



N5 MK2S Master Quality Digital Audio Player User Manual



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** This function might not be available due to regulation or limitation of different region/countries.

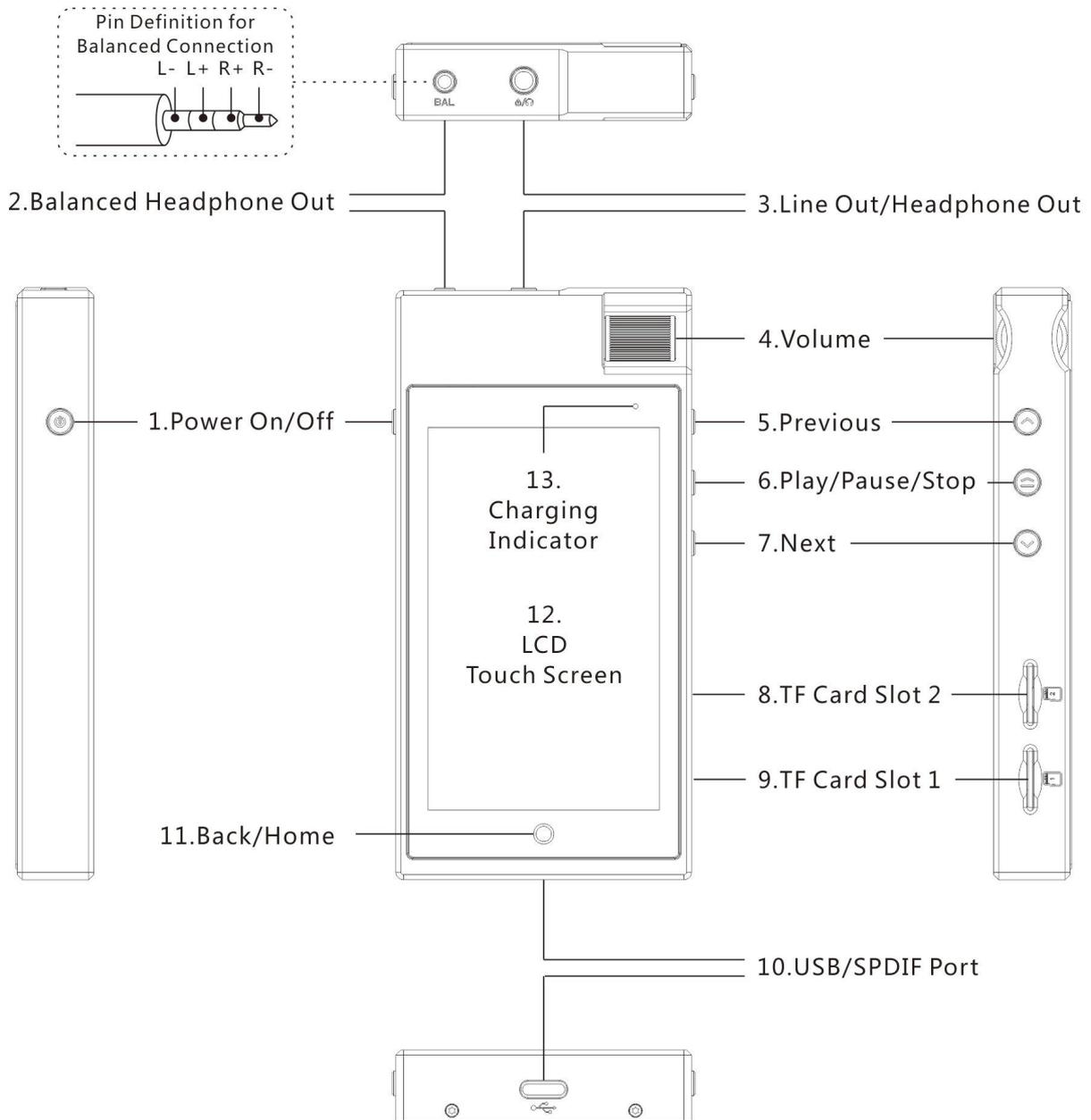
1. Introduction to N5 MK2S

1.1 Packaging and Accessories

The Cayin N5 MK2S Digital Audio Player comes with the following accessories in the package. Please check carefully and make sure everything is in place. Please contact our distributors if any accessory is missing.

- Cayin N5 MK2S Master Quality Digital Audio Player x 1
- Type-C USB Cable x 1
- Quick User Guide (attached with Warranty Card and QA Certificate) x 1
- Tempered Glass Protective Screen x 1 (pre-applied on LCD screen)
- Protective screen for back panel x 1 (pre-applied on back panel)
- Hi-Res Audio label x 2
- N5 MK2S Protective Case x1

1.2 Control and Operation



- 1) Power On/Off : Turn on or off the device when pressed for 2 second, can also be used to light up or turn off screen (Lockup) when clicked.
- 2) Balanced Headphone Output: Designed to work with 2.5mm TRRS balanced headphone with impedance ranged from 8 ohm to 300 ohm
- 3) Line Out/ Headphone Out:
Headphone Out - designed to work with regular 3.5mm non-balanced headphone with impedance ranged from 8 ohm to 300 ohm
Line out - output analogue signal with regular 3.5mm analogue audio cable to external amplifier for power amplification. Output level is fixed and cannot be altered by volume control of the player.
- 4) Volume: rotate clockwise to increase or counter-clockwise to decrease volume output.
- 5) Previous: select and playback previous track at playback menu, or hold to rewind from current playback, and release the button to resume playback at designated location.
- 6) Play/Pause/Stop: click to confirm selection and start to play selected file at playlist, or click to play or pause at playback screen.
- 7) Next: select and playback next track at playback menu, or hold to fast forward from current playback, and release the button to resume playback at designated location.
- 8) TF Card Slot 1: accommodate one TF card up to 400GB
- 9) TF Card Slot 2: accommodate one TF card up to 400GB
- 10) USB/SPDIF Port: With the provided USB Type-C cable, you can transfer data, use the DAP as an USB DAC by connecting the device to a computer, or charge up the device when connect to an external charger (not provided). The player can also output S/PDIF signal to outboard decoder devices through this port, but that will require a special Type-C to coaxial cable (purchased separately)
- 11) Back/Home: Click once to go back one step, hold to go back main screen directly.
- 12) LCD Touch Screen
- 13) Charging Indicator : will flash while charging, and remain always-on when charging is completed.

