

**aiwa**

**OPERATING INSTRUCTIONS**

**BEDIENUNGSANLEITUNG**

**MODE D'EMPLOI**

**INSTRUCCIONES DE MANEJO**

**GEBRUIKSAANWIJZING**

**使用説明書**

# MM-FX500

**Portable MP3 Recorder**

**Grabador Portable de MP3**

**ENGLISH**

**DEUTSCH**

**FRANÇAIS**

**ESPAÑOL**

**NEDERLANDS**

**中文**

8A-HZ4-905-01  
000610AWY-P-0

### **WARNING**

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

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### **Warning**

You must be aware that distributing copies of MP3 files without permission is against the copyright laws. You must use the MP3 encoding software included in the supplied installation CD-ROM only for personal use.

### **COPYRIGHT**

Please check the laws on copyright relating to recordings from discs, radio or external tape for the country in which the machine is being used.

The following are precautions that you should always keep in mind. Any violation of one or more of the following precautions may cause damage and will void the warranty.

### **To maintain good performance**

- Avoid exposure to heat, moisture and static electricity.
- Do not use the unit in places that are extremely hot, cold, dusty, or humid.
- In particular, do not keep the unit in a high humidity area such as a bathroom, near a heater or in an area exposed to direct sunlight (e.g., inside a parked car).
- When you carry the battery in your pocket, do not have other metal objects such as coins or keys in the same pocket. Friction caused by the metal and the battery rubbing together may cause a fire.
- Make sure that pins or other foreign objects do not get inside the unit.

### **Caution of impact**

Do not drop the unit or allow any sharp impact. This may cause serious damage to the unit.

### **Note on listening with the headphones**

- Listening to the unit at full power for extended periods of time can result in hearing damage.
- Do not wear the headphones while driving or cycling. It may create a traffic hazard.
- You should use extreme caution or temporarily discontinue use in potentially hazardous situations, such as walking, jogging, etc.
- Wear them properly; L is left and R is right.
- The in-ear type headphones should be worn with the longer cord behind your neck.

### **To clean the cabinet**

Do not use chemicals to clean the cabinet. This may change the colour of the player or damage the surface. Use a soft towel to clean the surface of the unit.

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## Main features

### MM-FX500 (Recorder)

- Record/Playback music MP3 (MPEG1 LAYER 3) format
- Record/Playback voice Max. 4 hours of recording with a single 32MB MultiMediaCard
- Encode music input from an external audio set into AFX files, then save the files on the MultiMediaCard
- 2 memory card slots
- Detachable remote control

### MM-FX500 Manager (Software)

- Transfer music (MP3) files from your PC to the MM-FX500 MultiMediaCard
- Transfer encoded music files (AFX) and voice files (MP3) from the MM-FX500 memory card to your PC
- Format the MultiMediaCard
- Play music/voice files

### Accessories

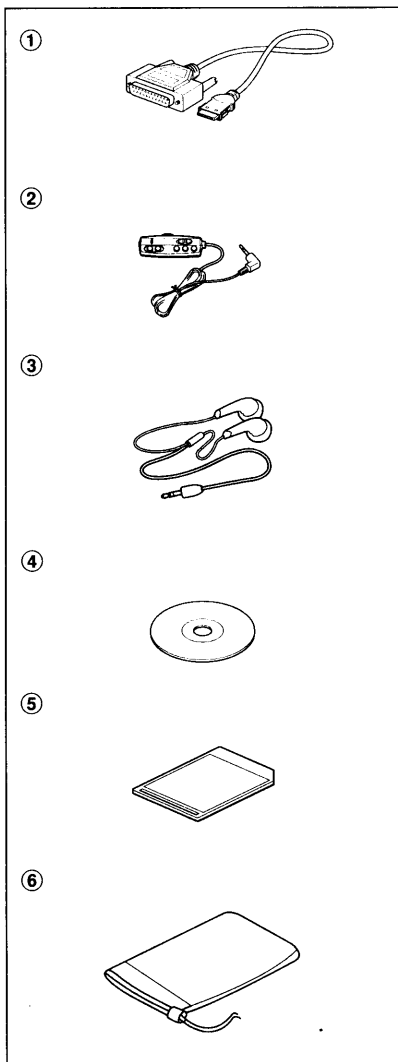
The following accessories are supplied with this unit. Check whether you have all the accessories illustrated.

- ① 25-to-15 pin parallel cable
- ② Remote Control
- ③ Headphones
- ④ Installation CD-ROM
- ⑤ 32MB MultiMediaCard
- ⑥ Carrying case
- ⑦ Operating instructions, etc.

### System requirements

The MM-FX500 Manager and RealJukeBox software require the following system:

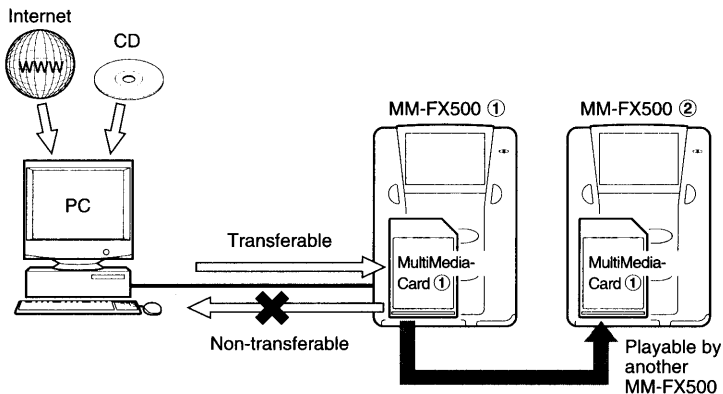
- Pentium200MHz MMX or faster
- MS Windows 95 (requires Service Pack 1 and Internet Explorer 4.01 Service Pack 2 or later) MS Windows 98 or MS Windows 98 Second Edition
- 32MB RAM
- 200MB free hard-disk space for software installation and execution
- 16bit sound card and speakers (optional)
- 16bit high colour video card
- 1 available Parallel Port (ECP mode, I/O range 0378-037F, IRQ7 preferred)
- CD-ROM drive supporting digital audio extraction



### Limitations on playback and file transfers

The main unit has the following limitations on playback and file transfers due to copyright protection.

