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FCC Information

This equipment has been tested and found to comply with 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 radiates radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio Communications, However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause unacceptable 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.

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

Certificated Of Conformity

1. Company : AMAC TEK CO., LTD

3rd Floor, Seyo Bldg, 161-8,

Samsung -Dong, Kangnam-Gu,

Seoul Korea 135-881

2. Model Name : HAN-320

3. FCC Compliance Statement:

This device complies with part 15 of FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Caution : Any changes or modifications in construction of this
device which are not device expressly approved by
the party responsible for compliance could void
the user' s authority to operate the equipment.

-EN55022 + A1 : 2000 --- Information Technology

Equipment - Radio disturbance

-EN55024 : 1998 --- Information Technology

Equipment - Immunity

-EN55013 + A14 : 1999 --- Sound and television broadcast

receivers and equipment - Radio disturbance

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To listen to Music

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Features & Others

■Features



* Removable Disk Function

- Additional Hard Disk Drive is appeared on your PC.

- It consists of Directory structure, and users can create the folders to save, copy, playback, and delete the desired music.

* SD CARD BACK-UP Function

- The player supports SD Card slot so that it can be used for data back up storage.

- Therefore, users can transfer Pictures and JPEG data from SD Card used by Digital Camera or other devices to the player.

* ENCODING Function

- User can record not only voice but also FM Radio at the real time, and the desired MP3 files can be made to directly connect to other audio devices such as CD Player, Cassette Tape Recorder and so on.

* FM Radio Function

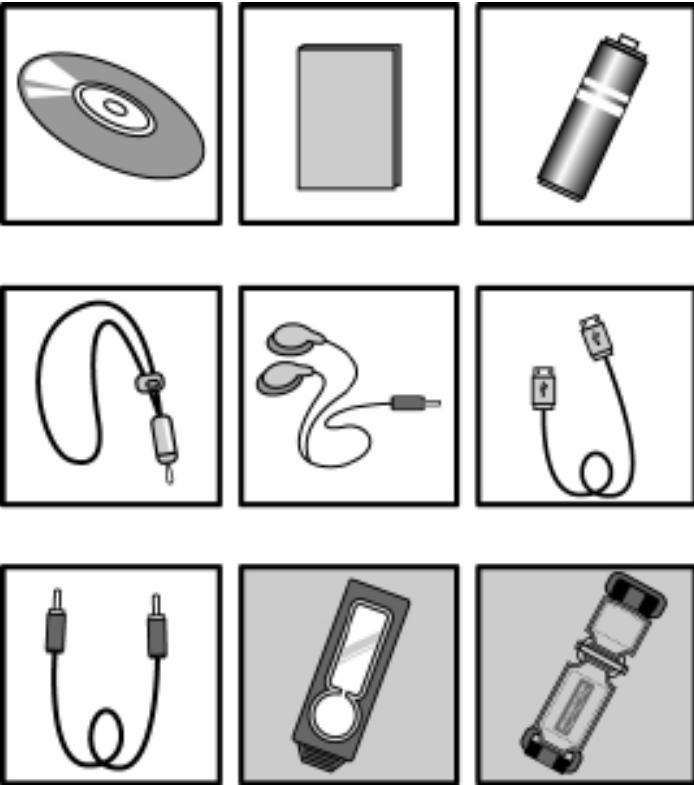
- Users can listen to FM Radio to use preset frequency function by Auto Scan, and the preset frequencies are saved automatically.

* Firmware Upgrading

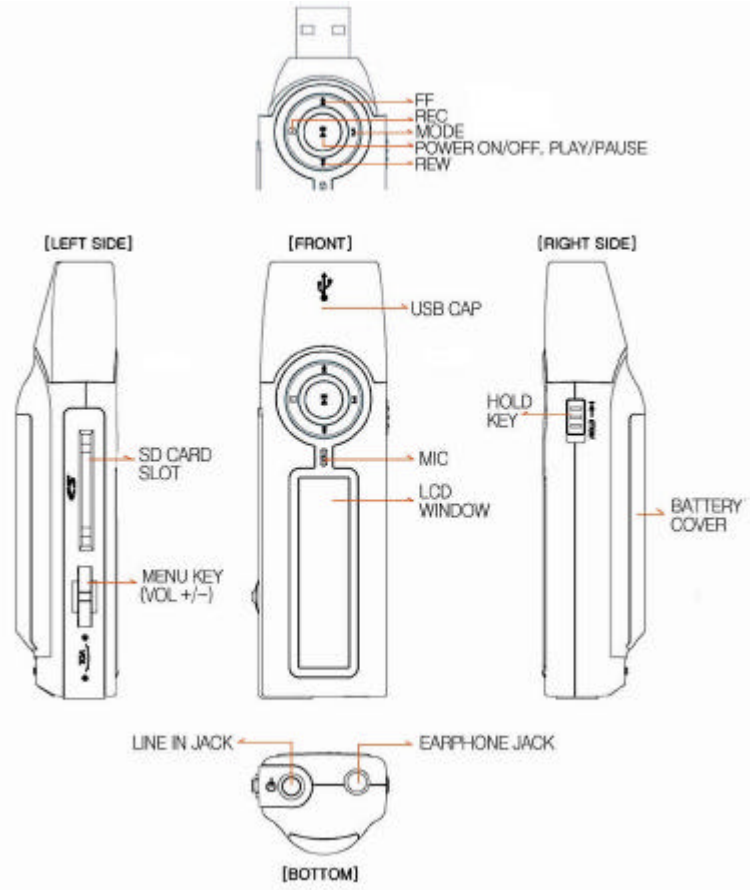
The HAN-320 is easily upgraded using the firmware upgrading service through www.amac21.com

AMAC TEK CO., LTD. will give notice of the new functions and firmware for upgrading.

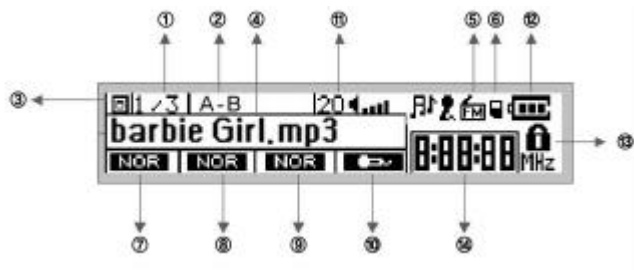
■Enclosures



■Player Overview



■LCD Display



- ① Indicates the present played folder and the track number
- ② Indicates the Selected Area Repeat(A -B)
- ③ Indicates the memory of the present played file
(Internal memory or External SD Card memory)
- ④ Indicates the title of the present played file
- ⑤ Indicates the MODE (MP3, FM, REC)
- ⑥ Indicates SD Card(When the SD Card is inserted.)
- ⑦Indicates EQ Mode (Normal, Classic, Jazz, Rock, M-Bass, USER)
- ⑧ Indicates REPEAT Mode(Normal ->S1->All->RANDOM)
- ⑨ Indicates Playback Speed(-4, -3, -2, -1, NORMAL, +1)
- ⑩ Indicates the Record (Voice/Line)
- ⑪ Indicates the volume level(00 ~30)
- ⑫ Indicates the battery life
- ⑬ Indicates HOLD Mode
- ⑭ Indicates Playback Time

Required Software by OS

■ Required Software by OS(Operating System)

S/W program installation is not mandatory for all OS users except for WINDOWS 98 users. Therefore, WINDOWS 98 users must install the driver and additional program, and any other users (WINDOWS 2000/ME/XP) install only additional program.

To install software programs by each OS

① Windows 98/SE User

Installation CD provided should be installed firstly (the driver and additional programs), and then users should connect the player to PC. When the driver and additional programs are not installed firstly before connecting the player to PC, PC recognizes the player as [Unknown Device] so that the player can not be used properly.

② Windows 2000 User

Users who upgraded up to MS Windows 2000 service pack 3 do not have to install S/W program, but except for those users have to upgrade service pack 3 so that the player can recognize SD Card. Please download it from CD provided or visit the website (<http://www.microsoft.com/korea/Windows2000/downloads/servicepacks/sp4/download.asp>)

③ Windows ME/XP User

No S/W program is required.

■ Software installation guide for additional functions

Please install an additional utility program which is used to upgrade firmware or to convert from TVF into WAV.