(When the DAP is turned on the first time, the system will go through a initialization process, this will take around 3 minutes, please wait patiently and do not operate the player until the process is completed.)

1.3 Connect to other devices

- 1) Unbalanced Headphone: Insert the 3.5mm connector of your unbalanced earphone or headphone to the shared line out/headphone output port at the top of the player.
- 2) Balanced Headphone: Insert the 2.5mm connector of your balanced earphone or headphone to the balanced headphone output port at the top of the player.
- 3) Line Out: connect your audio equipment to the shared line out/headphone output port at the top of the player with an appropriate analogue audio cable.
- 4) Computer: connecting N5 MK2S to a computer via an USB Type C cable to copy, paste, and delete data file from internal storage or TF card. Please make sure the process is completed before you disconnect the player from the computer
- 5) Memory Card: Insert a TF card into the TF card slot 1 or 2 (upto 400GB), N5 MK2S will detect the card automatically.
- 6) OTG: Connect an external USB storage with Type C interface or cable to the USB port, N5 MK2S

can copy or play the file in the storage directly.

- 7) USB Audio: N5 MK2S can output USB Audio signal and connect to an USB DAC device for outboard digital audio conversion, or it can accept an USB Audio source (such as a computer) and function as an USB DAC.
- 8) S/PDIF: Connect to external audio device with coaxial input via a Type C to Coaxial S/PDIF cable.

1.4 Power Management

- 1) The device will start to charge up the battery when you connect the device to a USB charger or the USB port of a computer via USB cable (as supplied). The battery installed in the device is rated at 3000mAh (3.8V), it will take around 3.5 hours to completely charge up by a 2.0A charger
- 2) We recommend our customer to use high quality charger with N5 MK2S because inferior charger might introduced high risk in the long run. Please charge up the battery at room temperature. Charging at very high or low temperature might cause battery failure during the charging process. When N5 MK2S is connected to a USB charger, it can play music while charging is in progress. If N5 MK2S is connected to an USB port of a computer and charging, the player will stop playing music.
- 3) Charging Recommendation: Appropriate battery care can extend the lifetime of the battery and the player. Lithium Polymer battery does not have memory effect, it can be charged regardless of its current capacity, given that it has no negative effect in its performance. Fully discharging and charging the battery repeatedly is not recommended. If the battery have been used without a complete full discharge after a very long period, it might result in inaccurate gauge and lead to incorrect battery capacity estimation, a full discharge followed by a full charge immediately will calibrate the gauge.

2. Add Music Files to Player

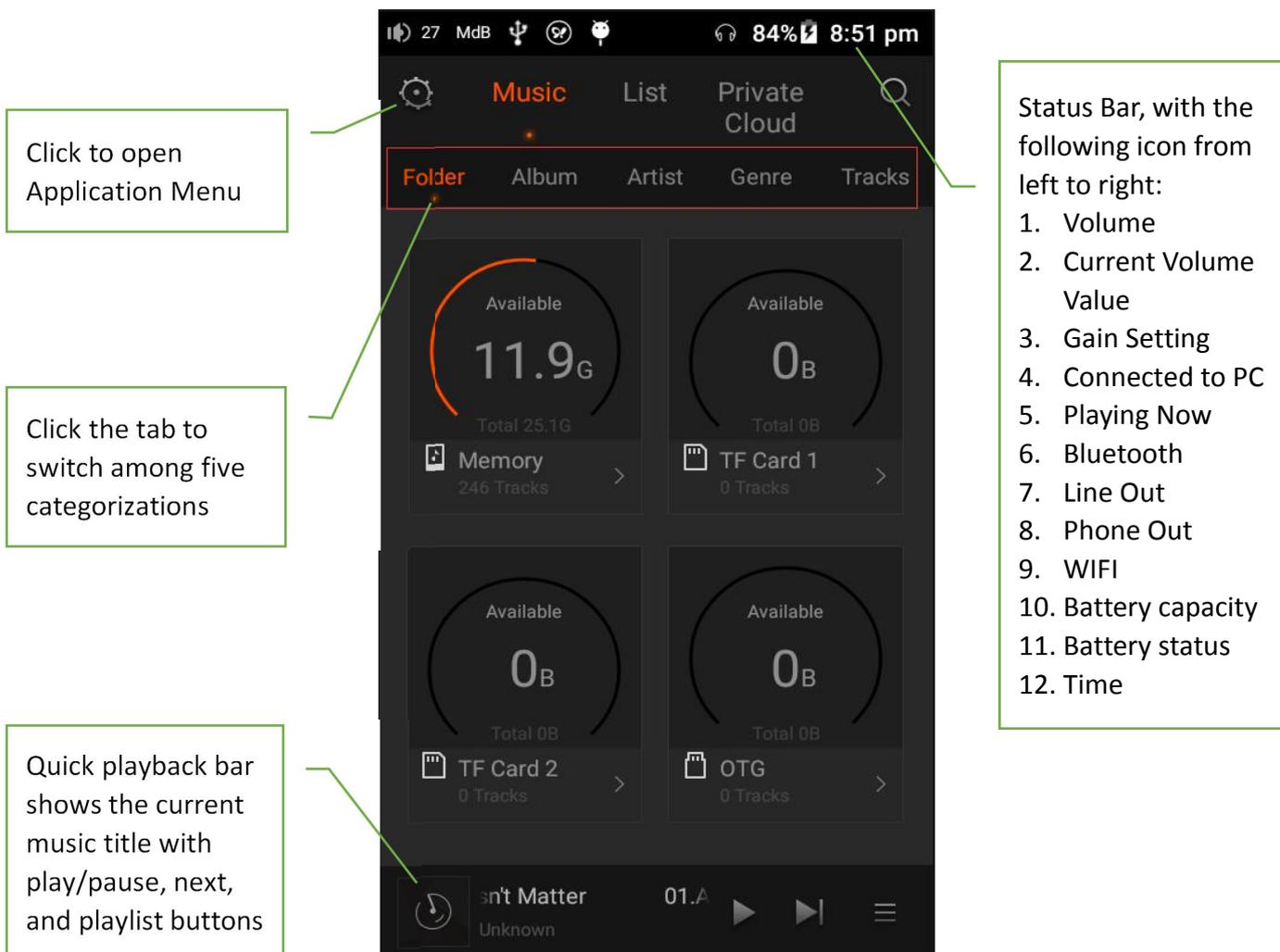
You can add music file to the Digital Audio Player by one of the following methods.

