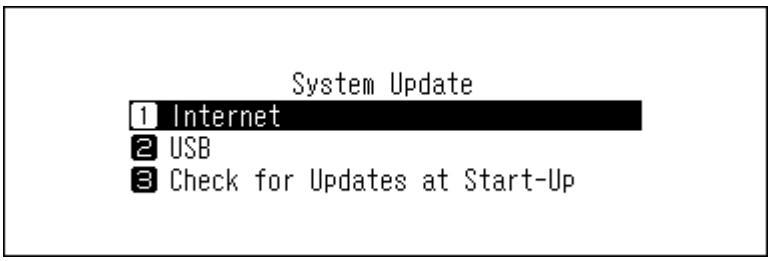
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↵ button on the front to show the menu.

3 Press ∨ and select "System Update", then press the ↳ button.



4 Press ∨ and select "Internet", then press the ↳ button.



5 Follow the instructions on the display.

The system version is now updated.

Updating from USB Device

1 Download the latest firmware from melco-audio.com.

2 Extract the downloaded file and copy "audionas_ha_n1_updater.bin" file from the extracted folder to USB device (root directory).

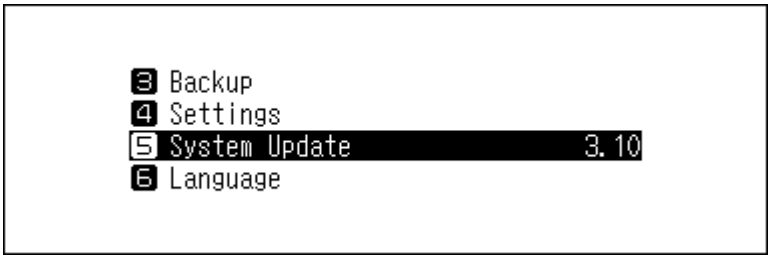
3 Connect the USB device to the USB 3.0 port at the rear.

4 Turn on the HA-N1.

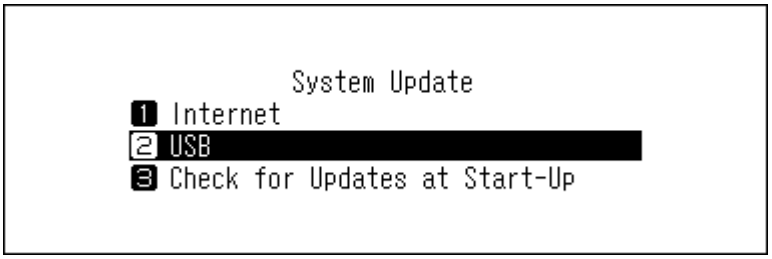
5 If the importing from USB port screen is displayed, press the ⮌ button at the front.

6 When the home screen is displayed, press the ↳ button on the front to show the menu.

7 Press ∨ and select "System Software", then press the ↳ button.



8 Press ∨ and select "USB", then press the ↳ button.



9 Follow the instructions on the display.

The system version is now updated.

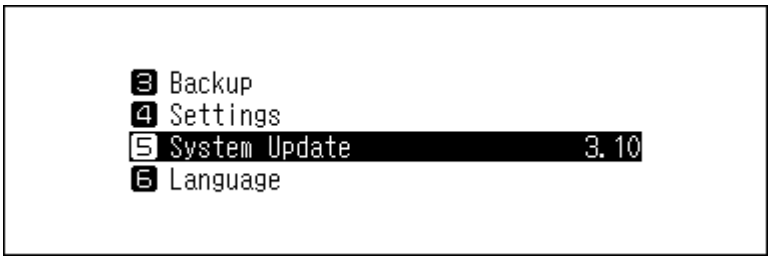
Checking the Update Automatically

The HA-N1 can check if the newer firmware is released when turning on the HA-N1. If the new firmware is detected, you can continue to update the firmware. To enable checking the firmware release automatically, follow the procedure below.