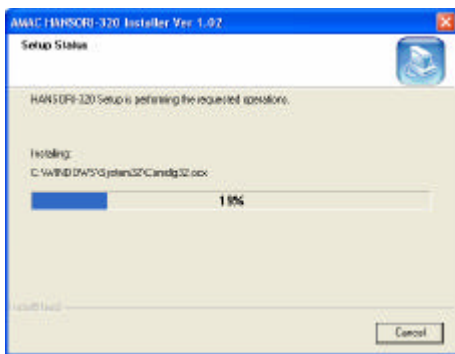
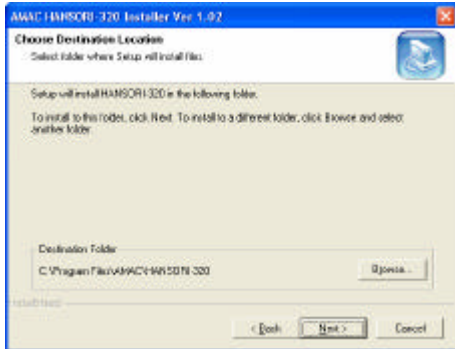
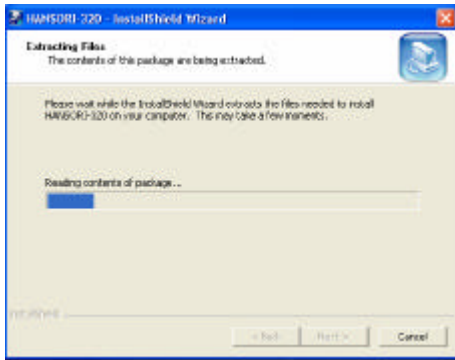
▶ PC System Requirements

Windows 98/ME/2000/XP	20MB Hard Disk Space or higher
CD-ROM Drive	PC for USB Port supported

▶ How to install Software Program

1. Insert the installation CD and the following pictures are appeared. (If it is not run automatically, please click on INSTALL.EXE file in CD-ROM for the manual installation.)

2. Please follow the installation guide, which will be shown automatically, to finish the installation.



To Upload/Download

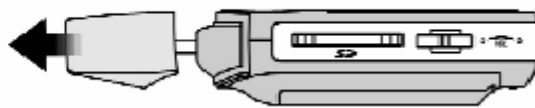
* Caution

To open the USB Cap, lean downward direction and pull as below pictures.

Down



Pull



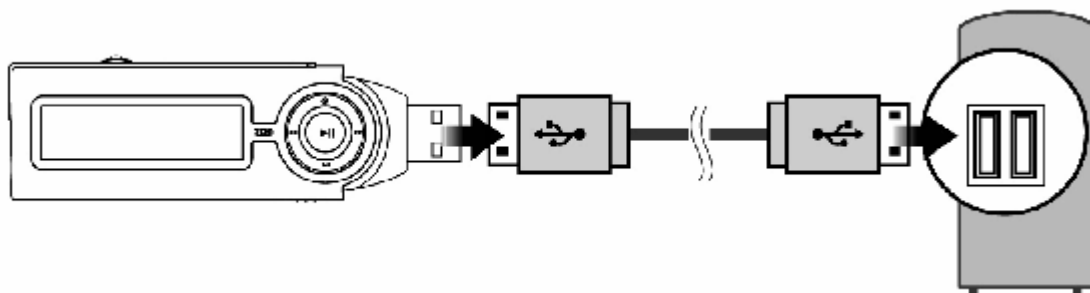
■To connect to PC

① Direct Connection

Open the cap of the player and connect USB port to your PC.

② Connection through the USB Cable

Use the USB cable provided if the USB port is positioned at the uncomfortable place.

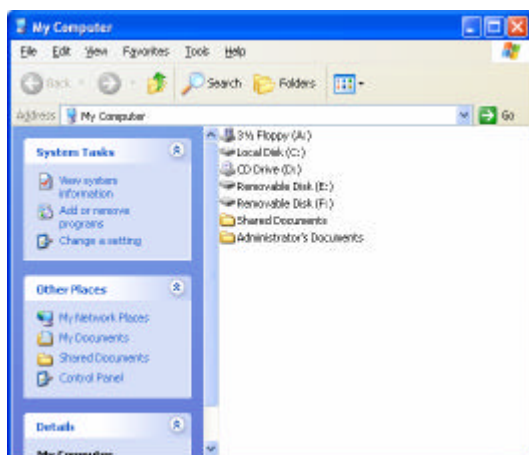


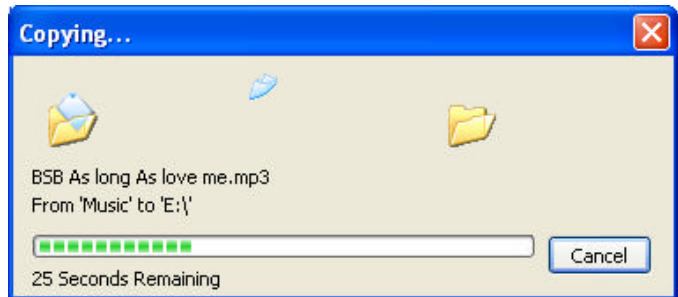
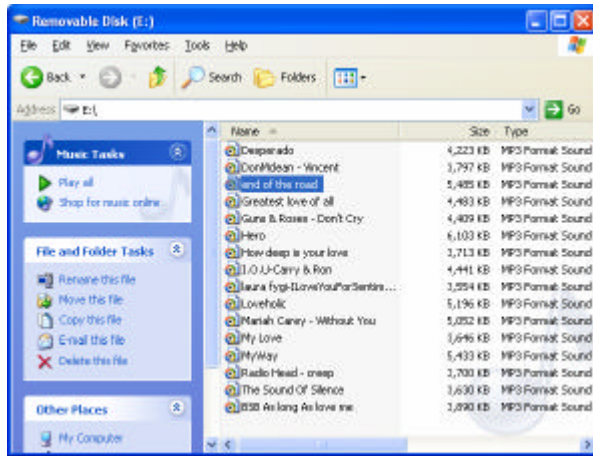
■To Upload/Download the files

① When the player is connected to PC, two removable disk drives are appeared in [My Computer]. The first removable disk drive is for the internal Flash Memory in the player, and the second one is for SD Card (The external Memory) and can be used only when SD Card is inserted. If SD Card is inserted into the player, [USB Connect] is displayed on the LCD.

② Users can copy the files saved in PC to the folder created in removable disk drive.

(* NOTICE: User can create the desired folders at users convenience. For instance; Music, Voice, Pictures, Business, and so on)





③ Uploading is on the contrary of downloading.

④ It will cause the serious problem on the files and internal Flash Memory if you plug-out the player from PC improperly. Please disconnect the player after downloading completely.

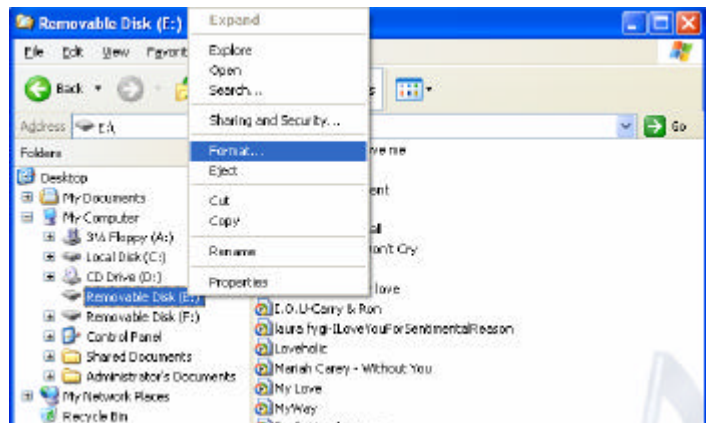
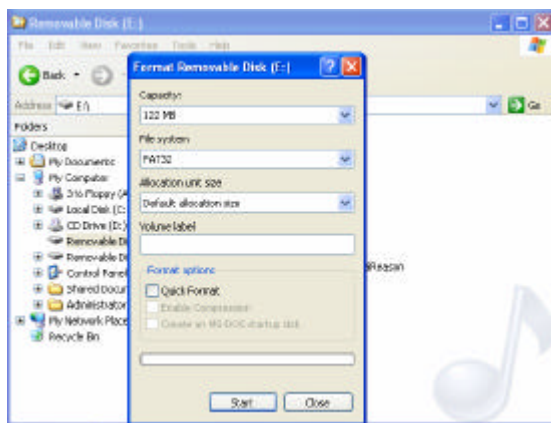
(Please refer to page #10 [To disconnect from PC])

⑤ If the player malfunctioned because of improper disconnection, please format the memory to return to normal condition. (Please refer to page #9 [To format])

■To Format

Please format after select the Removable Disk Drive and click on FORMAT in FILE Menu as below procedures.