1. Internal Storage: Set the USB mode of the player to MTP, connect the N5 MK2S player to a compute with an appropriate USB cable, and copy music files to a subfolder (normally by the name of Music) at the internal storage (32GB).
2. Expandable Storage: Copy the music files to a TF card and insert the TF card into either Slot 1 or Slot 2 of the side panel of the N5 MK2S player.
3. OTG Storage: Insert an external storage device to the Type-C Connector at the bottom of N5 MK2S with appropriate cable, copy music file to Internal Storage or Expandable Storage, or playback the music files on the OTG storage directly.
4. Streaming: Turn on Wifi and connect N5 MK2S to Internet, install appropriate third party applications (such as Tidal or Spotify), playback or download music from subscribed streaming service.
5. Networking: Turn on WiFi and connect N5 MK2S to a LAN, playback or download music from NAS or shared folder of connected computer facilities.

3. Listen to Music

3.1 Select Music Files

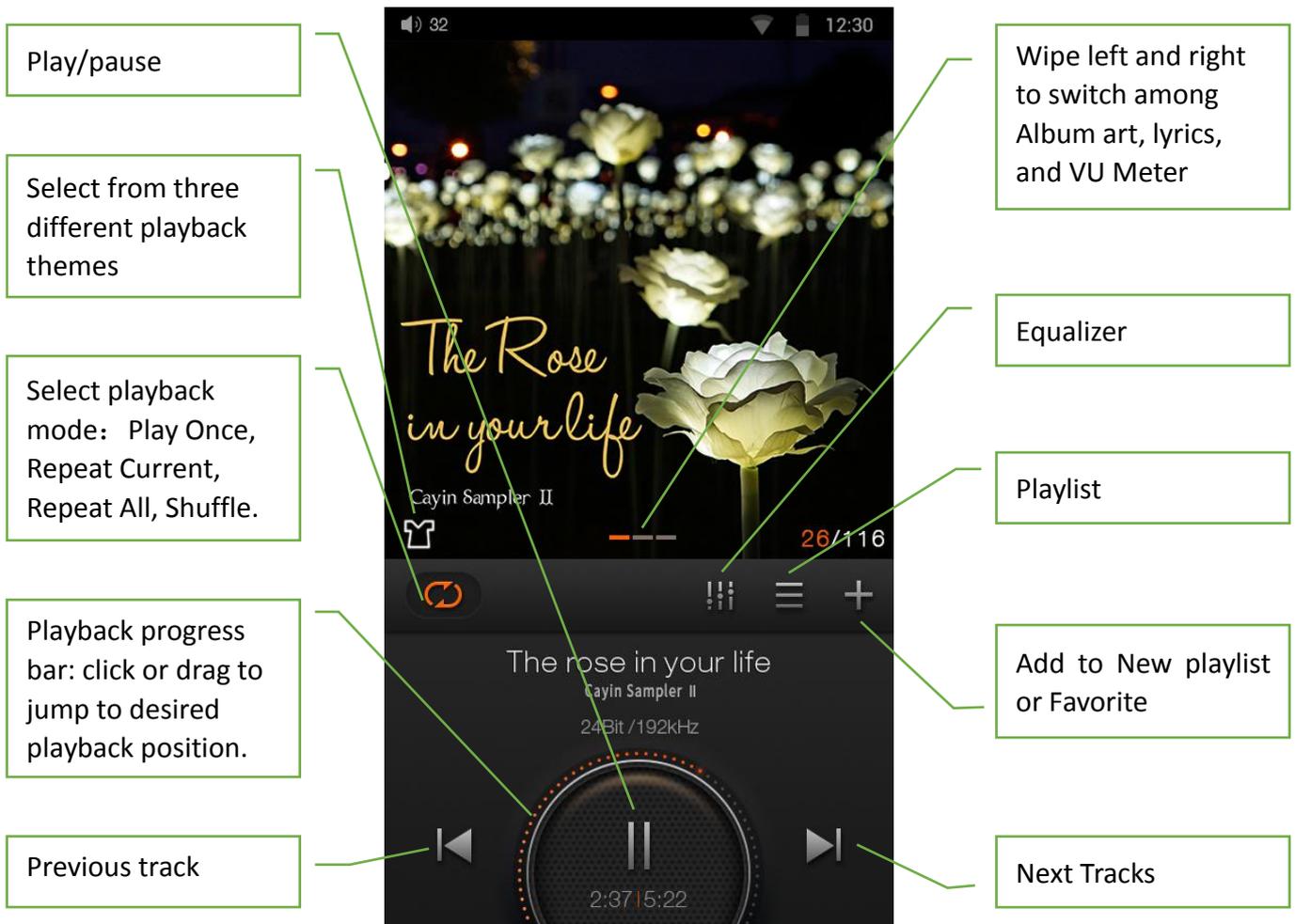
N5 MK2S organizes music files according to folder, album, artist, genre, and tracks, you can browse through your music resource according to your favorite pattern.



