



Hxmelody Digital Player

红芯数字HiFi播放器

HX500 User Manual V1.2
Hongxin

translated by Dennis Duchhart

HX500 Digital HiFi Player User Manual

Dear Customer,

Thank you for choosing the HX500 digital music player that was developed and produced by Hongxin Microelectronics Technology Co., Ltd. Please take a few minutes to browse this manual before using this player.

Hongxin Microelectronics Technology Co., Ltd. was established in 2009 in the beautiful country of heaven-Chengdu, Sichuan. The company is committed to serving users and dedicated to the development and manufacture of high-tech HiFi digital audio products that, as realistically as possible, restore live sound and rhythm from digital sources.

The HX500 digital HiFi music player resulted from years of experience with the development of HiFi products and related technology, previous hot-selling digital HiFi products, to once again improve digital output quality and improve the user experience. As a result, a high-performance, high-quality digital HiFi music player finally released for the majority of music lovers is a HiFi product that can challenge most desktop CD players and digital transports.

We hope that the HX500 digital HiFi player with its ultimate sound performance will bring you great music enjoyment!

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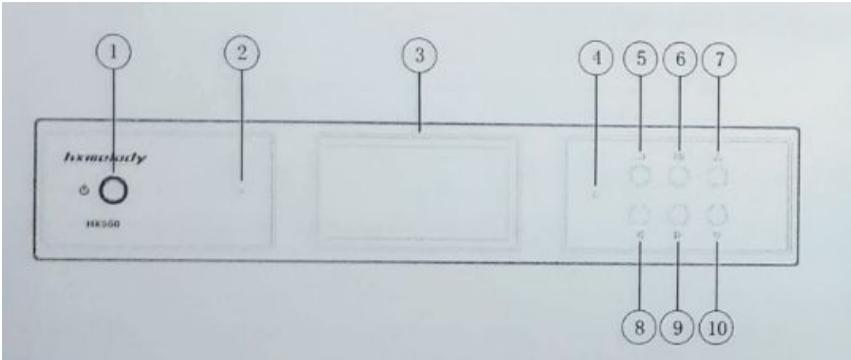
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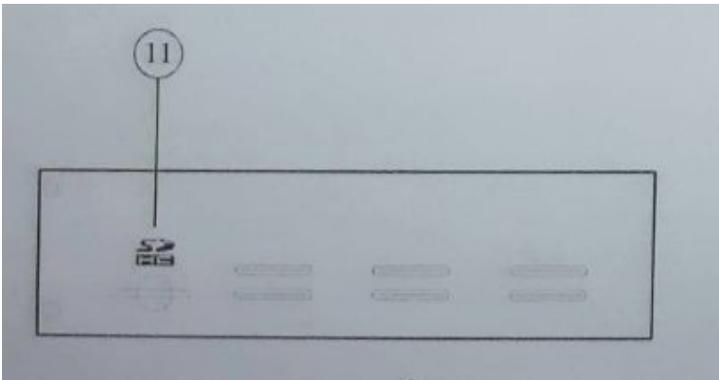
1、 Product layout