(* Caution: If formatted, all data stored in the Memory is deleted, so please back-up before the format)

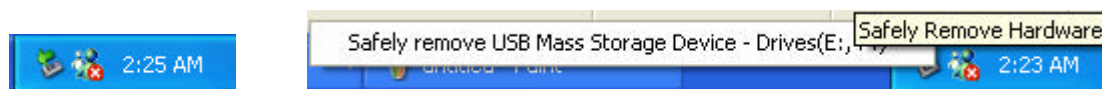


It is strongly recommended to use [Format Memory] function of the player because users can save the waiting time(the booting time) when the player is turned on. If users format the player from PC, the booting time may last longer.(Please refer to page #21 [Format Memory])

■To disconnect from PC

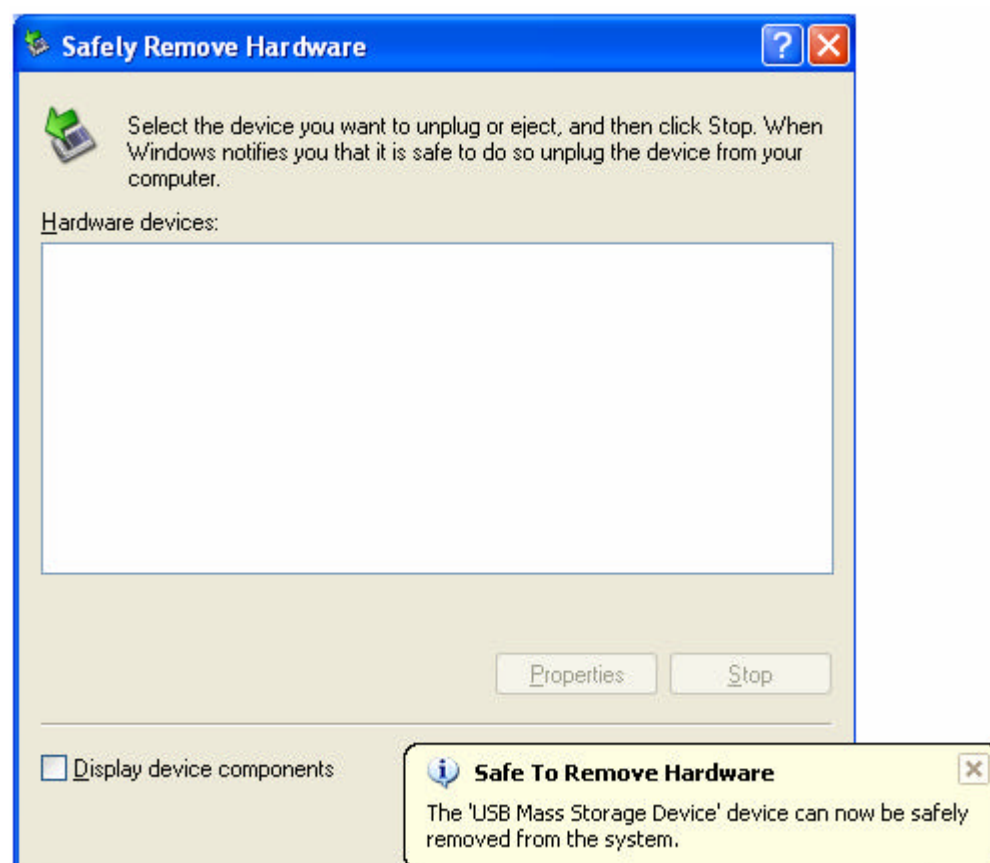
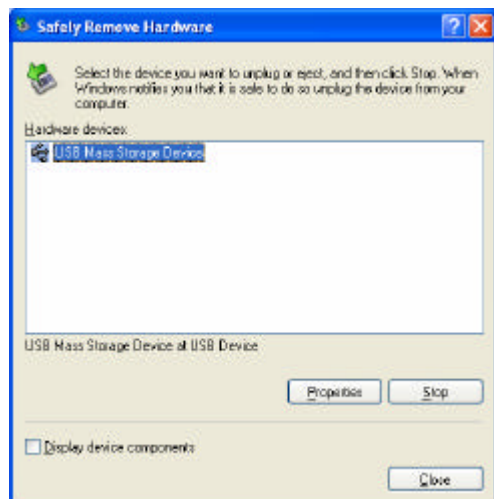
Disconnection from PC should be done as following procedures to prevent from file damage.

- ① Please double click the icon at the bottom of right side as below pictures.



- ② Select USB device, and click on [STOP].

- ③ Disconnect the player after click on [Yes]



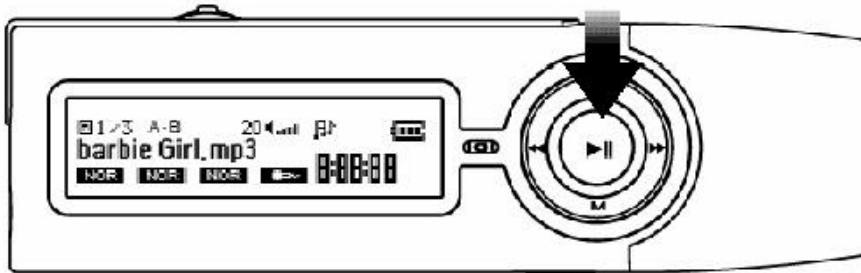
To listen to MP3 / WMA Music Files

■To listen to music

► To turn the power On/Off, Play/Stop

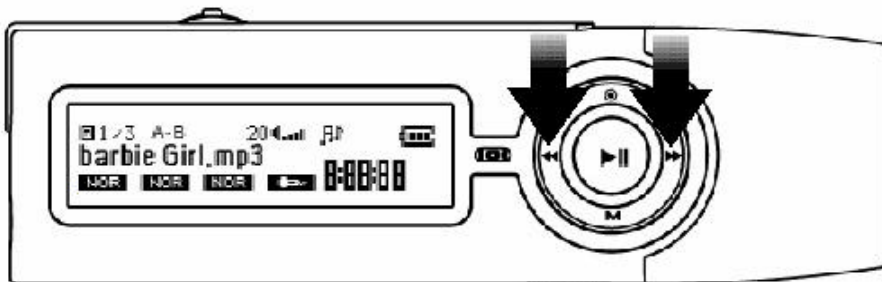
The power will be turned on when PLAYBACK(►||) button is pressed over two or more seconds and then press PLAYBACK(►||) button once again to play the music. Press PLAYBACK(►||) button during playback to pause or stop and press again to turn off the power for more than 3 seconds.

(* Notice : The booting time may be different according to the number of the folders and files saved in the player.)



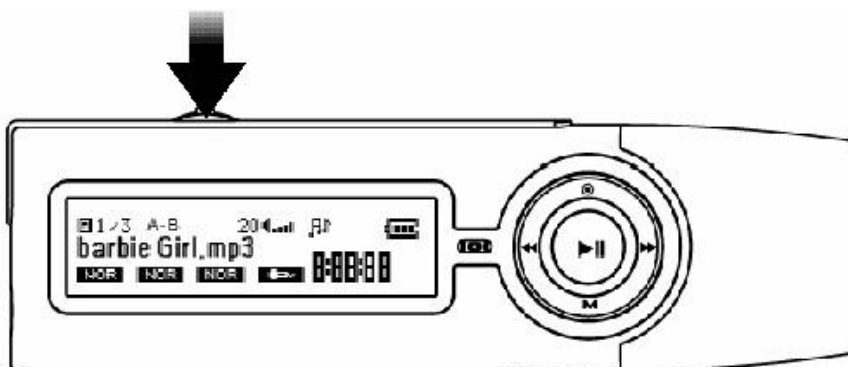
►To select the next file or previous file

Press the FF(►►) for the next file, and REW button(◀◀) for the previous file.