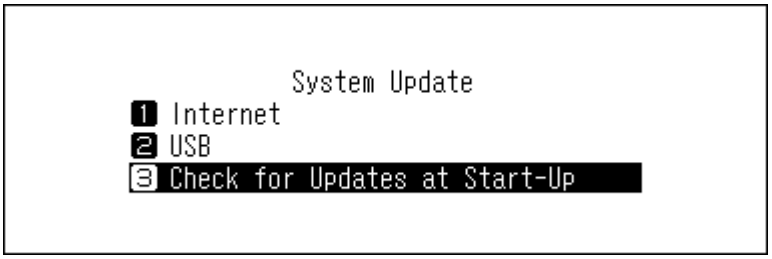
1 Turn on the HA-N1.

2 When the home screen is displayed, press the ↳ button on the front to show the menu.

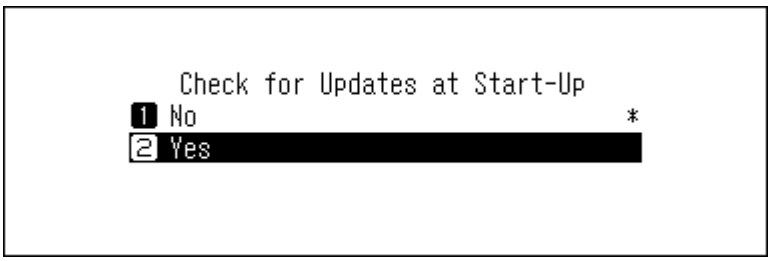
3 Press ∨ and select "System Update", then press the ↳ button.



4 Press ∨ and select "Check for Updates at Start-Up", then press the ↵ button.



5 Press ∨ and select "Yes", then press the ↵ button.



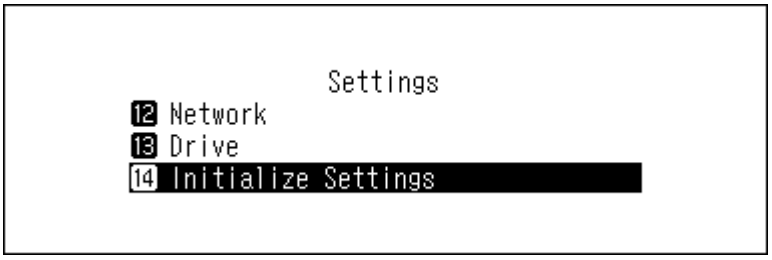
Enabling the firmware check is finished. The firmware release will be checked for on the next startup.

Restoring Factory Defaults

To initialize the HA-N1 to its factory default settings, follow the procedure below.

1 Turn on the HA-N1 while pressing the ∨ button. After the "MELCO" logo disappears, let go of the ∨ button. The setting initialization screen will be displayed.

Note: If you go to *Settings - Initialize Settings* on the display panel, the same screen will be displayed.



2 Press ∨ and select "OK", then press the ↵ button.

The device will be initialized. The operation above only initializes the settings. Data will not be affected.

Chapter 4 Appendix

Menu List

From the front display panel, the following options are available.

Status

Internal Drives	Displays the total capacity, used capacity, and usage percentage of the internal drives.
External Drives	Displays the total capacity, used capacity, and usage percentage of the connected external drive.
Songs	Displays the number of imported music files.
Music Database	Displays the current status of the imported music file database after it is scanned.
Time & Date	Displays current time and date.
Network	LAN: Displays the network settings of the LAN port labelled "LAN", such as IP address, MAC address, link speed, and the Internet connection status. Player: Displays the network settings of the LAN port labelled "PLAYER", such as IP address, MAC address, and link speed.
System Software	Displays the version of the firmware installed on the HA-N1.
Media Server	Displays the media server's version.

Display

Dark Mode	Turns off the display panel. If you press any button on the HA-N1 while the display panel is off, the display panel turns on.
Brightness	Changes the brightness of the display panel.