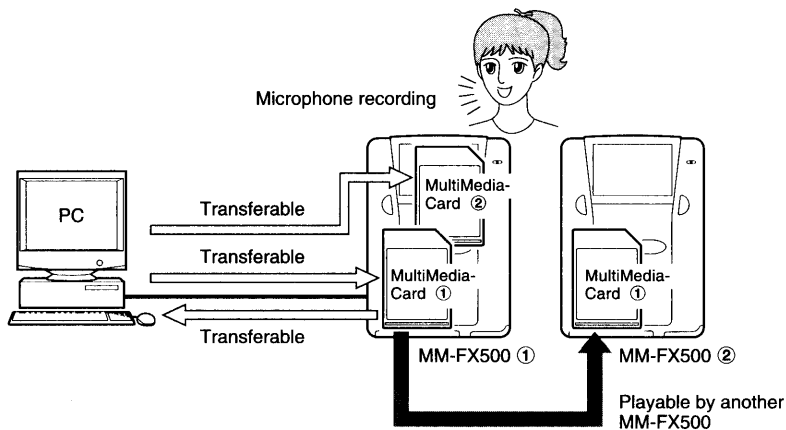
- MP3 files distributed via the internet, etc.
- MP3 files made by compressing tracks from CDs, etc.



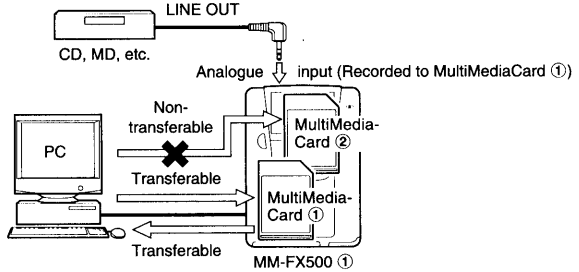
#### Note

- The files with formats other than MP3 or AFX can be transferred between PC and MultiMediaCard, but are not playable. These files will be skipped during playback.

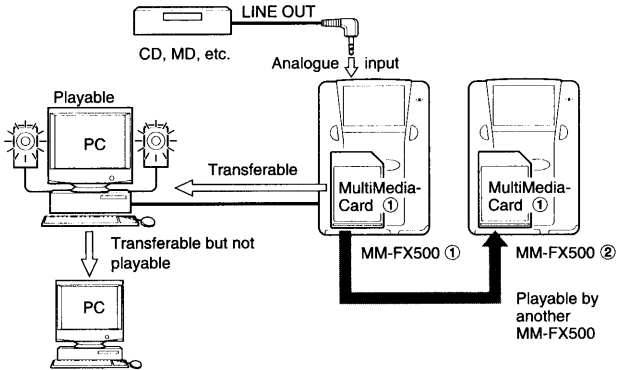
- Voice files (MP3 files) recorded via the built-in Mic in the main unit



- **Music (AFX files) encoded by the main unit via an analogue input (file transfer limitation)**



- **Music (AFX files) encoded by the main unit via an analogue input (Playback limitation)**



**Notes**

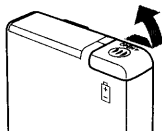
- When recording music, the serial number of the MultiMediaCard is also recorded into the AFX file. After transferring these files to PC, it is impossible to playback on PC if the MultiMediaCard on which the files were first encoded is not inserted in the connected unit.
- AFX files can be transferred or played back on the PC, even if the files on the MultiMediaCard are deleted.
- An AFX file cannot be saved onto another MultiMediaCard because it is bound to the MultiMediaCard on which it was recorded.

# PREPARATIONS

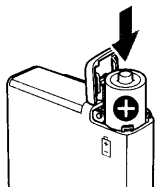
## Inserting a battery

Alkaline batteries are recommended for use with this unit.

- 1 Open the cover of the battery compartment.




- 2 Insert an LR6 (size AA) alkaline battery with the  $\oplus$  and  $\ominus$  marks correctly aligned, then close the cover.



## Battery Indicator

The battery indicator shows the power remaining.

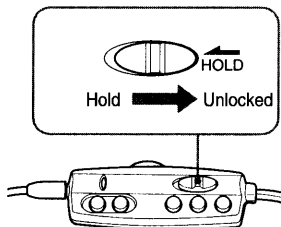
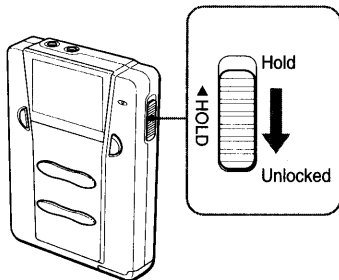


When  flashes on the indicator, replace the battery with a new one.

## Notes

- Make certain the battery is fitted in the correct direction ( $\oplus$  and  $\ominus$  aligned).
- Do not attempt to recharge, to disassemble or to apply heat to the battery. It may cause electrolyte leakage or an explosion.
- When the unit is not in use for a prolonged period, remove the battery from the unit to save battery power.
- If liquid leaks from the battery, wipe it thoroughly.

## Hold switch



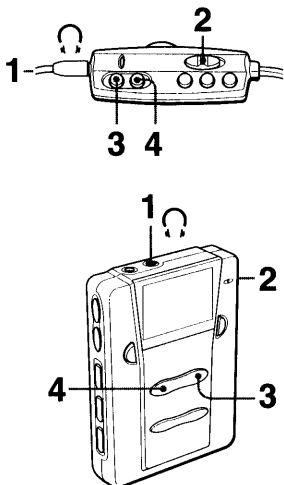
**When operating with the main unit,** set the HOLD switch on the main unit to the unlocked position.

**When operating with the remote control,** set the HOLD switch on the remote control to the unlocked position.

**When not using the unit,** set both HOLD switches to the hold position. This is to prevent accidental operation during transportation.

When the main unit is set to hold position, the HOLD indicator appears on the display.

### Turning on and off the power



**1** Connect the remote control to the headphone jack and connect the supplied headphones to the remote control jack.

**2** Slide the HOLD switch to the unlocked position.

**3** Press the /ON button to turn on the power.

The display will light up.

When on the remote control is pressed, the unit turns on and playback of files begins. (Direct play function.)

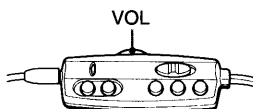
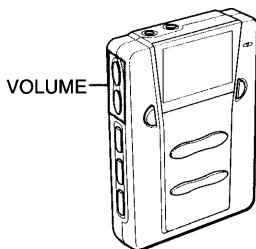
**4** Press and hold the /OFF button 1 second to turn off the power.

Display will turn off.

### Power save mode

If the MM-FX500 is not used for 3 minutes when its power is on, MM-FX500 will turn itself off to save the battery.

### Volume control



Volume is controlled by the VOLUME +/- buttons on the player and the VOL dial on the remote control.

#### Note

- Changes made to the volume with the remote control VOL dial do not change the volume level displayed on the player unit.