► To control Volume

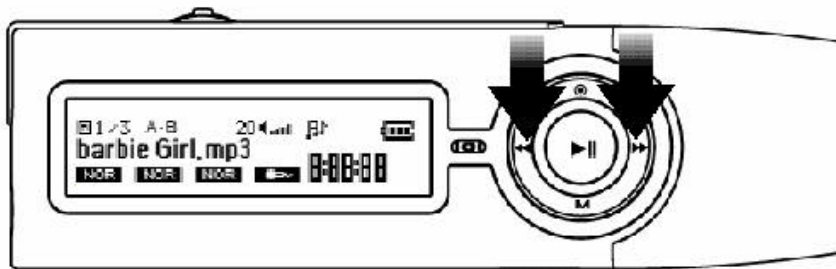
Move the Mode Key to VOL+ for volume up and move the Mode Key to VOL- for volume down. The Volume can be controlled in the range of 00~30.



► Fast Search Function

Press FF(►►) / REW(◄◄) button two or more seconds when a file is being played. Then, the previous or the next part in the file will be played.

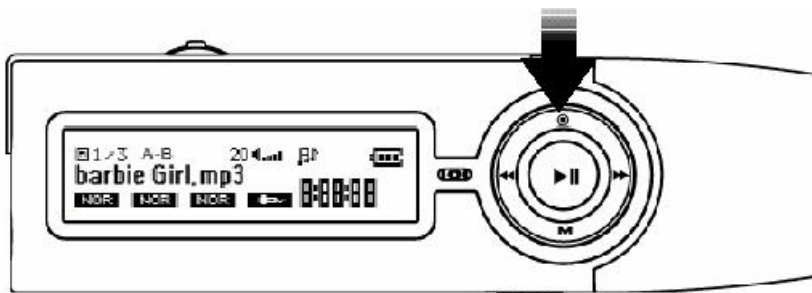
(Fast Search function when MP3 file is being played.)



► Repeat function for the selected Area (A -B)

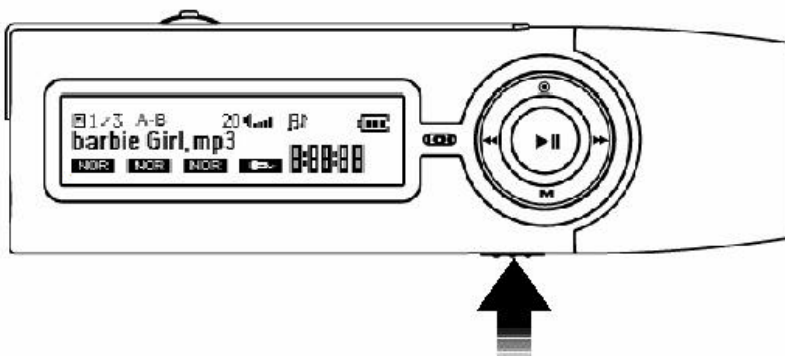
The desired area can be played repeatedly in the playback file. Please press REC(⊙) button at the point of the start(A) and press again at the point of the end(B). Then, the selected section is repeated. Press the REC button to release this setting up.

(* Notice: Repeat function can be applied for not only a file but also several files, too.)



► HOLD

When HOLD button is placed in the ON Position (HOLD -> I), all buttons on the player are not working.



■ MENU Function



Press MENU Key(Jog Key), and icons for Setting Up functions will be displayed on LCD screen (EQ -> REPEAT -> PLAYBACK SPEED CONTROL -> RECORD SELECTION(Voice/Line)). Each time users press MENU Key(Jog Key), it moves EQ -> REPEAT -> PLAYBACK SPEED CONTROL -> RECORD SELECTION in regular sequence. If no movement occurred more than 5 seconds, it automatically returns to the previous status. To set the each function, move the MENU Key(Jog Key) to right or left.

► Equalizer (EQ) Setting Up

Select ()Icon, and move the MENU Key(Jog Key) to right or left. Then the 5EQ modes will be shown as below.
Normal -> Classic -> Jazz -> Rock -> M-Bass -> USER

*Please refer to page #21 [USER EQ].

► REPEAT Setting Up

Select ()Icon and move the MENU Key(Jog Key) to right or left. Then the Repeat Setting up will be shown as below.

NOR(Normal) -> S1(Select One) -> All(ALL) -> RAN(Random)

► PLAYBACK SPEED CONTROL

Select ()Icon, and move the MENU Key(Jog Key) to right or left. Then the PLAYBACK SPEED CONTROL Setting up will be controlled up to 6steps.

Fast -> Normal -> Slow 1 -> Slow 2 -> Slow 3 -> Slow 4

► Power Saving Function

The power will be turned off if no movement occurred for 3minutes.

■To search Directory

The folders consist of each basic folder, and MP3 files are saved in each folder.

If the desired file that user wants to listen to is in the other folder, user has to move to that pertinent directory.

※Reference : The Device HAN-320 will display on LCD as below.

1. After formatting



There is no change on LCD after the format even though users press FF and REW button.

2. After Voice Recording

The folder :\VOICE will be created automatically, and the current status will be in Voice folder. All of encoded files will be saved in Voice folder.

3. After using File Copy function in Mode

The folder I:\BACK_UP will be created automatically, and all of copied files will be saved in this folder.

The root folder consists of VOICE, BACK-UP, and Additional Folders created by users.

* <<Config.sys>> file will be created and shown automatically in PC when users set up anything through MODE key. The value of user setting is saved as <<Config.sys>> file, and it does not affect PC system. Please do not remove <<Config.sys>> file or all of setting value by users will be returned to default value.

►To move from file to file

Press FF(►►) /REW(◄◄) to move to the next or previous file. If the current status is root folder, the VOICE, and BACK_UP folders will be shown with files. If the current status is subfolder, I:\Up_Folder will be shown with files of the folder.

► To move to the VOICE, BACK_UP folder, or Subfolder

Press the PLAYBACK(►II) button to move the desired folder at the status of root folder.

► To move to the Upfolder

Press the PLAYBACK(►II) button at the status of I:\Up_Folder, which is shown after the last file.

► To move to the SD Card

It is possible to move to the SD Card only in root folder. When SD Card is inserted, the files in SD Card are displayed on LCD automatically and the location is in root folder whenever SD Card is inserted.

The movement order of files are as follows. Files in Internal Flash Memory

-> VOICE folder -> BACK_UP folder ->Files in SD Card.

To record / encode

Please set up MIC. and LINE input as users' convenience using the function of MENU when encoding.

After select(**[SEL]**) with MENU key, users can change into the desired recording. When the voice recording is desired, please move the volume button to right and left and select (**[MIC]**) icon, and when the direct encoding is desired, please select (**[LINE]**) icon. The recorded voice will be saved in VOICE Folder(**[I:\VOICE]**) automatically.

■To record with MIC

After setting up (**[MIC]**) icon, press REC(**[REC]**) Button to start the recording and press REC(**[STOP]**) Button again to stop the recording.

Please set up MIC. and LINE input as users' convenience using the function of MENU when encoding.



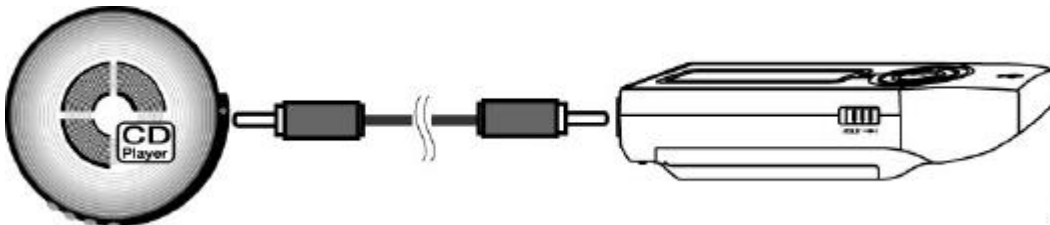
■To encode from other audio devices (Direct Encoding)

It is the function to record directly from other audio devices such as CD Player or Cassette Player.

Connect Line-In terminal of the player to Line-Out terminal of audio devices with an audio cable provided after setting up (**[LINE]**) icon.

Play the CD Player or Cassette Player, and press the REC(**[REC]**) Button on the player to start the recording.

Press the REC(**[STOP]**) button again to stop the recording.



■To listen to the recorded file

The playback of the all recordings is the same as listening to the music.