1.1 Player

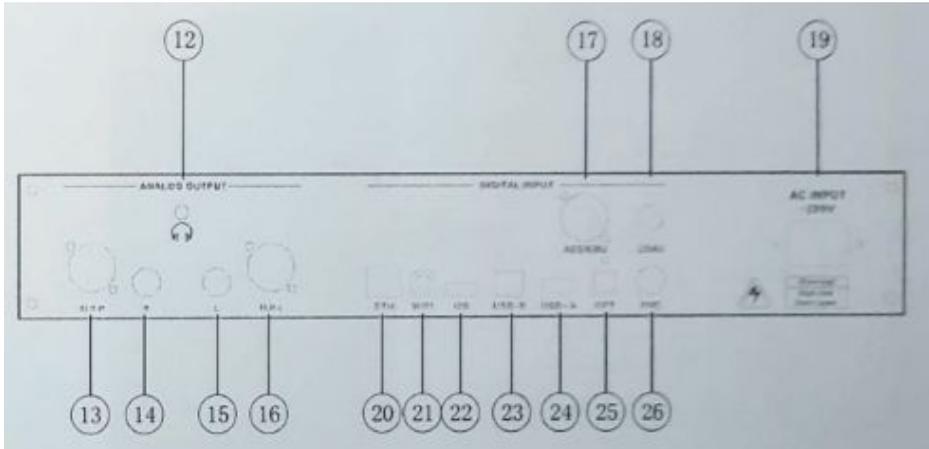
front



right



rear

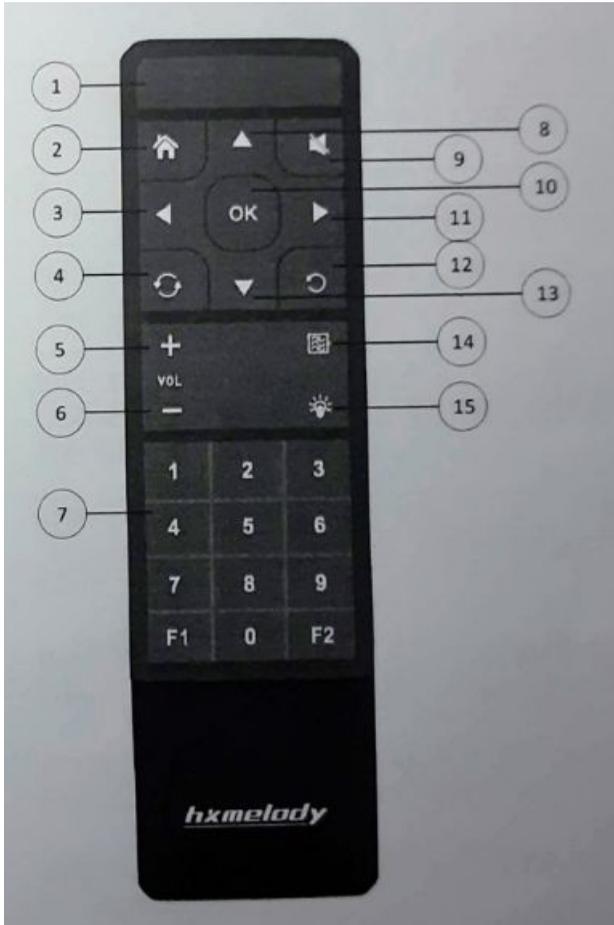


1	Power button, standby
2	Power/run indicator (blue = on, red = standby)
3	LCD display
4	infrared receiver
5	return key
6	OK, play/pause
7	up arrow key, play previous song
8	left key
9	right key (plays next song)
10	down key (plays next song)
11	SD card slot
12	3.5mm Line Out (this interface has been cancelled)
13	XLR analog balanced output right channel (version with DAC)
14	RCA analog single-ended output right channel (version with DAC)
15	CA analog single-ended output left channel (version with DAC)

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16	XLR analog balanced output left channel (version with DAC)
17	AES/EBU: digital balanced output
18	COAX: coaxial digital output
19	Power line
20	RJ45 network cable
21	WIFI antenna
22	I2S digital signal with HDMI specification
23	USB slave
24	USB host
25	TosLink: optical fiber digital output
26	BNC: coaxial digital output

1.2 remote control



Red Core Digital HiFi Player HX500

1	Power button, standby (toggle)
2	Menu: main menu
3	Left/rewind button (rewind 1 minute)
4	cycle mode switch
5	volume up (version with DAC)
6	volume down (version with DAC)
7	digits 0-9
8	up key/previous song
9	mute/unmute
10	OK, play/pause
11	right key: fast forward 1 minute
12	go back key
13	direction down key/next song
14	filter device setting (version with DAC)
15	turn off LCD screen backlight

2、 Specification parameters

2.1 Interface

2.1.1 Input interface

SD * 1: Support high-speed SD card, capacity is temporarily unlimited, support FAT12, FAT16, FAT32, EXFAT, NTFS format.