Backup

Start Backup	Backs up the music files in the HA-N1 to the USB device that is connected to the port labelled "BACKUP".
Restore from Backup	Restore Settings: Restores the settings from the USB device. Restore Data: Restores the backup music files in the USB device to the HA-N1.
Backup History	Displays the backup history of any previous backups.
Format	Formats the USB device that is connected to the "BACKUP" port.

Settings

SMB File Sharing

Sets to "On" when copying music from the computer.

Update Music Database

Updates the music database of the imported music files. If the music files are not listed properly on the Network Audio Player, update the music database.

Power LED Brightness

Changes the brightness of the power LED at the front.

Rear Side LED

Configure whether to turn off the rear "LAN" and "PLAYER" port LEDs.

Time & Date

Configure the time settings of the HA-N1.

Auto	Configures the time settings automatically from the Internet.
Manual	Configures the time settings manually.

Time Zone

Configure the time zone for date and time settings.

Auto Power Save

Configure whether to shut down the HA-N1 automatically if the music stops playing and a specific amount of time passes. You can select from "Off", "1 minute(s)", "5 minute(s)", and "15 minute(s)".

Notes:

- The HA-N1 will not be powered down while playing music.
- If the HA-N1 is accessed from a Network Audio Player or computer, it will not be powered down even after the specified time passes.

Import Directory

Configure whether to create a folder that contains the import date in the folder name when importing.

Date	Creates a folder within the "import" folder to store the imported files from the connected USB device. The folder name will contain the import date. Imported files may contain duplicates in the HA-N1 if the same files are on the USB device.
All	Imports all updated files to the "all" folder within the "import" folder on the HA-N1. If a file has no updated information, that file will not be imported.

USB-DAC

Configure settings to convert DSD files using a USB-DAC.

Controller	Configures the mode to stream music using controller apps.
DSF/DSDIFF Playback	Configures the output file format if playing DSD files on the HA-N1 using a USB-DAC. If the connected USB-DAC supports DSD over PCM, select "DSD (DSD over PCM)". If connecting another USB-DAC, select "Convert to PCM".

PrecisionStart Latency	Configures a gap time that precedes a playlist track. This also solves an issue that occurs with specific USB-DAC devices.

CD Drive

Configure settings to import music files from a music CD using an optical drive.

Import File Format	Selects import file formats from either "FLAC" or "WAV". If you select "FLAC", configure the compression level used when importing music files as well.
Read Retry Count	Configures the retry count if an read error occurs when reading from a CD.
Advanced Drive Optimization	Configures the read sample offset correction values between "-2000" to "+2000". This value will vary depending on what type of CD drive you use. It is configured to "±0" by default. This doesn't need to be changed normally.
CD Transport	Enables or disables playing music tracks from a CD in the optical drive that is connected to the HA-N1 using USB-DAC.

Downloader

Enable or disable auto download, and add or remove a streaming site account for downloading audio files.

Auto Download	Enables or disables auto download.
Account Settings	Adds, edits, or deletes a streaming site account for auto download. Currently the HA-N1 supports accounts from HIGHRESAUDIO, OTOTOY, and e-onkyo music. After adding the account, audio files purchased at the streaming site will be downloaded to the HA-N1 automatically.

Network

Player	Selects "Network Mode" if the HA-N1's "LAN" port is connected to the router. If directly connecting the HA-N1 and the Network Audio Player, select "Direct Mode".
LAN	Configures whether to automatically acquire the IP address from a DHCP server or enter manually. If "Fixed IP" is selected, enter the IP address, subnet mask, default gateway, and DNS server.
Friendly Name	Changes the friendly name (hostname) of the HA-N1.

Drive

Format Internal Drives	Formats the internal drives of the HA-N1. When formatting, you can change the current RAID mode to a spanned, RAID 0, or RAID 1 array. If you select "Erase All Data", all data on the drives will be completely erased. Data removed this way will be nearly impossible to recover with the current tools.
Format Backup Drive	Formats the USB device connected to the "BACKUP" port. If you select "Erase All Data", all data on the drives will be completely erased. Data removed this way will be nearly impossible to recover with the current tools.