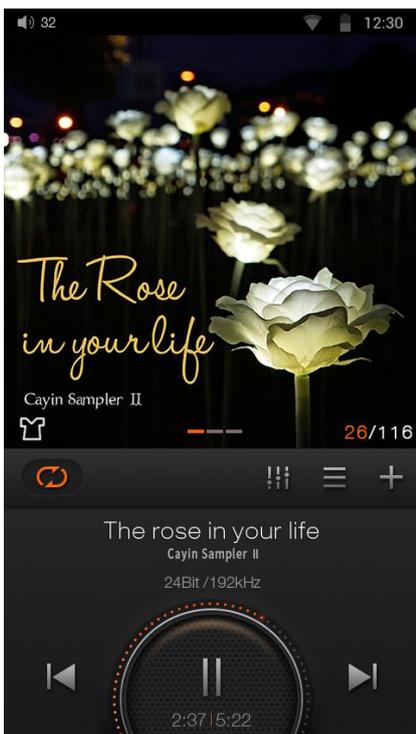
- 1) Folder: This is the default home screen showing the total and available capacity of all the local storage options. Click to select the storage you want to playback from and N5 MK2S will display the folders and files on the storage in a hierarchal listing.
- 2) Album: A thumbnail display of all albums according to the Album Art recognized by N5 MK2S, with number of files collected under this album.
- 3) Artist: All music is sorted by artist with number of music file available, when click into an artist, the player will present the music files according to albums in thumbnail display;
- 4) Genre: All music is sorted in accordance with the different genres, and shows number of music file available under each genre, when click into a genre, the music files will show in alphabetic order of Track Title;
- 5) Tracks: All music file is sorted in alphabetic order of Track Title.

Note: With the exception of Folder category, all other four categories will required a Music Scan from Application Menu before the information can be displayed correctly.

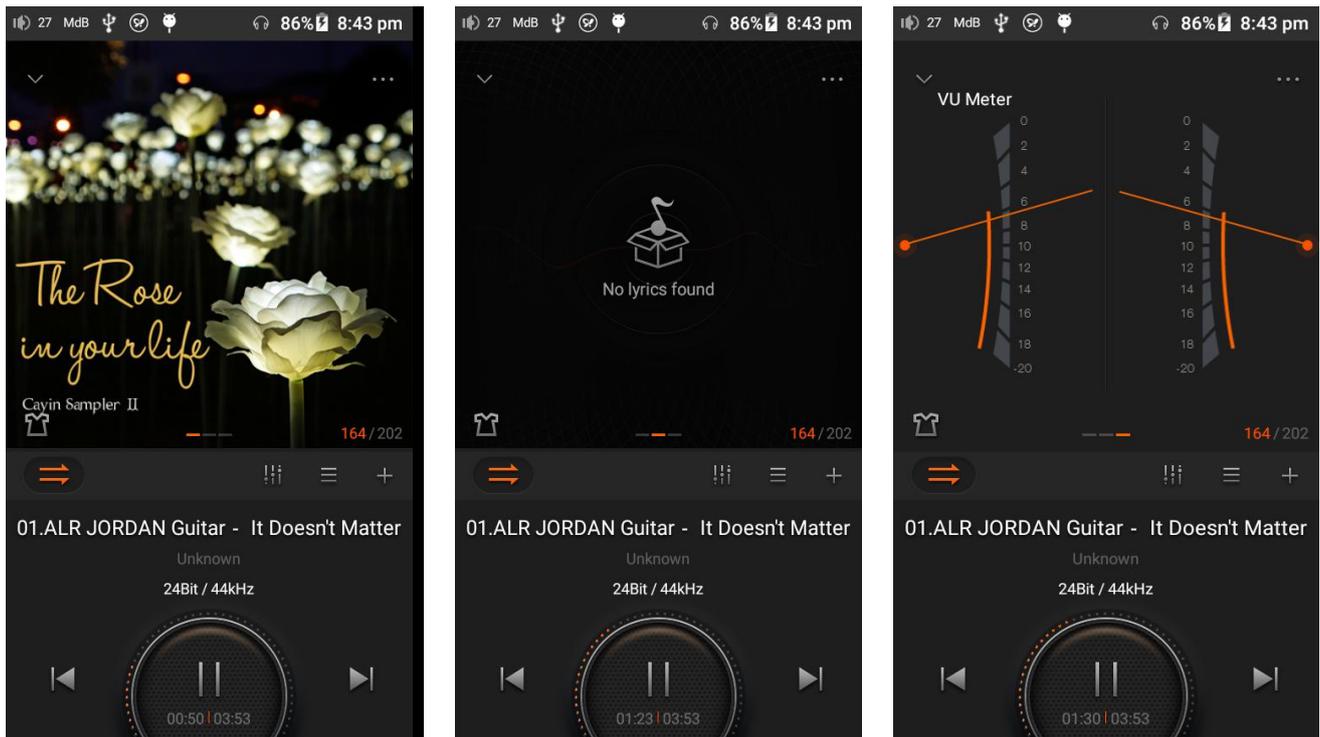
3.2 Playback



1) Choice of three Playback Themes:

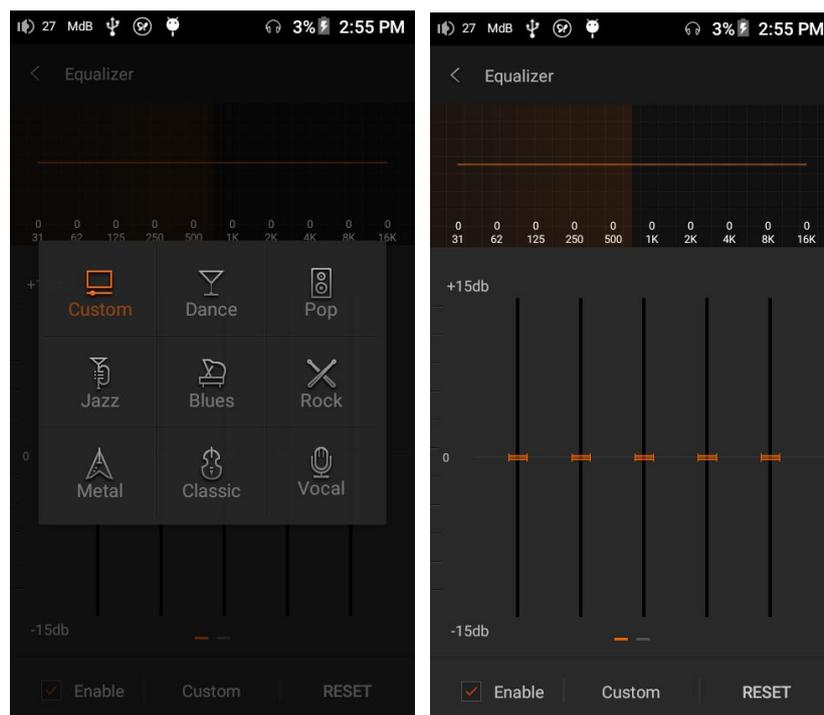


2) Choice of three playback effect: Album Art, Lyrics, VU Meter

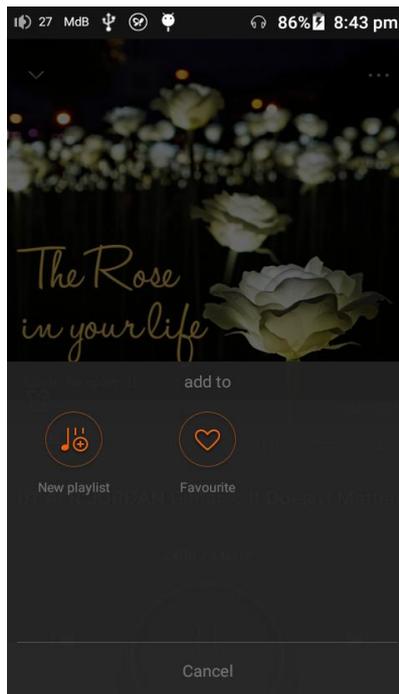


3) Equalizer

N5 MK2S comes with eight pre-set EQ: Dance, Pop, Jazz, Blues, Rock, Metal, Classic, and Vocals, you can click the appropriate icon to enable any one of these preset EQ. You can also click "Custom" to customize the 10-bands equalizer settings by yourself. The EQ screen will only show 5 bands at a time, you can wipe left or right to display another 5 bands.



