

A World-Class High-resolution Digital Audio

Feel Wonderful Sound delivered by
Dual Sabre³² Reference DAC

cocktail Audio X45



DSD
Direct Stream Digital

DXD
Digital eXtream Definition

MQA

HD MUSIC
32Bit/384Khz
High Resolution Audio

DSD	DXD	PCM	flac
	WAV	WMA	M4A
		M3U	PLS
CAF	ALAC	AIFF	AIF
MP3	APE / CUE	HD MUSIC 32bit/384Khz High Resolution Audio	
HD FLAC (24bit/192KHz)			
HD WAV (24bit/192KHz)			

Rev 1.0

Rev1.0

English

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Important safety instructions

For your own safety, please read the following important safety instructions carefully before attempting to connect this unit to the main power supply. They will enable you to get the best performance from the unit.

1. Read the instructions.
2. Keep the instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this product near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not remove the casing of this product.
9. Only use this product indoors. Do not expose the product to water, rain or high humidity.
10. Keep this product away from direct sunlight, naked flames or heat.
11. Do not install near any heat sources such as radiators, heat registers, stoves, or other electrical equipment (including amplifiers) that produce much heat.
12. Do not place any other electrical equipment on the product.
13. Do not place any sources of danger on the product (e.g. objects containing liquid, burning candles)
14. This product includes batteries. Please refer to safety and disposal instructions for batteries in this user manual.
15. Unplug this product during lightning storms or when unused for long time.
16. Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged, such as the power supply cord, damaged plug, liquid spillage, objects dropped on the unit, exposure to rain or moisture, does not operate properly, or has been dropped.
17. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection
18. The an all-pole MAINS SWITCH is used as the disconnect device, the location on the apparatus and the function of the switch shall be described, and the switch shall remain readily operable

WARNING

- Using headphones at a high volume can impair your hearing. This product can produce sounds in decibel ranges that may cause hearing loss for a normal person, even for exposure less than a minute. The higher decibel ranges are offered for those that may be experiencing some hearing loss. Over time your hearing 'comfort level' adapts to higher volumes of sound, so after prolonged listening, what sounds 'normal' can actually be loud and harmful to your hearing. To guard against this, set your volume to a safe level.
- Loudspeakers : Before making any connections to loudspeakers, make sure all power is turned off and only use suitable interconnects.

- Only use attachments/accessories specified and supplied by the manufacturer.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance(servicing) instructions in the literature accompanying the appliance

FCC regulations

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER AUTHORITY TO OPERATE THE EQUIPMENT.

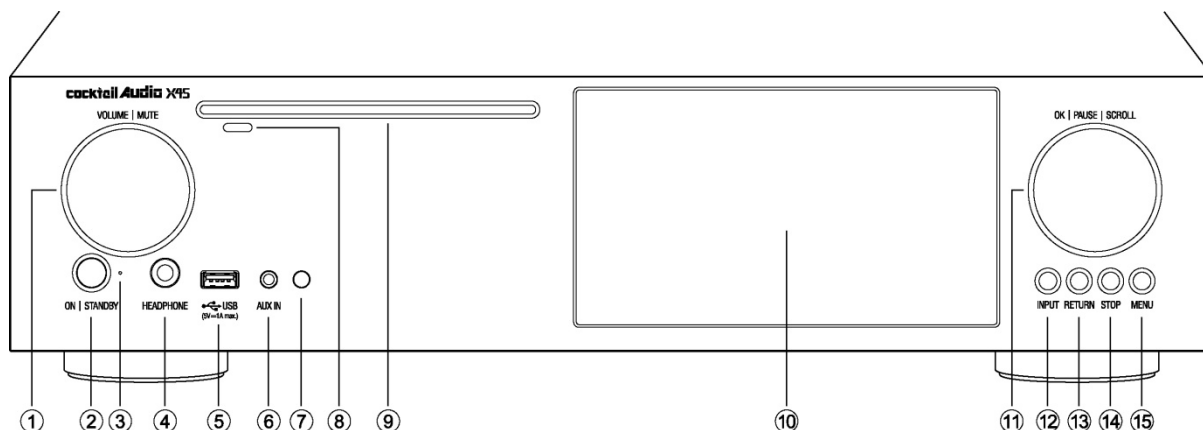


This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy. 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.

- Re-orient 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.

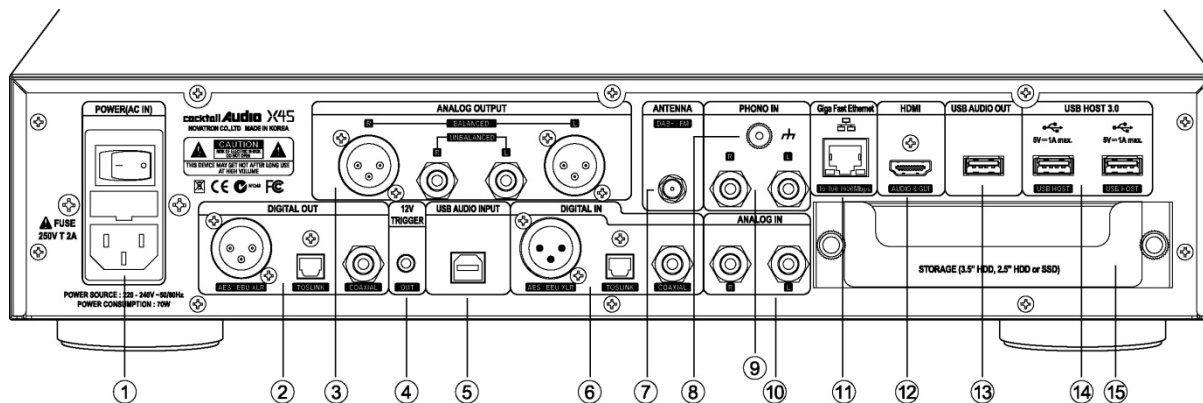
1. Product overview

1-1. Front View



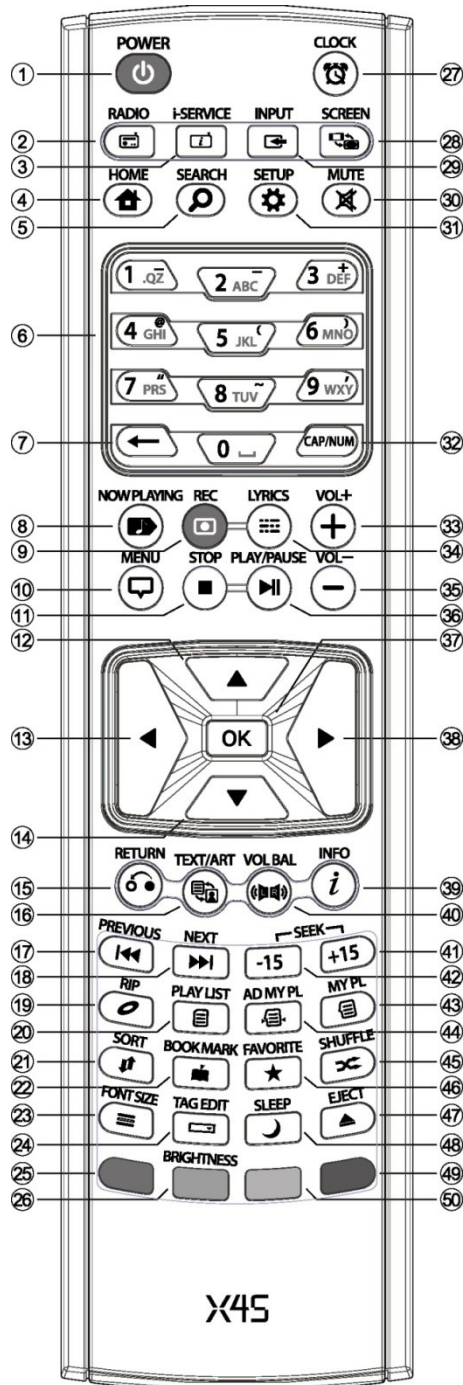
- | | |
|---------------------------|------------------------|
| ① Volume/Mute Knob | ⑨ CD-DRIVE |
| ② Power/Standby button | ⑩ LCD SCREEN |
| ③ Power/Standby Indicator | ⑪ OK/PAUSE/SCROLL Knob |
| ④ HEADPHONE | ⑫ INPUT button |
| ⑤ USB Host port | ⑬ RETURN button |
| ⑥ AUX IN | ⑭ STOP button |
| ⑦ Remote control receiver | ⑮ MENU button |
| ⑧ CD Eject button | |

1-2. Rear View



- | | |
|------------------------------|--|
| ① AC Power Inlet (with fuse) | ⑧ SIGNAL GROUND |
| ② DIGITAL OUT | ⑨ PHONO IN |
| ③ ANALOG OUT | ⑩ ANALOG IN |
| ④ 12V Trigger Out | ⑪ Giga Fast Ethernet LAN |
| ⑤ USB Audio IN(USB DAC) | ⑫ HDMI Out for ext screen/Audio Signal Out |
| ⑥ DIGITAL IN | ⑬ USB Class2.0 Audio Out |
| ⑦ DAB+/FM TUNER | ⑭ USB 3.0 Host port |
| | ⑮ Storage Deck(Drawer) |

1-3. View of Remote Controller and each key's function

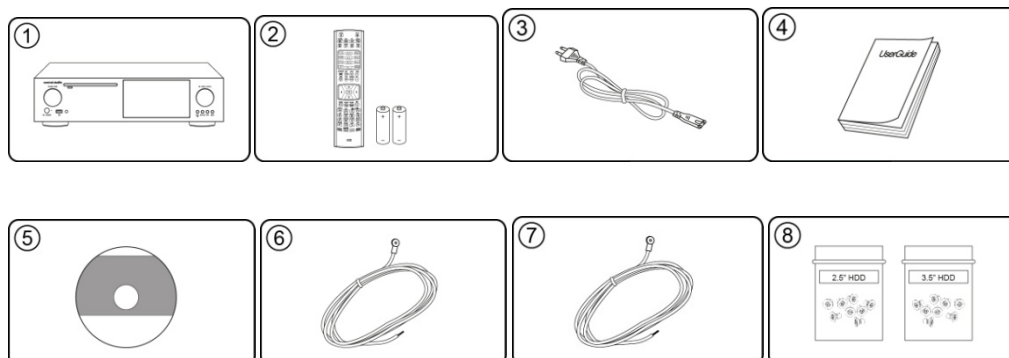


- 42. SEEK/-15: Seek backward by 15 sec
- 43. MY PL: To make My Playlist
- 44. AD MY PL: To make advanced
My Playlist
- 45. SHUFFLE: To change play mode
- 46. FAVORITE: To add iRadio station or
song to Favorites folder
- 47. EJECT: Eject CD
- 48. SLEEP: Go to sleep mode
- 49. Reserved
- 50. Reserved

- 1. POWER: Power ON/OFF
- 2. RADIO: Go to DAB+ /FM Radio screen
- 3. i-SERVICE: Go to i-Service screen
- 4. HOME: Go to home screen
- 5. SEARCH: To pop up search menu
- 6. Alphanumeric: Enter number & alphabet/
Seek at Playing Screen mode
- 7. ← : To delete typed alphabet
- 8. NOW PLAYING: Go to Playing Screen
- 9. REC: To record
- 10. MENU: Popup menu screen
- 11. STOP: Stop playing
- 12. ARROW: Move cursor to upper side
- 13. ARROW: Move cursor to left side
- 14. ARROW: Move cursor to down side
- 15. RETURN: Go back to upper level
- 16. TEXT/ART: To switch text or art mode
- 17. PREVIOUS: Play previous music
- 18. NEXT: Play next music
- 19. RIP: Pop up ripping menu
- 20. PLAYLIST: Go to playlist screen
- 21. SORT: Sort file list
- 22. BOOK MARK: Make bookmark
- 23. FONT SIZE: To change text line number(size)
- 24. TAG EDIT: To popup tag edit screen
- 25. Reserved
- 26. BRIGHTNESS: To control screen brightness
- 27. CLOCK: Digital clock display/OFF screen
- 28. SCREEN: To switch LCD or HDMI screen
- 29. INPUT: Go to Input screen
- 30. MUTE: Mute/unmute sound
- 31. SETUP: Go to setup
- 32. CAP/NUM: Toggle numeric key, alphabet key
and special characters
- 33. VOL+ : Volume up
- 34. LYRICS: To show up lyrics on the screen
- 35. VOL- : Volume down
- 36. PLAY/PAUSE: Toggle Play and Pause
- 37. OK: Confirmation
- 38. ARROW: Move cursor to right side
- 39. INFO: Get more detailed info
- 40. VOL BAL: Control volume balance
- 41. SEEK/+15: Seek forward by 15 seconds.

2. Prepare

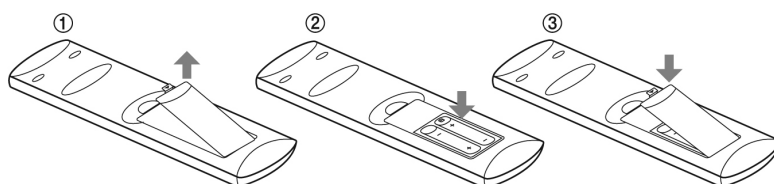
2-1. Check the contents of X45 package



- ① X45 unit
- ② Remote controller + AAA batteries x 2EA
- ③ Power cord
- ④ Manual
- ⑤ FreeDB Data CD
- ⑥ FM Radio Antenna
- ⑦ DAB Antenna
- ⑧ Screw to install storage

<NOTICE> DAB Antenna is NOT provided to the countries where DAB is not available

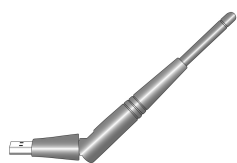
2-2. Install AAA batteries into the remote control.



Open the battery door and insert the batteries.

2-3. Optional items, WiFi USB dongle

If you purchased optional items, the WiFi USB dongle, it looks like below.



801.11b/g/n WiFi USB dongle

[NOTICE] The wifi dongle not approved by X45 manufacturer will not work properly

2-4. To use X45 as USB DAC via its USB Audio Input

※ NOTICE

(In case that 352.8Khz and 384Khz files goes into X45 via its USB Audio Input and goes out via its Digital Outputs, there may be some noises. So, we recommend that you should not use X45 digital outputs when using X45 as USB DAC)

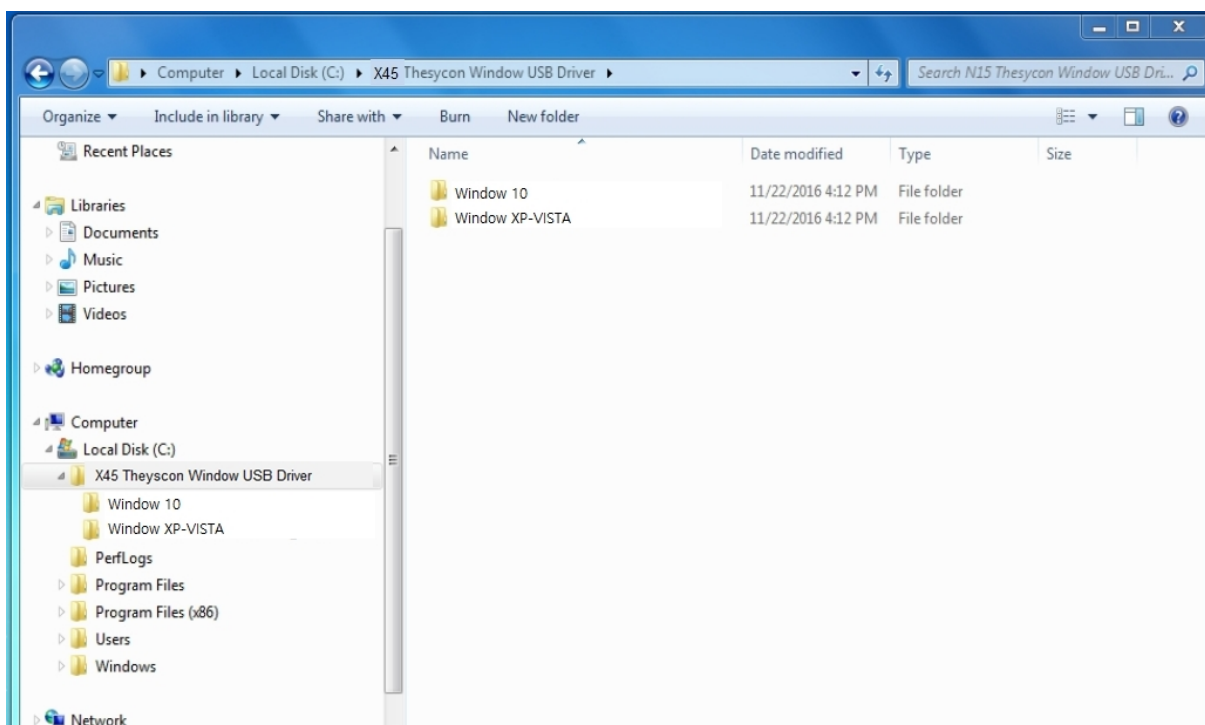
2-4-1. USB Audio Class 2.0 Driver Software for Windows OS

You should install USB Audio Class 2.0 driver software for Windows OS so that you could use X45 as an USB DAC with Windows PC properly.

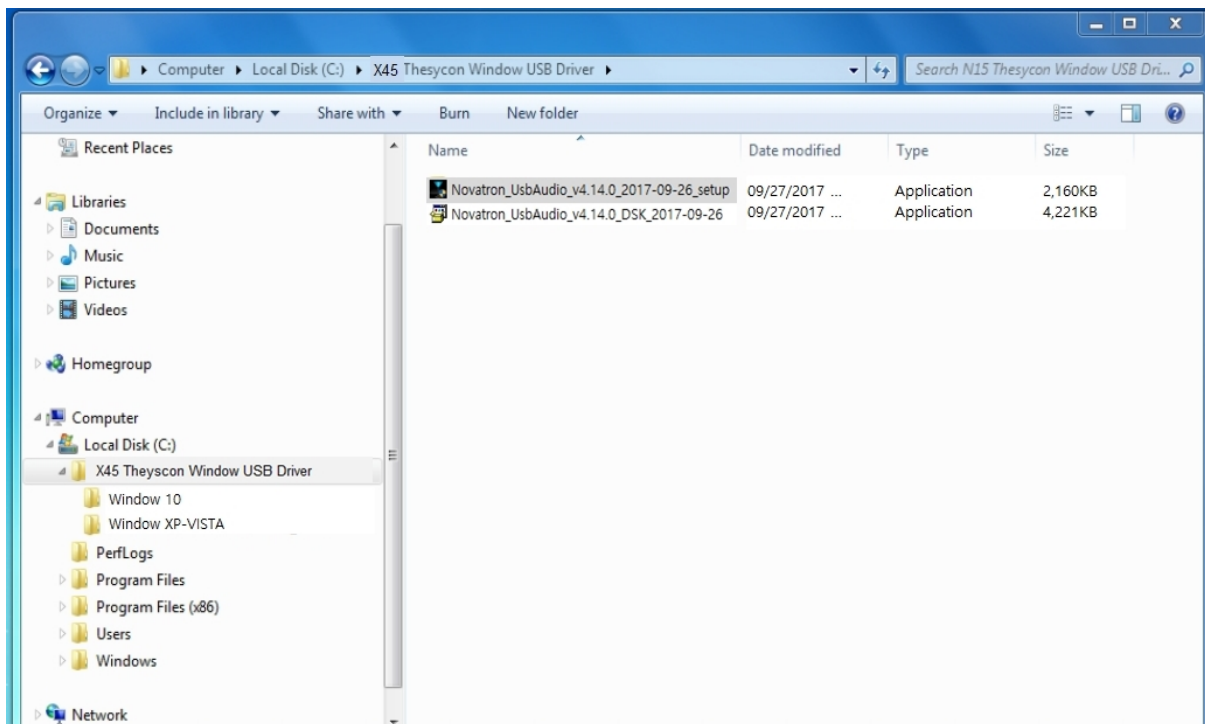
You can download USB Audio Class 2.0 driver software from our website, www.cocktailaudio.com or from our local distributor website.

2-4-2. How to install USB Audio Driver Software to Windows PC

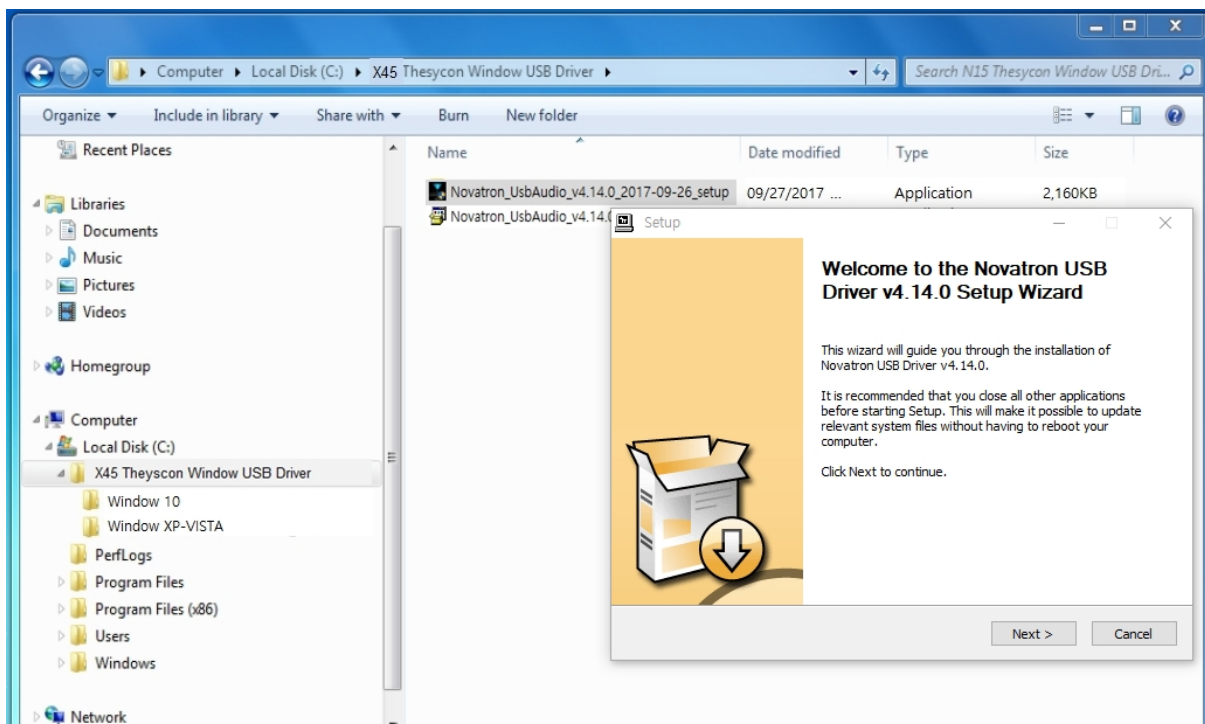
Unzip the downloaded Driver Software. Two folder will show up like below.

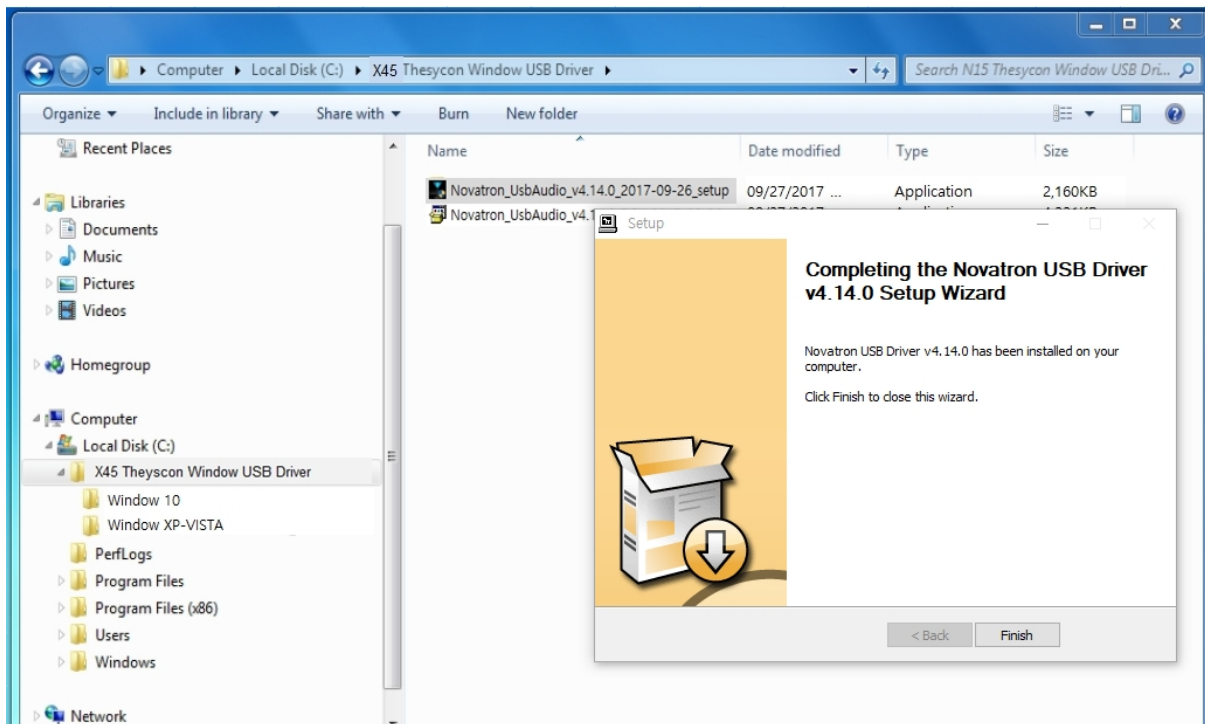


Select one suitable for your PC OS and run its EXE file with double click to install.