Format Expansion Drive	Formats the USB device connected to the "EXPANSION" port. If you select "Erase All Data", all data on the drives will be completely erased. Data removed this way will be nearly impossible to recover with the current tools.

Initialize Settings

Restores the HA-N1 settings to the factory default.

System Update

Internet	Updates the HA-N1's firmware to the latest version via the Internet. Refer to the "Updating via the Network" section in chapter 3 for instructions to update the firmware.
USB	Updates the HA-N1's firmware to the latest version using a USB device that contains the firmware file. Refer to the "Updating from USB Device" section in chapter 3 for instructions to update the firmware.
Check for Updates at Start-Up	Enables or disables checking for a new firmware release when turning on the HA-N1.

Language

English	Changes the display language to English.
日本語	Changes the display language to Japanese.
Deutsch	Changes the display language to German.
Français	Changes the display language to French.
Italiano	Changes the display language to Italian.
Español	Changes the display language to Spanish.

Error Codes

If the following error codes are displayed on the HA-N1's display panel, try the corrective actions.

Error	Corrective Action
010–012 No backup found.	Make sure the USB device that contains backup data is connected to the "BACKUP" port.
020 Friendly name is too short.	The friendly name has not been configured. Enter the friendly name.
021 Friendly name is too long.	The entered friendly name (hostname) must be shorter than 20 characters.
030 Not enough space on drive.	Delete extra files in the copy target device.
031 Some files not copied.	Files in the copy source device may be corrupted.
033 I/O error.	The connected USB device may be malfunctioning. If connecting a USB drive, connect it to a computer and run a disk check.
034 Could not erase data.	The drive to be formatted may be malfunctioning.
040, 041 Updater not found.	Make sure the HA-N1 is connected to the Internet or the updater is saved on the connected USB device.

Error	Corrective Action
042–044 Update error.	The updater file may be corrupted. Try the update again, or download a new updater file from melco-audio.com.
091 No external drive available.	Make sure the USB device is connected to the HA-N1.
094 No response from NTP server.	Put the HA-N1 on a network that can access the Internet.
101 Could not mount drive.	The USB device may be malfunctioning or the disk format is not supported.
102 Could not dismount drive.	The USB device is possibly being accessed at this time.
103 Could not format drive.	The formatted device may be malfunctioning.
104 Could not form partition.	Device may be malfunctioning or is not supported.
110 Internal drive not found.	Try restarting the HA-N1. If the message is still displayed, contact Buffalo technical support for assistance.
111 Usable internal drive not found.	
112 Internal drive not found.	
113 Internal drive 1 not found.	
114 Internal drive 2 not found.	
120 USB drive not found.	The connected USB device may be malfunctioning. Try another USB device.
121 USB drive not mounted.	
130 No expansion drive available.	Make sure the USB device that contains backup data is connected to the "EXPANSION" port.
140 No backup drive found.	Make sure the USB device that contains backup data is connected to the "BACKUP" port.
141 Backup drive not mounted.	
150 Could not create RAID.	If this message appears, contact Buffalo technical support for assistance.
151 Could not rebuild RAID.	
153 Could not rebuild system.	
154 Could not rebuild data.	
200 No accounts found.	Add an account.
203 Could not connect to the site.	Put the HA-N1 on a network that can access the Internet.
204 Authentication error.	Make sure that the username and password are correct.

Error	Corrective Action
300 This CD's music data is currently unavailable.	The music database server may be under maintenance. Please wait for a while and try again later.

Default Settings

The HA-N1 is configured with the following default settings.