#### CAUTION

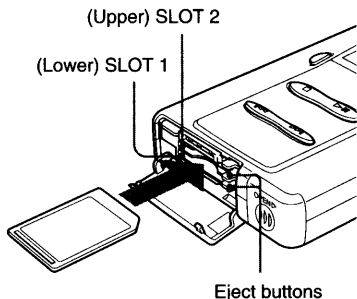
Listening to the headphones at full power for extended periods of time can result in hearing damage.



## MultiMediaCard installation

Before inserting or removing a MultiMediaCard, be sure to turn off your MM-FX500 and disconnect it from the 25-to-15 pin parallel cable.

- 1 Insert the MultiMediaCard into the slot in the correct direction.



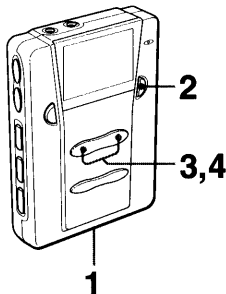
If this is the first time using the MultiMediaCard, format it with the unit or the Manager software installed on your PC (see page 19).

**To remove the MultiMediaCard**, press the eject button and pull it out gently.

### Notes

- Insert the MultiMediaCard completely into the slot. If not, MM-FX500 Manager will be unable to recognize the files on the card.
- Do not insert anything else into the memory card slot.

## Formatting a MultiMediaCard



Before using a MultiMediaCard for the first time it must be formatted.

- 1 Insert the MultiMediaCard into an empty slot.
- 2 Press the MENU button repeatedly until **FORMAT** is displayed.
- 3 Press the **▶|||** button to format (press **■** to cancel).

The confirmation message will be displayed.

### WARNING! FORMAT Y/N

- 4 Press the **▶|||** button to format (press **■** twice to cancel).

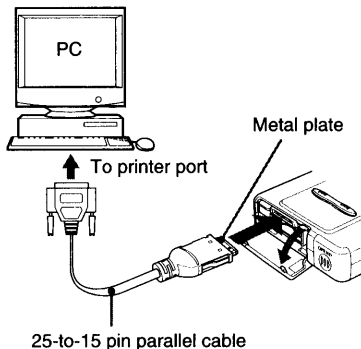
Formatting will begin.

### Note

- Formatting permanently erases all files from a MultiMediaCard.

### Connecting MM-FX500 to your PC

Connect your PC and MM-FX500 with the supplied 25-to-15 pin parallel cable.

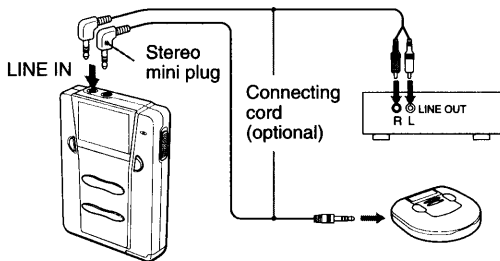


#### Notes

- When plugging the cable into the MM-FX500 connector slot, make sure that the metal plate on the cable plug is facing up. Insert the cable gently.
- When transferring data between the PC and MM-FX500, do not disconnect the parallel cable.
- To disconnect the 25-to-15 pin parallel cable from MM-FX500, press the levers on both sides of the plug and gently pull it out.

### Connecting an external audio set

Connect the LINE OUT jack of the external audio set with an optional connecting cord to the LINE IN jack of the unit.



You can record music sent from the external audio set while listening to it through the headphones (see Page 27).

#### Note

- The LINE IN jack of the unit should be connected to a 3.5mm stereo mini plug.

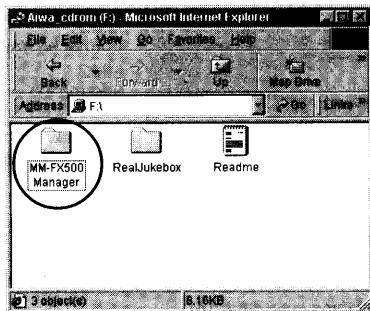
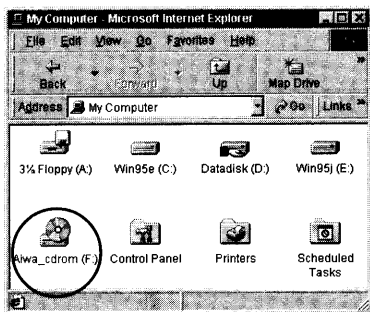
# MM-FX500 MANAGER (SOFTWARE) INSTALLATION

MM-FX500 Manager software controls the transfer of music, voice and data between your PC and MultiMediaCard.

## Installing MM-FX500 Manager

Before starting the installation, check the system requirements (see page 4), and shut down all application software in use.

- 1 Insert CD-ROM into the CD-ROM Drive.
- 2 Open the CD-ROM directory and open the "MM-FX500 Manager" folder.



- 3 Double click the "Setup" icon in the MM-FX500 Manager folder.



Setup

- 4 After starting the SETUP program, the SETUP wizard will guide you through the installation process.
- 5 It is recommended that you restart your PC after installation is completed.
- 6 During the installation, MM-FX500 installer makes an MM-FX500 Manager shortcut icon on the Desktop and adds MM-FX500 Manager to the start menu.

## Note

- For RealJukeBox installation instructions see page 29.

## Uninstalling MM-FX500 Manager

To uninstall the MM-FX500 Manager software, choose Start-Programs-MM-FX500 Manager-MM-FX500 Manager Uninstall from the Windows menu bar. This will remove all MM-FX500 Manager files from the MM-FX500 Manager folder.

# MM-FX500 MANAGER OPERATION

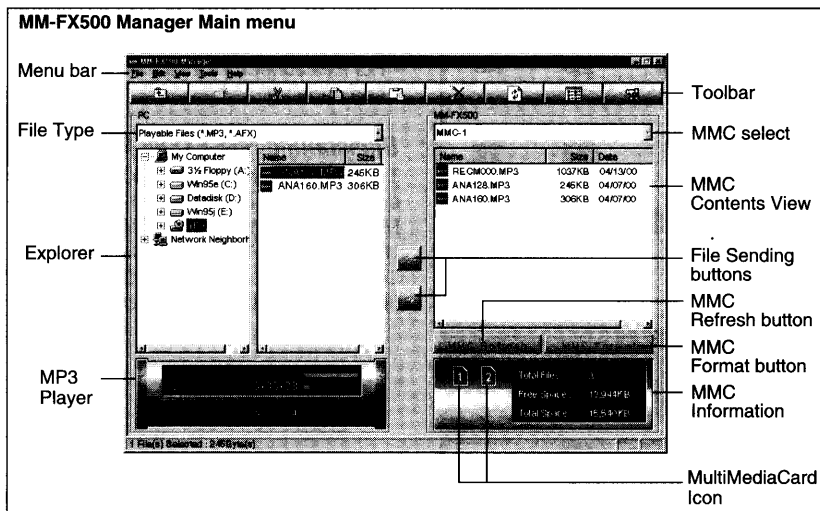
## Opening MM-FX500 Manager and linking PC with MM-FX500

- 1 Connect your PC and MM-FX500 (see page 10).
  - 2 Press **▶||/ON** on the MM-FX500 main unit to turn on the power.
  - 3 Start MM-FX500 Manager by double-clicking the shortcut icon, or by selecting it from the start menu.
  - 4 For communication between MM-FX500 and your PC, you need to select the correct parallel port. Refer to page 14, "To select the parallel port and the initial directory (folder)".
- Note**
- While MM-FX500 Manager is active, the unit displays "PC LINK, Key Locked". To enable key operation, close MM-FX500 Manager.