USB host * 1: Supports USB1.1, USB 2.0 high speed, USB3.0 U disk, mobile hard disk, SSD solid state drive, support FAT12, FAT16, FAT32, EXFAT, NTFS file system, support MBR and GPT disk partition.

USB slave * 1: Supports PC operating systems such as Windows XP, Windows 7, Windows 8, Windows 8.1, Windows 10, Linux, OSX, etc., and support mobile phone output of Android 5.0 and above and IOS 9 and above.

LAN interface: Full-duplex 10/100Mbps self-adaptive, supporting NAS playback, Windows shared folder playback, DLNA network playback, Internet radio, mobile app control and other network applications.

WIFI interface: Supports NAS playback, Windows shared folder, playback of lossy format songs, DLNA network playback, Internet radio, mobile APP control and other network applications

Power input: Support 220V 50/60HZ power input.

When plugging in the power supply, please make sure that the voltage input is correct to prevent damage to the machine.

2.1.2 Output

2.1.2.1 Digital output

COAX coaxial: 75 ohm, 192KHz/24Bit /DoP64

BNC coaxial: 50 ohm, 192KHz/24Bit /DoP64

SPDIF fiber: 192KHz/24Bit /DoP64

AES/EBU: 192KHz/24Bit / DoP64

I2S output: 768KHz/32Bit/DSD1024

total harmonic distortion+noise 24bit/44.1k: -141.6dB

jitter 24bit/44.1k: 204.5ps

2.1.2.2 Analog output (version with DAC)

Line Out output/XLR balanced output/RCA single-ended output

768KHz DSD1024 Specifications:/ 32Bit / DSD512 /revolution DSD512

output voltage:

LineOut:

- 2Vrms
- XLR 4Vrms
- balance:RCA:2Vrms

frequency response(20Hz ~ 20kHz) \pm 0.5dB

SNR - 131dB

THDN + noise @ 1kHz 0.00042 % 24bit/44.1k

2.2 Music file formats

WAV	dual channel, 5.1 channel 44.1KHz-768KHz 8Bit-32Bit supports 32 bit float and 64 bit input converted to 32 bit output supports WAV DTS
APE	dual channel fast/normal/high 44.1-192KHz extra high <= 96 KHz 16/24Bit
FLAC	dual channel 16/24Bit 44.1-384KHz full specifications support
MP3	dual channel 16Bit, 44.1KHz, supports CBR and VBR
WMA	WMA9/WMA10 Pro/WMA lossless
CUE	supports CUE Sheet supports Unicode , UTF-8 and other encoding
DSF	DSD64/128/256/512/1024
DFP	DSD64/128/256/512/1024/DST64
SACD	DSD64/DST64, support compressed and uncompressed
AIFF	dual channel, 5.1 channel 44.1KHz-768KHz 8Bit-32Bit
ALAC	dual channel 16/24Bit 44.1-192KHz
AAC	MPEG2AAC/MPEG4AAC LC/LD/HE/HEv2 and other
DTS	internal decoding downmix dual channel output, source code output 7.1 channel

3、 Operation

3.1 Boot

HX500 only needs a few seconds to boot. After the startup is complete, a “Any Key Start” will be prompted at the bottom right of the screen (you can modify the configuration to other modes in the system settings), as shown on the right.



3.2 Status icons

There are four status bars at the upper right of the screen:



network



wired network connection



WiFi connection

playback



stopped



paused



playback in progress

cycle mode



entire disc played sequentially



entire disc played randomly (shuffle)



repeat single track



repeat album/directory

volume (version with DAC)



current output volume (maximum is 100)



mute

3.3 Main Menu

HX500 has six functional modules:

- local storage
- NAS
- DLNA
- Internet radio
- USB interface
- system settings



The current system software version is shown in the lower right corner.