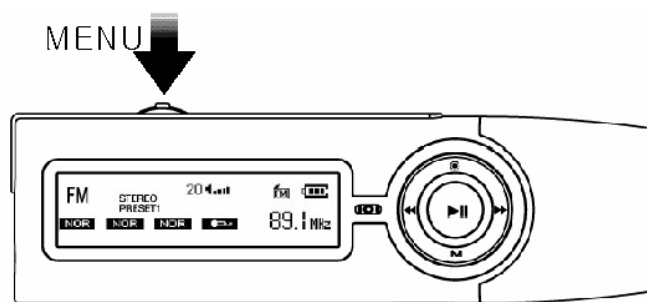
To listen to FM Radio & record at the real time

Earphone provided should be inserted into the player to receive FM frequency since the earphone works as an antenna.

Earphone provided should be inserted into the player to receive FM frequency since the earphone works as an antenna.

■To preset frequency by Auto Scan

Press PLAYBACK(▶II) button shortly to stop or pause the playback and press MODE button to enter FM Radio. Then, press MENU Key(Jog Key) over two or more seconds to search and saves up to 15channels automatically.(PRESET01~PRESET15)



■How to use PRESET MODE

Press MENU key for PRESET Mode, then press FF and REW and the saved frequencies move from PRESET 01 ~ to PRESET 15. If there are no saved frequencies, please press MENU key more than 2 seconds to preset frequencies by auto scan and then use FF(▶▶) to go to the next preset channel and REW(◀◀) to go to the previous preset channel.

■To save frequency by Manual

In some cases (Place & movement speed), it may happen that the saved frequencies are not very well set. In such a case, the desired frequencies can be found and saved by manual as follows;

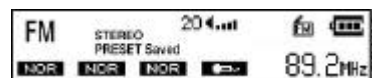
Press MENU Key(Jog Key) once, and the saved frequencies are released. Press FF(▶▶) / REW(◀◀) to move the desired frequency.

Press PLAYButton(▶II), then [PRESET SAVED] is displayed on LCD which means the desired frequency is saved.

[TO RELEASE PRESET]



[TO SAVE BY MANUAL]



■To record FM Radio

Users can record the desired FM Radio while listening as follows;

Press REC(Ⓢ) button while listening to start the recording.

Press REC(Ⓢ) button again, to stop the recording.

(* Notice: FM Radio recording files are saved as RADIO 001 ~ 999 in the VOICE folder.)



To set up FM BAND

It is function of worldwide FM frequency setting up. Please refer to page # 21 [FM BAND Select].

(* Notice : US Band is default mode at first)

To set the mode

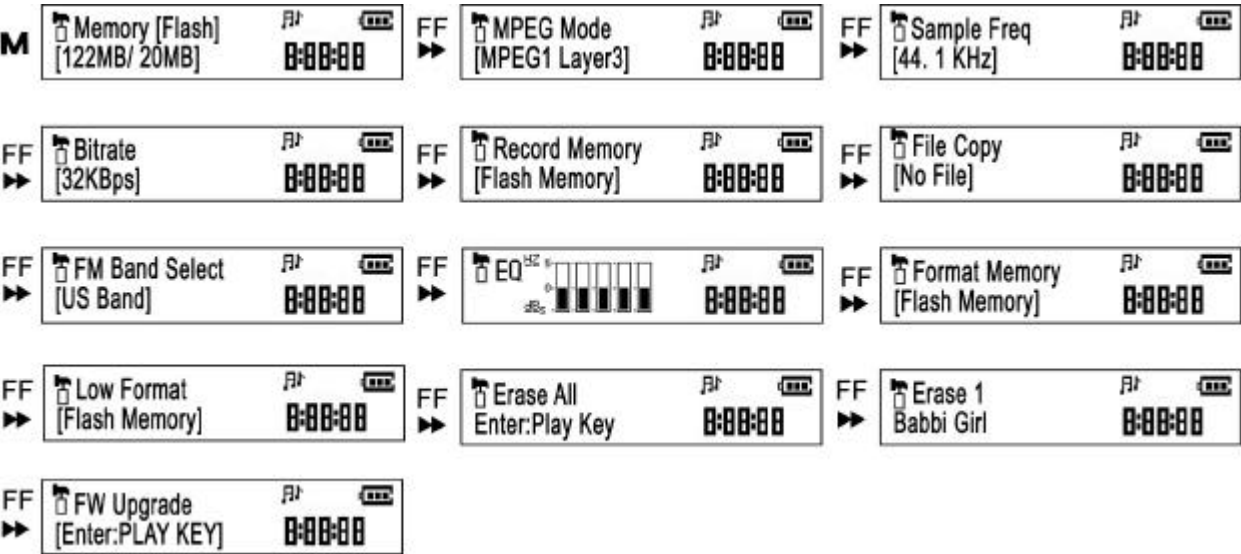
The player is made for users to set up the basic mode as users convenience. Turn on the power and press M (MODE) button more than 2 seconds to enter MODE Setting Up. To return, press M (MODE) button again.

■Major Mode Setting Up

■How to enter the detailed MODE Setting up

- 1) Press the FF button (▶▶) / REW button (◀◀) to select the desired MODE.
- 2) Move the MENU key (Jog Key) to select the detailed specifications displayed on the LCD
- 3) Press the PLAYBACK(▶II) button to select the desired specification and press MODE button(M) to return from the mode setting up.

[Pictures for All MODE Functions]

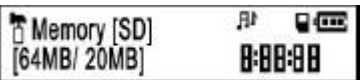


1. MEMORY

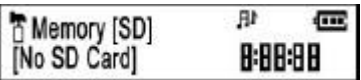
-Total Flash Memory Capacity / Free space



-SD Card Memory Capacity / Free space
(When SD Card is inserted)



-No SD Card



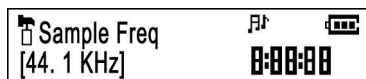
An actual usable memory in the player is shorter than an original memory because 8~ 9MB is used by the system of the player.

2. MPEG MODE



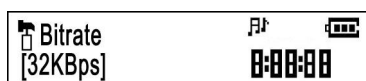
MPEG MODE setting up consists of 6 as follows;
MPEG1 layer3->MPEG2 layer3->MPEG2.5->MPEG1 layer2->ADPCM ->TVF

3. SAMPLE FREQ Setting Up



MPEG MODE	SAMPLE FREQUNCE(KHz)
MPEG1 layer3	32 → 44.1 → 48
MPEG2 layer3	16 → 22.05 → 24
MPEG2.5	8
MPEG1 layer2	32 → 44.1 → 48
ADPCM	8
TVF	8

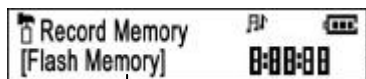
4. BITRATE Setting



MPEG MODE	BITRATE(Kbps)
MPEG1 layer3	11 Steps in range of 32 ~160
MPEG2 layer3	11 Steps in range of 08 ~112
MPEG2.5	8
MPEG1 layer2	64 → 128 → 192
ADPCM	32
TVF	4.7 → 5.9

5. Record Memory

Users can select the desired place between the internal Flash Memory in the player and SD Card when recording and saving as follows;

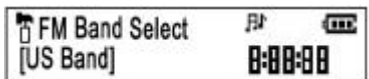


or [SD Memory]

6. File Copy

Users can transfer Pictures and JPEG data from SD Card used by Digital Camera or other devices to the player.

- Press MODE button more than 2 seconds to enter MODE Setting Up and go to the FILE. COPY after SD Card is inserted. Then, users can see the file in SD Card as follows;

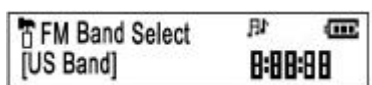


[IN SD CARD]

- Use MENU Key (Jog Key) to select the desired file for copying.
- Press PLAYBACK(▶ II) button to copy and the progressing % is appeared on LCD.
- When the file copy is completed, [File Copy OK] is appeared on LCD.
- Please repeat again for the additional file copy as above.
- After file copy, Backup Folder is created automatically in the player.
- To check the saved file of Backup Folder in the player, use MENU Key (Jog Key) to move the Backup Folder in the player.
- The player can not support the data back-up from an internal Flash memory to SD Card.

(* Caution: While file copy is progressed, do not remove the battery. It may cause that the file is deleted.)

7. FM BAND Select



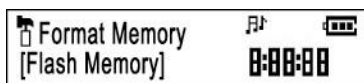
It is function of worldwide FM frequency setting up. Please use MENU Key (Jog Key) to select the desired FM BAND among US BAND->JAPAN BAND
->EUROPE BAND.