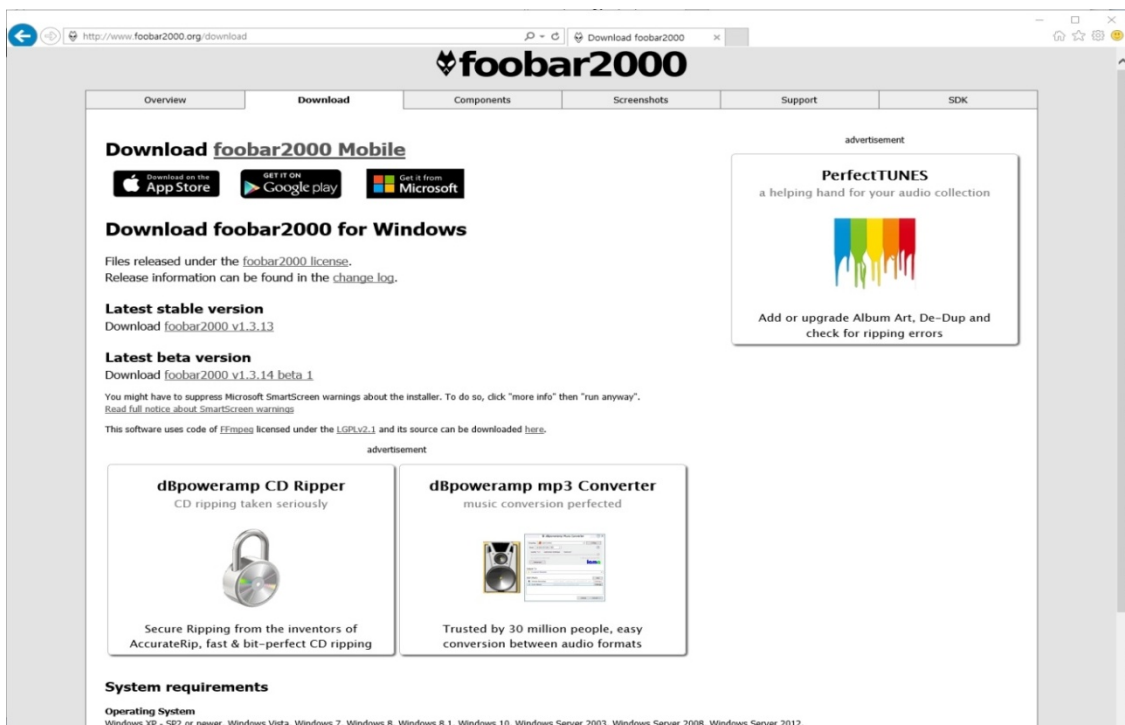
According to Setup Wizard, you can finish installation like below





2-4-3. Special software (Player) for DSD file on your Windows PC

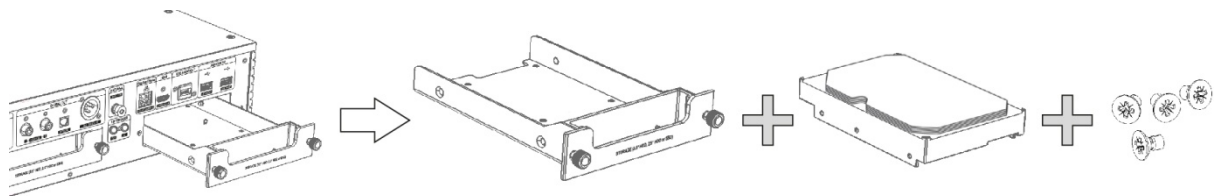
To play DSD file on your PC, you need to install a special software (player) like Foobar2000 or JRiver Media Center. You can download foobar2000 from www.foobar2000.org, and install it into your PC. You can download JRiver Media Center from www.jriver.com



2-5. X45 purchased without storage.

You need a 3.5" or 2.5" SATA hard disk or SSD, and install it into the X45 like below picture and format it. For formatting of the installed storage into X45, please refer to the 4-7-10. Format Storage (Page 57)

2-5-1. HDD installation



【 TIP 1 】 X45 supports 3.5" or 2.5" SATA hard disk and solid state drive (SSD)

2-5-2. HDD Format

※ Refer to the 4-7-10. Format Storage (Page 57)

2-6. X45 purchased with an internal storage installed.

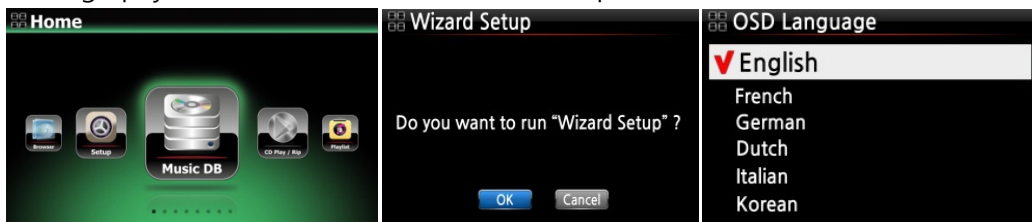
Check whether the storage is formatted, or not. If the storage is not formatted, please format it according to the 4-7-10. Format Storage (Page 57)

3. Turn On and Start

3-1. Wizard Setup (Setup Assistant)

During first booting-up procedure, you will meet the Setup Assistant (Wizard Setup) as shown below.

Select OK and confirm with the OK key to start Wizard Setup. If you want to run the set up after booting up, you can select CANCEL at the 1st step.



<NOTICE> It will ask for OSD language, Audio Ripping Format, Network Setup, Time setting, HDD format.

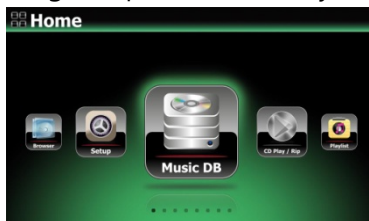
【 TIP ① 】 You will be asked about formatting the HDD only if the HDD installed has NOT been formatted.

3-2. Turn ON for normal use

Switch the unit on at the rear of the X45. The power LED will be ON with green color. Power it on using the remote control or the power button on the front of the X45. The power LED color will be changed to blue and start booting – The X45 should take about 30~40 seconds to boot up as it is looking to see if a network is connected.

After the X45 is powered ON, the below screen will show up in sequence.

- 1) Booting image 2) Booting completed and ready for use



- Music DB: Play loaded(ripped) music in X45 Music DB folder.
- CD Play/Rip: Load(rip) CD or play it
- Playlist: Make Playlist and play it.
- i-Service : Play i-Radio or online music service
- Input: To select Input source
- FM Radio/DAB+: Play FM or DAB+
- Browser : See all storages such as hard disk of X45, USB host and networked storages.
- Setup : Change settings

3-3. When using X45 as an USB Digital to Analog Converter (DAC)

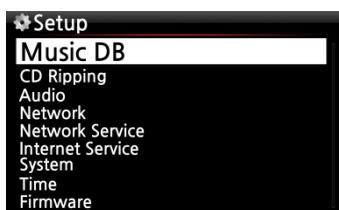
- ① Install USB Audio 2.0 Driver Software to your Windows PC(Refer to 2-4 on page 28)
- ② Install a special software(Player) like foobar2000 if you want to play DSD file in your PC(Refer to 2-4 on page 28)
- ③ Connect X45(USB Audio IN) and your PC(USB Host port) via USB cable
- ④ Remaining procedures will be understood easily

※ NOTICE

(In case that 352.8Khz and 384Khz files goes into X45 via its USB Audio Input and goes out via its Digital Outputs, there may be some noises. So, we recommend that you should not use X45 digital outputs when using X45 as USB DAC

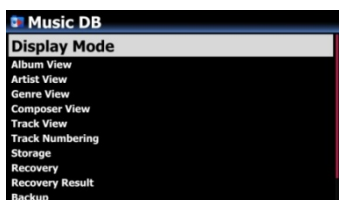
4. SETUP

Go into SETUP menu with remote controller.



You can select each item with the arrow key and confirm it with the OK button.

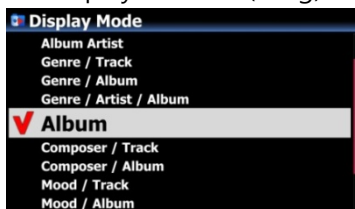
4-1. Music DB



Select the Display Mode and confirm with the OK button.

4-1-1. Display Mode

You may set one of fourteen (14) options, see below. For example, if you set Title, the Music DB will display the title (song) list when you go into the Music DB. (※ default: Album)



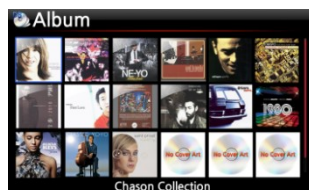
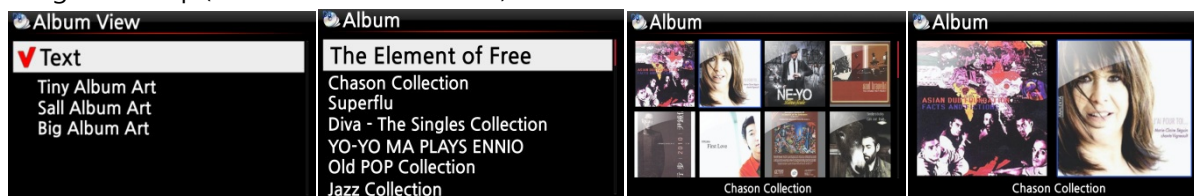
※ Default : Album

※ For example

- Artist/Track : Artist list → Title(song) list
- Artist/Album : Artist list → Album list of the artist → Track (song) list of the album

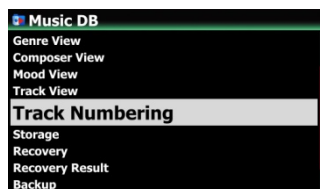
4-1-2. Album View

You can set the list to show albums in the Music DB by its album name (text) or album cover art using this setup.(※ default : text mode)



※Artist view, Genre view, Composer view and Track view also are available.

4-1-3. Track Numbering

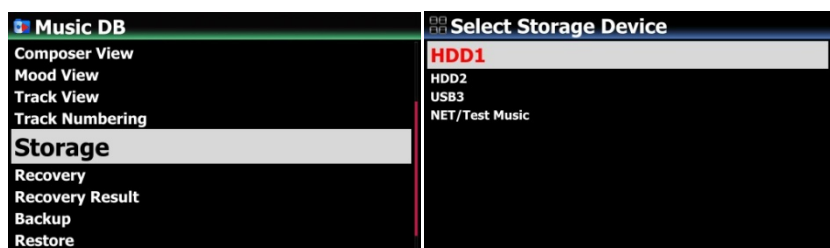


With the Track Numbering option at SETUP, you may decide whether you allow the track number to be added at the front of title for each track when you rip CD. (※ Default: Enabled)

4-1-4. Storage for Music DB

You can select a HDD(SSD)1, USB or NAS(Network attached storage) for Music DB storage. If one of them is selected as MusicDB storage, its color will be red.

※ Default is HDD1



[CAUTION]

※ NOTE: Please remember to check this setting first when you see 'Query Error' on the screen in trying access to your music DB. For example, you will see 'Query Error' on the screen when you try accessing your Music DB of internal (installed) HDD with Music DB storage set to USB.

※ When you use an external USB hard disk, please make sure to supply Power to the external USB hard disk in case the external USB hard disk is designed originally to connect to a Power supply.

4-1-5. Recovery

It is possible for damage or errors to occur on the album or files in the Music DB when you run several functions like; 'Rename, Delete, Copy to DB, or CD ripping' etc. If there are errors in the Music DB, the X45 may not play the files properly or may not rip CDs properly. The Music DB Recovery function will help to clear these problems.

4-1-5-1. How to run Music DB Recovery function

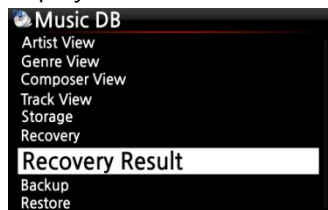
① Go to the Music DB. ② Select Recovery and press the OK key.

※ It will take some time to start and finish if your Music DB is quite large.



4-1-5-2. Music DB Recovery run

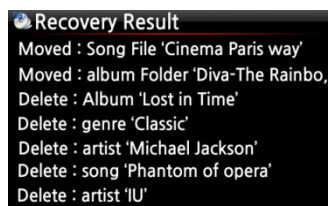
After you run the Music DB Recovery, as shown above, you can see the results of the Recovery as displayed below.



Go to Music DB of SETUP and select Recovery Result.



The left screen will appear if your Music DB is OK



The left screen will appear if something was dubious

※ 'Moved' means the song file moved to 'Recovery' folder.

※ 'song file' is actual file.

※ 'Deleted' means the info in the Music DB was deleted.

※ 'Album', 'genre', 'artist' and 'song' are just info(text file).

They are not actual music files.

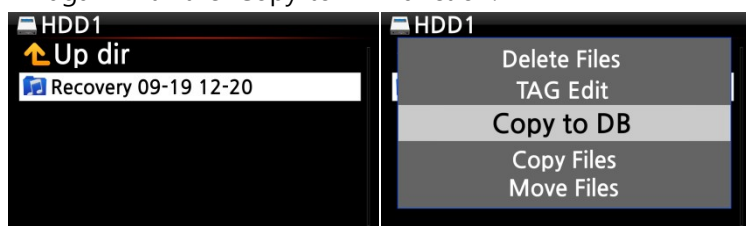
4-1-5-3. To create 'Recovery MM-DD hh-mm' folder automatically on HDD (or USB)

During Music DB Recovery run, the X45 creates a 'Recovery MM-DD hh-mm' folder automatically on the internal HDD (or USB). The checked files or album folders will be stored (moved) there.



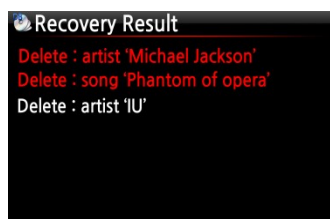
4-1-5-4. Importing files from the 'Recovery' folder to the Music DB again.

After checking the files have moved to the 'Recovery' folder, you can import them to the Music DB again with the 'Copy to DB' function.

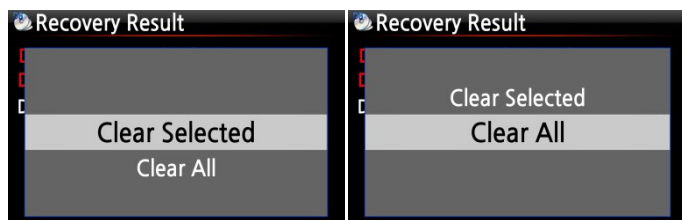


4-1-5-5. To clear the list on Recovery Result

You can clear the list on the Recovery Result as follows:



- ① Place the cursor on the screen of the Recovery Result.
- ② Select the list you want to clear with the RIGHT key
- ③ Press the MENU key
- ④ You can clear all or the selected list only.



4-1-6. Backup

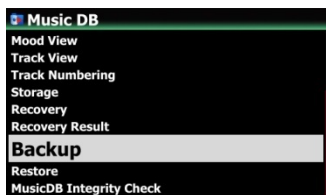
4-1-6-1 How to do Backup

X45 offers two backup methods. One is 'Background backup', the other is 'Interactive backup'.

※ **Background backup:** You can do other works like playing even in backup processing.

※ **Interactive backup:** You can't do anything in backup processing.

※ You need an external USB hard disk drive which has a bigger capacity than the Music DB.

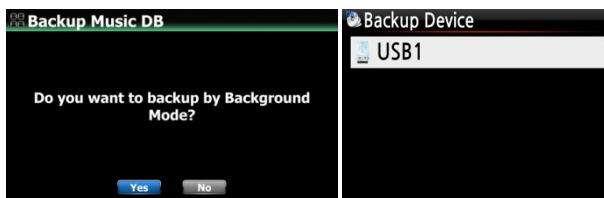


① Go to SETUP > MusicDB > Backup

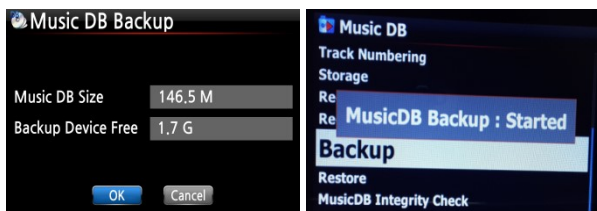
② Confirm 'Backup' with OK key

③ Dialog window will show up like left picture.

"Do you want to backup by Background Mode?"



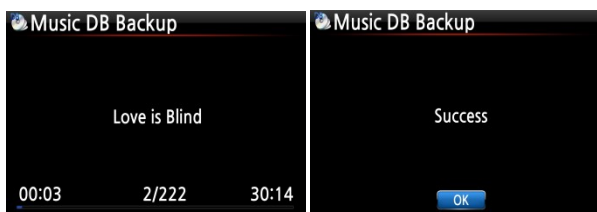
④ If you select and confirm 'Yes', next step for 'Background backup' will show up. But, if you select and confirm 'No', next step for 'Interactive backup' will show up.



⑤ Select backup storage and confirm it with OK key.

⑥ It will check space of the backup storage

⑦ Select OK and confirm it to start backup



⑧ 'MusicDB Backup : Started' message will show up and disappear in about three(3) seconds.

※ Now, you can go back by RETURN key for other works!!!!

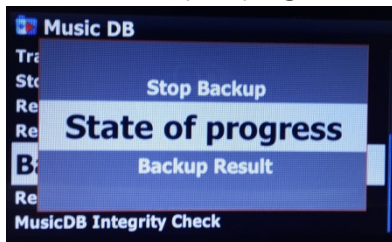
<CAUTION>

1) While backup in progress, if you do CD ripping or file importing to DB, these ripped files and imported files will not be backed up.

2) While backup in progress, device response will be delayed slightly when try using other function.

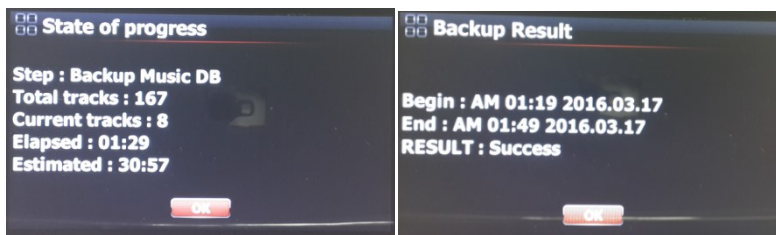
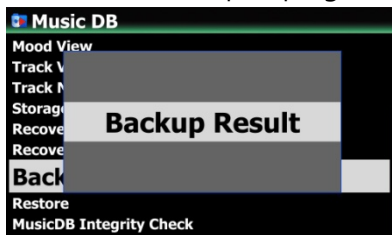
4-1-6-2 How to check backup progress and result

※ While backup in progress



- ① Go to SETUP > MusicDB > Backup
- ② Place the cursor on the 'backup'
- ③ Press MENU key
- ④ You can choose 'State of Progress' or 'Backup Result'

※ While no backup in progress



- . Step: Backup MusicDB
- . Total tracks: total track number of MusicDB
- . Current tracks: number of backed up tracks until now
- . Elapsed: total time passed until now
- . Estimated: total time to backup

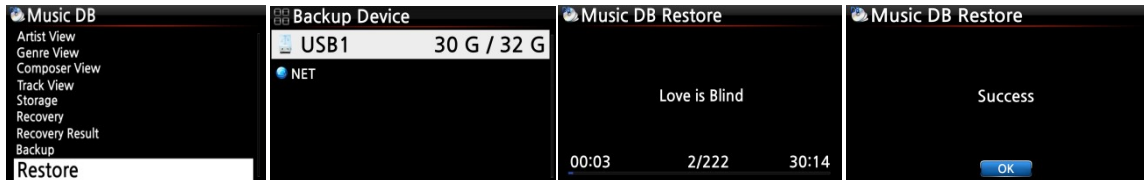
4-1-6-3 How to stop backup

- ① Go to SETUP > MusicDB > Backup
- ② Place the cursor on the 'backup'
- ③ Press MENU key
- ④ You can choose 'Stop Backup'

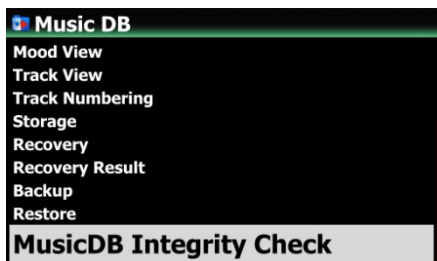
4-1-7. Restore

You can restore the backup data in the Music DB of the X45.

- ① Connect the backup device to the USB host port of the X45.
- ② Go to the Music DB of SETUP and select Restore, and confirm it with the OK button.
- ③ You can see the backup device and select it, confirm using the OK key to start Restore.



4-1-8. MusicDB Integrity Check



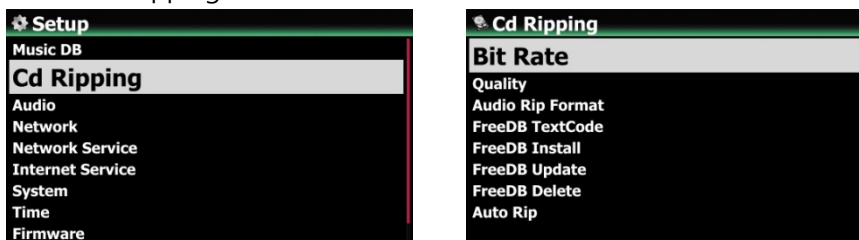
This function will check any error in MusicDB. You can select when this check will do. In shutdown or in Booting.

※ Default: In Shutdown.

※ As 'MusicDB Integrity Check' process will have effect on booting time, we recommend to set it as 'In Shutdown'

4-2. CD Ripping

Select CD Ripping and confirm it with the OK button. The below items will be displayed.



4-2-1. Bit Rate and Quality

You can select bit rate and the quality level for ripping to MP3 files.

There are two (2) items.(This is for ripping a CD to an MP3 file)

- ☐ Compressed Rate : 128K / 192K / 320K [default] 192K
- ☐ Quality level : Excellent / Best / Good / Fast / Very fast [default] Very fast

Select one of the above options and confirm with the OK button on the remote control.

【 TIP ① 】 The time required to rip a CD to MP3 format based on each quality level option is shown below.

Option of quality level	Normal playing time	Required time to convert to MP3
Excellent	The time required to play music in CD normally.	X 1.5 (150%)
Best		X 1.08 (108%)
Good		X 1 (100%)
Fast		X 3/4 (75%)
Very fast[Default]		X 1/3 (33.3%)

※Quality level affects on the MP3 and Ogg ripping in view of sound quality, and on the FLAC ripping in view of file size.

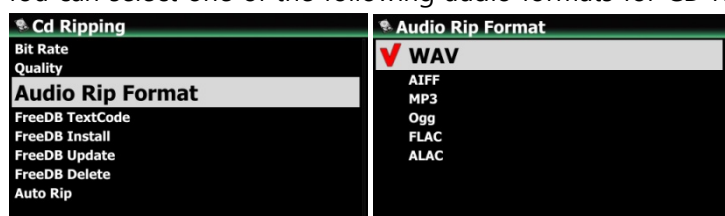
【 TIP ② 】 Estimated Storage capacity

CD Ripping option		500GB HDD	1 TB HDD	2 TB HDD	4 TB HDD
WAV(uncompressed)		650 CDs	1,300 CDs	2,600 CDs	5,200 CDs
MP3 / OGG	Compressed Rate				
	128K	7,500 CDs	15,000 CDs	30,000 CDs	60,000 CDs
	192K	5,000 CDs	10,000 CDs	20,000 CDs	40,000 CDs
	320K	3,000 CDs	6,000 CDs	12,000 CDs	24,000 CDs

These figures may vary slightly according to the number of tracks on a CD

4-2-2. Audio Format (Audio Rip Format)

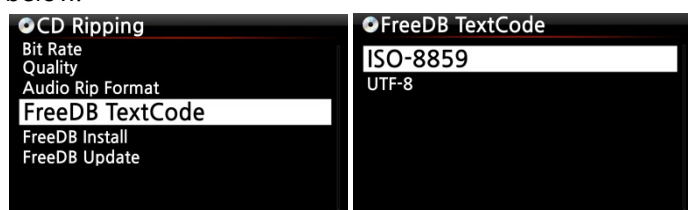
You can select one of the following audio formats for CD Ripping;



※ default is WAV

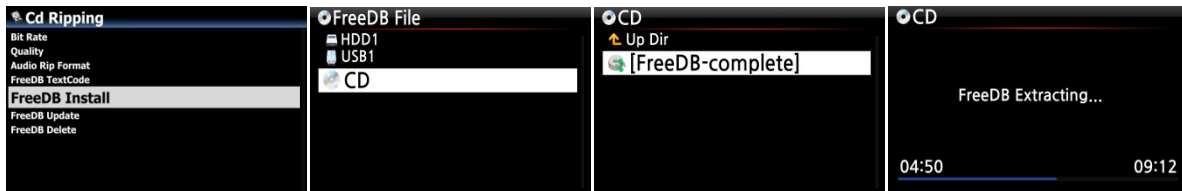
4-2-3. FreeDB TextCode

In the case that the FreeDB text is broken, you may try changing the FreeDB TextCode as shown below.



4-2-4. FreeDB Install

You can install the FreeDB data to the storage of the X45 as a FreeDB data (DVD) is supplied by the manufacturer. Once you install the FreeDB data to the X45 the inserted CD information (metadata like title, album name, artist, etc) will be displayed on the X45 screen without network connection.



To install the FreeDB data to the X45 hard disk, insert the FreeDB data DVD into the CD slot of the X45 and go to SETUP and select FreeDB to install. You will see the CD, select and confirm with the OK button. The X45 will shut down and reboot to start installing the FreeDB data automatically.

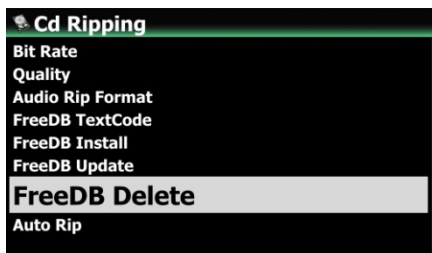
<NOTICE> When using X45 with network(internet) connected, you don't need to FreeDB data because it's useless when X45 is connected to network(internet)

4-2-5. FreeDB Update

You can get a FreeDB update from the Cocktail Audio website (www.cocktailaudio.com).

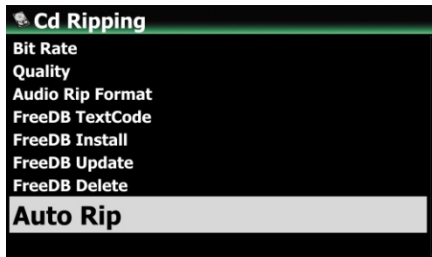
To update your copy the FreeDB load the file downloaded from www.cocktailaudio.com to a memory stick and insert the memory stick into the USB host port of the X45. Navigate to SETUP and select FreeDB Update. Press the OK button. You can see the USB memory and select it with the OK button to find the FreeDB update file. Confirm with the OK button to begin the installation.

4-2-6. FreeDB Delete



You can delete FreeDB data if you don't like it after installing it into X45

4-2-7. Auto Rip



When ripping many CDs at one time, this function will be useful. If Auto Rip is set as ON, X45 will rip CD by itself if you insert CD, and eject CD by itself after finishing ripping without pressing any key

※ Default: OFF

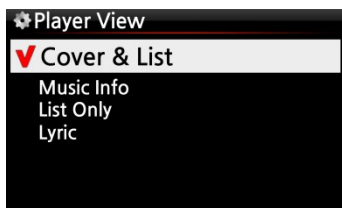
4-3. Audio

Select Audio and confirm it with the OK key



4-3-1. Player View

You can set one of the following; Cover & List, Music Info or List Only.



※ NOTE: Using INFO button of remote control, you can change player view to Cover & List, Music Info or List Only like below.

※ Default: Cover & List

[Cover & List]



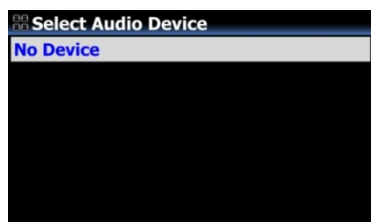
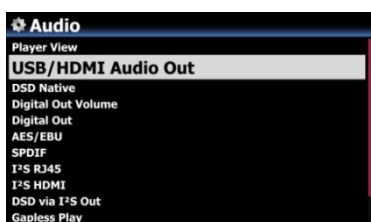
[Music info]



[List Only]



4-3-2. USB/HDMI Audio Out

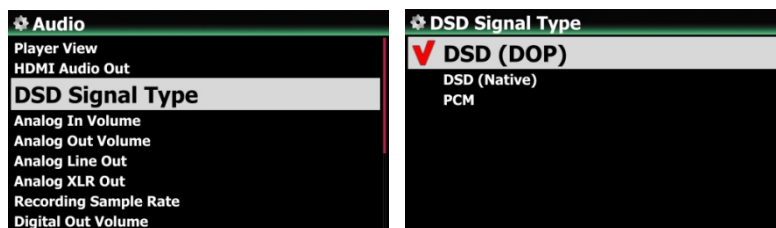


When USB DAC or HDMI audio device is connected to X45 USB Audio Out, the connected devices will be listed here. You may select it here.