MM-FX500 Manager

The MM-FX500 Manager main menu will be displayed on the screen.



- Menu bar : Select from the menu (see Page 13)
- File Type : Select the file type (e.g. to view MP3 files, select "\*.MP3")
- Explorer : Show the folders and files
- MP3 player : Playback music/voice files (MP3 and AFX files)
- Toolbar : Select the common functions (see Page 14)
- MMC select : Select MultiMediaCard 1 or 2
- MMC Contents view : Display file details of the selected MultiMediaCard
- File Sending buttons : Send files between PC and MultiMediaCard
- MMC Refresh button : Refresh the MultiMediaCard contents information
- MMC Format button : Format MultiMediaCard

## Menu bar function

The Menu bar provides access to the various functions. See the list below for the details.

Menu bar



## Folder and file management in Explorer

File	New Folder Up One Level Refresh Rename Exit	Create a new folder Select the folder one level up Display the latest folder and file details Rename a folder or file Close MM-FX500 Manager
Edit	Cut Copy Paste Delete Select All	Delete the file or folder and copy it to the clipboard Copy the selected file or folder to the clipboard Paste the selected file or folder from the clipboard Delete the selected file or folder Select all the files and folders in the Explorer window
View	Status Bar Large Icons Small Icons List Details	Show or hide the status bar Display the files and folders with large icons Display the files and folders with small icons List all the files and folders in the selected folder Display the details of the files and folders

## Memory card management and Player (on Windows) control

Tools	Send to PC Send to MM-FX500 MMC-1 MMC-2 MMC Refresh MMC Format	Send files from the MM-FX500 to PC Send files from PC to the MM-FX500  Select MultiMediaCard 1 Select MultiMediaCard 2 Display the latest information on the MultiMediaCard Format the MultiMediaCard	
	Player Tools	Play Files View File Info. Equalizer Visualization	Select the music/voice file to play Edit the music/voice file information Open the graphic equalizer display Open the option menu for the graphic display
	Playback	Previous Play Pause Stop Next	Play the previous music/voice file Play the music/voice file Pause the playback Stop the playback Play the next music/voice file
	Play mode	Repeat Random	Play the music/voice files repeatedly Play the music/voice files in random order
	Environment	Select the parallel port connection to MM-FX500 and the default folder as initial directory to be opened when the MM-FX500 manager is executed	






## Help Menu



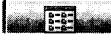

Help	Contents About MM-FX 500 Manager	Display the help menu Display the MM-FX500 version information
------	-------------------------------------	---

## Toolbar function

The Toolbar provides shortcut buttons for the file manipulation functions.



	Up One Level button see File - Up One Level
	New Folder button see File - New Folder
	Cut button see Edit - Cut
	Copy button see Edit - Copy
	Paste button see Edit - Paste

	Delete button see Edit - Delete
	Refresh button see File - Refresh
	View button see View
	Environment button see Tools - Environment

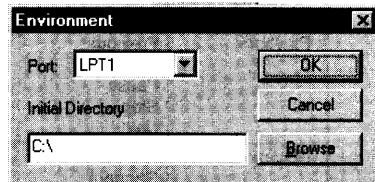
### Note

- To use the Windows file management functions Find, Delete, Copy, Rename etc. while using MM-FX500 Manager, click the right mouse button. A pop-up menu will be displayed listing these and other functions.

## To select the parallel port and the initial directory (folder)

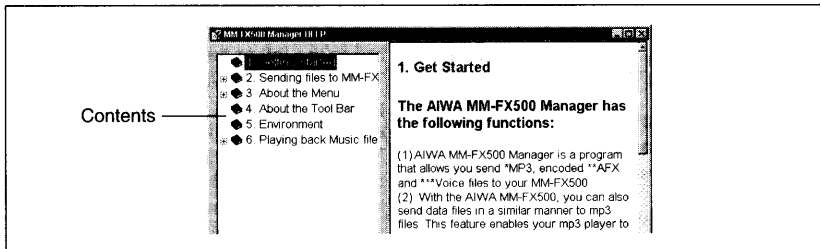
- 1 Select Tools - Environment from the menu bar or click the Environment button on the Toolbar.
- 2 The default setting "LPT1" is shown on the Environment menu. If necessary, select the other port setting.
- 3 The initial directory is the folder which will be displayed in the Explorer each time MM-FX500 Manager is opened. To set this to the folder holding your music and voice files, click the Browse button and select the folder.

- 4 Click the OK button and exit.



## Help menu

To learn more about the functions in detail, the help menu is useful.



**1 Select Help - Contents on the menu bar. The help menu will be displayed on the screen.**

**2 Click on an item in the contents to open it. When a **[+]** mark is attached, there are hidden sub-contents. Click the **[+]** mark and the sub-contents will be displayed.**

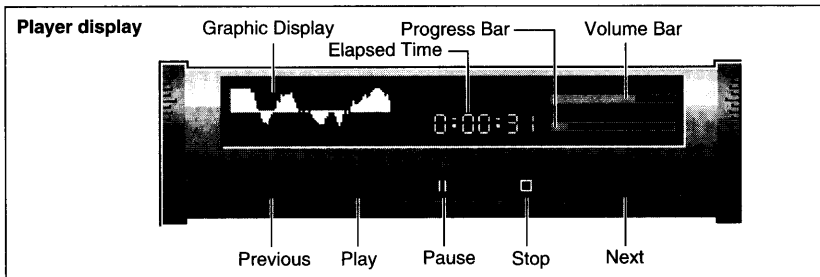
To hide the sub-contents, click the **[-]** mark.

### Note

- To optimize the display of the Help menu, please change the Text size setting of Internet Explorer to Medium.