3.4 Local storage and NAS

Upon selecting local storage or NAS options, enter the desired drive letter. The NAS can only be accessed when the network is connected.



SD card



USB device



NAS shared drive. Select drive letter and enter file browsing interface. Use up, down, left and right keys to browse and OK key to enter directory select music for playback. Use Back key to return to previous directory or storage device selection interface.



folder



disc file (SACD or CUE)



music file

Currently selected items are shown at the bottom right as well as the folders of the current directory and the total number of supported music files.

Currently, the file extension types supported by HX500 include wav, cue, ape, flac, wma, mp3, cue, dsf, dff, iso, m4a, aif, aiff, etc.

3.4 Music playback

Information about the track being played is shown in the music playback interface, such as album, writer, song type, sampling frequency, bit width, playback progress and time.

Album art is displayed on the left. Currently the HX500 only supports jpg and bmp picture display, while DST playback does not support album picture display.



The top of the screen shows the total number of songs in the current directory and the sequence number of the currently playing song.

In this interface, the up key switches to the next song and the down key to switch to the previous song. Use the right key to fast forward 60 seconds, the left key to rewind 60 seconds and the back key to return to the current directory. During playback, you can also use the mute key on the remote to silence the player. When muted, the playing time is displayed in red.

The cycle mode key is used to switch the cycle mode. The HX500 currently supports four loop modes: full disc sequential loop playback, full disc random playback, single loop playback, and sequential playback within the directory.

When playing, the Music Play interface will reappear after 30 seconds.

3.5 DLNA

Select DLNA on the main menu to prepare for DLNA.

The control point (phone or PC) needs to be

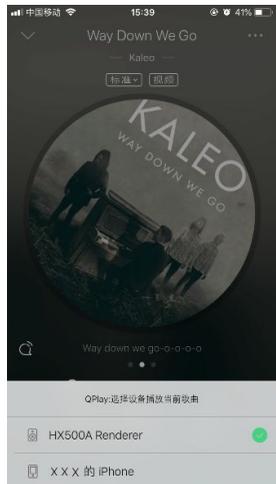
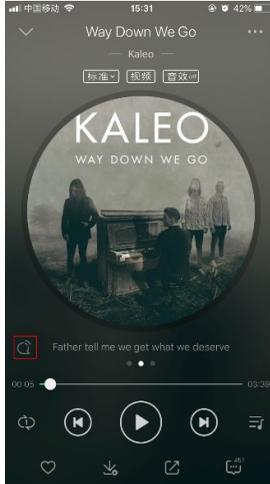


Red Core Digital HiFi Player HX500

connected to the same network as the HX500.

In QQ Music, first confirm that the Settings => Qplay and Car Music => Speaker option is on. Then enter the playback interface to see if this

icon appears: . After selecting 'HX500 Renderer' HX500 plays the selected tracks. Currently, QQ music can only support playing mp3.



3.5 Internet Radio

Select Internet Radio from the main menu to enter the program selection interface. Select radio programs per type. HX500 currently supports hundreds of Chinese radio stations, most of which are AAC 64K audio sources.



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3.6 USB interface

Select USB interface from the main menu, then connect the mobile phone or computer to the HX500 USB slave port.

When connecting to a mobile phone or computer, you need to remove the USB flash drive or removable hard drive on the USB Host.

Drivers need to be installed on Windows XP, Windows 7, Windows 8, Windows 8.1 and Windows 10 versions prior to 1803. The usb audio 2.0 driver is built in Windows 10 versions 1803 and later. You can play PCM and DoP without the driver installed. DSD native playback requires the driver to be installed.

Add support for ASIO and WASAPI by installing the drivers.

On Linux and OSX systems, please confirm whether the kernel supports usb audio 2.0.