4-3-3. DSD Signal Type

There are many kinds USB DAC(Digital-to-Analog Converter) in the market, which can be connected to X45 USB Audio Out. But, some of these DAC can receive 'DSD Native signal', others can receive 'DoP signal' only instead of 'DSD Native signal'. So, we added 'DSD Signal Type' option at SETUP, which gives three (3) options like below. You need to select proper option according to your USB Audio DAC spec.

- DSD(DoP): This is for the USB DAC which receive 'DoP signal' instead of 'DSD Native signal'
- DSD(Native): This is for the USB DAC which can receive 'DSD Native signal'
- PCM : This is for the USB DAC which can receive 'PCM signal' only.



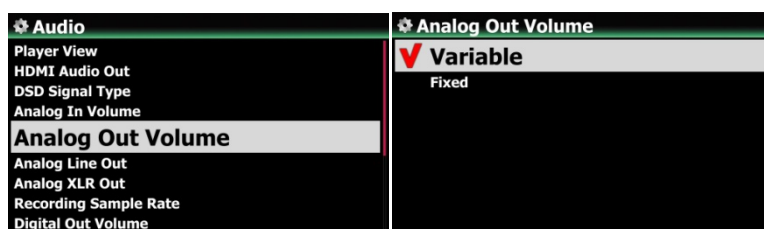
※ Default: DSD(DoP)

4-3-4. Analog In Volume



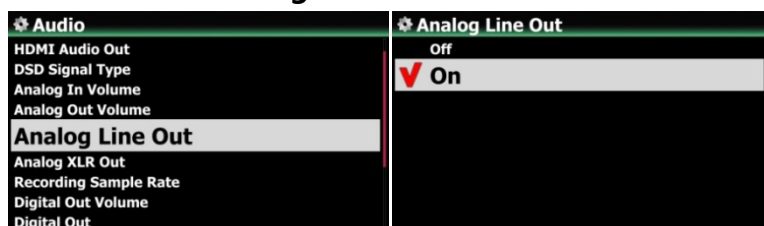
You can control volume level of Analog IN/AUX IN/PHONO IN
※ Default: 0

4-3-5. Analog Out Volume



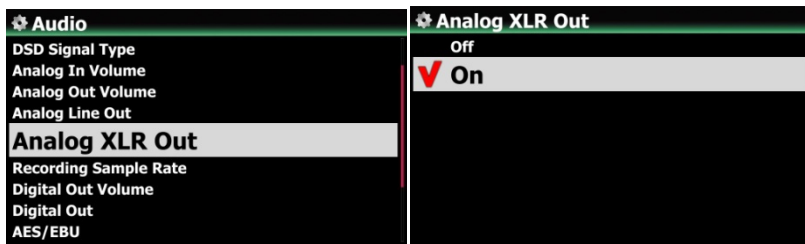
You can set Analog Out Volume as Variable or Fixed
※ Default: Variable
※ Fixed: X45 volume will be set as 0dB (Max). You can't control volume with X45

4-3-6. Analog Line Out



Analog Line Out can be set as OFF or ON
※ Default: ON

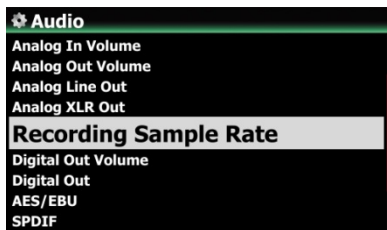
4-3-7. Analog XLR Out



Analog XLR Out can be set as OFF or ON

※ Default: ON

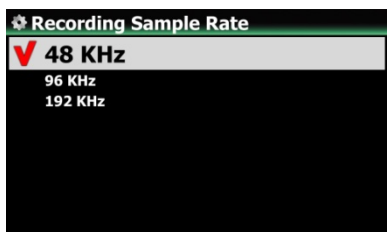
4-3-8. Recording Sample Rate



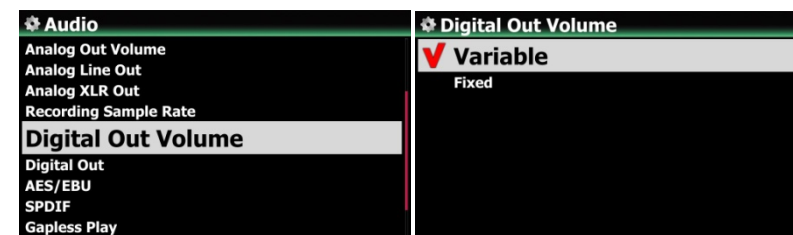
When recording, you can set Recording Sample Rate as one of three (3) options like 48KHz, 96KHz, 192KHz.

※ NOTE: The higher sample rate, the more recording space is needed.

※ Default: 48KHz



4-3-9. Digital Out Volume



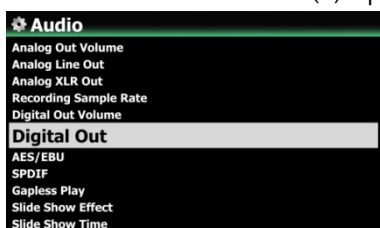
※ Variable: You can control volume for Digital Out with X45

※ Fixed: X45 volume will be set as 0dB (Max). You can't control volume for Digital Out with X45

※ Default: Variable

4-3-10. Digital Out

You can set one of three (3) options like 48KHz, 96KHz and 192KHz

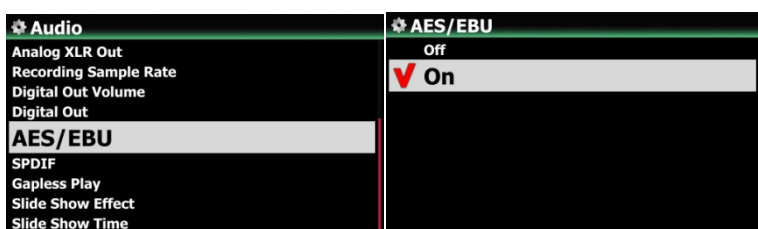


- 1) 48KHz : Max 48KHz frequency
- 2) 96KHz : Max 96KHz frequency
- 3) 192KHz : Max 192KHz frequency
- 4) Passthrough



※ Default: 96KHz

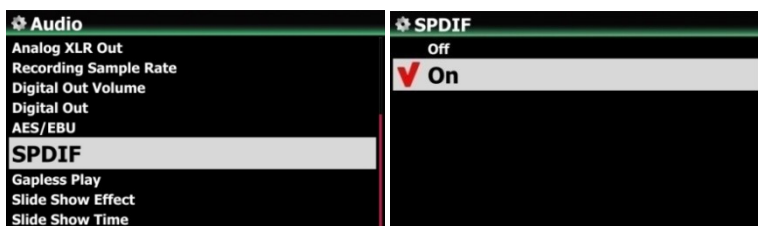
4-3-11. AES/EBU



※ Default: ON

You can set as ON or OFF for AES/EBU digital output

4-3-12. SPDIF

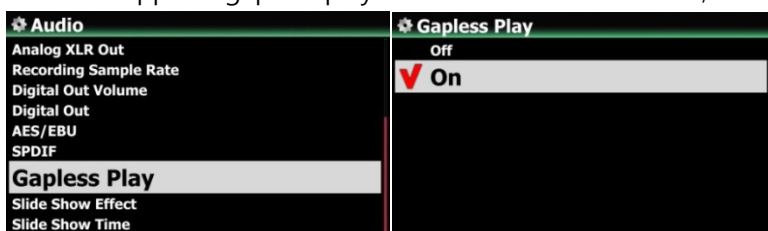


You can set as ON or OFF for SPDIF digital output

※ Default: ON

4-3-13. Gapless Play

The X45 supports gapless playback function for MP3 files, WAV, FLAC and DSD files only.



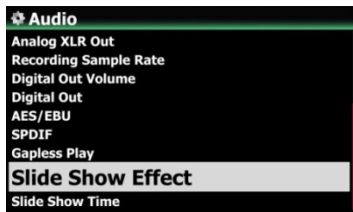
※ Default: ON

【 TIP 】

※LAME-encoded MP3 files only supported

※The Gapless play function works properly on 'Repeat All' and 'Normal' modes only. For example in 'Shuffle' mode Gapless play is not supported

4-3-14. Slide Show Effect



Six (6) options are available like All, Fade in & out, Transition, Rotation, Flip and None.

※ NOTE: For detailed explanation, refer to 19-3. Photo Slide Show (Page 105)

4-3-15. Slide Show Time



You can set show time and effect time according to your taste.

※ Show time: The time required to show one photo

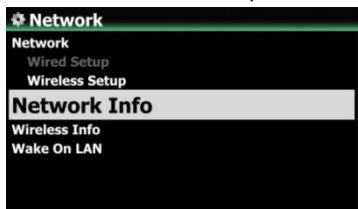
※ Effect time: The time required to transit one photo to other photo

※NOTE: For detailed explanation, refer to 19-3. Photo Slide Show (Page 105)

4-4. Network

※ Make sure your Ethernet cable or a USB WiFi dongle is connected.

Select Network and press the OK button.



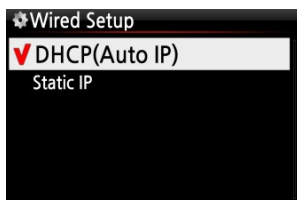
① Select Network and confirm with the OK button.

② Select Wired Setup or Wireless Setup and confirm it with OK button.

【 TIP 】 To check network information, press Network Info.

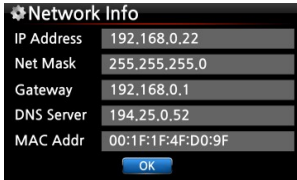
4-4-1. Wired Setup

4-4-1-1. DHCP (Auto IP)



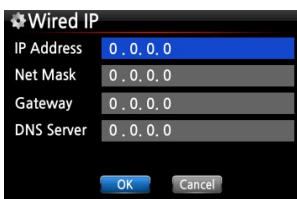
③ Select DHCP(Auto IP) and confirm with the OK button. There is no need to enter any values.

④ Select OK and confirm with the OK button.

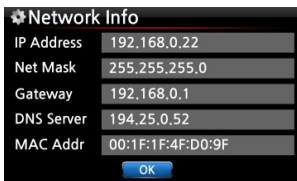


- ⑤ The screenshot shown on the left will be displayed if the network is connected successfully.

4-4-1-2. Static IP



- ① Select Static IP and confirm with the OK button.
- ② Enter the values such as; IP Address, Subnet mask, etc.
- ③ Select OK and confirm with the OK button

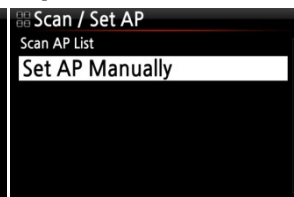
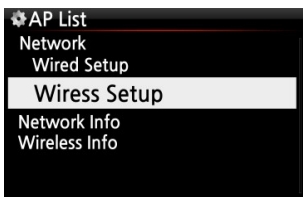


- ④ The screen to the left will be shown if the network is connected successfully.

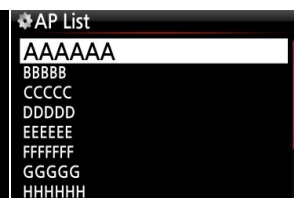
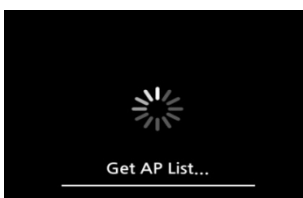
4-4-2. Wireless Setup.

The X45 offers two kinds of method for wireless network connection

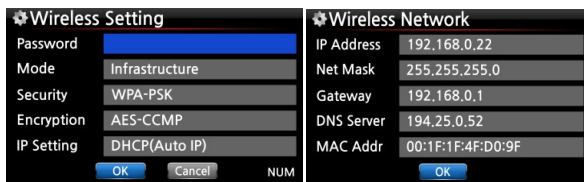
4-4-2-1 Open SSID



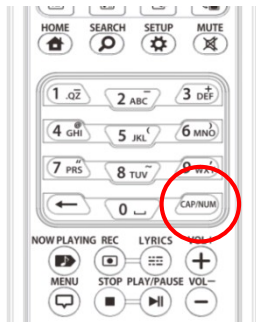
- ① Select 'Wireless Setup' and confirm with OK key.
- ② Select 'Scan AP List'. All AP available will be listed up.



- ③ Select proper AP and confirm with OK key.
- ④ If the AP has a password, enter it and select OK and confirm OK key.

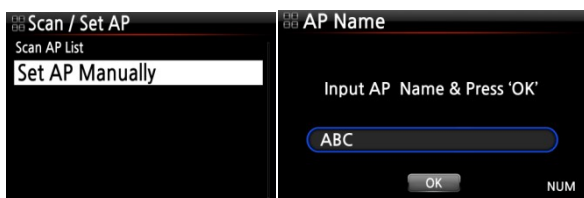


The screen to the left will be shown if the network is connected successfully.



※ With CAP/NUM key of remote control, you can toggle number, capital, small alphabet or symbols for typing.

4-4-2-2 Hidden SSID

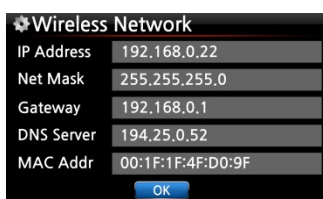


- ① Select 'Set AP Manually' to open the window for AP name input like left.
- ② Input AP name and select OK and confirm it.
- ⑤ The window for the password input will show up. The follow procedure is same as 'Open SSID'

4-4-2-3 WiFi Repeater Roaming function

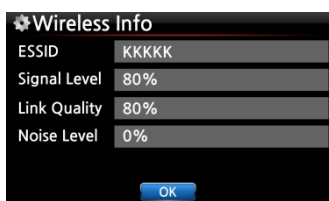
In case that signal strength of the connected AP goes down -45db, the X45 will be connected to the AP which has same SSID and better signal strength if it is detected

4-4-3. Network Info



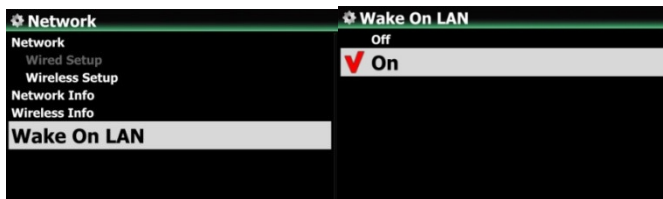
Select Network Info and confirm with the OK key. You can see the network information displayed as shown below.

4-4-4. Wireless Info



Select Wireless Info and confirm with the OK key. You can check the Wireless LAN signal strength, see below screen shot.

4-4-5. Wake ON LAN

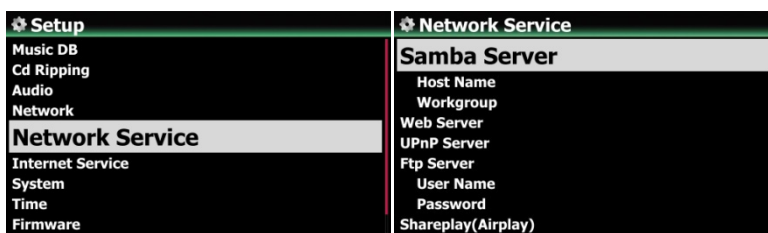


If Wake ON LAN is set as ON, X45 can be powered ON by a signal from outside via network.

※ Default: OFF

<NOTICE> In case that Wake ON LAN is set as ON, X45 Power LED on the front will stay as Blue even though you power it off by remote control or front power button.

4-5. Network Service

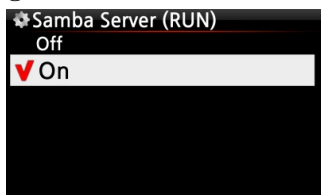


Select Network Service and confirm with the OK key. There are several items like Samba Server, Web Server, UPnP Server and FTP Server and Shareplay(Airplay)

4-5-1 Samba Server

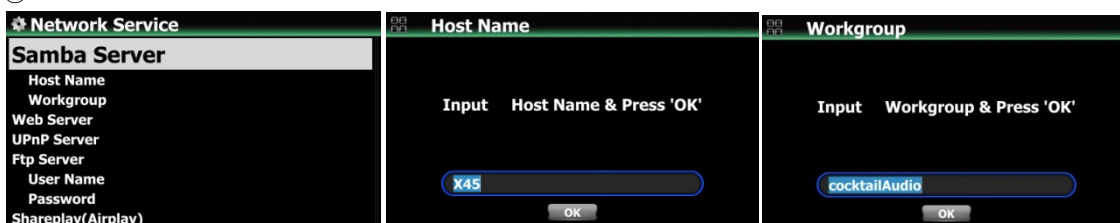
If you would like to see the folders on the X45 hard disk through your network connected PC you can set up the following:

- ① Select Samba Server and confirm with the OK key. Set Samba Server as ON, see below



※ default: OFF

- ② Select Samba Server and confirm with the OK button.



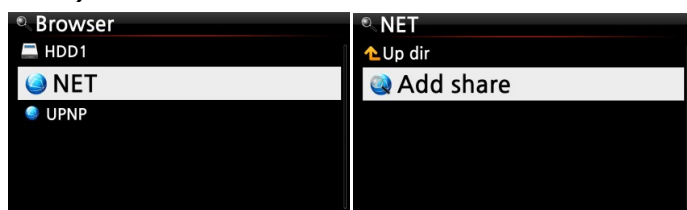
- ③ Select Host Name and Workgroup.
 - ④ Enter host name and workgroup name and select OK and confirm with the OK button.
- ※ **How to see the folders of the X45 hard disk on your PC screen (based on Window 7)**
- ① Click the 'START' icon on the left/bottom on your monitor.

- ② Select 'Computer' and click it.
 - ③ You may see 'Network'
 - ④ Click 'Network', then you may see all servers (The X45 default host name is X45) connected to local network.
 - ⑤ Select 'X45' and click it.
 - ⑥ You may see the two folders, LocalStorages and MusicDB.
- ※ **WARNING: You must NOT access to the MusicDB folder related to database. If you delete or edit something inside of the folder, it will make MusicDB serious trouble.**

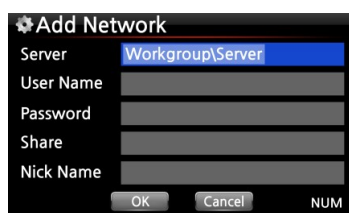
4-5-2 Network Sharing (Samba Client)

You can connect the X45 and the storage devices in the same network. If you want to stream the file in remote devices and play it with the X45, you need to do 'network sharing' first as below.

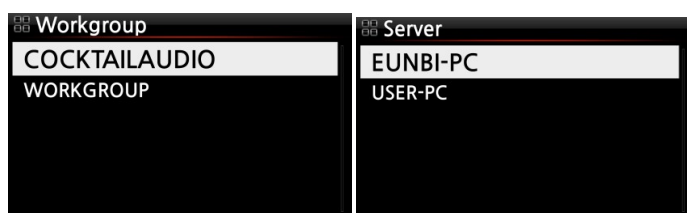
1) How to add 'shared folder'



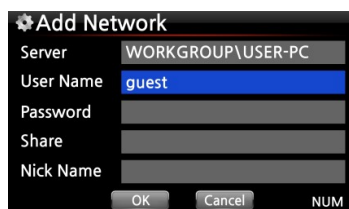
- ① Go to Browser and click 'NET' when network is enabled
- ② Click 'Add share' and the below screen shows up



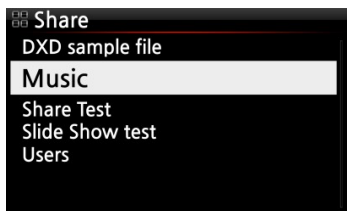
- ③ Click the Server (Workgroup \ Server), then you may get workgroup and server as below.



※ For example, you selected 'WORKGROUP' and 'USER-PC'. Then, the picture below will show up.

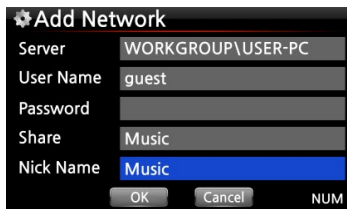


- ※ User Name default: guest
- ④ Place the cursor on the Share, and click it. Then the shared folders will be displayed as below.



⑤ Select the folder that you want to add

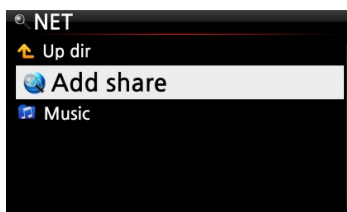
⑥ For example, you select 'Music' folder. Then, the screen below will show up to make 'Nick Name'. The very 'Nick Name' will be listed on the X45 screen as networked folder.



⑦ You can change the nick name (Music) freely as you want.

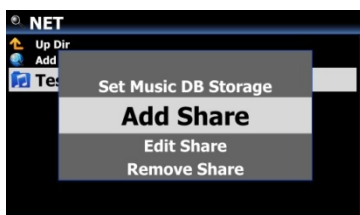
※ Same nick name can't be used.

⑧ Select OK and confirm it. The screen below will show up.



⑨ Now, you may select 'Music' folder and click it to play the files in the shared folder.

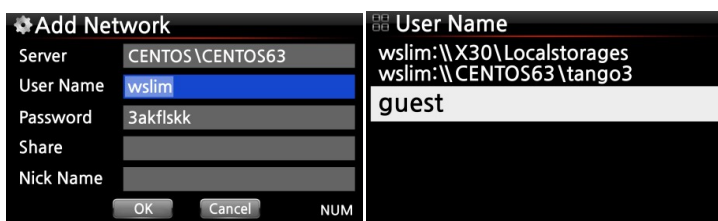
2) How to edit and remove 'shared folder'



① Place the cursor on any folder listed on the screen.

② Press MENU key to open popup menu as the picture on the left. You may add or edit here.

3) Convenient method to input the user name that you input previously



Place the cursor on the User Name and click it. Then, you may see the user name that you input previously

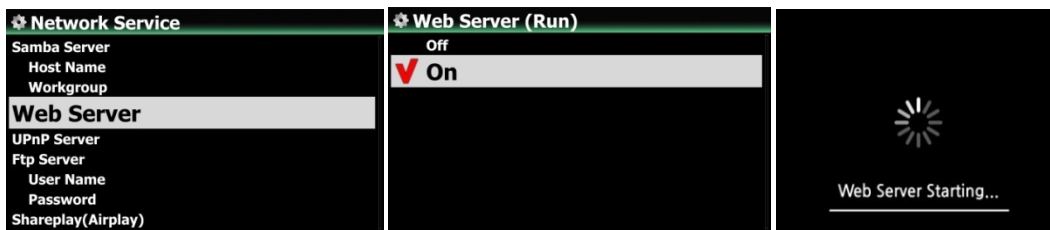
4-5-3 Web Server

With the Web Server function of the X45, you can enjoy the following functions:

- Add album cover art to all albums stored (ripped) in the X45 Music DB through Internet.
- Edit ID3-tag information of each song
- Play and control the X45 through the WebInterface
- Make playlists with songs stored in the Music DB of the X45
- Refer to '4-5-3-2 How to start WebInterface' on page 52

4-5-3-1. How to enable Web Server

Select Web Server and confirm with the OK key. Set to ON as shown below

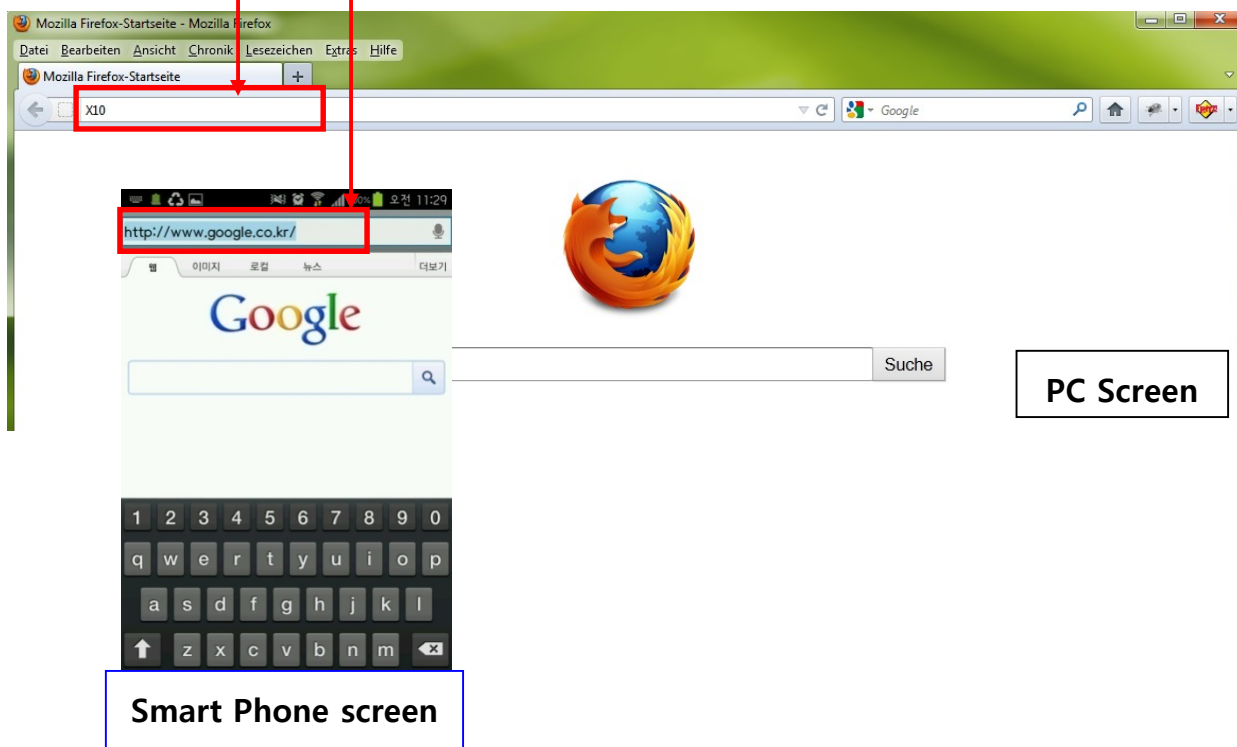


4-5-3-2. How to start WebInterface

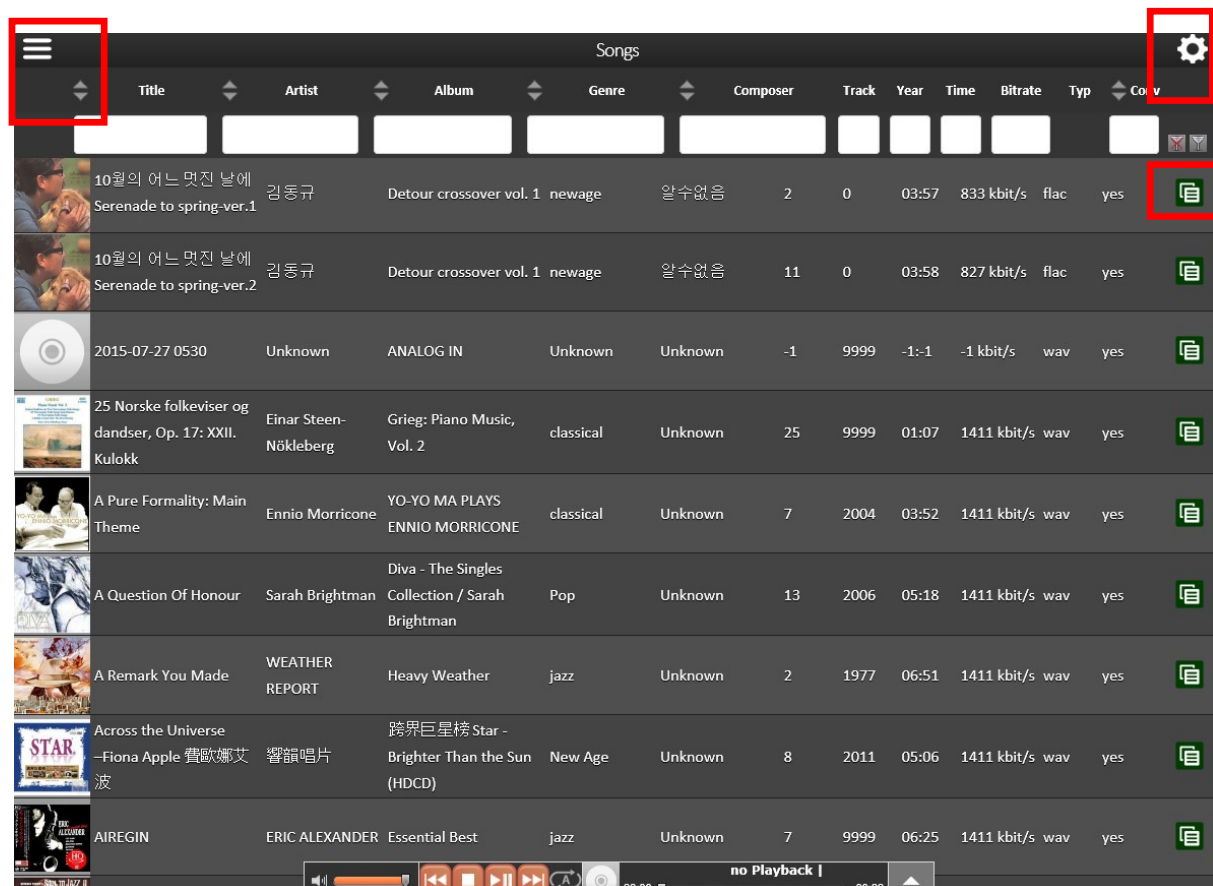
The X45 WebInterface is available in two formats; one for PC (tablet PC also), the other is for smart phones.