8. USER EQ



Each song can be set through the User EQ function which has 5channels in the ranges of 300Hz~6KHz. Please use MODE button to set the USER EQ as below picture and set the USER EQ by moving MENU Key(Jog Key). It can be adjustable in the ranges of -5dB ~ 5dB.

9. Format Memory



It is function of initializing the memory.

Use MENU Key (Jog Key) to select the internal Flash Memory in the player or SD Card.

Press PLAYBACK(▶ II) button and [YES] or [NO] is appeared.

Press PLAYBACK(▶ II) button again to format and [Formatting] is appeared.

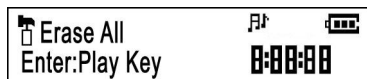
(* Notice: When users do not want to format, then press FF or REW button to move to the next function.)

10. LOW FORMAT



It is function of initializing the memory by deleting all data completely and constituting the track and sector. Thus, LOW FORMAT is substantial initializing Flash Memory in the player. The process is the same as the above #9 [FORMAT Memory]

11. ERASE ALL



It is the function to erase all files.

- Select the folder in the internal Flash Memory in the player or SD Card.
- Press MODE button more than 2 seconds to enter MODE Setting Up.
- Press FF or REW button to move to ERASE ALL.
- Press PLAYBACK(▶ II) button and all saved files are deleted while [ALL Erasing!!] is appeared on LCD display.

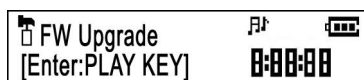
12. ERASE 1



It is the function to erase one file.

- Select the folder in the internal Flash Memory in the player or SD Card.
- Press MODE button more than 2 seconds to enter MODE Setting Up.
- Press FF or REW button to move to ERASE 1.
- Use MENU Key (Jog Key) to select the file in the internal Flash Memory in the player or SD Card
- Press PLAYBACK(▶ II) button to delete the desired file while [Erasing!!] is appeared on LCD display.

13.FIRMWARE UPGRADE

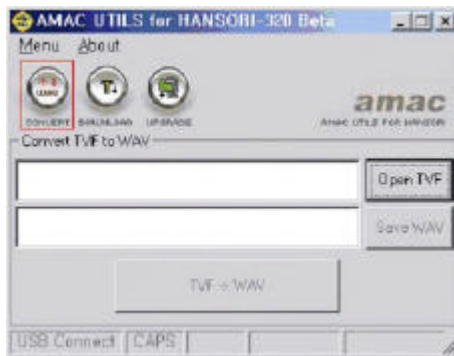


It is the function to upgrade the firmware. Please refer to page #27 [Firmware Upgrading].

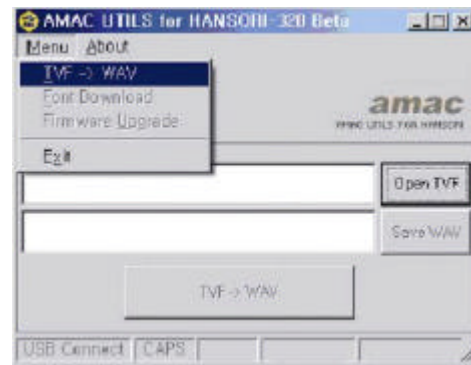
Additional Functions

■ How to use the UTILITY program

▶ TVF file in the player and WAV file in PC



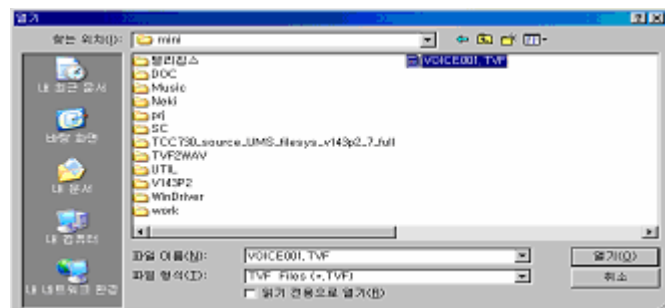
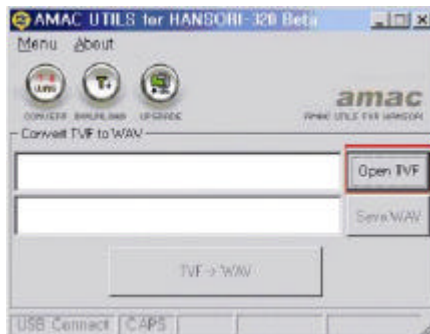
Picture(1-1)



Picture(1-2)

If users want to record voice with the player as TVF file (low capacity), only the player, not PC, can play TVF file. So, TVF file should be converted to WAV file in PC while connecting the player to PC, and then users can listen to WAV file (converted from TVF) in PC.

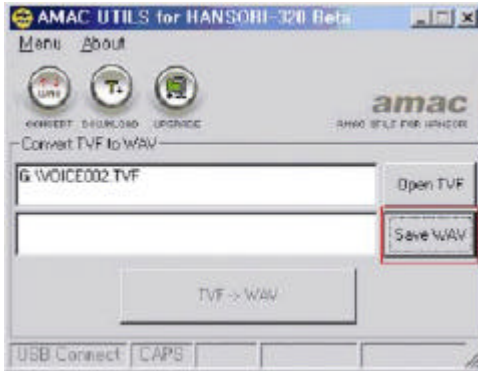
▶ How to convert from TVF File to WAV file



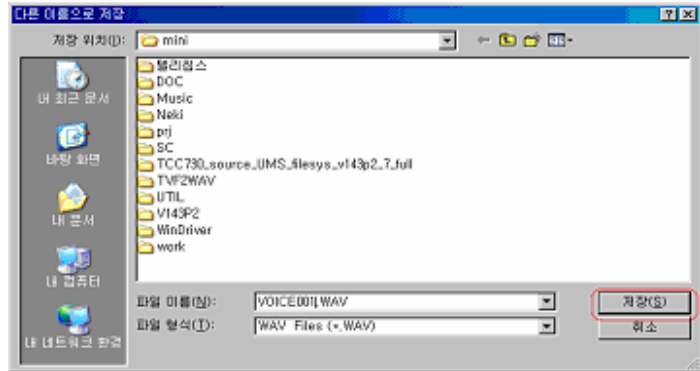
To click on the icon or select the menu

- Click on the icon as below [Picture 1-1] or select TVF File -> WAV(C) in the MENU as below [Picture 1-2].

▶ To select WAV file name to save



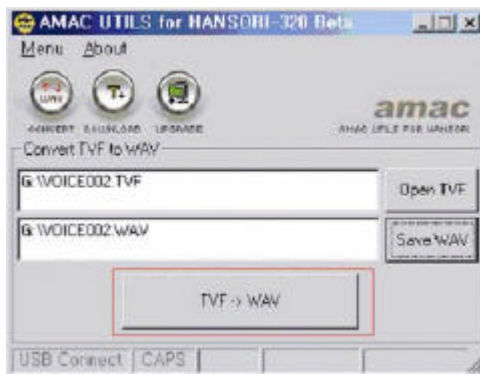
Picture(1-5)



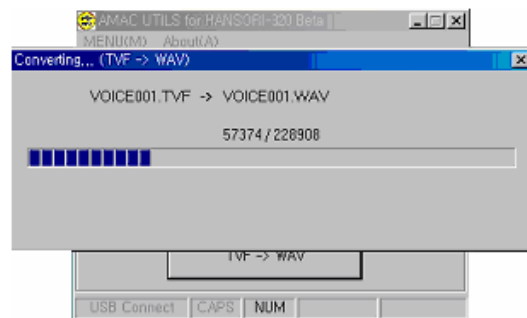
Picture(1-6)

- Click on [Save WAV] to appoint the place for saving as below [picture 1-5]. Then [Picture 1-6] is appeared.
- Select file name and the place to save, then click on [SAVE].

▶ Conversion



Picture(1-7)



Picture(1-8)

Press the [TVF ->WAV] to convert[Picture 1-7]. Then, [Picture 1-8] is appeared and disappeared when it will done.