## Playing music and voice files

Using MM-FX500 Manager you can play music and voice files (MP3 and AFX). You can adjust the tone using the graphic equalizer.



- Play : Start playback
- Pause : Pause playback
- Stop : Stop playback
- Next : Skip to next music/voice file and start playback
- Previous : Skip to the previous music/voice file and start playback
- Progress Bar : Rewind or fast forward through the file currently playing
- Volume Bar : Adjust the volume
- Elapsed Time : Elapsed time of the playing track
- Graphic Display : Display the music response in Oscilloscope mode or Spectrum mode

### *Playing a music or voice file directly*

#### **1 Select the music or voice file to play in the Explorer.**

- To select more than one file, use the SHIFT or CONTROL key.

#### **2 To start playback, double click on the file in the Explorer or drag and drop the file icon over the player display.**

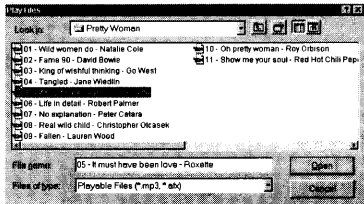
To pause the playback, press **||**.

To resume playback, click **▷** again.

#### **3 Click on the player display to stop the playback.**

### *Playing music or voice files selected from the Play Files menu*

#### **1 Select Tools - Player Tools - Play Files from the menu bar. The Play Files menu will be displayed on the screen.**



Select the folder where the music and voice files are kept, then select the files to play. The selected files are played in the order listed in the Play Files menu.

- To select more than one file, use the SHIFT or CONTROL key.

#### **2 To start playback, click Open on the Play Files menu.**

To pause the playback, click **||**.

To resume playback, click **▷** again.

#### **3 Click on the player display to stop the playback.**

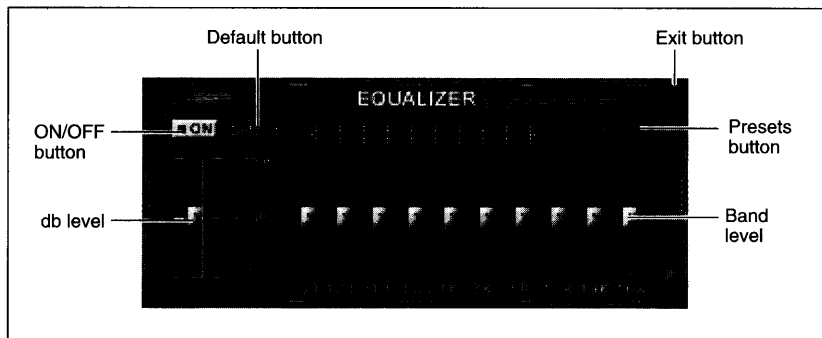
### **Notes**

- To adjust the volume in the player display, place the mouse pointer on the volume bar, then click and drag the edge of the bar to the left or the right.  
To increase the volume, move the mouse pointer to the right; to reduce the volume, move the mouse pointer to the left.
- To search forward/backward, click and drag the edge of the progress bar to the left or right. Playback will start from where you release the mouse button.
- To adjust the tone, open the graphic equalizer (see Page 17).
- If you click **▷** on the player display without specifying any files, MM-FX500 will and start playing the last music or voice file played.
- To skip to the next music or voice file, click **▶** on the player display
- To skip to the previous music or voice file, click **◀** on the player display.
- To play selected files repeatedly, select Tools - Play mode - Repeat from the menu bar.
- To play selected files randomly, select Tools - Play mode - Random from the menu bar.
- To play an AFX file through MM-FX500 Manager, the MM-FX500 recorder must be connected to the PC and contain the MultiMediaCard on which the file was first encoded. This is to protect copyright.



## Graphic equalizer

You can adjust the sound for each frequency band using the graphic equalizer incorporated in MM-FX500 Manager.



**1 Select Tools - Player Tools - Equalizer from the menu bar. The equalizer will be displayed on the screen.**

**2 Click the ON/OFF button to activate the equalizer. When it is active a pink light is displayed on the ON/OFF button.**

**3 Move the db level and the Band levels upward or downward to adjust the sound.**

To turn off the equalizer effects, click the ON/OFF button again. The pink light will turn off and the sound will return to normal.

**4 To save the current equalizer settings, click the Presets button.**

The Save and Load Selection menu will be displayed. Click Save to display the Save Equalizer File menu. Select a folder to store the settings, name the file and click the Save button.

To load previously saved equalizer settings, click the Presets button and select Load from the Save and Load

Selection menu. Click on a file listed in the Load Equalizer File menu, then click the Open button.

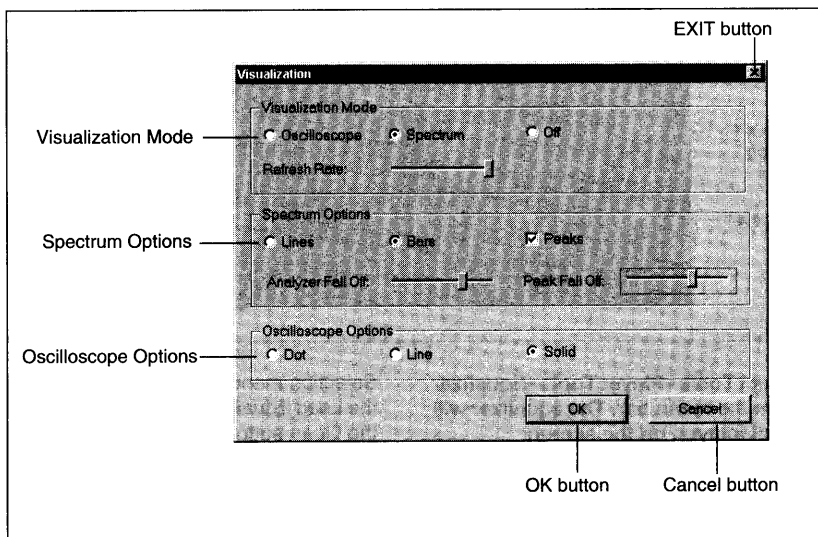
**5 To exit the menu, click the Exit button.**

### Note

- To reset to the default equalizer setting, click Default button. All the band levels and the db level will be reset to the middle. If you do not save the setting before clicking the Default button, you will lose the current setting.

## Visualization mode


You can change the appearance of the graphic display in the player display (see page 15) by changing the visualization mode.





- 1 Select **Tools - Player Tools - Visualization** from the menu bar. The **Visualization Mode** menu will be displayed on the screen.

The sound output pattern displayed in the Graphic display will be changed according to your selection from the Visualization Mode menu.