- ① You can get the IP address of your X45 from SETUP. (SETUP / Network / Network Info)
- ② Type in the IP address (for example, 192.168.0.4) into the address window in the web browser of the PC or Smart phone, see below.



Main Screen

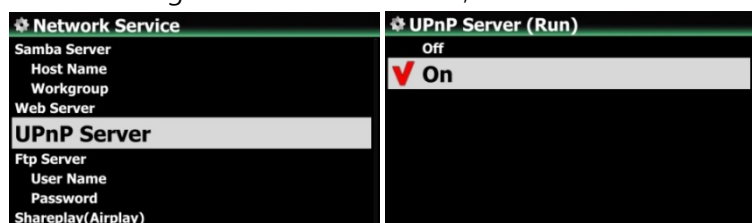


<NOTICE> Please click the items marked with quadrangle. Then, you may see various functions

4-5-4 UPnP Server

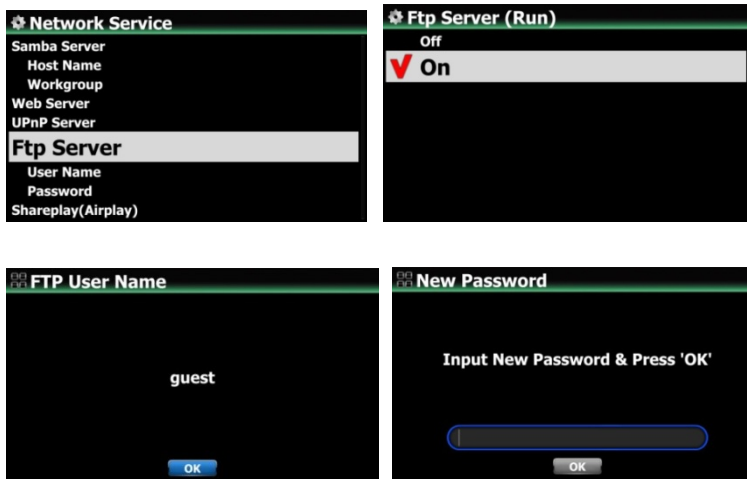
If you have a device (like a PC) which supports UPnP client protocol, you can play music stored in the X45 Music DB through the UPnP device.

Default setting for UPnP Server is ON, see below.



4-5-5 FTP Server

Select FTP Server and confirm with the OK key. Set it to ON. User Name is fixed as Guest. Default password is 0000. You may change password should you wish to.

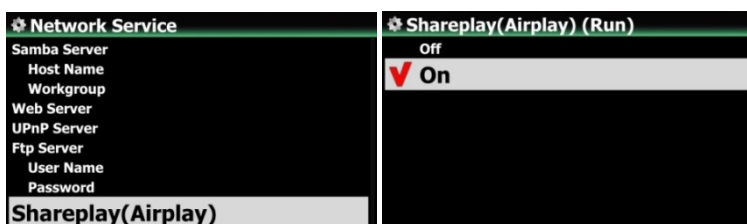


【 TIP 】 You may use the FTP software like 'File Zilla'. The character should be set as 'UTF-8'.

※What you can do with FTP Server function?

After installing FTP software like 'File Zilla' onto your PC, you can copy, delete or move files or folders between X45 hard disk and your PC hard disk.

4-5-6 Shareplay(Airplay)

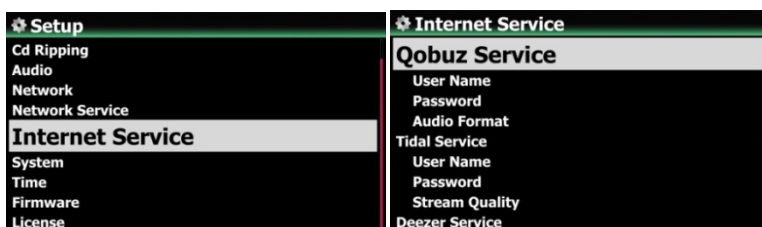


You can set Airplay function as OFF if needed

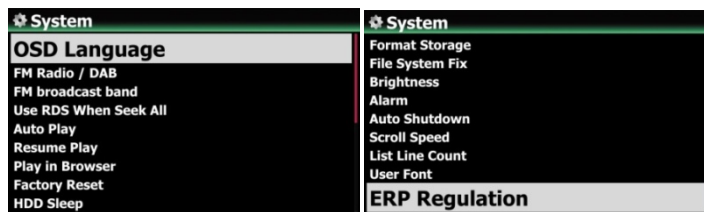
※Default: ON

4-6. Internet Service

X45 integrated Online Music Services into its software. So, you can play Qobuz, TIDAL, Deezer, Napster with X45 directly if you subscribe for those services and put their user name and password here properly.

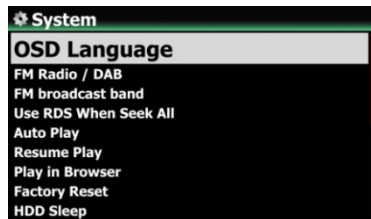


4-7. System



① Select System and confirm with the OK button.

4-7-1. OSD (On Screen Display) Language.



② Select OSD Language and confirm with the OK button.

Supported languages will be displayed.

③ Select your preferred language and confirm with the OK button.

【 TIP ③ 】 Default is English.

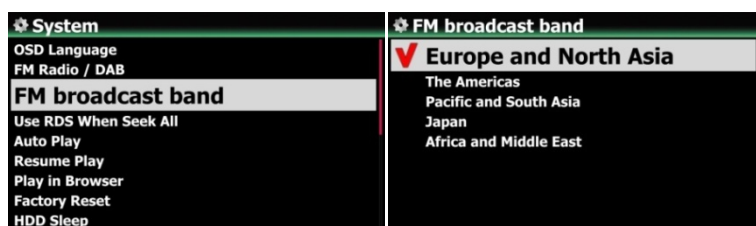
4-7-2. FM Radio / DAB+ selection



You can select FM Radio or DAB+ at this setup

※ Default: DAB+

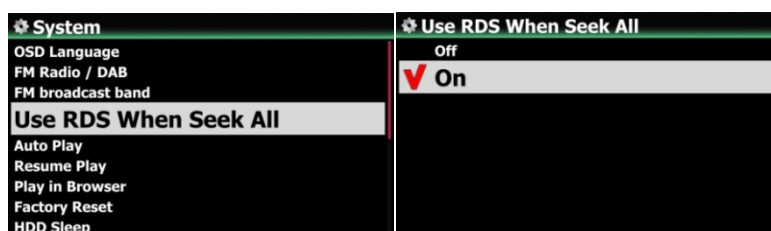
4-7-3. FM Broadcast Band



You can select your area for better signal receive

※ Default: Europe and North Asia

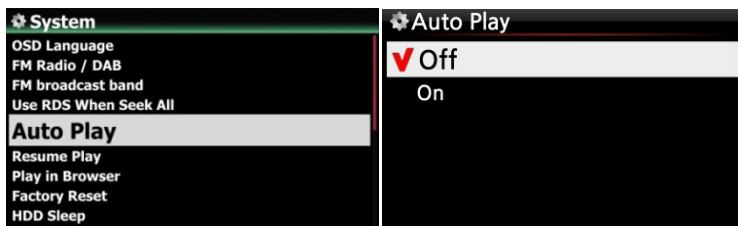
4-7-4. Use RDS When Seek All



To speed up for station seeking, you can set RDS function as OFF

※ Default: ON

4-7-5. Auto Play



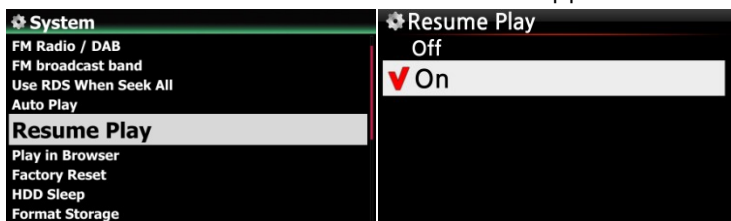
Select Auto Play and confirm with the OK button. You can set it to ON or OFF.

※ Default : OFF

【 TIP 】 For detailed explanation of Auto Play function, refer to 19-13 Auto Play (Page 110)

4-7-6. Resume Play

When you boot up the X45, it will automatically resume playing the music in the Music DB, Browser or i-Radio from where it was last stopped.



Select Resume Play and confirm with the OK key. Set it as ON as shown left.

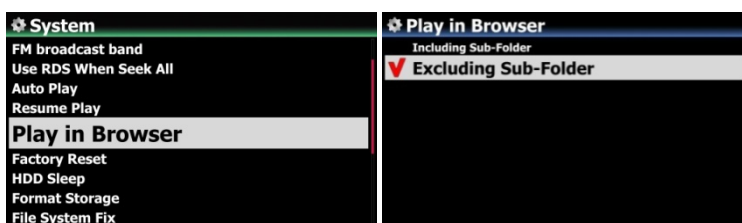
※ Default is OFF

【 TIP 】

※This function does NOT work in the case that the 'Alarm' function or 'Auto Play' function is enabled.

※Function priority : Alarm function ----→ Auto Play function -----→ Resume Play function

4-7-7. Play in Browser



1) Including Sub-Folder : All songs in sub-folders also will be played.

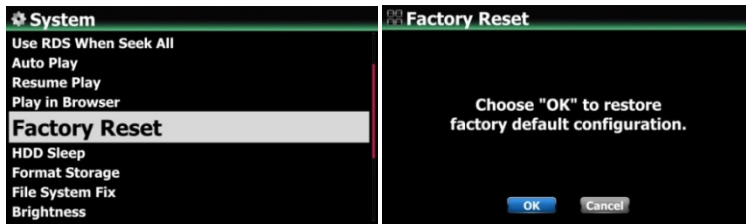
2) Excluding Sub-Folder : Any song in sub-folders will not be played

※ Default: Excluding Sub-Folder

You can play all files in multiple folders or in single folder.

- ① Select folders with RIGHT arrow key.
- ② Press MENU key to open popup menu
- ③ Select 'Start Playing' to start playing.
- ⑤ All songs in the selected folder will be played

4-7-8. Factory Reset

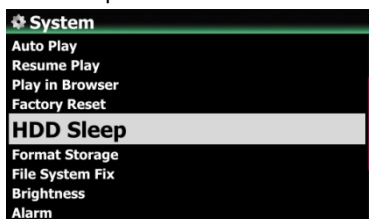


To restore changed values of setup, select Factory Reset and confirm with the OK button.

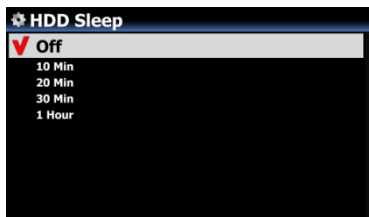
<NOTICE> When you boot up after Factory Reset, it will ask for Wizard Setup

4-7-9. HDD Sleep

You can make X45 HDD go to sleep mode by this setting. There are five (5) options like OFF, 10 Min, 20 Min, 30 Min and 1 Hour. During the selected time, if no access to HDD, the HDD goes into sleep mode.

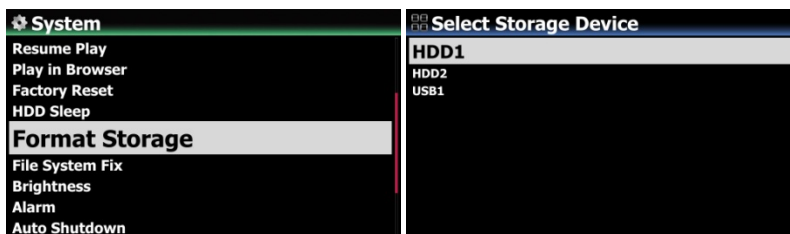


※ For the X45 to wake up from HDD sleep mode, it takes 3~4 seconds. During this time, the X45's response to the input signal from remote control will be delayed.



4-7-10. Format Storage

※ NOTE: HDD Format function of the X45 does not support multi-partitioning. If you would like to make two (2) partitions on the HDD we recommend this is done using your computer.



※ NOTE: The X45 offers the function to format internal hard disk and external USB devices also. The format procedure is same for the both storages.

<NOTICE> If you format HDD, all data in the HDD will be lost

4-7-11. File System Fix

When you suspect there is some problem in the file system of storages like internal HDD or connected USB storage, you can try this function to remove some error in file system of storages.

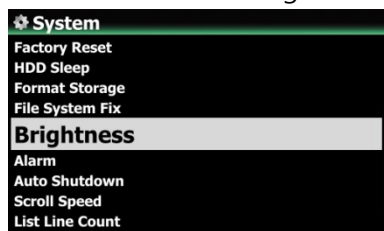
Select File System Fix and confirm with the OK key.



【 Caution 】 We recommend you NOT to run this function if the file system of the X45 hard disk has no problems.

4-7-12. Brightness

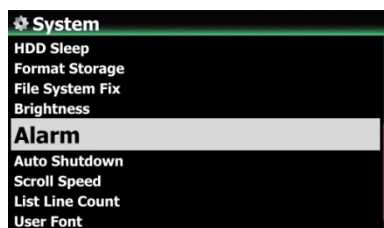
You can control the brightness level of the LCD.



Select Brightness and confirm with the OK key. You can set the brightness using the LEFT/RIGHT arrow key on the remote control. ※ Default: 10

4-7-13. Alarm

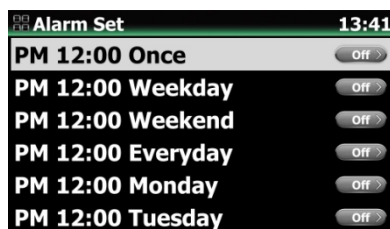
You can set six (6) alarm settings on the X45.



① Go to Alarm at SETUP, and confirm it with OK key.
The following screen will appear.

② Select the line you require and press the OK button.
The following screen will appear.

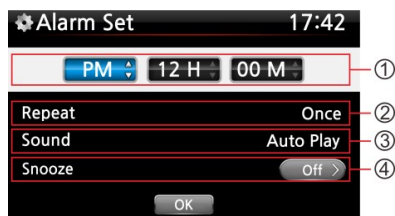
※ NOTE: The time should be set minimum 10 minutes later than current time.



③ Set time, cycle and sound source.

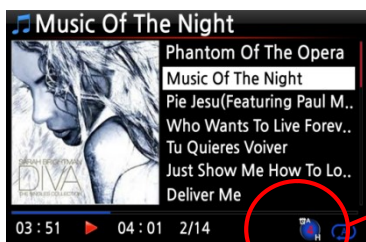
④ Set Snooze ON.

⑤ Select OK and confirm it with OK button.



- ① Selecting time with up/down button.
- ② Selecting cycle with OK button
- ③ Selecting sound source from Playlist or iRadio (My Favorites)
- ④ Selecting snooze ON/OFF

※ NOTE: In case that Alarm is set, the below icon will show up on the playing screen.



※ NOTE

A : Alarm

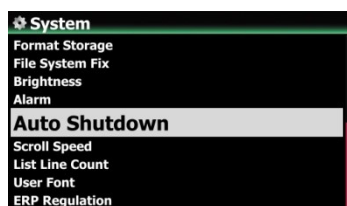
2 : Two

D : Day

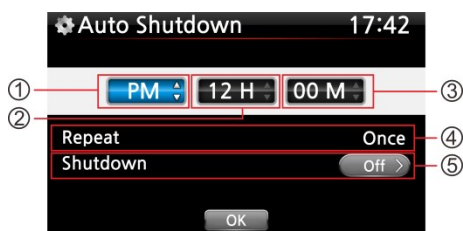
Alarm is set as 'after 2 days from now'.

4-7-14. Auto Shutdown

The X45 will be powered off automatically at the assigned time and date.



- ① Go to SETUP and select System.
- ② Select Auto Shutdown and confirm with the OK key
- ③ Select from the list and confirm.



- ④ You can set the time on the X45
- ⑤ Once the time is set move cursor onto the OK icon and confirm with the OK key.

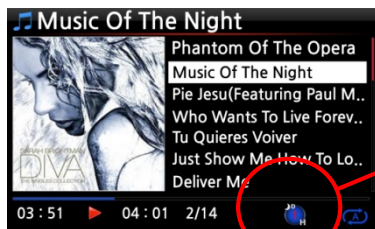
※ NOTE: Use the arrow key (UP/Down) to change the values. Use the arrow key (left/right) to move the cursor. Press the OK key to change 'Repeat'. Use the arrow key (left/right) to set ON/OFF.



- ⑥ The left screen will show. Press the RETURN key to save the setting and exit this setup.

※ NOTE: Auto shutdown does not work properly if you set the shutdown time 'within 3 minutes of the power

※ NOTE: In case that Auto shutdown is set, the below icon will show up on the playing screen.



※NOTE

D : Auto Shutdown

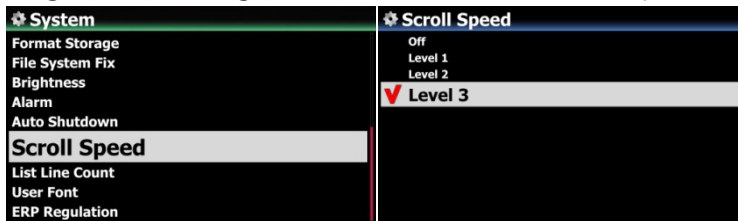
3 : three

H : Hour

After 3 hours, X45 will shutdown

4-7-15. Scroll Speed

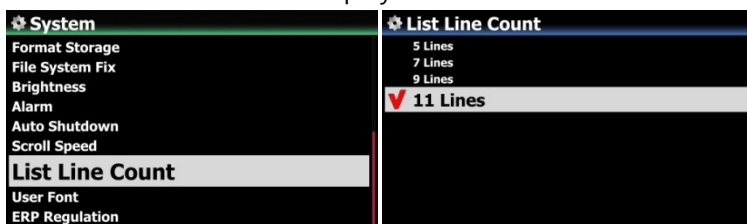
Long text is scrolling on the screen. You can set its speed like below.



※ Default: Level 3

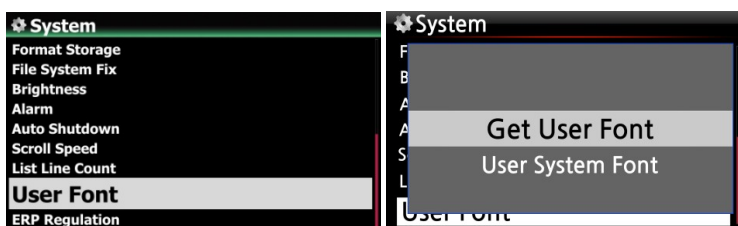
4-7-16. List Line Count

The number of text lines displayed on the screen is selectable according to your taste like below.



※ Default: 11 lines

4-7-17. User Font



※ Various fonts are available in Windows PC (C:/Windows/Fonts). You can get one of them and use it for X45 via this function.

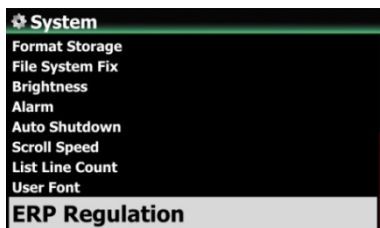
① Copy preferred fonts file into USB memory stick or local hard disk of X45.

② go to SETUP > System > User Font: Confirm it with OK key to open menu window like above

③ Select 'Get User Font' to look for the fonts files and load it.

※ To return to 'X45 original system font, select 'User System font' and confirm it with OK key.

4-7-18. ErP Regulation

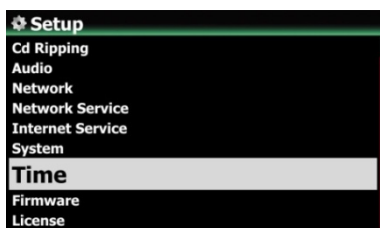


According to CE Regulation (ErP/Energy Efficiency Regulation), X45 will enter into Power Off mode or WOL mode automatically after 20 minutes without any working or input signal. You can set this function as ON or OFF

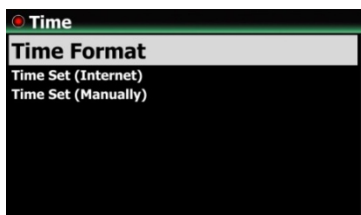
※ Default: OFF

4-8. Time

You can set time format and time via internet or by manual here.



4-8-1. Time Format

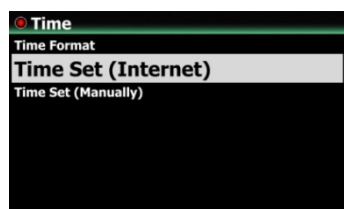
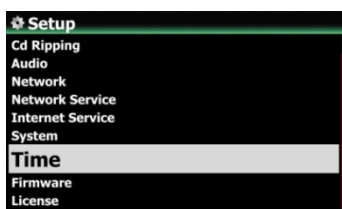


X45 displays the time while playing the internet radio.

Pressing the CLOCK key displays time.

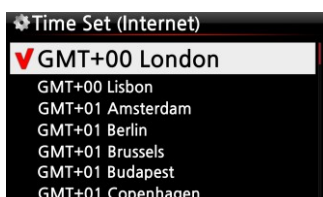
X45 can display one of two ways, AM/PM or 24Hours. You can select which here.

4-8-2. Time Set (Internet)



① Select Time Set (Internet) and confirm it with the OK button. All the time options will be displayed as below.

【 TIP 】 Make sure that the X45 is connected to network (internet) before you try time setting by Time Set (Internet).

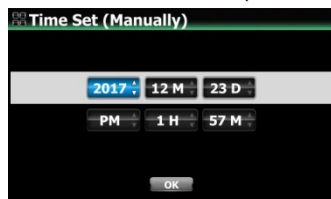


② Select your preferred time and confirm it with OK button.

【 TIP 】 Default: GMT+00 London

4-8-3. Time Set (Manually)

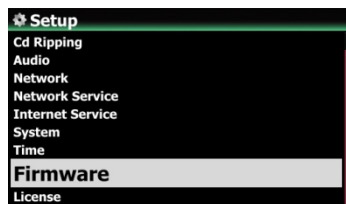
Without a network (internet) connection, you can set time manually.



- ① Select Time Set (Manual) as in the above picture and confirm it with the OK button.
- ② Input your time manually and select OK to confirm it with OK button.

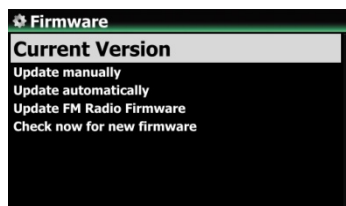
4-9. Firmware

You can check the current firmware version of your X45 and install the updated new firmware.



Select Firmware and confirm with the OK key.

4-9-1. Current Version



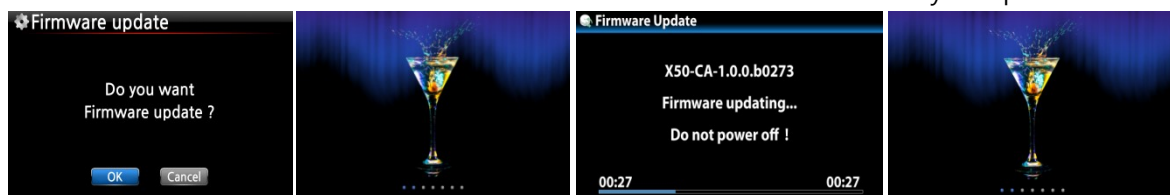
You can check the current firmware version as shown below. Select Current Version and confirm with the OK key.

4-9-2. Update manually (Firmware update manually)



- ① Obtain the new firmware first and put it onto the root directory of USB memory stick or the HDD of the X45.
- ② Plug the USB memory stick into the USB host port of the X45.
- ③ Go to SETUP and select Firmware Update and confirm with the OK key.
- ④ Select the storage device containing the new firmware.
- ⑤ Select xxxxxxxxxx.pkg file and confirm with the OK key

Select OK and confirm with the OK button. The X45 will reboot automatically to update the X45.



4-9-3. Update automatically (Automatic Firmware Update by network)



The X45 will automatically update the firmware through the network. If you don't wish this done automatically you can change the setting to OFF, see left.