- 4) Add to
Add tracks to new playlist or favorite

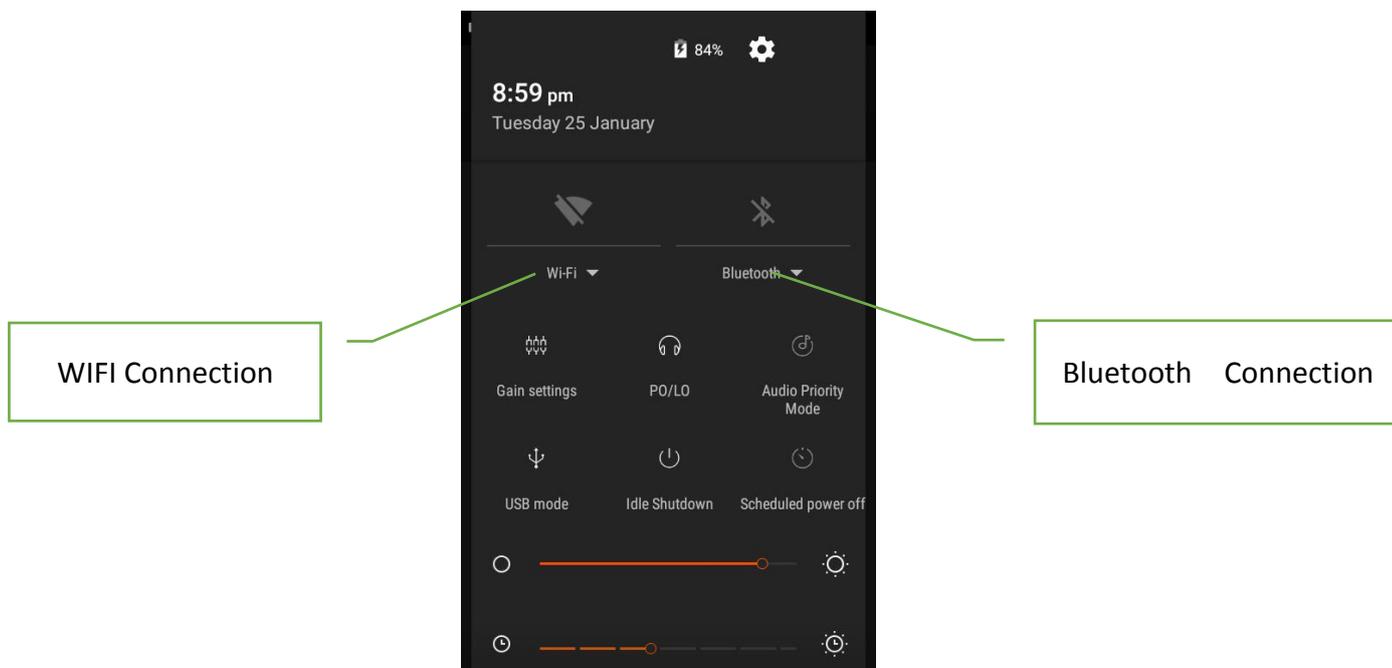


4. Networking Tools

4.1 WiFi & BT

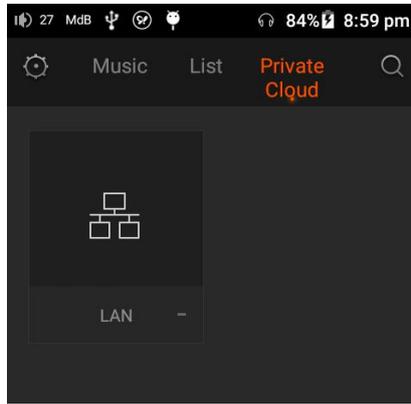
You can connect N5 MK2S to Bluetooth device and enjoy your music in wireless. Bluetooth device must be paired with N5 MK2S in advance, please refer to the electronic version User Manual for more details. You can also select the WiFi icon on the status bar to connect N5 MK2S to WiFi for streaming or networked music resources.

Note: the WiFi of N5 MK2S doesn't support channel 14 (2.484GHz) of 2.4GHz band.



4.2 Private Cloud

Click the LAN button, the player can search, browse and playback the music files stored on the NAS or shared folder of connected computer facilities.

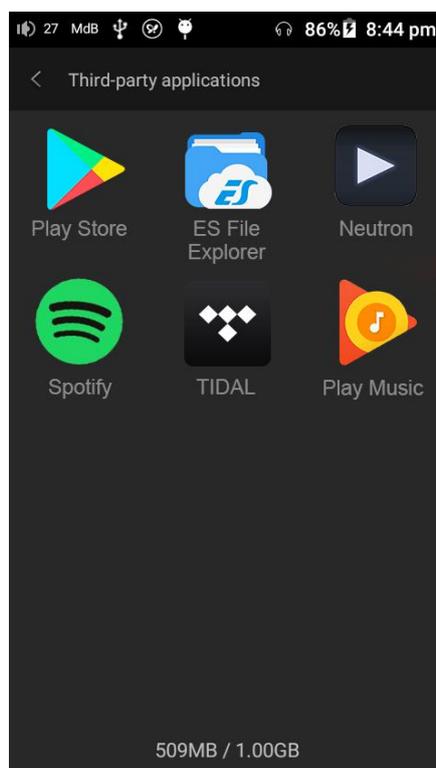


5. Third-Party Applications

N5 MK2S support third party applications, user can download and install applications as they need. Please be reminded that this DAP is a fully-customized Android device, it is fundamentally different from generic Android mobile device as a lot of features such as Camera and Contact List are not available, hence might cause malfunction in a lot of applications. Some applications might introduce background tasks that will affect the performance of the DAP. For these reasons we recommend user paid special attention to the instruction and purpose of the third party applications before installation.

5.1 Installation package

- 1) Download the installation package of the third party application, normally suffix with xxx.apk, and copy the file to the internal storage or TF card of the player.
- 2) Sweep from the left side of Main screen to bring out the Application Menu, select Third Party Applications
- 3) Select ES File Explorer, specify the location of the installation package.
- 4) Select the installation package, complete the installation process as instructed. The application icon will display in Third Party Applications at end of installation.



5.2 Google play

- 1) Make sure the player has connected to Internet through WiFi. Sweep from the left side of Main screen to bring out the Application Menu, select Third Party Applications
- 2) Select Google Play, you can search and install application at the main screen, , the application icon will display in Third Party Applications at end of installation.
- 3) If you have not used Google Play in this device before, you will be required to enter your Google account and password. If you do not have a Google account, please create one with other mobile/computer device.
- 4) Google Play will guide you through the setup process for first time user. We recommend you to uncheck “Keep this phone backed up with my Google Account” and “Keep me up to date with news and offers from Google Play” when asked, and complete the complete the Google Play setup by select “Accept”. You should arrive at Google Play at the end of setup process.

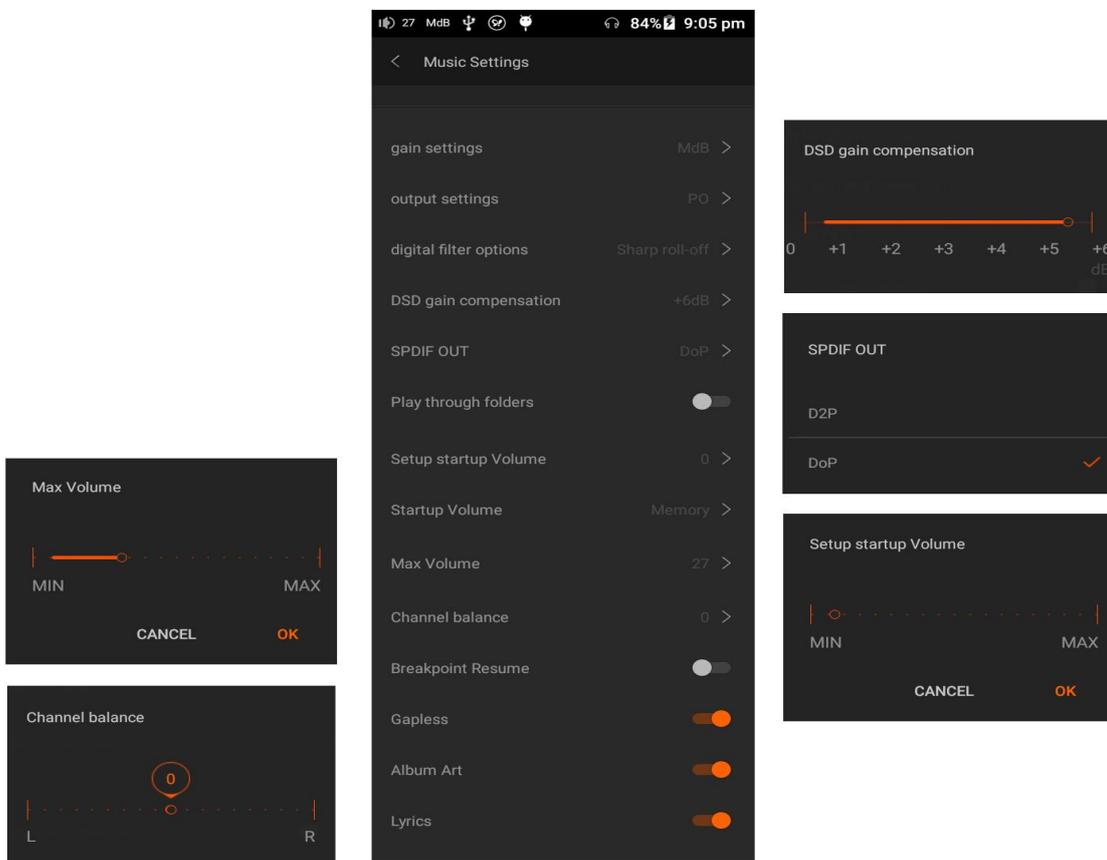
Note: This function might not be available due to regulation or limitation of different region/countries.