### • Select Visualization mode

- Oscilloscope : Display a wave-chart pattern
- Spectrum : Display a bar-chart pattern
- Off : Turn off the graphic display
- Refresh Rate : Change the refresh (sampling) rate (Slow  Fast)

### • Select Spectrum Options when Spectrum is selected

- Lines : Display the spectrum with lines
- Bars : Display the spectrum with bars
- Peaks : Turn peak hold ON or OFF
- Analyzer Fall Off : Change the refresh (sampling) rate (Slow  Fast)
- Peak Fall Off : Change the peak displaying time (Short  Long)

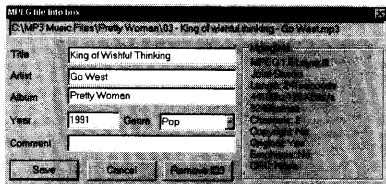
### • Select Oscilloscope Options when Oscilloscope is selected

- Dot : Display the wave with a dotted line
- Line : Display the wave with a line
- Solid : Display the wave with a solid surface

- 2 Click **OK** to apply the setting.

## To view file information (ID3 tag)

- 1 Select a file from the Explorer.
- 2 Double-click on the file in Explorer, or drag and drop the file icon over the player display.  
Playback of the file begins.  
To stop playback, press  on the player display.
- 3 Right-click the player display and select View File Info to display the file information of the current file.



You may edit or delete the content of this file information. Click on the Save button to update the file information after making a change.

- 4 To view information about another file, repeat steps 1 to 3.

### Note

- To view the correct file information, the selected file must be sent to the player display, either in play mode or stop mode.

## MM-FX500 MultiMediaCard management

MM-FX500 Manager controls data transfers between your PC and MM-FX500. MM-FX500 file management can be carried out remotely using MM-FX500 Manager on your PC.

To perform these functions, connect your PC and MM-FX500. (See page 10 for connection instructions.) Then, open the MM-FX500 Manager and link the PC with MM-FX500.

## Formatting a MultiMediaCard

When you use a MultiMediaCard for the first time, format it with MM-FX500 Manager.

- 1 Select the MultiMediaCard from the MMC Select pop-up menu, or click the MultiMediaCard icon.

MMC-1: MultiMediaCard 1  
MMC-2: MultiMediaCard 2

- 2 Click the MMC Format button.

A warning appears - click OK and MultiMediaCard formatting begins.

## Listing the contents of a MultiMediaCard

- 1 Select the MultiMediaCard, 1 or 2.

The contents of the MultiMediaCard will be displayed in a list.

- 2 Edit the files in the list

You can delete the files listed or change their names.

## ***Sending music or voice files from your PC to a MultiMediaCard***

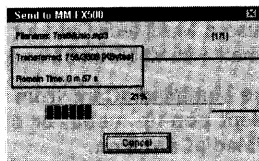
- 1 Select the MultiMediaCard, 1 or 2.**
- 2 Select the files to send to the MultiMediaCard by clicking the files listed in Explorer.**

To select more than one file, use the Shift or Control key.

- 3 Click the File Sending button.**



Sending status will be displayed.



Current file transfer condition

Percentage of total files transferred

- 4 When the completion message is displayed, click OK to exit the menu.**

### **Notes**

- You can send any kind of data to your MultiMediaCard.
- MultiMediaCards can store a maximum of 99 files.
- AFX files can only be transferred to the MultiMediaCard on which they were first encoded.
- Files with names longer than 52 characters including extension cannot be transferred to MM-FX500.
- MP3 files encoded at over 192Kbps cannot be transferred to MM-FX500.
- Close all other applications while transferring files.
- When transferring data between the PC and MM-FX500, do not disconnect the parallel cable.

## ***Sending music or voice files from a MultiMediaCard to your PC***

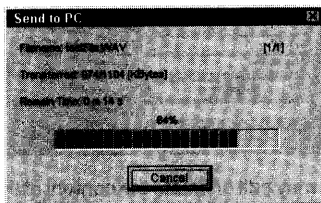
- 1 Select the MultiMediaCard, 1 or 2.**
- 2 Click on the files listed in the MultiMediaCard contents to select those you wish to send to your PC.**

To select more than one file, use the Shift or Control key.

- 3 Click the File Sending button.**



Sending status will be displayed.



- 4 When the completion message is displayed, click OK to exit the menu.**

### **Note**

- To protect copyright, MM-FX500 Manager is designed not to send music MP3 from the MultiMediaCard to your PC. You can send any other files (including voice MP3 files) from the MultiMediaCard to your PC.

## ***Disconnecting MM-FX500 from your PC***

- 1 Close MM-FX500 Manager.**
- 2 Turn off MM-FX500.**

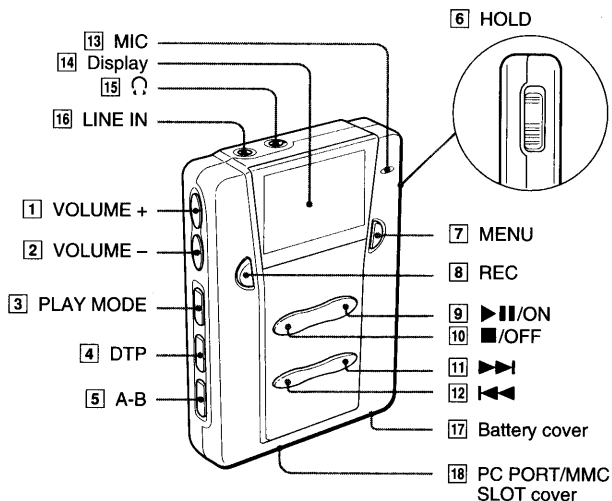
### **Note**

You can only operate the MM-FX500 buttons when MM-FX500 Manager is closed.

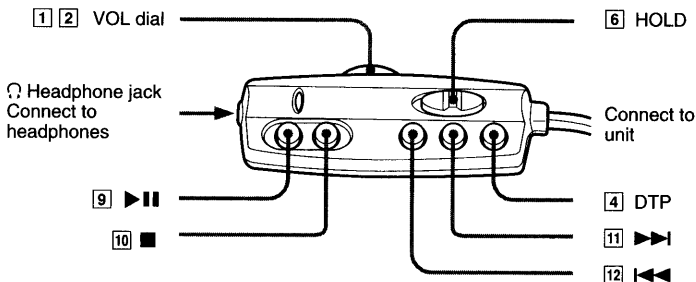
- 3 Disconnect the parallel cable from MM-FX500 and your PC.**

# IDENTIFICATION OF CONTROLS

## Recorder unit



## Remote control



- 1** VOLUME + /VOL  
Increase the volume.
- 2** VOLUME - /VOL  
Decrease the volume.