※ Default: ON

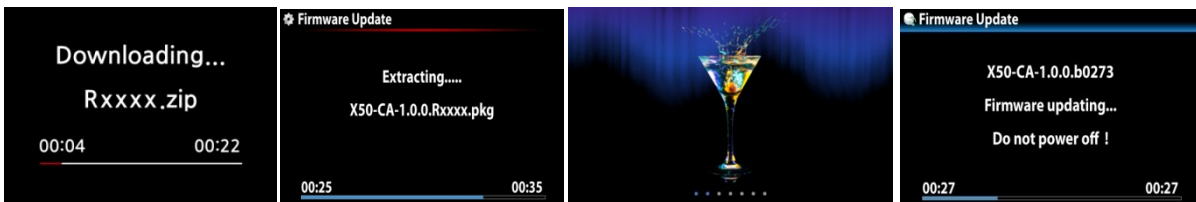
4-9-4. What is Automatic Firmware Update by network?

This function is available only when X45 is connected to a network (internet). In the instance that a higher version of the firmware exists at our server system, your X45 will check it automatically when the X45 boots up.

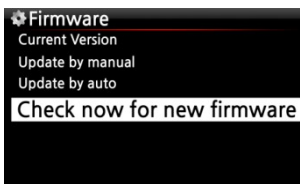


※ NOTE: If CANCEL is selected, the folder [New Firmware] is created automatically in the internal hard disk (or USB), then the X45 will not ask for a Firmware Update when booting up. If you delete [New Firmware] through Browser, it will ask again.
※ NOTE: There is no actual data in the [New Firmware] folder.

If OK is selected the X45 will try downloading and extracting it automatically. The X45 will reboot automatically to update the firmware, see sequence below:



4-9-5. Check now for new firmware



When you want to check if your X45 has the latest firmware installed, please use this function. If there is higher version of firmware in our server, the dialog window will show up when you click this option.

4-10. License for Gracenote Service

4-10-1. Limited Gracenote service

X45 provides Gracenote service to retrieve CD metadata and Album cover art for CD Ripping.

※ NOTICE

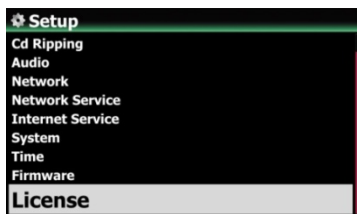
But, Gracenote service is free for two (2) years. After two (2) years, if you want to keep using Gracenote service, you need to pay five (5) EURO per service for one year.

Of course, if you don't like to Gracenote service with payment, CD metadata from freedb server and album cover art from Google, Amazon, Bing, etc are available in the X45

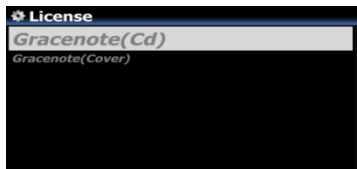
4-10-2. How to activate license for Gracenote service

※ NOTICE

You need to take a simple process to activate 'Gracenote Service' first like below.

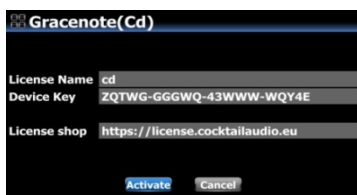


- ① Go to SETUP>License.
- ② Click 'License', then below screen will show up



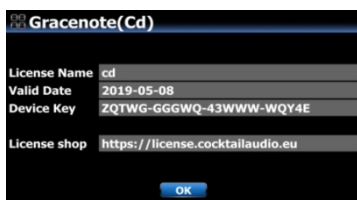
※ Two(2) services are available. One is CD metadata(Cd), the other is Album coverart(Cover)

- ③ Click one of them. For example, click 'Gracenote(Cd)'



There will be License Name and Device Key, which are needed to activate license

- ④ Click 'Activate'



- ⑤ Click 'OK' to finalize 'license activating'

※ After two(2) years, you can take a similar process to buy license

5. What is the CD Database (Music DB) of X45

The Music DB is a database of the music loaded (ripped) to the X45 (onto the storage). You can make X45 MusicDB via the functions of 'CD Ripping' and 'Importing to DB'. You can edit the CD information of each track such as the title, album, artist, year and genre that are stored in the Music DB. You can search any of your music easily by title, album, artist, year or genre.

When the X45 is connected to the internet/network the CD information can be retrieved from the CD metadata server provided by the company with which we contracted for that service.

We use two CD metadata servers. One is 'freedb', the other is 'Gracenote'. The freedb is free, but Gracenote service is not free. Freedb database is available at X45 basically, but if you want better CD information, you can use Gracenote database by activating it at X45 SETUP.

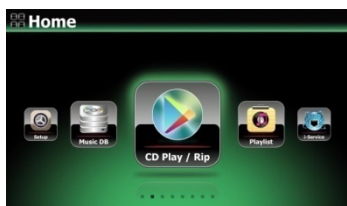
6. CD Loading (Ripping)

All music that you load (rip) onto the X45 will be stored in hidden folder (the name of the folder is .DB), that cannot be seen.

【 TIP ① 】 It is recommended that you connect to the internet to make use of the CD metadata server when loading (ripping) CDs.

6-1. When the X45 is connected to network (Internet)

Make sure to connect X45 to network (Internet) before inserting CD into X45.



① Insert CD into X45, then all tracks will be listed on the screen.

【 TIP ② 】 If the X45 is connected to the Internet, but displays the track lists instead of the actual music titles, eject the CD & re-insert it into the optical drive again.

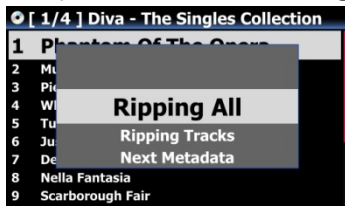


② For CD loading (ripping), press the MENU button.

Then the below popup screen is displayed showing "Ripping All".

6-1-1 Ripping All

This procedure is for loading (ripping) a whole CD.



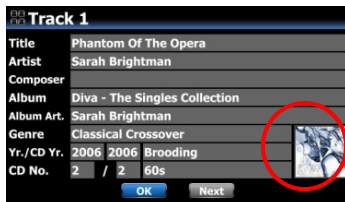
③ Select Ripping All and press OK button.

Then the below screen is displayed.



④ Select one of five (6) options (WAV, ALAC, AIFF, MP3, OGG, FLAC) and press OK button.

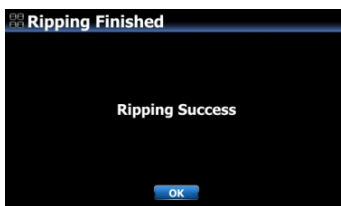
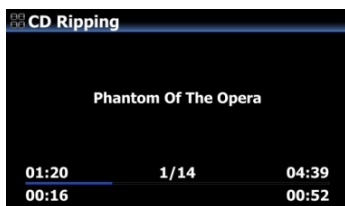
Then, the below screen is displayed.



The X45 retrieves each information (title, artist, etc) from the CD metadata server

⑤ Press OK to start CD ripping

※ NOTE: In case that multiple CD metadata exist, you can select other metadata for the CD with the NEXT icon, and click Album cover art if you want to change album cover art



⑥ Now, it's ripping

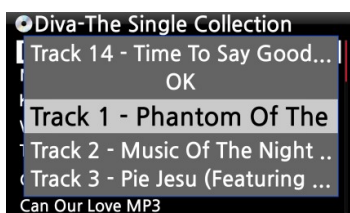
6-1-2. Ripping Tracks

This procedure is for loading (ripping) individual tracks.

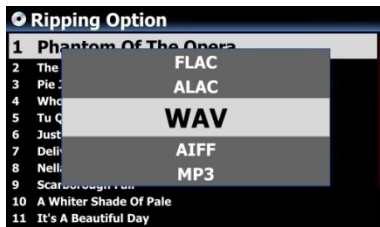


① Select Ripping Tracks and confirm with the OK button.

The below screen is displayed.



② Select the track(s) you want to load (rip) with RIGHT ARROW key, the selected tracks will change to red. After finishing selecting, select OK and confirm with the OK button.

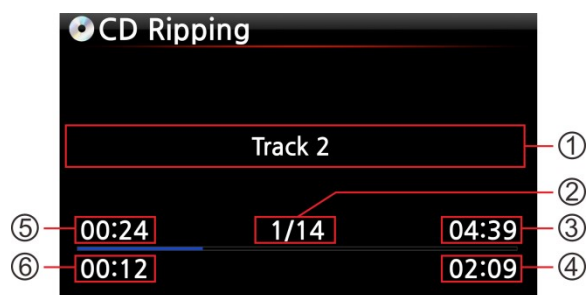


③ Select one of the 6 file type options and confirm with the OK button.

From here, next procedures are same as the 'Ripping All'

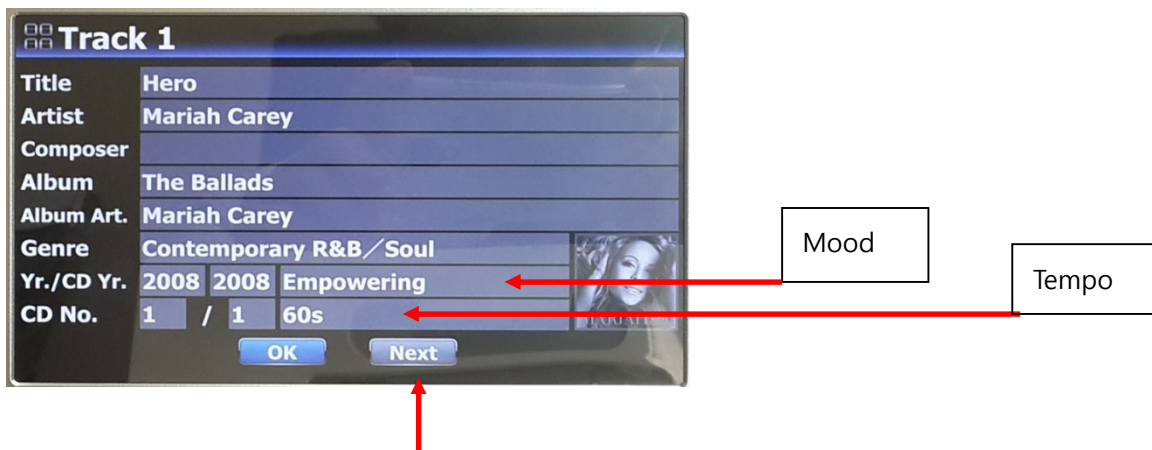
【 TIP ③ 】 When a CD is inserted into the optical drive, the X45 loads (rips) the CD to a WAV format first, even if the MP3 option was chosen. The X45 then converts the WAV file into MP3 format afterwards in the background. The X45 continues to convert the files if it is turned on. The X45 will pause the conversion process during ripping.

【 TIP ④ 】 Explanation of each item on the ripping screen.



- ① Title of track being ripped
- ② Number of tracks to be ripped/ total no of tracks in CD.
- ③ Title of playing time
- ④ Total time for playing
- ⑤ Equivalent play time
- ⑥ Ripped time

6-1-3. Structure of ID3 Tag Edit Dialog Screen in CD Ripping



This 'Next' key will show up in case that metadata for this CD exists in CD metadata company server with multiple number

6-1-4. How to merge all tracks of Multi-Album into one folder(one album) when ripping multi-album CDs

For multi-album, you can rip all tracks of multi-albums into one folder(one album)



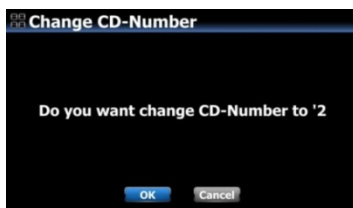
For example, you have Multi-Album, The world's Greatest Ballads, which is composed of three(3) CDs. You already ripped CD1

① Insert CD2 and try ripping procedure. You will meet Tag Edit screen like left. Place the cursor on the Album name and press OK



② Then, you will see 'Album Help' screen like left, and the cursor will be placed on the album which has same 1st alphabet as CD2's album name. This will help you to look for the CD1 easily.

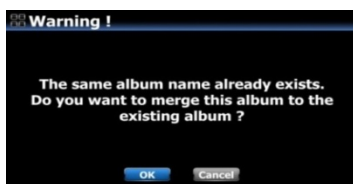
③ Place the cursor on the CD1 album and press OK.



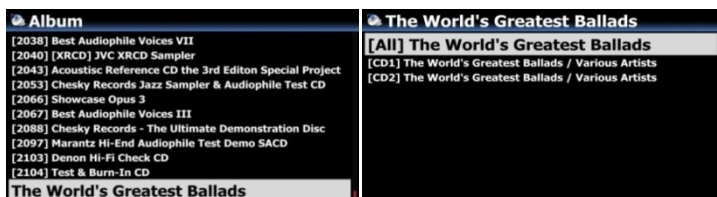
④ Please select OK to change CD number to '2'



⑤ CD1's album name will be inserted into CD2's Tag Edit screen like left. Confirm OK



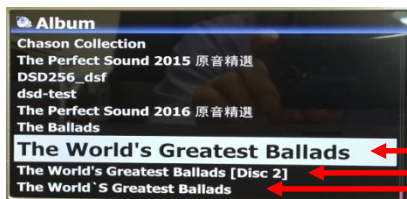
⑥ Select OK and confirm it



6-1-5. How to merge all tracks of Multi-Album into one folder(one album) after you already rip multi-album CDs to separate folders(albums)



For example, you have multi-album, The world's Greatest Ballads, which is composed of three(3) CDs. You already ripped them separately

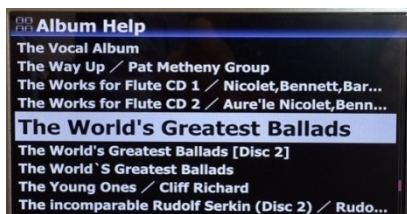


① Completing CD ripping for all three CDs, go to MusicDB. There will be three(3) albums like left picture.



② Place cursor on the CD2(2nd Album) and press MENU key
③ Confirm 'Album Edit' to open Tag Edit screen like below picture.

④ Cursor will be on Album name like left picture. Press OK key to open 'Album Help' screen like below.



⑤ Look for the Album of CD1 and select it with OK key



⑥ Left screen will show up to get CD number. Select OK and confirm it.



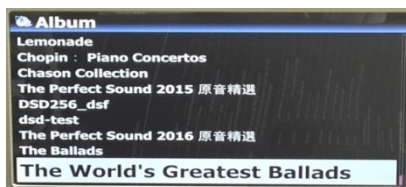
⑦ Then, Tag Edit screen of CD2 will get proper Album name and CD number like Left.

⑧ Select OK and confirm it.

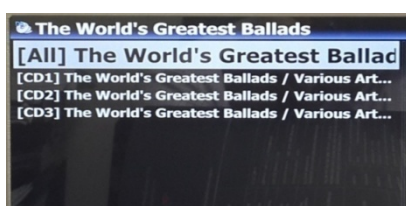


⑨ CD2(2nd Album) was merged to CD1(1st Album). There will be just two Albums(CD1 and CD3) like left screen.

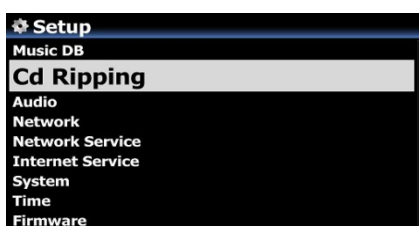
※ For CD3(3rd Album), you may send it to the CD1(1st Album) by the same procedure as above.



⑩ Finally, there will be only one Album like left. Click it. There will be four folder like left. There will be all tracks in the [All] folder(Album)

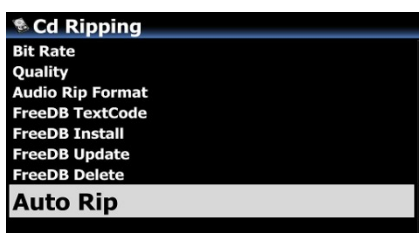


6-1-6. Automatic Ripping(Auto Rip) function



When you want to rip many CDs, this function will be helpful.

- ① Go to SETUP>CD Ripping> Set it as ON (※ Default: OFF)
- ② Insert CD into CD drive
- ③ X45 will start CD ripping and eject CD by itself after finishing ripping without pressing any key

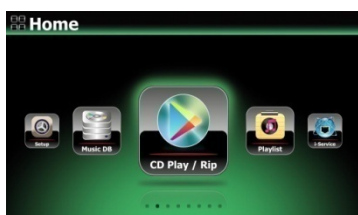


※ NOTICE

- 1) If CD ripping is not successful, X45 will show up 'error message' and will wait for your confirmation.
- 2) After ripping, you don't like metadata or album cover art missing, you can edit the album tag info and get new album cover art through 'Album Edit' and 'Cover Art' functions



6-2. In the case that the X45 is NOT connected to a network (Internet).



- ① Insert CD into X45.
- ② Select CD Play/Rip icon and press OK.
Track list is displayed as in the screen below.

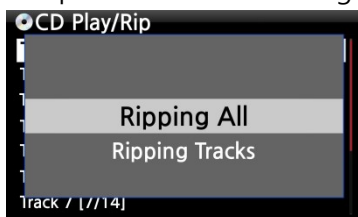


- ③ For loading (ripping), press MENU button.
The below screen "Ripping All" is displayed.

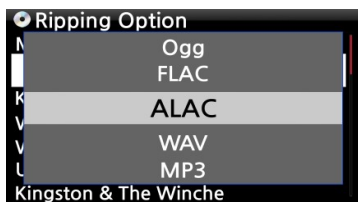
【 TIP 】 Without a network (Internet) connection, the inserted CD will get metadata (tag info) if you installed FreeDB onto X45 storage. The FreeDB data CD is bundled in the X45 package.

6-2-1. Ripping All

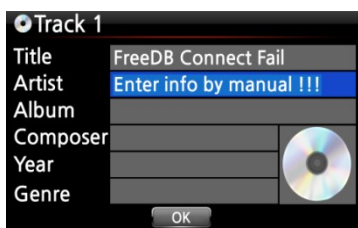
This procedure is for loading (ripping) all the tracks on CD.



- ④ Select Ripping All and confirm it with OK button.



- ⑤ Select one of the 5 file type options and confirm by pressing the OK button. The below screen will be shown.



- ⑥ Enter the info manually with remote controller or USB keyboard.

You must enter Album name to go to next step.

【 TIP ⑥ 】 To use USB keyboard, ensure to connect a USB keyboard into the X45 before you boot the unit.



- ⑦ Select OK to confirm the entry. Then, loading (ripping)

Now loading (ripping).



⑧ Loading (ripping) has finished. Select OK and confirm by pressing OK. The screen below will be displayed.



⑨ If you did not enter info for title, artist, year or genre on the previous step, you can enter all the info here.

⑩ After entering the info, select OK and confirm it by pressing the OK button.

※ NOTE: You can edit tag information for loaded CDs in Music DB of the X45 easily through WebInterface.

6-2-2. Ripping Tracks

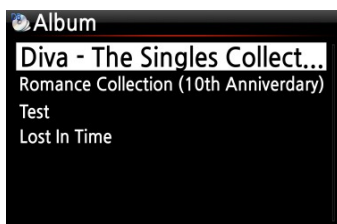
This procedure is almost the same except you are required to select the track you wish to load (rip).

6-3. If the FreeDB is installed onto the storage of the X45

If you installed the FreeDB database onto the storage of the X45 via the supplied DVD it will work as if the X45 is connected to network (internet). The X45 will display the CD information from the FreeDB database installed onto the storage.

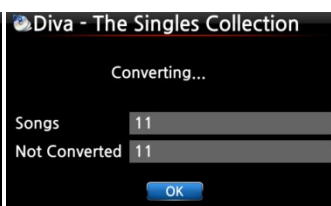
6-4. To check the status of CD ripping and converting.

You can check the status of CD ripping and converting by using this function.



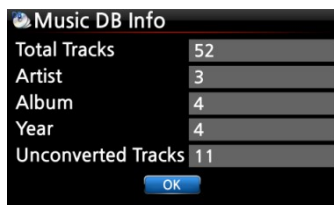
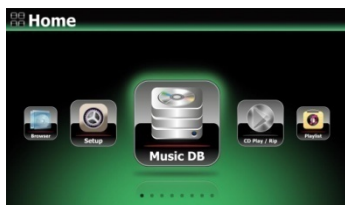
① Place the cursor on the album you want to check.

② Press INFO key



③ The status information will show up like left.

※ NOTE: If you wish to check the information and the status of the conversion process for the whole of the Music DB of the X45, go to the home screen. Place the cursor on the Music DB icon and Press the INFO key.

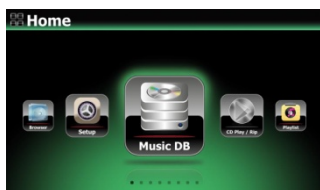


7. How to use the Music DB (database)

7-1. Play music loaded (ripped) onto the X45.

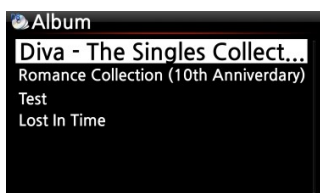
【 TIP ① 】 As soon as you finish loading (ripping) a CD into MP3 format, go to Music DB and select the loaded music and play. You can see the loaded music format is still WAV not MP3. To rip CD within short time, once X45 will rip CD into WAV format first, and then, as background job, it will convert WAV format into the format you selected. Converting lead-time will be almost same as actual playing time.

The Music DB contains loaded (ripped) music.



① Select Music DB icon, confirm with the OK button.

The album list is displayed as shown below.



② Select the album you wish and confirm with the OK button.

All the music in the album is displayed, see below.



③ Select from the music list and confirm with the OK button to start playing the music.



Now playing.

【 TIP ② 】 Pressing the INFO key will change the screen as follows;

[Playing Screen]



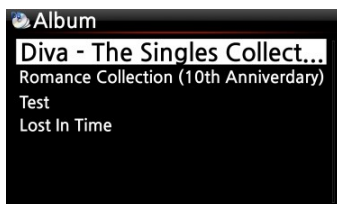
[INFO Screen]



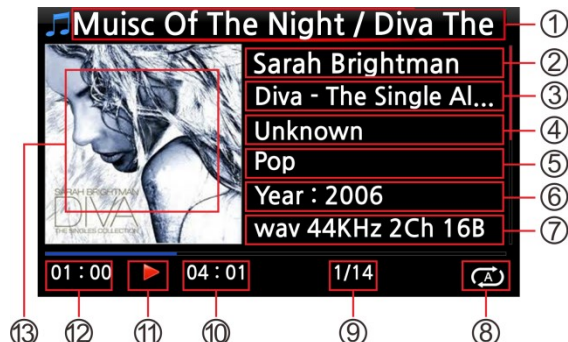
[Title List Screen]



【 TIP ③ 】 On the album list screen, press the MENU button on the remote control, to show other categories such as artist/track list, artist/album list, genre/track list, genre/album list or titles, see below



【 TIP ④ 】 Playing screen ----- press INFO button ----- Detailed info of current music



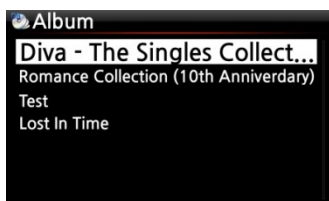
- ① Title / Album of current music
- ② Title of previous music
- ③ Title of current music
- ④ Title of next music
- ⑤ Play mode
- ⑥ Alarm set icon
- ⑦ Auto shutdown set icon
- ⑧ Sleep set icon
- ⑨ # of music playing / Total music #
- ⑩ Total time of current music
- ⑪ Play icon
- ⑫ Played time of current music
- ⑬ Album art of current music

- ① Title / Album of current music.
- ② Artist
- ③ Album
- ④ Composer
- ⑤ Genre
- ⑥ Year
- ⑦ File format/Frequency/Bit rate
- ⑧ Play mode
- ⑨ # of music playing / Total music#
- ⑩ Total time of current music
- ⑪ Play icon
- ⑫ Played time of current music
- ⑬ Album art of current music

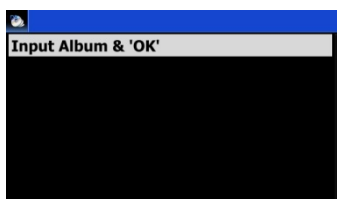
7-2. SEARCH function.

In the case that there are many album lists in Music DB, the search feature can be useful.

SEARCH function

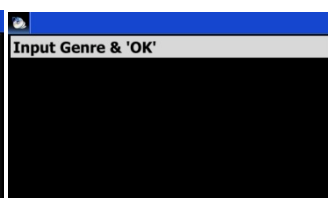
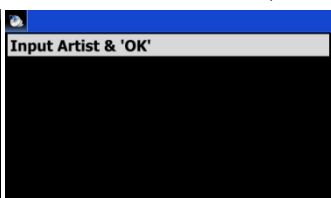


- ① On the album list screen, press SEARCH button to display the left/below screen.
- ② Enter the album name or part of the album name into the album name field using the remote control.



※ NOTE: To view corresponding lists type the first few characters of the album

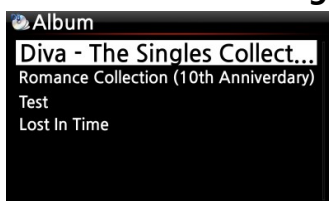
【 TIP ⑤ 】 You can run the SEARCH function by artist from the artist list screen, by genre on the genre list screen or by title on the title list screen, see below.



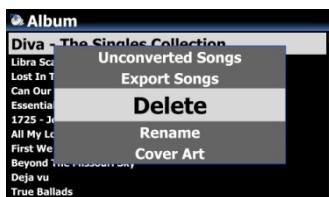
7-3. How to manage Music DB

The X45 allows you to manage the Music DB. You can delete or rename albums, artists and genre. You can export music from other storage devices (USB memory sticks or other hard disks) to Music DB folder.

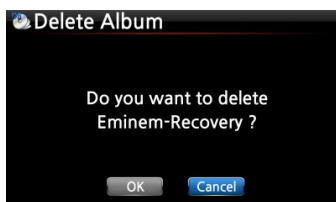
7-3-1. Deleting or renaming music in the Music DB.



- ① Open the album list, artist list or genre list.
- ② Place the cursor on the list you would like to delete/rename.
- ③ Press the MENU button. The menu screen is displayed as shown below.



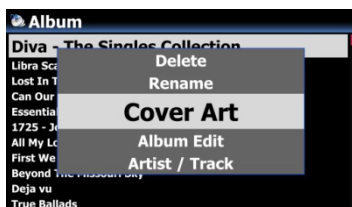
- ④ Select Delete or Rename and confirm with the OK button.



⑤ Select OK and confirm with the OK button.

【 TIP ⑥ 】 You can also run this function for the artist list and the genre list by using the same procedure.

7-3-2. Cover Art



You can add album cover art for an album in MusicDB

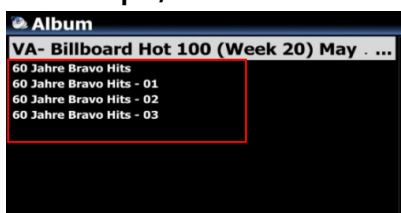
① Place the cursor on the album list to which you want to add album cover art.

② Press MENU key to open menu window like left. Then, you can follow up as the window guides you.