■Font Download

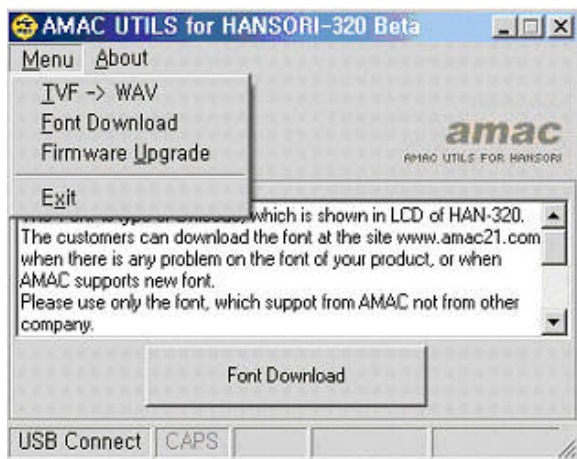
* When do users download fonts?

The music title is displayed on LCD using the external font provided by the player. When the music title is not properly displayed or the font is obsolete, users can download the fonts from the website www.amac21.com.

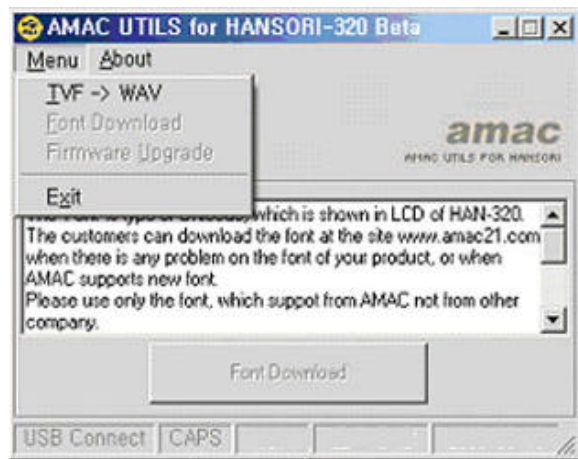
※How to Download the Fonts

1. To download, press MODE button more than 2 seconds in the player.
2. Find [Firmware Upgrade] and press PLAYBACK button.
Then, [FW UPGRADE] is appeared on LCD.
3. Connect the player to PC and refer to the followings;

►Pictures when the player is connected to PC



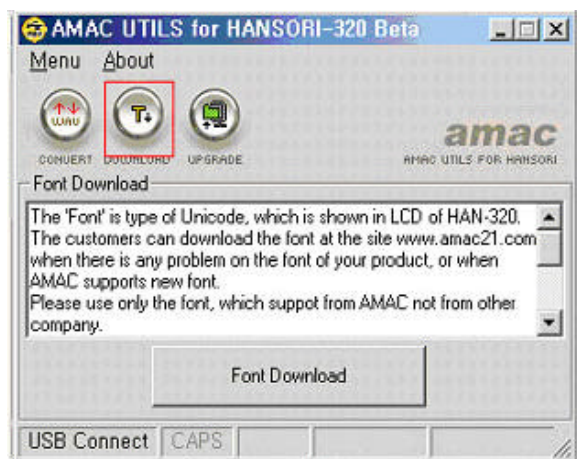
Connected Properly
Picture(2-1)



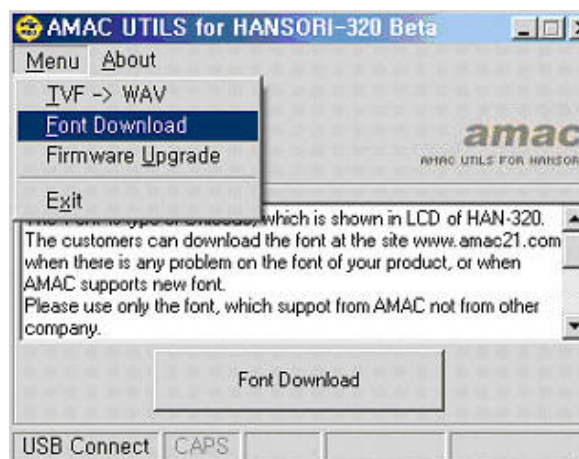
Connected Improperly
Picture(2-2)

4. [USB Connect] is activated shown on the bottom left corner as above Picture 2-1 and not activated on the bottom left corner as above Picture 2-2.
5. And also, [MENU(M)] related to USB Connection are not activated when the player is not connected to PC properly as shown on the top left corner.

►How to select the fonts downloading

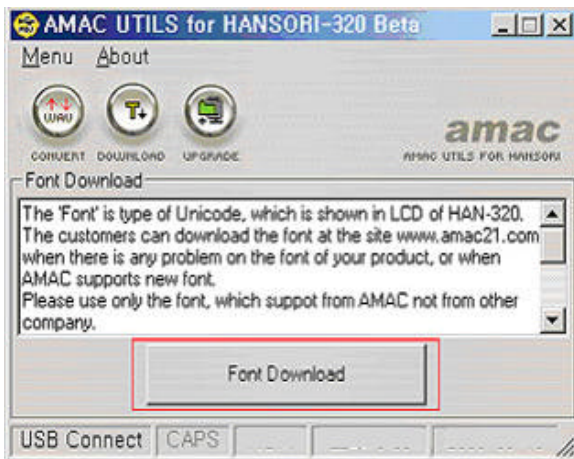


Picture(2-3)

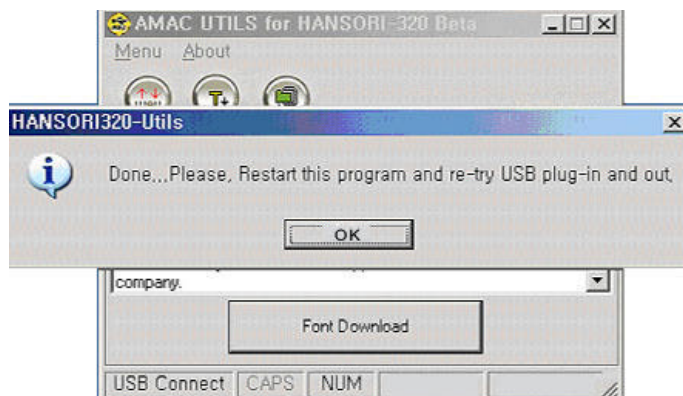


Picture(2-4)

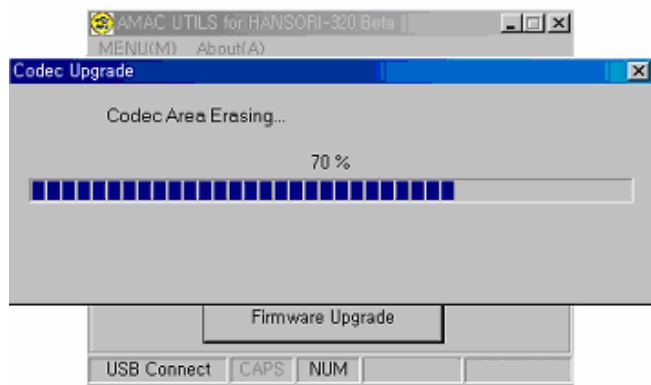
6. Click on the icon to download fonts as shown on Picture 2-3.
7. Click on the [MENU(M)] to download fonts as shown on Picture 2-4.
8. Users can choose either way.



Picture(2-5)



Picture(2-6)



Picture(2-7)

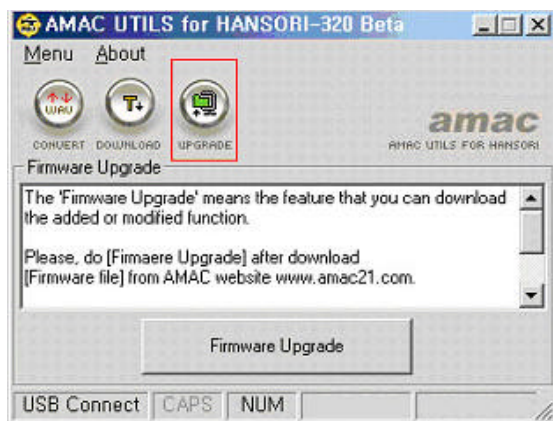
9. Click on [Font Download] button to start the downloading as shown on Picture 2-5.
10. Press [Confirm] button after finished Font Download as Picture 2-7.
The program has to be restarted after the Font Downloading,
and Re-Try the HAN-320 Plug-In and Out.