Android phones require version 5.1 or higher, and iPhone phones require IOS 9.0 or higher. However, since IOS 10.3, data cables with MFI certified chips are required.

Currently foobar2000 for Windows supports PCM 384KHz 32Bit, DSD128 DoP and DSD512 native.



3.7 System Settings

The System Settings menu includes 8 sub-items:

- Configure
- Network
- WiFe
- Sharing
- Output
- Upgrade
- Factory
- SysInfo



3.7.1 Configure

Transport configuration options include:

Language Setting

Simplified Chinese, Traditional Chinese or English.

Backlight Time Setting

never, 10, 20 or 60 seconds.

When the screen backlight is off, pressing any key will restore the screen display.

When 'never' is chosen, the screen backlight can also manually be turned off with the respective key on the remote.



AutoPlay at power-on

- any key play
- play immediate
- delay 5 sec play
- delay 10 sec play
- never

Change Song Mode

configure the functions of the up and down keys: previous or next track

Repeat Play Times

infinite or once

3.7.2 Network settings

Choose between DHCP (automatically obtained IP) or static IP (manually set IP). Normally, DHCP can be chosen. If there is no DHCP server in the LAN or directly connected to the PC, select manually set IP: choose IP address, subnet mask, gateway and DNS server. IP segment numbers greater than 255 will not be accepted. If you do not know the DNS server address specified by the operator, you can usually configure the same router IP as the gateway address.



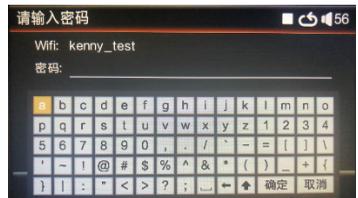
3.7.3 WiFi settings

Here WiFi can be set on or off. When turned off, the system will connect to the wired network when available. When turned on, the system will scan the network in about 10-30 seconds and display the available wireless networks including current signal quality of each network.

Upon selection of a network, HX500 either connects to that network or asks for a password if required. After the connection is successful, the system will remember the network and automatically scan and connect to it the next time it is turned on.

The WIFI network is limited by many factors such as distance, blocking, and interference from the surrounding network. It is easy to freeze when playing lossless music through the NAS, so the current system is limited to only lossy audio sources. Mobile APP control, DLNA and Internet radio are not restricted.

At present, the wireless network supported by HX500 is 802.11b/g/n mode, the encryption method supports WPA-PSK/WPA-PSK2/WEP encryption, and the channel supports 1-13 frequency band.



3.7.4 Sharing

This is used to configure NAS server or Windows file sharing. Enter the IP address of the NAS server or computer', user name, password, and workgroup options and save.

By default, the shared user is 'Anonymous'. At this time, the NAS needs to be set to anonymous access if possible