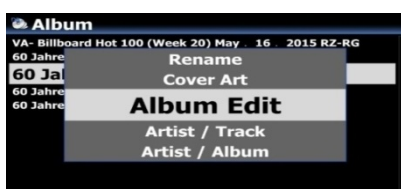
7-3-3. Album Edit for Multi-Album

There is a Multi-Album which is composed of several CD like C1, C2, C3, C4, etc. You can merge C1, C2, C3 and C4 into folder(album)

For example,



※ The 60 Jahre Bravo Hits is a multi-album, which is composed of four(4) CDs. You can merge all tracks of four CDs into one album name(60 Jahre Bravo Hits)



① Place the cursor on the 60 Jahre Bravo Hits -01(This is CD2), and press MENU key

② Select Album Edit to show up the below screen



③ You can edit Album name(60 Jahre Bravo Hits - 01) to target one(60 Jahre Bravo Hits) including other items.

※ If you press OK key when the cursor is in album name, the 'Album Help' screen will show up. You can select target album here



④ After finishing editing the screen, please confirm with OK button.

※ You can merge other CD2, CD3, CD4 like above.



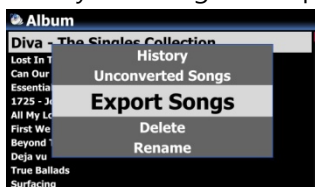
After finishing merging all CDs, the album looks like left screen.

Select it and press with OK key. Then, it looks like below screen. There will be five(5) folders like [All], [CD1], [CD2], [CD3], [CD4]



7-3-4. How to export music from the Music DB to other storage devices (HDD or USB).

You can export music from the Music DB to other storage devices such as; an external HDD or USB by following the steps below:



① Go into the Music DB using the remote control. You can see the Album list. Select the folder (Album) or the music you wish to export.

② Press the MENU key and select Export Songs, see screen shots shown on the left



③ Confirm with the OK key, to display the next screen, shown below



④ Select the destination; HDD or USB and confirm with the OK key. Then the below screen is then displayed.



⑤ Select New Folder and confirm with the OK button to create a new folder. The screen below is then displayed.

⑥ Titled the input folder and select OK and confirm with the OK key

⑦ For example, if you input Diva – The Singles Collection and confirm, the screen below is then displayed.



⑧ Place the cursor on Diva – The Singles Collection and select using the OK button. The screen below is then displayed.



⑨ Select Export Start and confirm with the OK key. The Export function will commence.



Now exporting music.

7-3-5. Creating .M3U and .PLS files when exporting



When you run 'Export Song' function, X45 will create .M3U file and .PLS file also in the target folder. For playlist icon on the home screen, you can export it to outside like USB

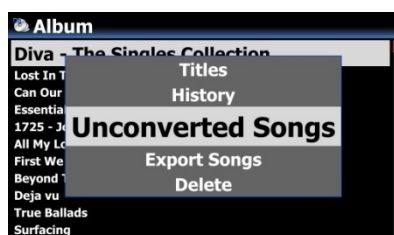
7-3-6. History function

You can list a maximum of 10 recently played songs from the Music DB using this function.



- ① Go into the Music DB
- ② Press the MENU key
- ③ Select 'History' and confirm with the OK key, as shown in the screen shot on the left.

7-3-7. Unconverted Songs



You can check the status of converting

- ① Go into the Music DB and open it as Album list
- ② Press the MENU key and select 'Unconverted Songs' and confirm it with OK key.
- ③ 'Not converted songs' will be displayed in blue

7-3-8. Set 'Playing Section' to play it repeatedly

[Playing Screen]



- ① On the Playing Screen, if you press LEFT ARROW key at a certain point, the point will be 'starting point'.

- ② If you press RIGHT ARROW key at a certain point, the point will be 'ending point'.

※ NOTE

- 1) If the 'Playing Section' is set, it will play repeatedly on the playing section
- 2) Numeric key of remote control (jump function) or -15/+15 SEEK key will be helpful to set 'playing section' easily.



※ In case that 'playing section' is already set, each key works like below.

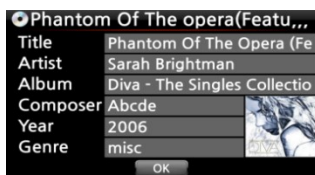
- * -15(SEEK) Key: Pressing the -15 Key one time makes 'Playing Point' move backward by 15 seconds playing time.
- * +15(SEEK) Key: Pressing the +15 Key one time makes 'Playing Point' move forward by 15 seconds playing time.
- * LEFT ARROW Key: When 'Playing Point' is below 50% of total playing time, LEFT ARROW key will make 'Starting Point' move backward by 0.25 seconds
- * RIGHT ARROW Key: When 'Playing Point' is below 50% of total playing time, RIGHT ARROW key will make 'Starting Point' move forward by 0.25 seconds
- * LEFT ARROW Key: When 'Playing Point' is over 50% of total playing time, LEFT ARROW key will make 'Ending Point' move backward by 0.25 seconds
- * RIGHT ARROW Key: When 'Playing Point' is over 50% of total playing time, RIGHT ARROW key will make 'Ending Point' move forward by 0.25 seconds
- * PREVIOUS key: 'From current point to end' will be playing section.
- * NEXT key: 'From beginning to current point' will be playing section.
- * STOP key: Playing section will be cleared.

8. Editing the TAG information of the music in the Music DB

You can edit the TAG information of music such as the title, artist, album, year or genre by following the steps below:



- ① Place the cursor on the music you wish to edit.
- ② Press the MENU button and select TAG Edit and confirm with the OK button. The screen below is then displayed.

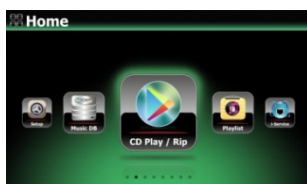


- ③ Using the remote control or USB keyboard you can edit the information.
- ④ Select OK and confirm with the OK button.

【 TIP 】 You can edit loaded CDs in the Music DB of the X35 easily using the WebInterface.

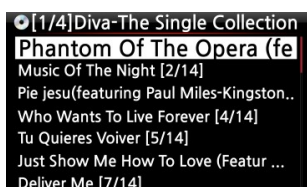
9. Audio CD direct play

9-1. If the X45 is connected to a network (Internet)



- ① Insert a CD into the X45.
- ② Then, all tracks will be displayed automatically

【 TIP ② 】 If the X45 is connected to CD database server through the network, the below screen will be displayed.



- ③ Select the music you would like to play and press the OK button.

The playing screen is shown below



Now playing.

【 TIP ③ 】 If you press the INFO button on the above Playing Screen, you can see detailed information for the music currently playing, see screen shot below.



9-2. If the X45 is NOT connected to a network (Internet)

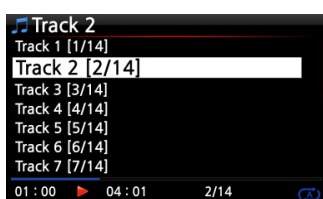


① Insert a CD and select CD Play/Rip icon and confirm with the OK button.

The track list is displayed as shown below



② Select the track you wish to play and confirm with the OK button. The track will then start playing



Now playing.

9-3. In the case that you have installed the FreeDB data onto the storage of the X45

If you installed the FreeDB data onto the storage of the X45, it will work just like the X45 is connected to a network (Internet). The X45 displays the CD information from the FreeDB data installed on the storage.

10. Data CD direct play

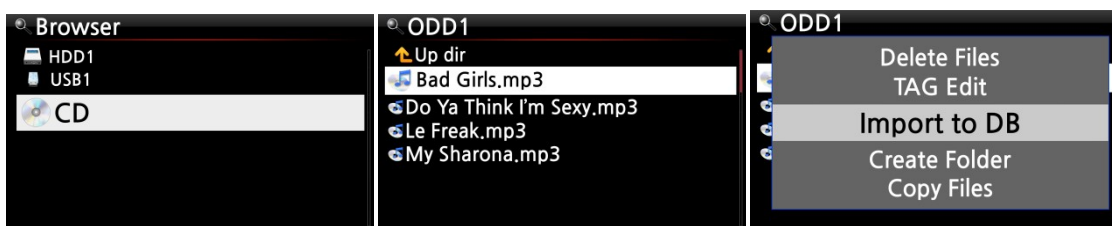
The X45 will support music files burned to CD R/RW or DVD R/RW discs

① Insert the data CD into the X45 and navigate to the Browser using the remote controller.

② You will see the CDRom.

③ Select and confirm with the OK button and select the music to play.

【 TIP 】 If you wish, you can import the music on the CD to the Music DB of X45. Press the MENU button on the remote control when on the music list and select Import to DB and confirm with the OK button.



11. Playlist

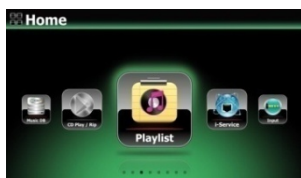
The X45 has three (3) kinds of playlist. The 1st one is just the normal Playlist function, the 2nd is 'My Playlist', and the 3rd is 'Advanced My Playlist'. The normal Playlist does not disappear by stopping or powering off. However, My Playlist and Advanced My Playlist are virtual playlists. The virtual playlist is removed by stopping or powering off.

※ NOTE: If you run 'My Playlist function' or 'Advanced My Playlist function', the My Playlist is created automatically in the Playlist folder.

11-1. Playlist

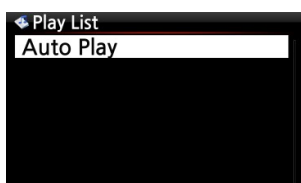
11-1-1. How to make a Playlist

Ensure there are music files in the Music DB before making a Playlist.

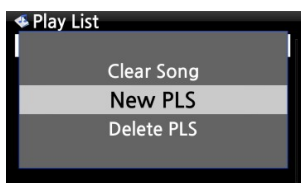


- ① Select the Playlist icon and press OK.
The screen below is then displayed.

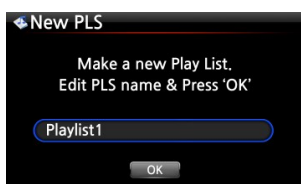
【 TIP ① 】 The Auto Play folder is created automatically and it can't be removed by the user.



- ② Press the MENU button to show a popup menu, see screen shot below.



- ③ Select New PLS and confirm with the OK button.
The screen below is then displayed.

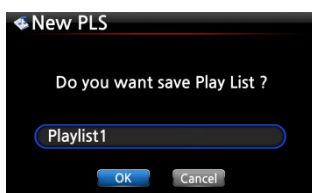


- ④ Enter a playlist name and select OK. Confirm the selection with the OK button.

The album list is then displayed in the Music DB, as shown below.



- ⑤ You may see + icon at the end of the cursor on an album. Press the PLAYLIST key to add the album to the playlist.
※ NOTE: You can move the cursor by using the arrow key (UP/DOWN)
- ⑥ Press the OK key if you would like to go down the track list of an album



⑦ You can add more music (tracks) or albums using the above procedure.

⑧ After adding a track or album, press RETURN to go to the screen shown below.

⑨ Select OK and confirm with the OK button.

Then, the playlist 1 is stored in the Playlist folder, see below. You can view the playlist if you go into the Playlist folder through the Playlist icon on the home screen.



Playlist has been created

※ NOTE: To add more songs or albums to the playlist you have created, move the cursor onto the intended playlist and press the MENU key.

11-1-2. How to make a Playlist with whole tracks in album, Genre, or Artist



① For example, go to Album list and place the cursor on the target album

② Press PLAYLIST key of remote control



③ Edit Playlist name as you want, and press OK. Go to Playlist and there will be the playlist like below picture.



11-1-3. How to add songs to a Playlist whilst playing music

When you are enjoying music from the Music DB and you come across a track you would like to add to a playlist, you can add it to an existing playlist in the Playlist folder by following these steps:

[Playing Screen]

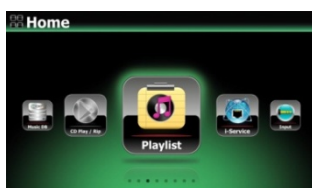


- ① Press the PLAYLIST key whilst in 'Playing Screen' mode as shown above.
- ② Select the playlist you would like to add the song to.
- ③ Confirm with the OK key and the song will be stored in the selected playlist.

11-1-4. Shortcut to add song(s) in MusicDB to existing playlist

- ① Place the cursor on a title, album, genre or artist in the MusicDB that you want to add to an existing playlist
- ② Press 'PLAYLIST' key of remote control
- ③ Select the playlist where you want to add the song(s), album, etc
- ④ Press 'OK' key to start adding

11-1-5. How to play a Playlist



- ① Select the Playlist icon on the remote control or press the PLAY LIST hotkey on the remote control. The following screen is then displayed.

- ② Select the Playlist you would like to play and confirm with the OK button.

You will then see the music in the playlist as shown below.

- ③ Select the music you would like to play and confirm with the OK button to play the selected music.

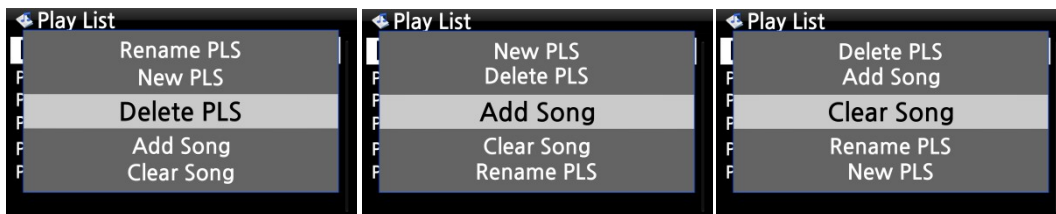
【 TIP ③ 】 If you set the play mode as Repeat All, all music in the selected playlist will be played continuously in sequence.

11-1-6. How to change song position in a Playlist

- ① In a Playlist, select a song or songs with RIGHT arrow key.
- ② Move the cursor with UP/DOWN arrow key to the place where you want to move the selected song/songs.
- ③ Press LEFT arrow key to paste the selected

11-1-7. How to edit a Playlist

Go to the Playlist screen. Press the MENU button on the remote control. You can delete existing playlists, add music to existing playlists or clear music from an existing playlist.



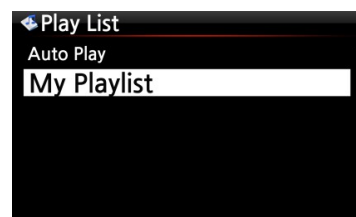
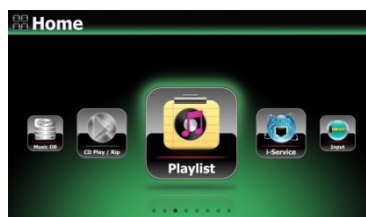
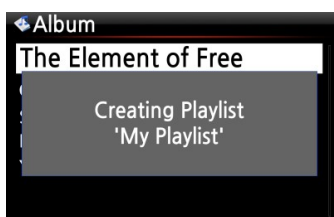
11-2. My Playlist (Virtual Playlist)

This is a virtual playlist function. After you have made a My Playlist, it will be removed if you stop playing or power off. This function works only in the Music DB. It will not work in the Browser.

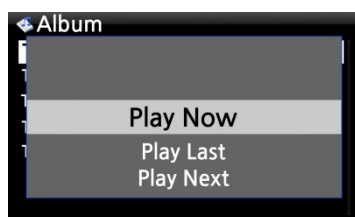


- ① Place the cursor on the list of songs, albums, artists or genres.

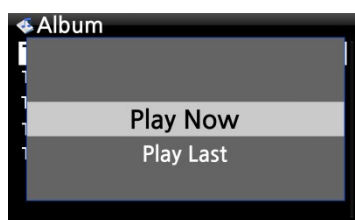
- ② Press the MY PL key on the remote control.
- ③ The selected album will be played after showing [Creating Playlist 'My Playlist'] as shown below.
- ④ If you go into the folder of Play List with the RETURN key, there will be My Playlist displayed



【 TIP 】 When My Playlist is being played, you may look for more albums or songs with RETURN key to add them into the current My Playlist. Place the cursor on the album or song, and press MY PL key. The below picture will show up.



- Play Now: If you select Play Now and confirm, the selected album will start playing.
- Play Last: The selected album will be added to the currently playing list (album) as the last entry.
- Play Next: The selected song will be added to the next of the current playing song.

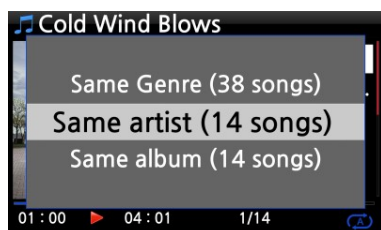


11-3. Advanced My Playlist (Virtual Playlist)

You can create a Advanced My Playlist (Virtual Playlist) when you come across a track you would like to add by its artist, genre or album.



- ④ When you come across the track, press the AD MY PL key at the 'Playing Screen, see left.



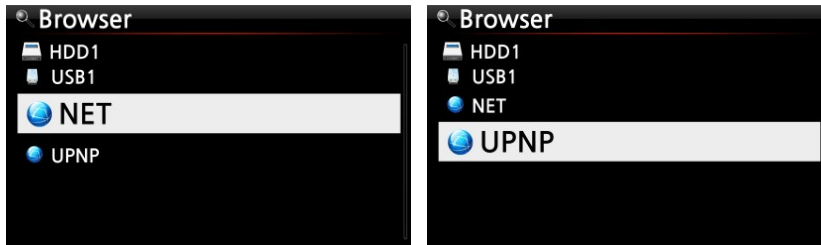
- ① The popup menu will appear as shown on the left.
- ② Select one choice and confirm with the OK key
- ③ The selected song will start playing, and will be stored as My Playlist.

12. The Music Streaming function

As the X45 supports various network protocols such as; UPnP Server/Client/Renderer and Samba Server/Client, you can enjoy various Music Streaming functions with the X45.

12-1. UPnP Server/Client and Samba Server/Client function

You can use the X45 together with various kinds of devices that support UPnP Server/Client or Samba Server/Client. If the devices are connected to the X45 through the same network, you can see the devices through the Browser, see below;



※ For connecting to the shared folders of networked devices, refer to 4-5-2 Network Sharing (Samba Client) (Page 50)

12-2. Multiple X45's on the same network.

Place the X45 with the storage (music server) in your living room. A second X45 (without storage) is placed in room #1 or room #2. You can then play files from the X45 (music server) on the X45's without storage, see schematic below.



12-3. The X45 works as a Music Server with Sonos.

Sonos users can use the X45 as a music server with their Sonos device.

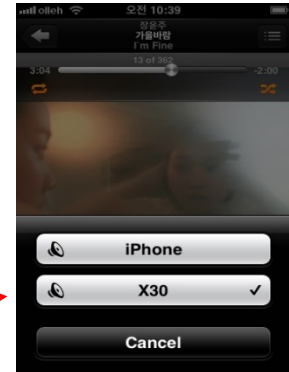
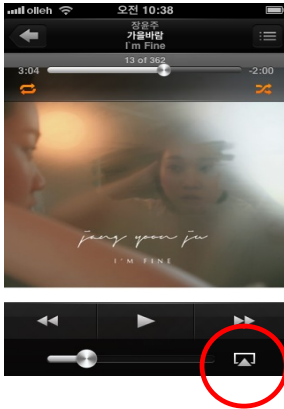


12-4. Shareplay(Airplay) function

This is the same function as Apple 'Airplay'

You can play the song files in the iOS devices through the X45.

- ① Start music player in your iOS devices like left picture.
- ② Click the red circled icon
- ③ The right picture will show up
- ④ Select the X45 to play it via the X45.



13. i-Service

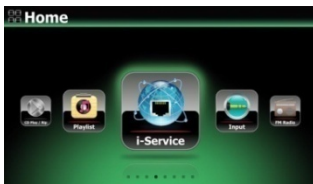
Ensure the X45 is connected to the network (Internet) before using the i-Service.

【 TIP ① 】 There might be a slight delay when tuning i-radio stations (buffering). This delay may occur due to the network (Internet) connection.

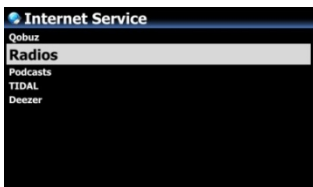
13-1. Internet Radio

13-1-1. How to play the Internet Radio.

You can enjoy many internet radio stations. The X45 Internet radio is based on the Airable server. It provides many stations by genre, by country, etc.



【 TIP 】 When the i-Service icon is highlighted the X45 is successfully connected to the network.



- ① Select the i-Service icon and confirm with the OK key. The below screen is then displayed.



- ② Select the Radios and confirm with the OK key. The below screen is then displayed.
- ③ Here you can select an item you want
- ④ There will be station lists in each folder.
- ⑤ Select a station and confirm it with OK key to start playing



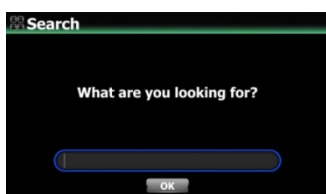
Now playing.

13-1-2. How to add your favorite stations into Favorites.



Whilst playing a station press the FAVORITE button on the remote control to add the station to Favorites.
The station will then appear in Favorites folder, as shown left.

13-1-3. How to a run search function on the Internet Radio



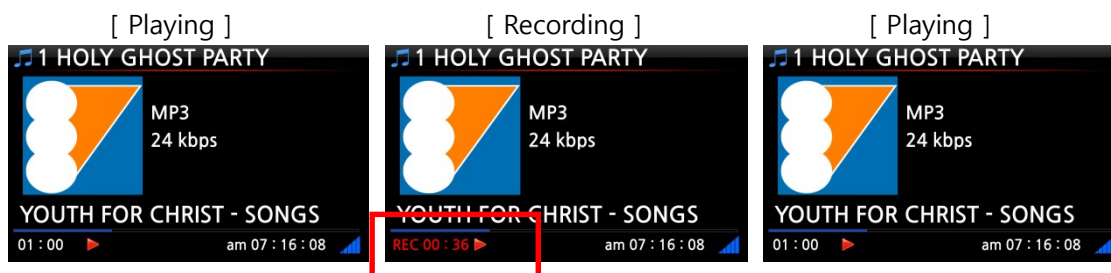
You can search for a station on the Internet Radio as follows; on the Internet Radio screen, press the SEARCH button on the remote control, the left screen will then be displayed. Input the first few alphabetical characters of the station and select OK and confirm with the OK key. Similar named stations are also displayed.

13-1-4. Recording from the Internet Radio

- ※ NOTE 1: We recommend NOT to record continuously for over three (3) hours.
- ※ NOTE 2: Space required for recording in MP3 format: 1 hour(54MB)/2 hours(108MB)/3 hours(162MB)
- ※ NOTE 3: X45 will record i-Radio by the formats like MP3, AAC or ASF according to the station's streaming format.

13-1-4-1. How to record

- ① While the I-Radio is playing, press the REC button to start recording.
- ② Press the STOP button to stop recording



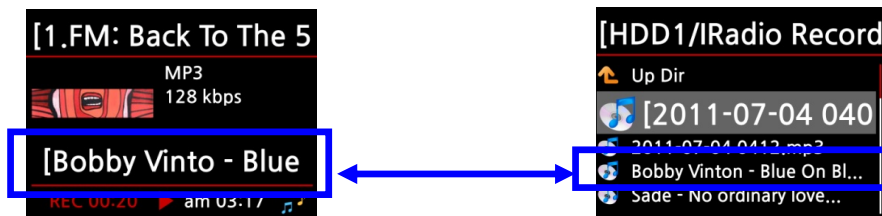
13-1-4-2. Where is the recorded file stored?

The X45 creates a [IRadio Recording] folder on the hard disk automatically when recording has started. All recorded files are stored in the IRadio Recording folder, see below.

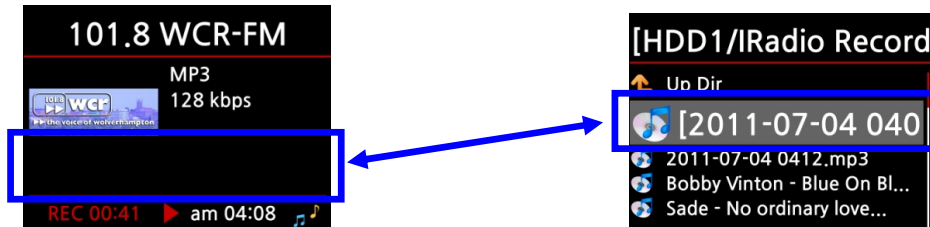


13-1-4-3. The recorded file name structure

The station will show the music title, see below, the recorded file name will be the music title.



If the station does not show any title, see screen shot below, the recorded file name will be 'year-month-day-time (minute/second)'.

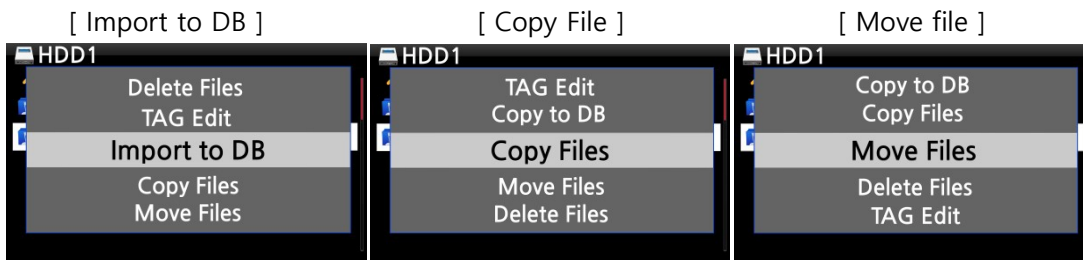


13-1-4-4. How to edit the recorded file

You can edit the recorded file easily with the file management function. Place the cursor on the recorded file and press the MENU button to run the following functions:

[TAG Edit]

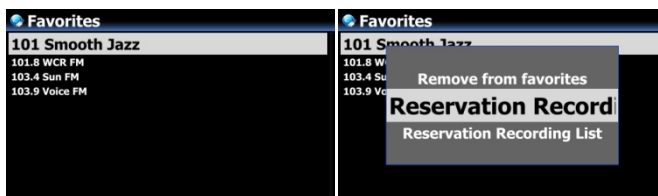




13-1-5. Reservation Recording

This function works for the stations stored in Favorites folder.

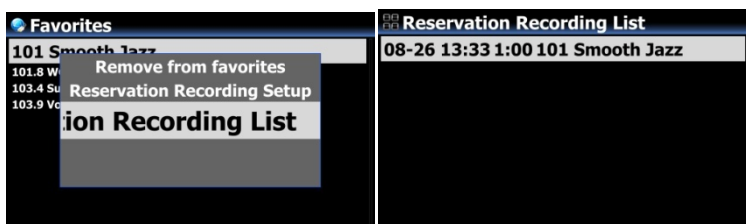
13-1-5-1. How to set reservation recording



- ① Open 'Favorites' folder of Radios.
- ② Place the cursor on the station you want to set
- ③ Press MENU key to open menu window like left.



- ③ Input date, time, etc on the setup window like left
- ④ Confirm it with OK key



※ To check if Reservation Recording Setting is well done, press MENU key at the Favorites list, and select Reservation Recording List to show recording list like left.



※ The station set as 'reservation recording' will be listed like left picture.

- Aug 26th, 13:33 -----> Recording start
- 1:00 -----> It will record for one hour.
- 101 Smooth Jazz -----> Station name

13-1-5-2. How does the reservation recording start

1) In case that you powered X45 off after recording setting (e.g. 4:00PM / record for 3 M)

- X45 will start booting up automatically at 3:57PM (3 minutes before set time 4:00PM)
- X45 will start playing the station at 3:59PM (1 minute before set time 4:00PM). Volume is set as 'Mute' automatically.
- X45 will start recording the station at 4:00PM and keep recording until 4:03PM.
- X45 will power off automatically by itself as soon as it finishes recording at 4:03PM.