11. Picture 2-6 shows that the downloading is progressing and click on[Yes] to complete.

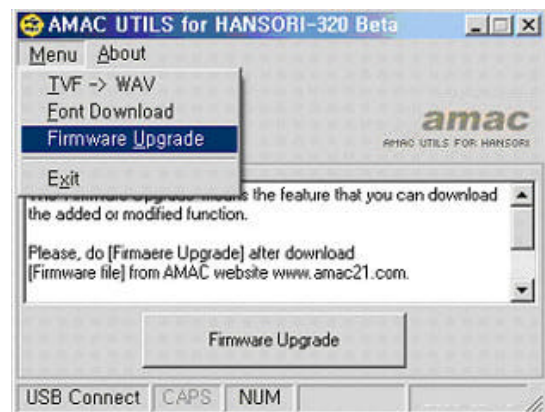
12. Turn the player power off and turn it on again.

■Firmware Upgrading

- The newest firmware is uploaded on website www.amac21.com
- Install the newest utility program on PC
- Turn the player on and use MODE button to enter [FW UPGRADE], then press PLAYBACK button.
- Connect the player to PC, then [FW UPGRADE Connected] is appeared on LCD.
- Click on the program related to the newest firmware on your PC screen.
- Make sure that the player is connected to PC, then [USB Connect] is activated as shown on the bottom corner of Picture 3-1.

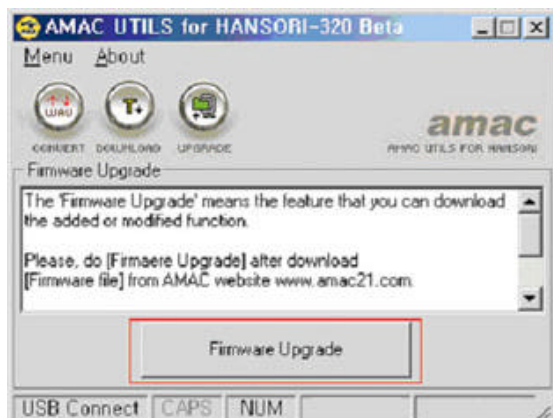


Picture(3-1) To select by ICON



Picture(3-2) To select by MENU(M)

- Click on the icon to upgrade firmware as shown on Picture 3-1.
- Click on the MENU(M) to upgrade firmware as shown on Picture 3-2.
- Users can choose either way.

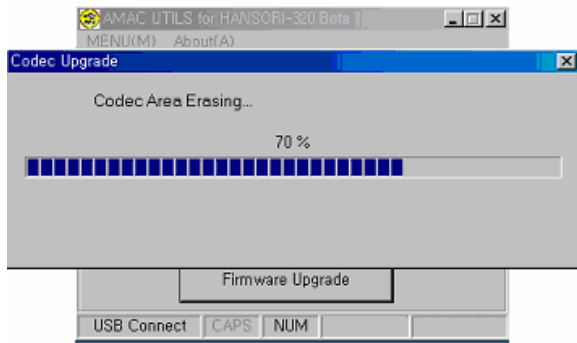


Picture(3-3)

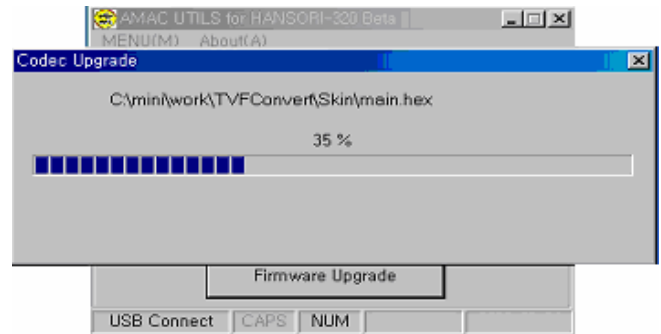


Picture(3-4)

Click on [Firmware Upgrade] as shown on Picture 3-3 and select firmware file as shown on Picture 3-4.



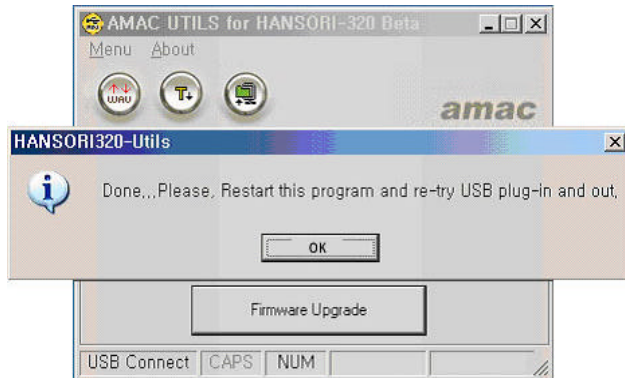
Picture(3-5) Removing Old Firmware



Picture(3-6) Downloading New Firmware

The old firmware is being removed as shown on Picture 3-5.

- The new firmware is being downloaded as shown on Picture 3-6



- Click on [Yes] to complete.
- Turn the player power off and turn it on again.

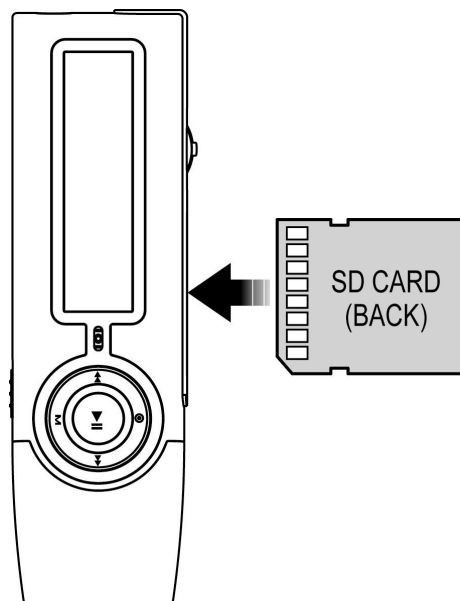
※If you plug -out the player during Font Downloading and Firmware Upgrading, please try to following procedures.

- Move the Hold Key to 'HOLD ON '
- Fix the MENU Key(Jog Key) to 'VOL - 'by finger.
- Connect the player with the status 'HOLD ON 'and 'VOL - '
- Double click the 'Manager Program 'and upgrade the firmware

■ To insert SD(Secure Digital) CARD

Users can add SD Card to expand the memory capacity and back up data.

① Please insert SD Card into the player as below the picture.



② Turn the player power on, then the SD Card icon is appeared on the top right corner of LCD after SD Card is inserted.



[LCD before SD
Card is inserted]



[LCD after SD
Card is inserted]

Others and Trouble Diagnosis

1) Precautions

The followings are precautions that you should keep in mind. Any violation of the following precautions may cause damage of product.

1. If the player will not be operated for a prolonged period, remove the batteries to avoid possible damage caused by electrical leakage.
2. To avoid static electricity, please If possible, avoid operating the player in extremely dry environment.
3. Battery life may vary with different using condition, manufacturer and manufacture date. Please change the battery when the battery indicator on LCD is low.
4. Do not drop the player, which probably cause battery fall off or damage its surface.

5. The player should be kept in areas free from extreme temperature changes, moisture and dust.(Do not leave the player over 35°C and below 5°C)
6. If the player stops running under proper operation, please reset it by taking out battery.
7. Do not polish with a chemical material (Benzene, Thinner, Organic solvent)
8. Do not expose in many hours on a direct ray of light or closed place from heat appliance
9. Do not disassemble a product unnecessarily except the AMAC maintenance man.

2) How to troubleshoot

When USB driver is not properly installed after the player is connected to PC, please follow as below.

Information related to USB Driver installation (For only Window 98 users)

When the message on PC shows that the Driver can not be opened after the player is connected to PC. Please follow as below.

1. If the player is properly connected to PC, click on [START] of Windows and select [CONTROL PANEL] -> [SYSTEM] -> [DEVICE MANAGEMENT] in sequence.
2. Double click on [Universal USB Controller] and check whether or not the AMAC USB Driver exists.
3. Select and delete AMAC USB Driver or the USB Driver of other devices if they are marked with a question mark (?), an exclamation mark (!) or [Unknown Device].
4. Pull out only the USB cable from the player, but leave alone the USB cable connected to the USB port on PC. Then, reboot the PC
5. Connect the USB cable to the player after rebooting and the USB driver is automatically detected.

Specifications of Product

Model No.	HAN-320
Memory	Internal Memory: 64/128/256/512MB External Memory: 16/32/64/128MB
Batteries	1.5V X AAA type 1EA
Playing Time	10 Hours
Size / Weight	100 x 29 x 23mm / 40g(Battery excluded)
Interface	USB Port
Downloading Speed	10Mbps
Voice recording Time	8 Hours (128MB/32Kbps)