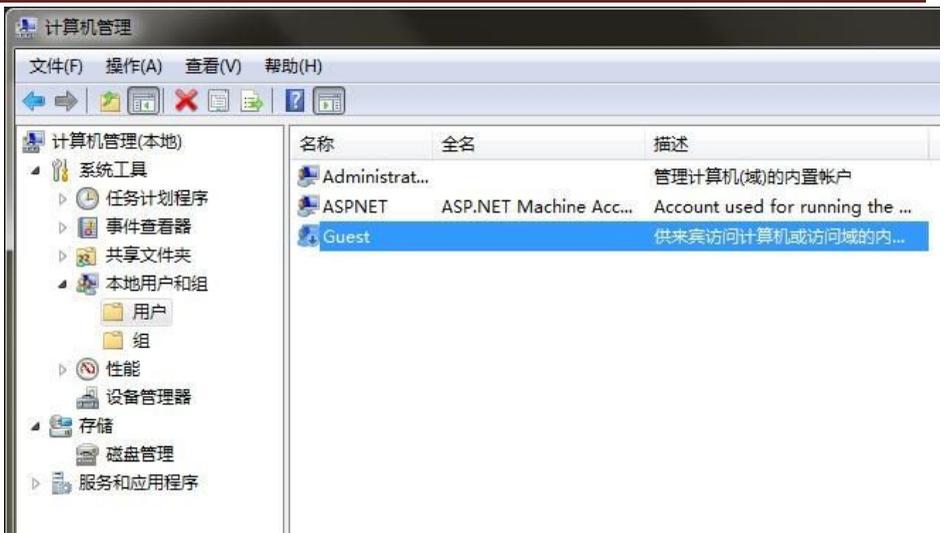
3.7.4.1 Windows anonymous sharing

Windows 7:

Enter the command compmgmt.msc in the search box of the start menu to open the Computer Management page.

Windows 10:

Go to start menu => all applications => Windows management tools => computer management. See figure:



Expand System Tools => Local Users and Groups on the left, select Users, then right-click Guest on the right and click Properties, as shown.



Remove the check mark before Account is disabled and select the application. Save. You need to ensure that the Guest account has no password. Windows does not set a password by default. If you have set a password for this account, please clear the password.

Uncheck the guest account's 'Deny access to this computer from the network' box.

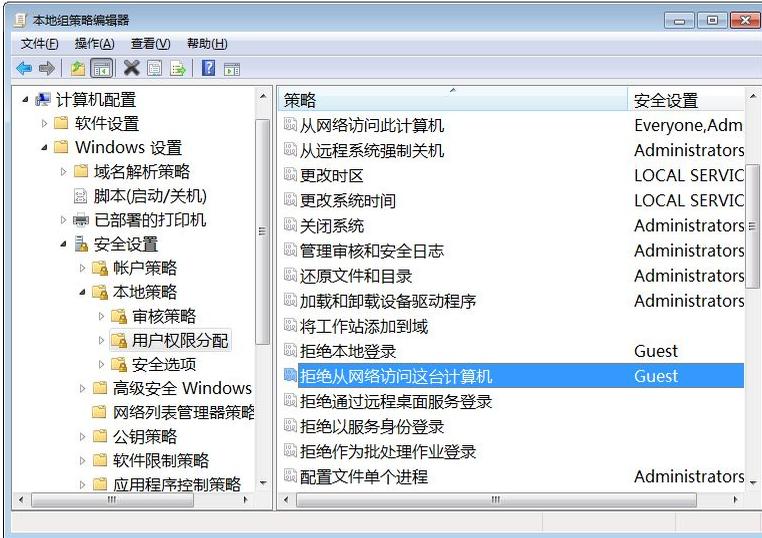
Windows 7:

In the Enter the command in the search box of the Start menu to gpedit.msc open the Group Policy page. Expand

\Local Computer\Computer Configuration\Windows Settings\Security Settings\Local Policies\User Rights Assignment.

Windows 10:

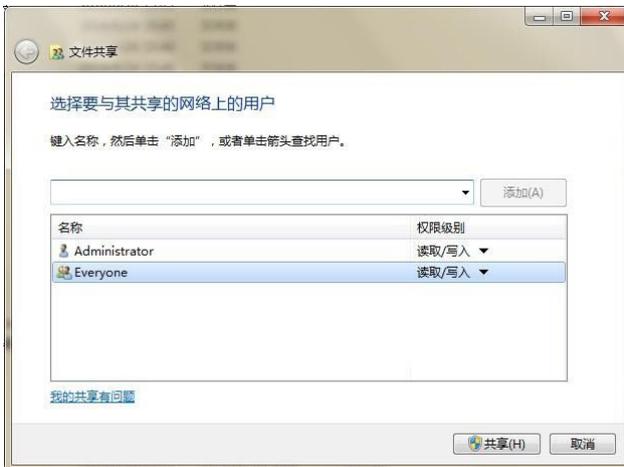
In the start menu => all applications => Windows management tools => local security policy. Expand \SecuritySettings\Local Policies\UserRightsAssignment in sequence, as shown:



Double-click 'Deny access to this computer from the network, delete the guest account in the item, as shown.