2) In case that you keep X45 powered ON after recording setting (e.g. 4:00PM / record for 3M).

- X45 will stop current job (playing) and start playing the station at 3:59PM (1 minute before set time).
- X45 will start recording the station at 4:00PM and keep recording until 4:03PM.
- X45 will stop recording at 4:03PM and keep playing the station continuously.

※ Set for multiple stations

You can set reservation recording for multiple stations. But, set time must NOT overlap each other. Of course, you have to consider needed time for each activity described above (How to work). If you do not give interval enough for each station and each activity, this function will not work properly. (e.g. You set recording at 4:00PM, and you powered off X45 at 3:58PM)

※ **NOTE: The recorded file will be stored in the 'IRadio Recording' folder of hard disk. You can see it through 'Browser'. You can edit the recorded file with the Tag Edit function.**

14. FM Radio

14-1. How to play FM Radio

※ **NOTE:** Make sure to install the FM Radio antenna properly first.



- ① Select FM Radio icon to start FM Radio
- ② X45 will seek all stations available
- ③ Select one station and confirm it with OK key.
- ④ It will start playing as below.



※ NOTE: On the playing screen like above, you can do fine tuning with the arrow (UP/DOWN) keys, and seek station with the arrow (LEFT/RIGHT) keys.



※ NOTE: In countries where RDS is available, you may see station name info and text data info in the red square.

※ NOTE: Place the cursor on the station list screen, and press MENU key to show up POPUP menu as below.

※

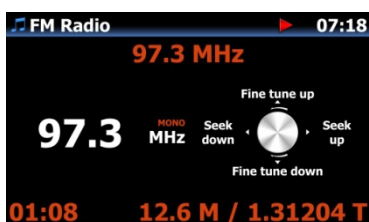


You can run useful functions like Rename, Delete, Seek All, Clear & Seek All



The left screen is for renaming the station

14-2. How to record FM Radio



- ① When playing FM radio, press REC key on the playing screen to start recording.
- ② To stop recording, press STOP button of remote control.

<NOTICE> It will be recorded as WAV format with 44.1Khz

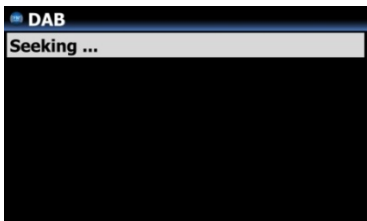
※ NOTE: The recorded files will exist in 'FM Radio' folder of 'My Recording' folder in HDD. You can edit the recorded file and import it to the Music DB. Refer to 13-1-4-4. How to edit the recorded file (Page 90). and 19-16. How to rip (convert) the edited file into other formats (MP3, FLAC, OGG, etc) and load onto the Music DB (Page 111)

15. DAB+

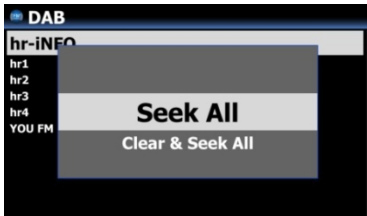
15-1. How to play DAB+



- ① Select DAB icon to start
- ② X45 will seek all stations available like below screen



<NOTICE> DAB signal is affected very much and easily by neighboring obstacle like wall. So, you need to remove surrounding obstacle to receive DAB signal better.



※ If you want to re-scan, press MENU key on the station list. And, select 'Seek All'



- ③ Select a station you want to play, and confirm it with OK
- ④ It will start like left

15-2. How to record DAB+

How to record DAB+ is exactly same as FM Radio recording. Please refer to 14-2. How to record FM Radio(Page 93)

15-3. To display more information on DAB+ station

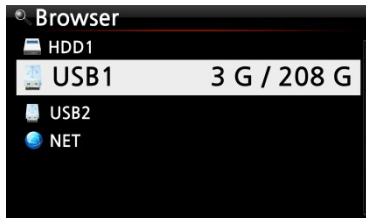
On playing screen of DAB+ station, If you press INFO key of remote control, the screen will show various information like below.

- Line 1/2/3 : Ensemble, Station name, Program type
- Line 5/6 : Bitrate, Quality level(Over 80%: Green, Over 50%: Yellow, Below 50%: Red)

16. USB host port for USB devices

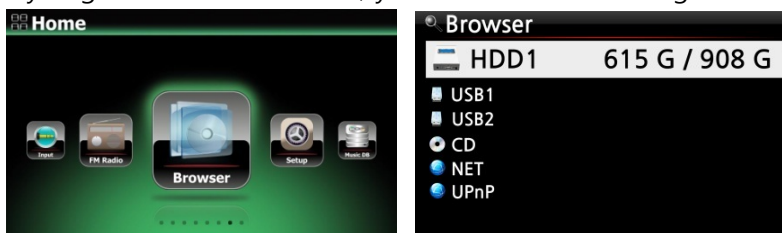
You can use various USB devices like USB memory stick, MP3 Player, USB external hard disk, etc with the USB host port of X45.

- ① Plug the USB device into the USB host port of the X45.
- ② Go into the Browser screen. The USB device appears in the browser screen as shown below.



17. Browser

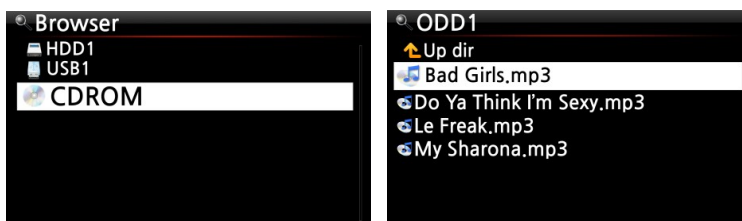
If you go to the Browser icon, you can run the following functions.



17-1. Play audio file data CDs

The X45 supports data CDs with recorded audio files. The X45 supports various audio files such as; DSD, MQA, ISO, APE/CUE, HD FLAC, HD WAV, MP3, FLAC, WAV, CAF, WMA, M4A, AAC, ALAC, AIFF, AIF, Ogg Vorbis, PCM, PLS, M3U, etc.

- ① Insert the data CD into the X45.
 - ② Select the Browser icon and confirm with the OK button.
- You will see the data CD. Select the music you would like and play using the OK button.



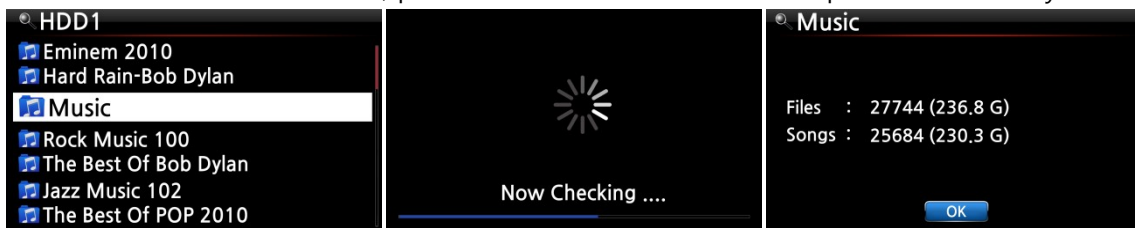
17-2. File Management function

17-2-1. Accessing information on the HDD, USB, folder or file.

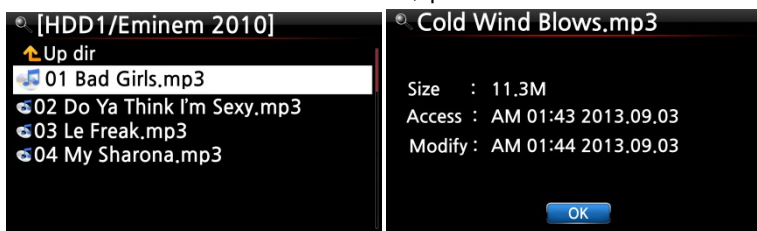
Place the cursor on each drive and press the INFO key. The information is displayed as shown below.



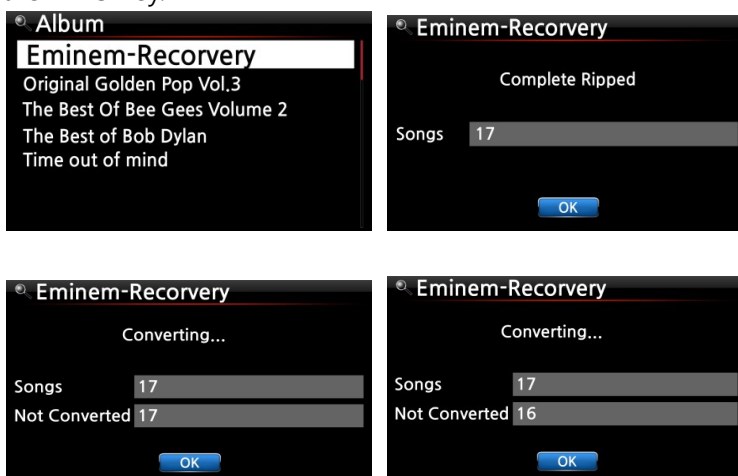
To check the information folder, place the cursor on the folder and press the INFO key.



To check the information on a file, place the cursor on the file and press the INFO key.



To check the information of a ripping / converting result, place the cursor on the album and press the INFO key.



17-2-2. TAG Edit

This function is only valid for files not for folders or disks.

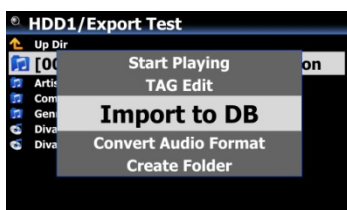
Place the cursor on the file you would like to edit and press the MENU key. Select Edit Tag and the edit screen is displayed, see below.



17-2-3. Import to DB

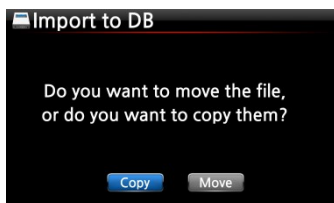
You can import a folder or file from the HDD, USB or CD to the Music DB.

To import a folder or file to the Music DB follow the steps below:



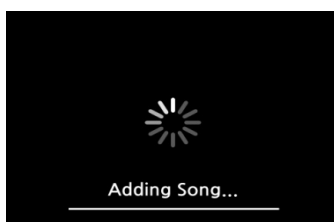
- ① Place the cursor on the folder or the file you would like to import to the Music DB
- ② Press the MENU key and select Import to DB and confirm with the OK key to commence importing.

※ NOTE: When importing all the music from a folder to the Music DB the album name of all the music in the folder must be same.



- ③ You can select 'move' or 'copy'.

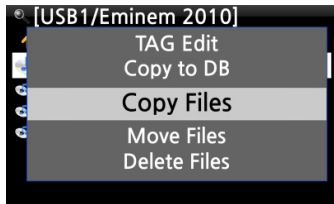
※ NOTE: If you select 'move', the importing speed will be faster than copy. But, the original file or folder will not exist anymore.



Now copying to Music DB.

17-2-4. Copy Files

You can copy files or folders by following the procedure below:



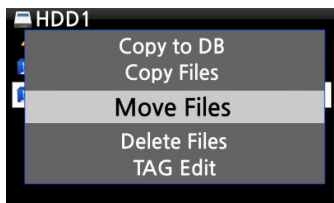
- ① Place the cursor on the file or folder you would like to copy
- ② Press the MENU key and select Copy Files. The screen below is then displayed.



From here, refer to 7-3-4. How to export music from the Music DB to other storage devices (Page 77), as the procedure is exactly same.

17-2-5. Move Files

You can move files or folders using the following procedure:



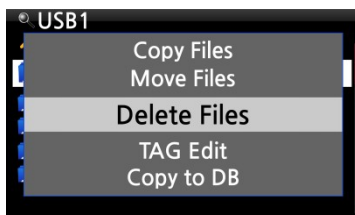
- ① Place the cursor on the file or folder you would like to copy
- ② Press the MENU key and select Copy Files. The screen below is then displayed.



From here, refer to 7-3-4. How to export music from the Music DB to other storage devices (Page 77), as the procedure is exactly same.

17-2-6. Delete Files

You can delete file or folder using the following procedure:



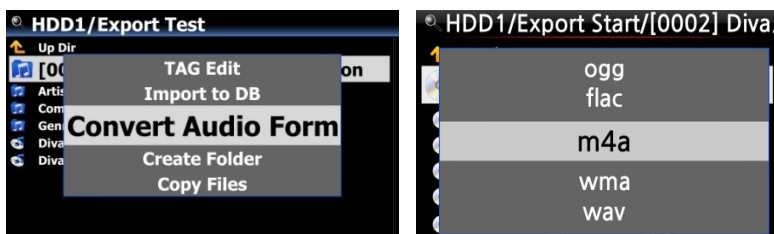
- ① Place the cursor on the file or folder you would like to delete
- ② Press the MENU key and select Delete Files. Confirm with the OK button to start deleting.

17-2-7. .PLS or .M3U files with Internet radio stations

If you wish to play an individual internet radio station using the X45, you will need to create a PLS or M3U file and put the file (PLS or M3U) onto the storage or USB host of the X45. Once you have created the file you can play the station through the X45 Browser, see example below.



17-2-8. Convert Audio Format



※ This function works on Browser mode only.

- ① If you want to convert the format of tracks in the Music DB, export them into a certain place of hard disk on the Browser with the 'Export Songs' function.
- ② Place the cursor on the file or folder, and press MENU key. (※ With RIGHT ARROW key, you may select multiple song files)
- ③ Select 'Convert Audio Format'. The format option like m4a, wma, wav, mp3, ogg and flac will show up.
- ④ Select one format to start converting.
- ⑤ One folder with the same name as the selected format will be created automatically.
- ⑥ The converted song files will be stored in the folder.

17-2-9. Cut the recorded file (Cut 'Playing Section')

※ NOTE: This cutting function works on Browser mode only.



For example, you recorded iRadio like left screen.

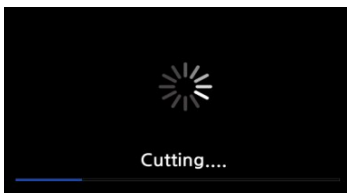
- ① If you go into 'iRadio Recording' folder of HDD1 via Browser, there will be the recorded file (FM - Start It Up.mp3)
- ② Play the file



③ Set 'Playing Section' as mentioned on 7-3-8. Set 'Playing Section' to play it repeatedly (Page 79)



④ Press MENU key to show up POPUP
⑤ Select 'Cut to Wave file' and confirm it with OK key



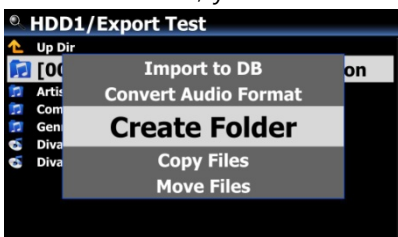
⑥ Progress message



⑦ Go into 'IRadio Recording' folder. There will be same name of Wave file.
※ If you cut a Wave file, serial number will be added at the end of the file name.

17-2-10. Create Folder

Via this function, you can make a folder in the Browser as you want.



① Go to inside of HDD or USB
② Press MENU key to open menu popup
③ Select 'Create Folder' and confirm it with OK
④ Left screen will show up. You can put folder name and confirm it with OK



18. Input

18-1. How to play an external device via Input

As the X45 has various Input connectors like AUX In, Analog IN, Phono IN and Digital IN (Toslink and COAXIAL), you can connect external devices like TV, player, turntable or etc to the X45 and record the audio (signal) coming from outside device.



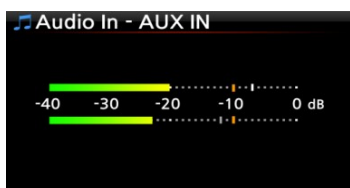
① Connect external device to the X45.

※ NOTE: When connecting external device to X45, be careful to connect both devices via proper connectors and cables.



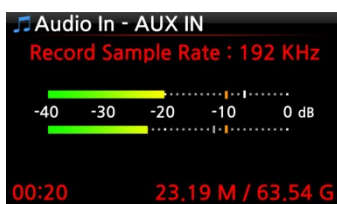
② Play the external device.

③ Select the proper input and confirm it with OK key



Now playing.

18-2. How to record



While playing music through the Input of the X45, press the REC button to start recording the music playing, see screen shot to the left. Press the STOP button to stop recording.

※ NOTE: Explanation

- 1) Record Sample Rate: 192KHz: This is decided according to the setting of the Recording Sample Rate at SETUP.
- 2) 00 : 20 : Recording time
- 3) 23.19 M / 63.54 G: File size of the recording file / Total size of the storage

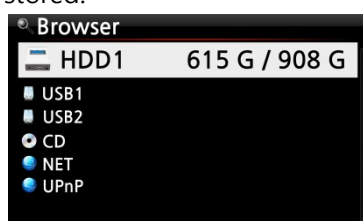
※ Recorded file information according to the Recording Sample Rate

* 1) Recording Sample Rate	Recorded File			
	Size/Recording time	Sample Rate	File name structure	Format
48KHz	691MB/1 Hour	48KHz	Year-month-date-time	WAV
96KHz	1,383MB/1 Hour	96KHz		
192KHz	2,767MB/1 Hour	192KHz		

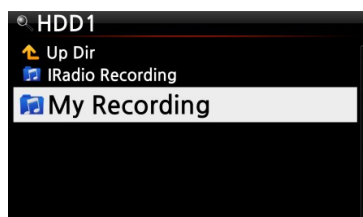
* 1) Recording Sample Rate : You can set as you want at SETUP

18-3. Where is the recorded file stored ?

If you start recording, the X45 creates the folders automatically where the recorded files are stored.



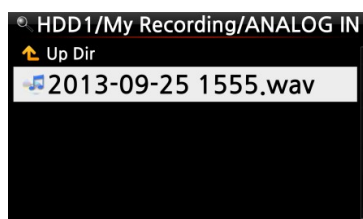
- ① Select Browser icon on the home screen, and confirm it with OK key.
- ② Select HDD1 and confirm it with OK key



- ③ Select Browser icon on the home screen, and confirm it with OK key.
- ④ Select HDD1 and confirm it with OK key



- ⑤ There will be folders like ANALOG IN, AUX IN, FM Radio, TOSLINK, PHONO IN
- ⑥ Select proper folder and confirm it with OK key to see the recorded file.

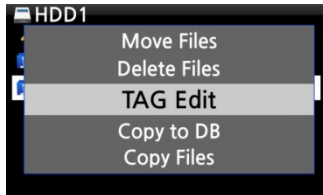


※ NOTE: The folder will be named according to the Input for recording.

18-4. How to edit the recorded file



① Place the cursor on the Recording folder (like ANALOG IN, AUX IN, FM Radio, TOSLINK, PHONO IN, etc) or on the recorded file in the folder, and press the MENU button.



② Select TAG Edit and confirm with the OK key, the edit screen will be displayed as follows.

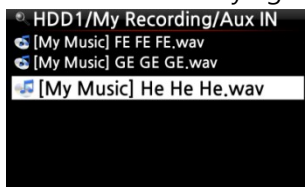


③ Put the Title, Artist, Album, Composer, Year or Genre. If you put same album name into each recorded file, all files which have the same album name will be sent(imported) to the same folder (album) in the Music DB when you try ripping (loading) the edited files to the Music DB.

※ The edited file name will be changed to [Album name]+Title

18-5. How to rip (convert) the edited file into other formats (MP3, FLAC or Ogg) and load onto the Music DB

※ NOTE: Before trying to convert the recorded file you should edit the recorded file first.



① Place the cursor on the edited file, and press the RIP button on the remote control.



② Select the format (MP3, Ogg, FLAC or WAV) you would like, and confirm with the OK button.



③ The edit screen will be displayed. Press the OK key again if there is no item to be edited.



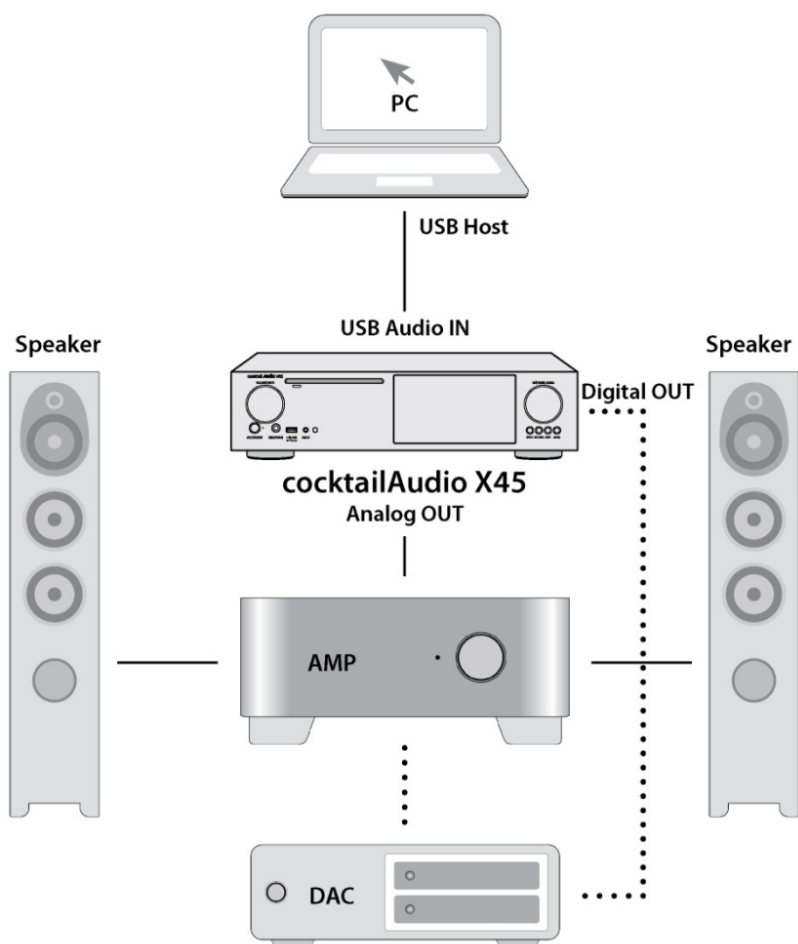
④ The file will start loading onto the Music DB

⑤ Go to the Music DB icon on the home screen and check the Album list.



⑥ You will see Test Album (Album titled at the edit step) and press the INFO button to check the converting status, as shown left.

18-6. How to use X45 as USB Digital-to-Analogue Converter (DAC)



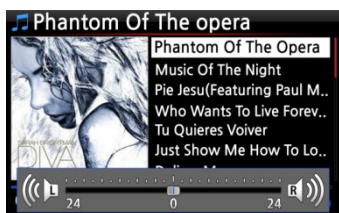
- ① Install USB Audio 2.0 Driver Software to your Windows PC(Refer to 2-4 on page 28)
- ② Install a special software(Player) like foobar2000 if you want to play DSD file in your PC(Refer to 2-4 on page 28)
- ③ Connect X45(USB Audio IN) and your PC(USB Host port) via USB cable
- ④ Remaining procedures will be understood easily

※ NOTICE

(In case that 352.8Khz and 384Khz files goes into X45 via its USB Audio Input and goes out via its Digital Outputs, there may be some noises. So, we recommend that you should not use X45 digital outputs when using X45 as USB DAC

19. Extra Function

19-1. Volume Balancing



- ① On the playing screen, press VOL BAL key of remote control to open the screen for volume balancing setting
- ② On the screen of volume balancing setting, you can control Left/Right volume level using the arrow key (LEFT/RIGHT)
- ③ After setting, you may save and exit using any key

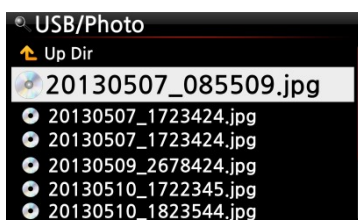
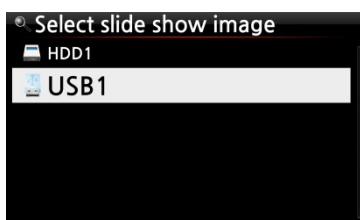
19-2. External Screen

If you want to use an external screen like TV, monitor, etc as a bigger screen for X45, please connect external screen to X45 HDMI Out.



- ※ Default : Both of Internal LCD and HDMI Out are all activated.
- ※ From Default setting, pressing SCREEN key will change mode like below
- Default ----> Internal LCD only -----> HDMI only -----> Default
- ※ X45 will remember last setting when it is powered off

19-3. Photo Slide Show

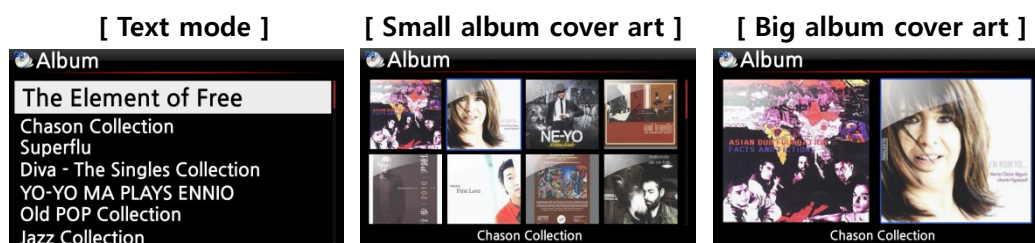


- ① Prepare photo file in the storage of X45 or in USB.
- ② While playing music, press MENU key on the Playing Screen to popup menu list like below.
- ③ Select Slide Show and confirm it with the OK key.
- ④ You will be guided to select photo file.
- ⑤ Select the 1st photo file and confirm it with the OK key. Then, the slide show will start based on all photo files in the same folder.

※ NOTE: You can set 'Slide Show Effect' and 'Slide Show Time' at SETUP

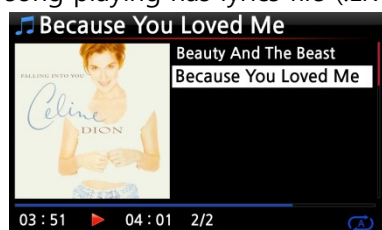
19-4. Listing by Text or Album cover art

You can list up all information (like album, title, genre, artist, etc) on the screen of X45 by text or album cover art. You can select one of text mode and album cover art mode easily using TEXT/ART button of remote control.



19-5. LYRICS

The LYRICS function is used to display lyrics on the screen during playing in the case that the song playing has lyrics file (.LRC file).



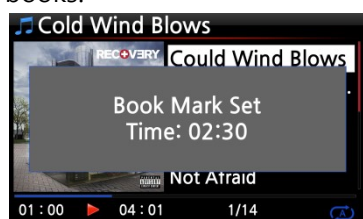
- ① On the playing screen, press LYRICS button of remote control. The lyrics will be displayed as below.
- ② Press LYRICS key again to go back to the playing screen.



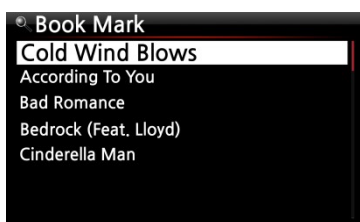
- ※ NOTE 1: LYRICS function works at Browser mode only, not at Music DB.
- ※ NOTE 2: If LYRICS is broken on the screen, you need to check OSD language setting and LRC file language

19-6. BOOKMARK

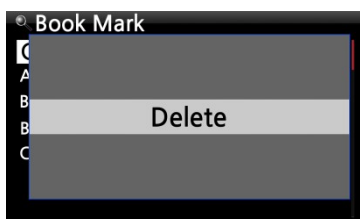
Files can be bookmarked while playing them. This function is useful for long files such as audio books.