- 3** PLAY MODE button  
Press repeatedly to select play mode.

Sub-Text Disp	Function
NORMAL	Normal play
RANDOM	Random play
RPT ONE	Repeat the selected file
RPT ALL	Repeat all files
RPT RANDOM	Repeat randomly

## IDENTIFICATION OF CONTROLS

- 4** DTP (Digital Tone Processor) button  
Press repeatedly to select the desired preset equalizer.

Sub-Text Disp	Function
NORMAL	Normal sound
CLASSIC	Emphasizes the middle range
JAZZ	Emphasizes the low range with greater bass effect
ROCK	Emphasizes the low and high ranges

- 5** A-B (Section Repeat) button  
Repeat a selected section of the music or voice file being played.

- 6** HOLD switch  
Prevent unintentional operation by setting to the HOLD position.

- 7** MENU button  
Press repeatedly to select one of the functions provided in MENU mode.  
To select the item in the selected mode, press the **▶▶▶** or **◀◀◀** button and then press the **▶||** button to confirm the selection.

Mode	Function
(normal disp)	Stop-mode
MEMORY	Show total and remaining memory size
REC MODE	Select recording mode MUSIC or VOICE
REC LEVEL	Select recording level HIGH, MID, or LOW
REC SLOT	Select MultiMediaCard #1 or #2
FORMAT/ ERASE	Format or reformat MultiMediaCard / Erase selected file

- 8** REC (Recording) button  
Start recording music or voice input from an external audio set or the built-in microphone.

- 9** **▶||** /ON (Power ON/Play/Pause/Yes) button  
Control Power On and playback

Before Pressing	After Pressing
Power Off	Power On
Stop	Playback
Playback	Pause
Pause	Playback

- 10** **■** /OFF (Power OFF/Stop/No) button  
Control Power OFF and playback

Before Pressing	After Pressing
Playback/Recording	Stop playback/Recording
Stop	Power Off

- 11** **▶▶▶** (Forward Skip/Search) button


Operation	Function
Press	Skip to the next file
Press & Hold	Search forward

- 12** **◀◀◀** (Backward Skip/Search) button

Operation	Function
Press	Skip to the previous file
Press & Hold	Search backward

- 13** MIC (Built-in Microphone)  
Record voice messages.

- 14** Display  
Shows the information, status and settings.

- 15**  Headphone jack  
Connect the supplied remote control.

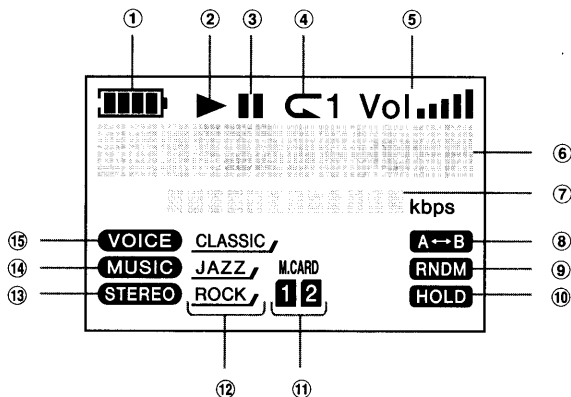
- 16** LINE IN jack  
Plug in the input cable connected to an external audio set.

- 17** Battery cover

- 18** PC PORT/MMC SLOT cover  
The MultiMediaCard slots and parallel cable connector are inside.

## Display window

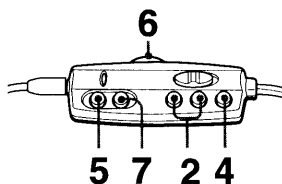
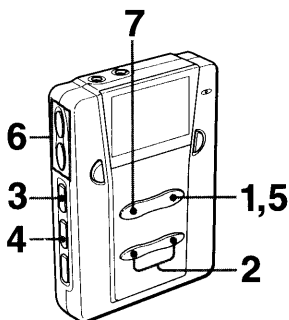
The icons and text information on the display show the current mode and settings.



### Icon Indicators

- |  |  |
|--|--|
| <p>① Battery indicator<br/>Shows remaining battery power.</p> <p>② Playback mode indicator<br/>Playback mode is selected.</p> <p>③ Pause indicator<br/>Pause mode is selected.</p> <p>④ Repeat indicator<br/>Current repeat mode.<br/>NORMAL / REPEAT ONE / REPEAT ALL</p> <p>⑤ Volume indicator<br/>Current volume level set by<br/>VOLUME +/- buttons.</p> <p>⑥ Main text display<br/>The 12-digit main text display shows music/voice file names and the settings that can be changed in menu mode.</p> <p>⑦ Sub-text display<br/>The 12-digit sub text display shows the following information.</p> <ul style="list-style-type: none"> <li>• Menu mode selection</li> <li>• Total number of files in memory</li> <li>• Time elapsed/remaining counter</li> </ul> | <p>⑧ Section repeat indicator<br/>Section repeat mode is selected.</p> <p>⑨ Random mode indicator<br/>Random play mode is selected.</p> <p>⑩ HOLD indicator<br/>HOLD switch is set to the lock position.</p> <p>⑪ M.CARD indicator<br/>Available MultiMediaCards<br/>Card in use flashes.<br/>MultiMediaCard 1 / MultiMediaCard 2</p> <p>⑫ DTP (Digital Tone Processor) indicator<br/>CLASSIC / JAZZ / ROCK</p> <p>⑬ STEREO indicator<br/>Playback of a stereo MP3 file.</p> <p>⑭ MUSIC indicator<br/>MUSIC is selected for recording.</p> <p>⑮ VOICE indicator<br/>VOICE is selected for recording.</p> |
|--|--|

## Playback



- 1 Press the ▶|| button to turn on the power.

The display will turn on.

- 2 Press the ▶▶| or |◀◀ button to select the desired file to play.

The display will show the file name and number each time you press the ▶▶| or |◀◀ button.

- 3 Press the PLAY MODE button if you want to select Random and/or Repeat play mode (see page 25).
- 4 Press the DTP button if you want to select a special sound effect.

Each time the DTP button is pressed, the sound mode will appear in the sub-text display.

### Note

- Heavy bass may be distorted at high volumes with the JAZZ sound effect. If this happens, reduce the volume.

- 5 Press the ▶|| button to start playback.

The playback mode indicator will be displayed.

To pause playback, press the ▶|| button. To resume playback, press the ▶|| button again.