5.3 Uninstall application

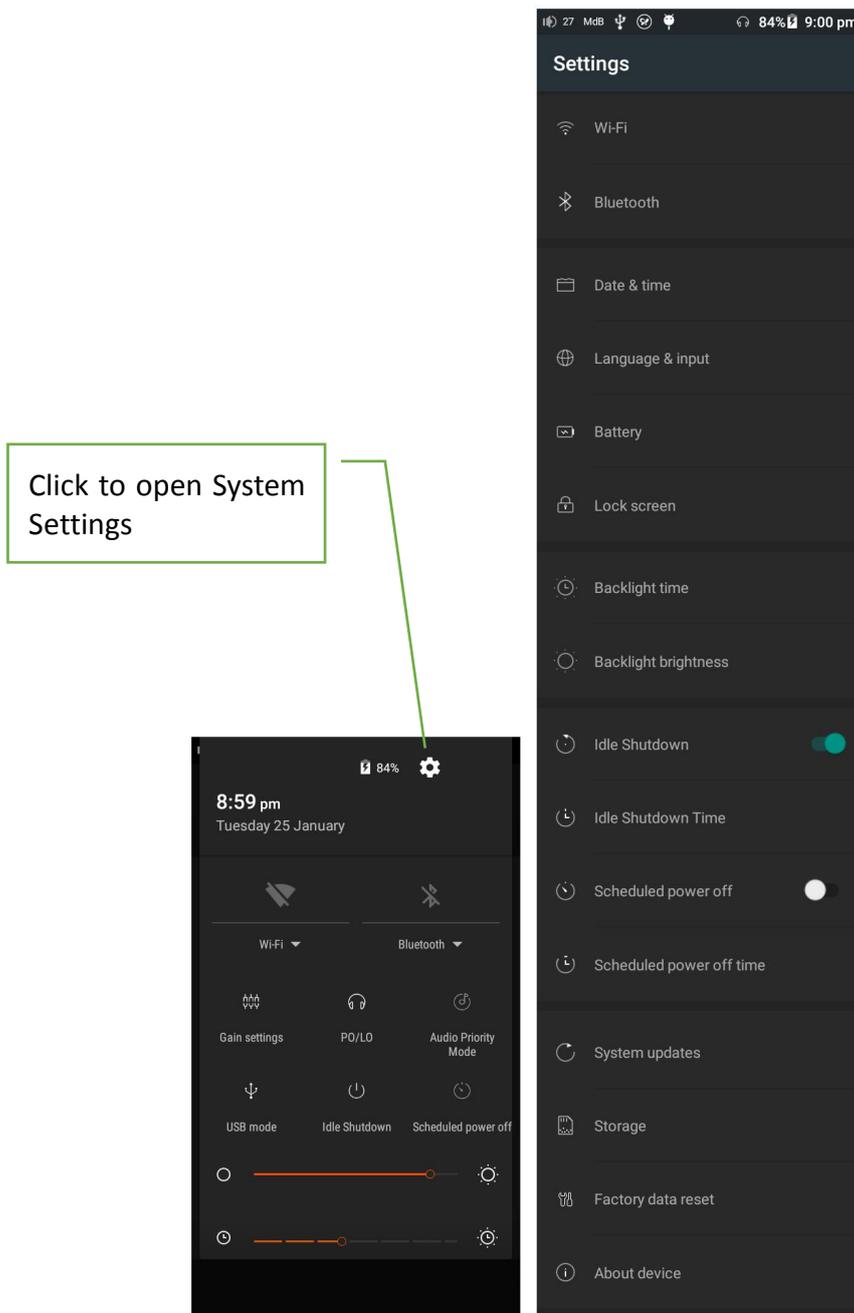
- 1) Sweep from the left side of Main screen to bring out the Application Menu, select Third Party Applications
- 2) Select and hold the application that you want to remove, system will pop up uninstall icon to start the process.

6. Music Settings and System Settings

6.1 Music Settings



6.2 System Settings



7. USB DAC

The concept behind USB DAC of N5 MK2S is to setup the player as an external sound card of a computer. Using N5 MK2S to playback the music file in your computer should provide improved audio performance, and you can control the volume at N5 MK2S. Please be reminded that N5 MK2S is designed to optimize audio performance, therefore audio data are transmitted from computer to N5 MK2S in asynchronous mode, this will cause synchronization problem with the video signal of the computer.

Installed N5 MK2S to your iOS, Linux and Window based computer should be a self-directed process, but you need to install a device driver before you can use it properly in Windows XP/vista (32 bit) or Windows 7, 8, 8.1 and 10 (32/64 bits) based system. Please download the required device driver at

8. Firmware Update

Cayin will release new firmware as needed to improve and optimize the function of N5 MK2S. Please follow the instructions of the firmware released by www.cayin.cn to complete the firmware upgrade procedure.