- ① Press the BOOKMARK button on the playing screen.
- ② The bookmarked music or story is stored in the Bookmark list as shown below.



③ If you would like to list up the bookmarked music or story, and play it, press the BOOKMARK button on any screen (except playing screen).

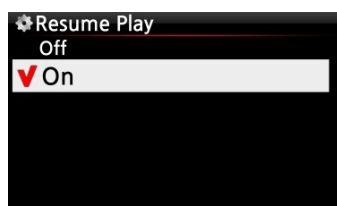


④ If you would like to delete bookmarked music or story, press the MENU key on the Book Mark list screen, shown left.

⑤ Select Delete and confirm with the OK button.

19-7. Resume Play

When you boot up the X45, it will automatically resume playing the music in the Music DB, Browser or i-Radio from where it was last stopped.



Select Resume Play and confirm with the OK key.

Set it as ON as shown left.

※ Default is OFF

【 TIP 】

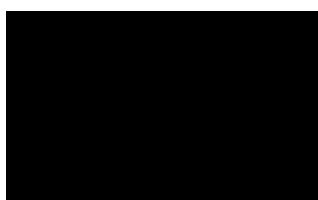
※This function does NOT work in the case that the 'Alarm' function or 'Auto Play' function is enabled.

※Function priority : Alarm function ----→ Auto Play function -----→ Resume Play function

19-8. CLOCK and Display (LCD) OFF

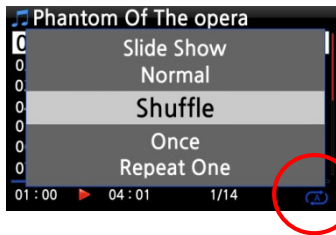


Whilst playing, press the CLOCK button. The digital clock will be displayed, see left. And, press it once again, the LCD will be OFF like below. This function is useful when you are listening to music at night as the light from the screen is reduced. Exit from LCD OFF mode by pressing if any button on the remote control.

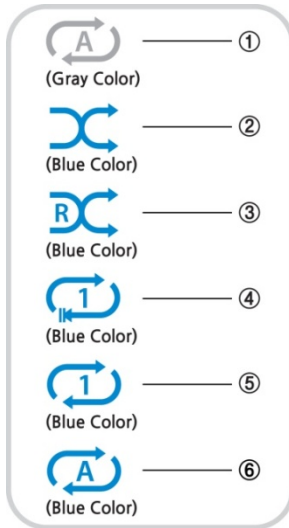


※ LCD OFF mode

19-9. Changing the play mode



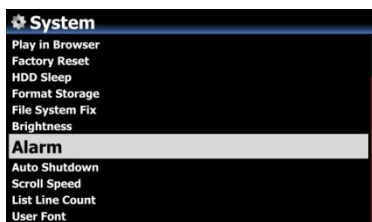
- ① Press the MENU button on the playing screen to change the playing mode.
- ② Alternatively, press the SHUFFLE button to change the mode without using the popup menu.



- ① Normal: Play all the music in an album or in a folder at once in sequence.
- ② Shuffle: Play songs randomly, but any song will not be repeated.
- ③ Random: Play songs randomly, but a song may be repeated
- ④ Once: Play the current music once only.
- ⑤ Repeat One: Play the current music repeatedly
- ⑥ Repeat All: Play all music in an album or in a folder in sequence and repeatedly

19-10. Alarm set

You can set six (6) alarm settings on the X45.



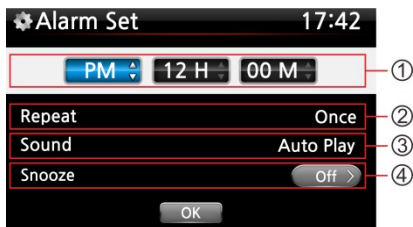
- ① Go to Alarm at SETUP, and confirm it with the OK key. The following screen will appear.

- ② Select the line you require and press the OK button. The following screen will appear.

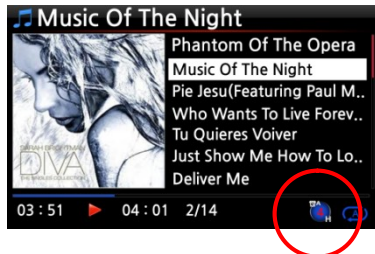
※ NOTE: The time should be set minimum 10 minutes later than current time.



- ③ Set time, cycle and sound source.
- ④ Set Snooze ON.
- ⑤ Select OK and confirm it with the OK button.



- ① Selecting time with up/down button.
- ② Selecting cycle with OK button
- ③ Selecting sound source from Playlist or iRadio (My Favorites)
- ④ Selecting snooze ON/OFF



※ NOTE:

A : Alarm

2 : Two

D : Day

Alarm is set as 'after 2 days from now'.

19-11. Auto Shutdown



The X45 will power off automatically at the assigned date and time.

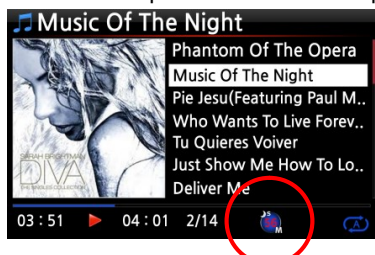
※ NOTE: Refer to section 4-7-14 Auto Shutdown (Page 58) for detailed explanation.

19-12. Sleep mode



- ① Press the SLEEP button on any screen (except setup), the popup Sleep Off/Sleep 10Min/Sleep 20Min/Sleep 30Min/Sleep 1Hour/Sleep 2Hour/Sleep 3Hour is displayed.
- ② The X45 will be set as per the last popup

※NOTE: Sleep icon will show up after setting.



※ NOTE:

S : Sleep

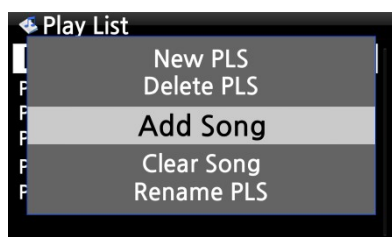
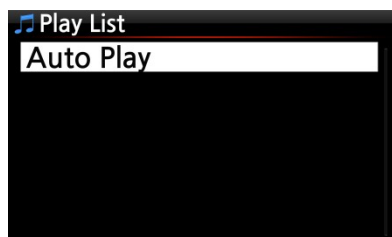
56 : Fifty six

M : Day

After 56 minutes, it will go into Sleep mode (power off).

19-13. Auto Play

When the power is ON, Auto Play function allows the X45 to boot up and start playing automatically the song in the Auto Play folder in the Playlist on the home screen.

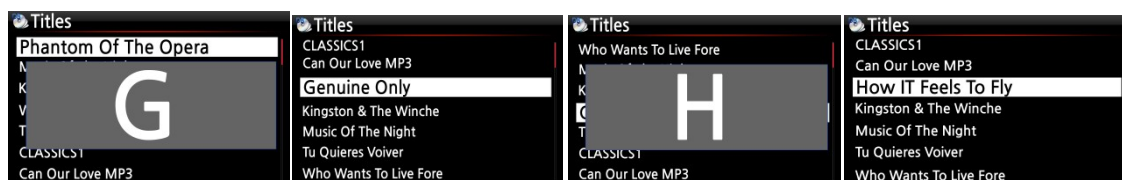


- ① Navigate to the Playlist to Auto Play.
- ② Place the cursor on Auto Play and press the MENU button.
- ③ Select Add Song and press the OK button.
- ④ Place cursor on the music you would like to Auto Play.
- ⑤ You can see plus (+) mark at the end of the cursor. Press the OK button. The music will disappear and be added to the Auto Play.
- ⑥ Go to Setup and set Auto Play ON.

※ NOTE: Default of Auto Play in SETUP: OFF

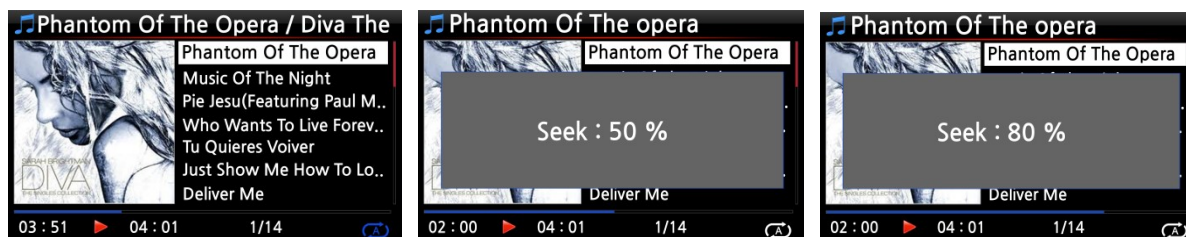
19-14. Shortcut to find files in all list modes

On each list mode if you press an alphabet key on the remote control the cursor will jump to the first file with that character at the beginning.



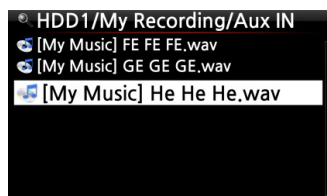
19-15. Seek function on the Playing Screen

At the playing screen you can run a seek function by pressing numeric keys on the remote control. For example, if you press the 5 key while playing a file it will start playing from the 50% position of the file based on total playing time.



19-16. How to rip (convert) the edited file into other formats (MP3, FLAC or Ogg) and load onto the Music DB

※ NOTE: Before trying to convert the recorded file you should edit the recorded file first.



① Place the cursor on the edited file, and press the RIP button on the remote control.



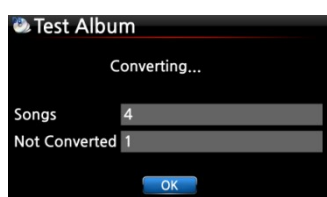
② Select the format (MP3, Ogg, FLAC or WAV) you would like, and confirm with the OK button.



③ The edit screen will be displayed. Press the OK key again if there is no item to be edited.



④ The file will start loading onto the Music DB
⑤ Go to the Music DB icon on the home screen and check the Album list.



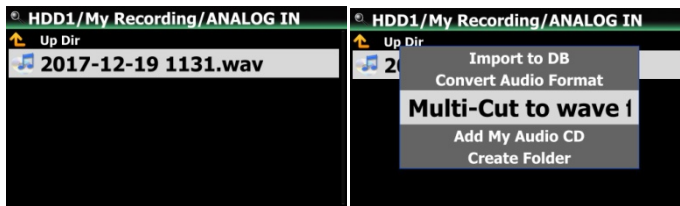
⑥ You will see Test Album (Album titled at the edit step) and press the INFO button to check the converting status, as shown left.

19-17. Function of Multi-Cutting(Auto-Cutting) for recorded file

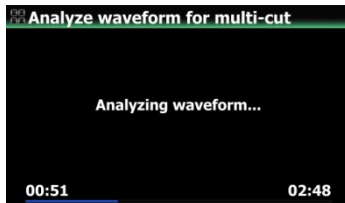
You can record iRadio of X45. Otherwise, you may have a file recorded by other devices like X40. With this new function, you can cut the file into each track by auto or by manual. To understand this function, you need to understand each key's function well by reading this manual very carefully.

※ **NOTICE: This function works in Browse mode only for most of file format, except for DSD file. But, after running this function, all tracks (files) cut will be 'WAV' file format.**

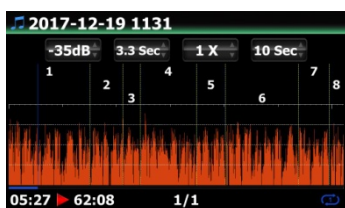
19-17-1. How to set 'cutting point' by auto



- ① Look for recorded file in Browse mode and place the cursor on it



- ② Press MENU key and confirm 'Multi-Cut to wav...' to start analyzing waveform of the file.



There are four(4) spins to set 'cutting point'.

※ Press MENU key to toggle Enable/Disable for these spins

※ Role of each spin

- . -35 dB: to set max dB value for auto cutting.

Scope settable: -30dB~-40dB

- . 4.0 Sec: to set duration for the above max dB value.

Scope settable: 0.1 ~ 5 Sec

※ For example, if you set -35dB and 4.0Sec, 'cutting point' will be created automatically at the points where volume level -35dB below and the volume level(-35dB below) lasts for over 4 seconds

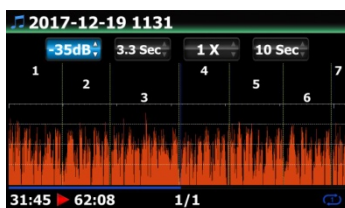
- . 1 X: to zoom graph by 1X, 2X, 4X, 8X, 16X ~ 128X

- . 1 Sec: to set 'seek time' unit when moving 'playing point' by LEFT/RIGHT arrow key. Scope settable: 0.1~30 sec

- . 1/2/3/4/5: Number of track which will be cut

- . Vertical green line: Cutting point

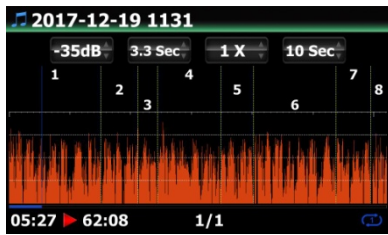
- . Vertical blue line: Current playing point



19-17-2. How to set 'cutting point' by manual

- ① You have to disable four(4) spins.
- ② You can seek cutting point you want by LEFT/RIGHT key
(For this job, you can set 3rd spin and 4th spin properly)
- ③ You can set 'current playing point' as 'cutting point' by pressing UP arrow key
- ④ By pressing DOWN key, you can remove 'cutting point' within 10 sec and closest to 'current playing point'.

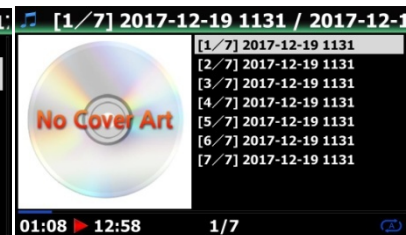
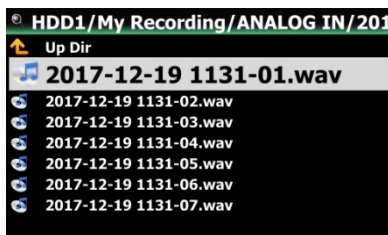
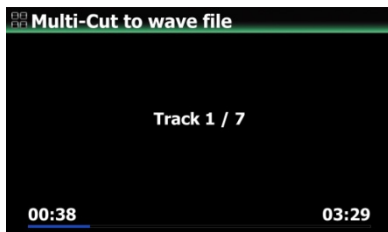
19-17-3. How to start cutting



- ① Set cutting points properly according to the above procedure
- ② Press RETURN key, then it will ask 'OK' or 'Cancel' like below



- ③ Select OK and confirm it. Then, it will start cutting like below
- ※ If you confirm 'Cancel', it will go back to 'Playing Screen'
- ※ If you press RETURN key, it will go back to 'Multi-cut screen'
- ④ To see cut tracks, go to the same folder where original file is
- ⑤ There will be one folder whose name is same as original file
- ⑥ There will be five(5) cut tracks in the folder like below.



19-17-4. Role of each key on 'Multi-Cut Screen'

- 1) All keys of remote control except for VOL BAL, VOL+/-, PAUSE/PLAY, SETUP and POWER don't work
- 2) MENU key: to toggle Enable/Disable for four(4) spins
 - 2-1) When Spin is enabled

<Buttons on the front of X35 unit>

 - . OK: to go to next spin
 - . JOG spinning: to up/down spin value
 - . MENU: to disable Spin

<Keys of remote control>

- OK: to go to next spin
- LEFT/RIGHT: to move Spin to left/right
- MENU: to disable Spin

2-2) When Spin is disabled

<Buttons on the front of X35 unit>

- OK: to toggle Play/Pause
- JOG spinning: to seek 'current playing point' by the value of forth Spin
- JOG spinning with JOG pressed: to seek 'cutting point'
- MENU: to enable Spin

<Keys of remote control>

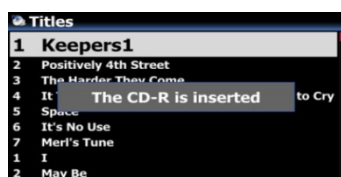
- OK: no working
- LEFT/RIGHT: to seek 'current playing point' by the value of forth Spin
- UP: to set 'current playing point(vertical blue line)' as 'cutting point(vertical green line)'
- DOWN: to remove the cutting point within 10 seconds and closest to the current playing point
- MENU: to enable Spin

2-3) Regardless of Spin Enabled or Disabled

- INPUT on the unit: t to set 'current playing point (vertical blue line)' as 'cutting point (vertical green line)'
- STOP on the unit: to remove the cutting point within 10 seconds and closest to the current playing point
- NEXT/PREVIOUS of remote control: to seek 'cutting point' to right/left
- -15/+15 of remote control: to work just as original role
- CAP/NUM of remote control: to toggle 'Seek to percent mode' or 'Jump to track mode' of the numeric keys.
- Numeric keys of remote control
 - * in 'Seek to percent mode': to seek by 0%, 10%, 20% within current displaying area
 - * in 'Jump to Track mode': to seek to starting point of each cutting area

19-18. Audio CD burning function

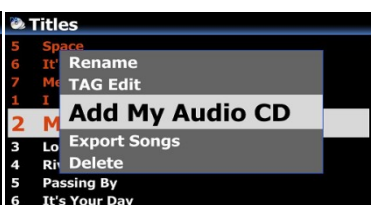
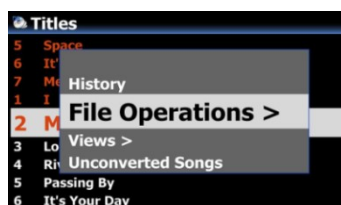
You can burn Audio CD with X45 like below



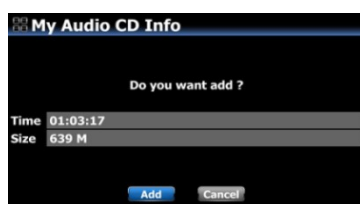
- ① Insert empty CD-R to CD drive on any screen
- ② Wait until media detection message comes out like left screen



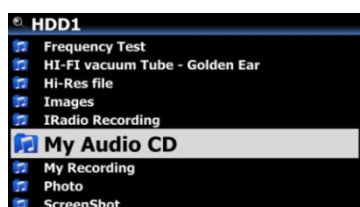
- ③ Look for target files(tracks) and place the cursor on the target file
- ※ On the file(track) list, press RIGHT arrow key to select multiple files



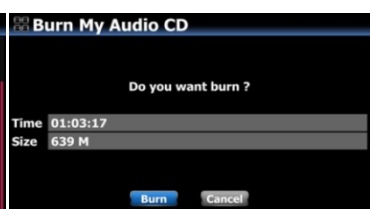
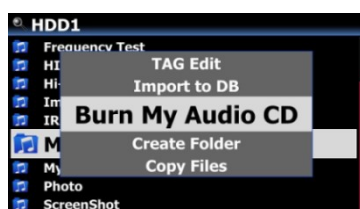
- ④ After selecting files, press MENU key and confirm 'Add My Audio CD' to send selected files(tracks) into 'My Audio CD' folder



- ⑤ Selected files will start copying to 'My Audio CD' folder in the storage set as MusicDB storage



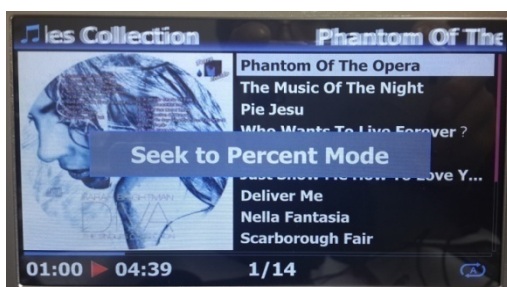
- ⑥ Go to Browser and look for 'My Audio CD' folder.(There will be WAV files in the folder)



- ⑦ Place the cursor on the 'My Audio CD' folder, and press MENU key to select and confirm 'Burn My Audio CD' to start burning

※ NOTICE: For next Audio CD burning and inserting new track, you have to make 'My Audio CD' folder empty.

18-21. Function of Jump to a song on Playing Screen

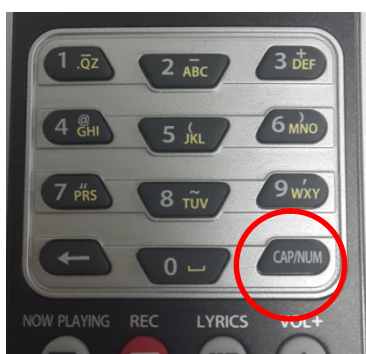
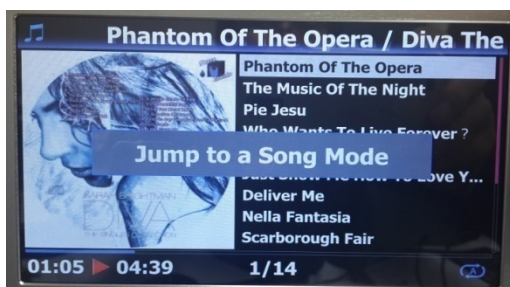


We added 'function of Jump to a Song Mode' on Playing Screen.

Press CAP/NUM key of remote control to toggle 'Seek to Percent Mode and 'Jump to a Song Mode'

* Jump to a Song Mode : Press numeric key to seek a song

* Seek to Percent Mode : Press numeric key to go to a certain playing position.



20.Specification

Model name	cocktailAudio X45		Remarks
Host CPU & Memory	CPU: Dual Core ARM Cortex A9 running at 1.0GHz		
	Main Memory: DDR-1066 1GByte		
	NAND Flash 8GByte		
CD Player	Type	Front Loading	
	Supported media	CD, CD-DA, CD-R, CD-RW, DVD-R/RW	
Display	7.0" TFT LCD(1,024 x 600pixels)(* able to connect to ext. screen via HDMI out)		
Interface	Key & Jog(Volume/Scroll), IR Remote Control, Customized Remote App for iOS and Android devices, Web Interface		
Analog Out (Sabre ³² ES9018K2M Dual DAC)	Balanced (PRE-OUT)	XLR, Dynamic Range: 130dB (Max 4.5Vrms, Stereo) THD +N: 0.0004%	
	Unbalanced (PRE-OUT)	RCA, Dynamic Range: 130dB (Max 2Vrms, Stereo) THD +N: 0.0004%	
	Headphone Out	6.35mm Jack, 100mW+100mW@1Khz, 600ohm, 0.1% THD	
Digital out (Variable/Fixed)	COAXIAL x 1	S/PDIF 75ohm RCA, Sample rate: up to 24bit/192KHz	
	TOSLINK x 1	S/PDIF, Sample rate: up to 24bit/192KHz	
	AES/EBU/XRL x 1	110ohm, Sample rate: up to 24bit/192KHz	
	USB Audio x 1	USB Audio Class2.0 Output	
	HDMI Out x 1	HDMI Audio Out(*Shared with HDMI Out for external screen)	
Analog Input	LINE In x 1	L&R RCA at the rear, default 2Vrms(controllable 1~4Vrms)	
	Aux In x 1	3.5mm Phone Jack on the front, default 1Vrms(controllable 0.5~2Vrms)	
	Phono In x 1	MM Input, default 7.5mVrms(controllable 3.75~15mVrms)	
Digital Input	COAXIAL x 1	Sample Rate: up to 24bit/192Khz	
	TOSLINK x 1	Sample Rate: up to 24bit/192Khz	
	AES/EBU XLR x 1	Sample Rate: up to 24bit/192Khz	
USB Audio Input	USB B type connector, USB Audio Class 2.0 input (support up to PCM 384Khz/32Bit, DSD Native 256, and MQA file)		

(USB DAC)				
Supported Storage	Hard Disk	2.5" SATA, up to 2TB	* Bigger capacity of storage will be supported by firmware update when available in the market	
		3.5" SATA, up to 8TB		
	SSD	2.5" SATA, up to 2TB		
TUNER	DAB+/FM Radio	Selectable for DAB/DAB+ or FM Radio		
Connectivity	USB Host	USB3.0(5V/1A) x 2 at rear USB2.0(5V/1A) x 1 at front		
	Network	Wired	Giga Fast Ethernet(10/100/1000Mbps)	
		Wireless(Optional)	※ 802.11b/g/n WiFi USB dongle(Optional)	
		HDMI Out	Connect to external screen(* Shared with HDMI Audio Out)	
Codec & Format supported	MQA, PCM 384Khz/32Bit, DSD(DSD64, DSD128, DSD256), DXD(24Bit/352.8KHz), HD WAV(24Bit/192KHz), HD FLAC(24Bit/192KHz), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, M4A, MP3, WMA, CAF, Ogg Vorbis, PCM, M3U, PLS, etc			
Network Protocols Supported	UPnP(DLNA) Server/Client/Media Renderer, Samba Server/Client, FTP Server, Web Server, etc			
Internet Services	Internet Radio	Airable		
	Online Music Services	TIDAL, TIDAL MQA, Deezer, Qobuz, Napster, Spotify Connect		
Supported OSD languages	English, German, French, Spanish, Italian, Polish, Dutch, Russian, Traditional Chinese, Korean,(To be added by request)			
Isolated Power management	Toroidal Transformer	For audio signal management		
	70W internal SMPS	For digital CPU management		
12V Trigger Out	Max 200mA, 12V			
Power Source	220V area	AC 220V - 240V, 50/60Hz		

	110V area	AC 110V - 120V, 50/60Hz	
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Mechanical	Material	Front	13mm thickness aluminum by CNC cutting	
		Knob	Aluminum by CNC cutting	
		Body	Metal	
	Dimension	Without foot	441mm(W) x 330mm(D) x 100mm(H)	
		With foot	441mm(W) x 330mm(D) x 111mm(H)	
Certificate	CE, FCC, EMI, etc			

Specification to be changed without notification

21.Troubleshooting

1. There is no power.
 - 1-1. Make sure the power cord is connected.
 - 1-2. Check the X45 is switched ON at the rear panel.
 - 1-3. Make sure the plug is fully inserted into the wall socket.
2. The X45 does not respond to the remote control.
 - 2-1. Replace remote batteries
 - 2-2. Check for interference from other IR sources
 - 2-3. Reduce the distance between the remote control and the X45.
3. The X45 does not display the network-shared folder on your PC
 - 3-1. Check the network connection status between the X45 and your PC
 - 3-2. According to the network environment there may be a time delay in connecting to the network.
 - 3-3. Try rebooting the X45 and configure the network setup again.
4. No sound from the speaker during music file play back
 - 4-1. Check if the MUTE function in ON
 - 4-2. Check all cables connected to each device.
 - 4-3. Check the volume level
 - 4-4. Check Audio settings at SETUP

5. The X45 does not read the disc.
 - 5-1. Check if you have inserted the disc upside down.
 - 5-2. Check to see if the disc is scratched or dirty.
6. The disc is skipping
 - 6-1. Check for scratches or dirt.
 - 6-2. Make sure that the X45 is on a firm surface and not subject to vibrations.
7. There is a hum coming from the speaker.

Make sure that all cable connections are secure.