Display	Brightest
SMB File Sharing	On
Power LED Brightness	Bright
Rear Side LED	On
Auto Power Save	15 minutes **Note:** Depending on the shipping date, this setting may be configured to "Off".
Import Directory	All
Controller	HybridMode
DSF/DSDIFF Playback	DSD (DSD over PCM)
PrecisionStart Latency	0.75 second(s)
Import File Format	FLAC/No Compression
Read Retry Count	1
Advanced Drive Optimization	±0
Auto Download	Off
Player	Network Mode
LAN	DHCP
Friendly Name (Hostname)	N1-XXXX (X stands for the last four digits of MAC address)
RAID Mode	HA-N1ZH: RAID 0 Other HA-N1 series: Spanned

Specifications

Check melco-audio.com for information about the latest products and their specifications.

LAN Port	Interface	IEEE 802.3ab (1000BASE-T) IEEE 802.3u (100BASE-TX) IEEE 802.3 (10BASE-T)
	Transfer Speed	1000 Mbps full duplex (auto-negotiation) 100 Mbps full duplex/half duplex (auto-negotiation) 10 Mbps full duplex/half duplex (auto-negotiation)
	Number of Ports	2 ports (supports auto-MDIX)
	Connector Type	RJ-45 8-pin
	Protocol	TCP/IP
	Access Method	CSMA/CD

USB Port	HA-N1Z series: 3 USB 3.0 ports (type A), 1 USB port for 5 V power supply devices HA-N1A series: 1 USB 2.0 port (type A, front), 3 USB 3.0 ports (type A, rear)
Internal Hard Drive	HA-N1ZS: Audio-grade solid-state drives (SSD) HA-N1ZSP (40th anniversary model): Solid-state drives (SSD) HA-N1ZH: Hard disk drives (HDD) HA-N1AH: Hard disk drives (HDD) **Note:** If a hard drive malfunctions, contact Buffalo technical support for assistance.
Dimensions (W x H x D)	HA-N1Z series: 350 x 65 x 370 mm; 13.8 x 2.6 x 14.6 in (HA-N1ZSP: 350 x 75 x 370 mm; 13.8 x 2.6 x 14.6 in) HA-N1A series: 436 x 70 × 352 mm; 17.2 x 2.8 x 13.9 in
Weight	Approx. 7.0 kg; 15.4 lb (HA-N1ZSP: Approx. 8.5 kg; 18.7 lb)
Power Supply	AC 100–240 V 50/60 Hz
Power Consumption (Max.)	60 W
Operating Environment	Temperature: 5–35°C; 41–95°F Humidity: 20–80% (no condensation)

Chapter 5 Regulatory Compliance Information

For Customers in the United States

FCC Statement

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

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

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

Only use the cables and accessories that are included in the package. Don't use other accessories or cables unless specifically instructed to in the documentation.

MET

The socket-outlet shall be installed near the equipment and shall be easily accessible.

Label Information

⎓	Direct current
~	Alternating current

Proposition 65

WARNING:

This product and its components contain chemicals known to the State of California to cause cancer and birth defects, or reproductive harm. Wash hands after handling.

For Customers in Europe

CE

Deutsch
Verwenden Sie ausschließlich die Kabel und Zubehörteile, die im Lieferumfang enthalten sind. Andere Zubehörteile oder Kabel dürfen nur dann verwendet werden, wenn dies in der Dokumentation ausdrücklich vorgeschrieben ist.
Verwenden Sie keine USB-Kabel, die 3 Meter lang oder länger sind, um USB-Geräte.

English
Only use the cables and accessories that are included in the package. Don't use other accessories or cables unless specifically instructed to in the documentation.
Do not use USB cables that are 3 meters or longer to connect USB devices.

Français
Utilisez uniquement les câbles et accessoires inclus dans ce package. N'utilisez aucun autre accessoire ou câble sauf instruction spécifique de la documentation.
Utilisez des câbles d'une longueur de moins 3 mètres pour connecter les périphériques USB à.

CB

Norsk
Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare.
For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.

Svenska
Utrustning som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrusningen och kabel-TV nätet.

Label Information

⎓	Direct current
~	Alternating current

The socket-outlet shall be installed near the equipment and shall be easily accessible.