Add Everyone when adding a share Access rights, as shown.



3.7.4.2 Non-anonymous user sharing

The HX500 also supports non-anonymous user sharing, which can be configured through the player's user interface or through a configuration file.

First create a new text document in the root directory of the SD card and rename it to netshare.txt. Fill in the text file with the following content (omitting the text in square brackets):

```
cifs_enable=1
cifs_addr=192.168.1.2 [the IP address of the NAS or computer]
cifs_users=redcore [user name required to access the share]
cifs_password=redcore [if it is empty, the line is set to "cifs_password="]
cifs_domain=local [domain name of the account, if there is no domain, fill in "cifs_domain=local" or delete the line]
```

Insert the SD card into the player and restart manually. After the player starts, the configuration will be updated automatically.

3.7.5 Output settings

DSD output settings

Choices are DoP, source code ('native') and source code (inverted). When in DOP mode, the internal decoder is deactivated. When in native mode, the coaxial output is deactivated.



DTS output settings

Choices are internal decoding and external decoding. In case of internal decoding the HX500 decodes all channels and downmixes them to two-channel stereo

output. In case of external decoding the HX500 does not decode internally but directly outputs the source.

I2S output settings

Choices are normal phase and reverse phase. In case of normal phase the HX500 outputs a standard I2S signal. In case of inverted, the I2S DATA and LRCK signals are reversed.

PCM Filter / DSD Filter (version with DAC)

For specific settings, please refer to the information of the AKM4497 chip.

3.7.6 Firmware upgrade

Currently (firmware 1.1.1.13 and higher) the HX500 supports two modes: local upgrade and online upgrade.

Local upgrade

Copy the upgrade file to the root directory of the disk, then enter the local upgrade mode, select the disk and upgrade. To obtain the upgrade file (hx500_upgrade.bin) consult the player's manufacturer.

Online upgrade

When connected to the network, ensure that the HX500 has Internet access; then choose the upgrade online option.

Note: During the upgrade process, do not turn off the power. Although we have used software algorithms to ensure that the upgrade process can be restored or continue after the power is turned off, this could still cause other damage.

If the system fails to start after the upgrade fails, but you can enter the upgrade mode, please copy the upgrade file to the SD card, insert the SD card, and restart the computer.

3.7.8 System Information

This displays the hardware version, software version, program compilation time, network type, network address, and current IP address of the HX500 digital HiFi player.



3.7.7 Restore factory settings After

This option erases all internally stored data, restores the HX500 to the factory settings and restart the player.

3.8 Mobile phone control

For mobile phone control, the phone needs to be connected to the same WIFI network as the HX500.

Open the 'Red Core Turntable' app on the phone. It should find the HX500 and connect to it.

The app displays the currently playing track, album, song type, sampling frequency etc. Also displayed are current playback progress, time and total time.

Like the remote, the app can control many functions of the player, such as switching the cycle mode, turning off the screen, mute, go to previous or next song, play, pause, fast forward and -rewind. Also you can browse and select folders and tracks, as shown.



Warranty policy

The HX500's warranty period is one year. Man-made damage is not covered by the warranty. The LCD screen is a wearing part, and any cost for repair or replacement is for the owner.

Unauthorized disassembly of the machine can significantly increase the complexity and uncertainty of any maintenance. Please do not open the machine without authorization, so as not to affect the warranty service.

Product Warranty Card

Product Name	HX500 Digital HiFi Player	Serial Number	
Purchase Date	Year Month Day		
User Name		Postal Code	
Mobile Phone Number		Fixed Phone	

Manual Warranty Statement

The information contained in this manual is subject to change without notice, but will be incorporated in the new version of the manual. The company does not provide guarantees for any matters related to this manual, nor does it include implied guarantees on the timeliness or applicability of a particular use.

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