9. Safety Information

9.1 Product safety

- 1) Do not place heavy objects on top of the device, this may cause damage or malfunction to the device
- 2) Do not place the device near anything can disperse strong magnetic field
- 3) In case of damaging the device, please:
 - a) Do not use this device in highly moisturized environment.
 - b) Do not drop or hit the device and its accessories with hard force.
 - c) Do not use the device in dusty or smoky environment.
 - d) Do not use chemical solvents or detergents to clean the device.
 - e) Do not use the device at thunderstorm.
- 4) Do not attempt to disassemble the device, this may cause damage and void the warranty

9.2 Battery Safety

Do not place the unit in a fire or attempt to heat up the device, this may cause the battery to explode. If you notice the battery of the device displace high temperature, please stop using the device immediately, otherwise it may damage the device (Note: If you need to replace your battery, you must use the same or equivalent battery only. Improper battery replacement might lead to explosion)

10. Disclaimer

The manufacturer, distributor, importer and reseller will not responsible for any damage caused by improper usage or operation of this product, including accidental or human damage. The user manual is a documentation of the product based on the specification at the time of print. Cayin reserved the right to change product specification without prior notice. Cayin might include additional features or introduce new technologies subsequently. All specification or function might subject to change without prior notice. Under no circumstances will manufacturer, importer and reseller responsible for loss of data as a result of using this product.

11. Trouble Shooting

Symptom	Explanation	Remedial Action
Unable to turn on	The battery is too low to be powered on	Charge the battery and try to turn on again. If the battery has drained at very low level, it might take 15 minutes of charging before

		the DAP light up its screen again.
Power off suddenly when battery reading is not too low	inaccurate gauge and lead to incorrect battery capacity estimation	calibrate the gauge of the battery by performing a full discharge followed by a full charge immediately
No sound from headphones	Volume in too low	Adjust the volume to a suitable position
	The headphone is damaged or bad connections	Change the headphone, make sure all cables are firmly connected
	Output level of the music file is too low	Play other music files to verify whether this is a file-based problem
Unable to display filename	The player does not support the file format or music file has been broken.	Please crosscheck with the acceptable file format support by the player or playback other music files
Filename has no suffix	Happened occasionally when parsing from an inappropriate Cue file	Edit cue file
File playback error	Music file in TF card might have been removed or deleted, causing the playback error	Update music library
USB DAC cannot be recognized	The driver has not been installed or setup properly PC music playback software has not designated this device as playback output	Install appropriate USB Audio driver and select N5 MK2S as system output device at your music playback software on your computer
System Halt		Hold on the Power button to restart the player

12. Specifications

Specifications		
Phones Out (Single-ended)	Power rating	150mW+150mW (@32 Ω)
	Frequency Response	20Hz-20kHz (±0.2dB, Fs=192kHz) 5Hz-50kHz (±1dB, Fs=192kHz)
	THD+N	0.002% (1kHz, Fs=44.1kHz; 20Hz-20kHz,A-Weighted)
	Dynamic Range	116dB (20Hz-20kHz,A-Weighted)
	SNR	116dB (20Hz-20kHz,A-Weighted)
	Chanel Separation	76dB
	Output Impedance	≤0.4 Ω
Phones Out	Power rating	250mW+250mW (@32 Ω)
	Frequency Response	20Hz-20kHz (±0.2dB, Fs=192kHz) 5Hz-50kHz (±1dB, Fs=192kHz)
	THD+N	0.002% (1kHz, Fs=44.1kHz; 20Hz-20kHz,A-Weighted)
	Dynamic Range	117dB (20Hz-20kHz,A-Weighted)

	SNR	117dB (20Hz-20kHz,A-Weighted)
	Chanel Separation	92dB
	Output Impedance	$\leq 0.6 \Omega$
Line Out	Output Level	2.0V (@47k Ω)
	Frequency Response	20Hz-20kHz (± 0.2 dB, Fs=192kHz), 5Hz-50kHz (± 1 dB, Fs=192kHz)
	THD+N	0.003% (1kHz, Fs=44.1kHz; 20Hz-20kHz, A-Weighted)
	Dynamic Range	116dB (20Hz-20kHz, A-Weighted)
	SNR	116dB (20Hz-20kHz, A-Weighted)
	Imp. Matching	$\geq 10k\Omega$ (suggested)
USB DAC	USB Mode	Asynchronized USB Audio 2.0 Class
	DSD	DSD64/DSD128 (DoP or D2P)
	PCM	Up to 192kHz/24bit (sampling frequency at 64kHz is not supported)
	Windows	Support (Driver required)
	MAC Osx	Support
	iOS	Not Support
	Android	Not Support
Music Format (Local Storage)	DSF	DSD64,DSD128 and DSD256 Support DST encoded
	DFF	
	SACD-ISO	
	FLAC	Up to 192kHz/32bit
	ALAC	Up to 192kHz/32bit
	AIFF	Up to 384kHz/32bit
	WAV	Up to 384kHz/32bit
	APE	Fast/Normal/High: Up to 192kHz/24bit Extra high: up to 96kHz/24bit, Insane: not supported
	WMA	Up to 96kHz/24bit
	WMA Lossless	Up to 96kHz/24bit
	MP2/MP3	Up to 48kHz/16bit
	AAC	Up to 48kHz/16bit
	OGG	Up to 48kHz/16bit
Battery	Capacity	3000mAh 3.8V
	Duration	~ 11 HRS (Single ended headphone) ~ 9 HRS (Balance headphone)
	Charging time	~ 3.5 HRS (with 2A Charger, not provided)
	Charging Current	≤ 1500 mA when charge with 2A Charger, ≤ 500 mA when charge with computer USB port
Recommended Headphone Impedance Range		8 \sim 300 Ω
Dimension		117*59*15.3 (mm)
Net Weight		$\sim 248 \pm 5$ g