- 6 Adjust the volume by pressing the VOLUME +/- buttons on MM-FX500 or by rotating the VOL dial on the remote control.

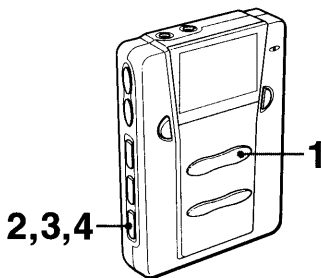
- 7 Press the ■ button to stop.

### Note

- Press the ▶|| button on the remote control once to turn on MM-FX500 and start playback.



### Section repeat playback



If you want to repeat a specific passage/section of a file, use Section Repeat Playback.

- 1 Select a file and start playback.
- 2 When you reach the start of the passage to be repeated, press the A-B button.

The A-B indicator will flash on the display.

- 3 When you reach the end-point of the passage, press the A-B button again.

Section Repeat Playback will start automatically. The A-B Indicator stops flashing and lights up on the display.

- 4 To resume normal play, press the A-B button.

#### Notes

- If you press the ►► or ◀◀ button during Section Repeat Playback, repeat play is canceled and play skips to the next or back to the previous file.
- Section Repeat cannot be used on two different files, as it will be disabled when playback reaches the end of the file.

#### Time Counter

Elapsed time and remaining time are shown in the sub-text display during playback.

During playback press the MENU button to switch between elapsed time and remaining time.

### Play mode

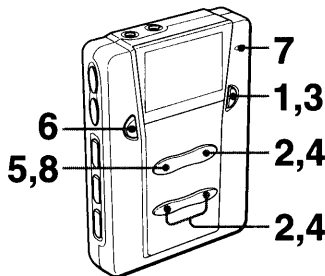
Play mode will change as follows each time you press the PLAY MODE button.

Indicator			Operation
Sub text	Repeat	RNDM	
NORMAL	off	off	Normal play in sequential order of MultiMediaCard 1 and 2.
RANDOM	off	<b>RNDM</b>	Random play until all the files on MultiMediaCard 1 and 2 have been played.
RPT ONE	☞ 1	off	Repeat play of the current file.
RPT ALL	☞	off	Repeat all the files on MultiMediaCard 1 and 2 in sequential order.
RPT RANDOM	☞	<b>RNDM</b>	Repeat the random play of all files endlessly.

## Recording analogue sound

MM-FX500 has a remarkable function to record your voice and the music input from an external audio set. MM-FX500 converts the analogue sound into digital format (MP3/AFX files) and then stores the sound on the MultiMediaCard.

## Recording your voice



**1 Press the MENU button repeatedly until REC MODE appears on the display.**

**2 Press the ►► or ◀◀ button to select VOICE 16KHz.**

Press the ►|| button to register the selection. The VOICE indicator will be displayed.

**3 Press the MENU button to move to REC SLOT mode.**

**4 Press the ►► or ◀◀ button to select MultiMediaCard #1 or #2.**

Press the ►|| button to register the selection.

**5 Press the ■ button to exit MENU mode.**

**6 Press the REC button to start recording.**

### Note

- The file name and number will be generated automatically by MM-FX500, and shown on the display.

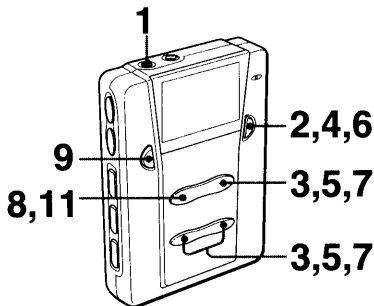
e.g. ● RECV003

**7 Address the message to the built-in microphone.**

**8 Press the ■ button to stop recording**

It will take a few seconds to return to stop mode, then the file name and number will scroll in the display. Play the voice file to confirm whether the recording was successful.

**Recording music input from an external source**



**1** Connect MM-FX500 to an external audio set (see Page 10).

**2** Press the MENU button repeatedly until REC MODE appears on the display.

**3** Press the ►► or ◀◀ button to select MUSIC 44KHz.

Press the ►|| button to register the setting. The MUSIC indicator will be displayed.

**4** Press the MENU button to move to REC LEVEL mode.

**Notes**

- MID LVL is suitable for most audio devices.
- REC LEVEL settings only affect music recording.

**5** Press the ►► or ◀◀ button to select HIGH LVL, LOW LVL or MID LVL.

Press the ►|| button to register the selection.

**6** Press the MENU button to move to REC SLOT mode.

**7** Press the ►► or ◀◀ button to select the MultiMediaCard to use, Card #1 or Card #2.

Press the ►|| button to register the selection.

**8** Press the ■ button to exit the MENU mode.

**9** Press the REC button to start recording.

**Note**

- File name and number will be generated automatically by MM-FX500, and shown on the display.

e.g. ● RECM003

**10** Start the external music source.

**11** After recording, press the ■ button to stop recording.

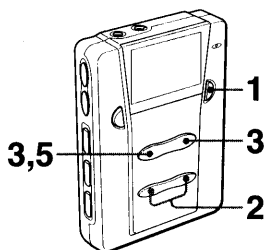
It will take a few seconds to return to stop mode, then the file name and number will scroll in the display. Play the recorded file to confirm the recording was successful.

If the recorded sound is distorted, reduce REC LEVEL, and if it is too soft, increase REC LEVEL and try to record again.

**Notes**

- Recording can be monitored through headphones connected to MM-FX500.
- During recording, do not use the VOLUME +/- buttons to adjust the sound. This may affect the recording level. To adjust the sound level, use the VOL dial on the remote control.
- During a recording, press the MENU button to switch the display between elapsed time and the remaining time available for recording.
- During recording the battery indicator level may drop. This is normal.

## Erasing files



- 1 Press the **MENU** button repeatedly until **ERASE xxx** appears on the display.
- 2 Press the **▶▶|** or **◀◀|** button to select the file to erase.
- 3 Press the **▶||** button to erase the file. The confirmation message will be displayed.

**ERASE? Y/N**

To erase: Press the **▶||** button  
 To cancel: Press the **■** button

If you press the **▶||** button, the completion message will be displayed.

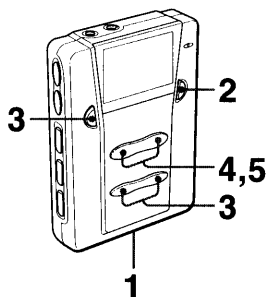
**Erased!**

- 4 To continue to erase, repeat steps 2 and 3.
- 5 Press the **■** button to exit the **MENU** mode.

### Note

- Once you have erased a file, you cannot recover it. Be careful to check the file name and number so that you do not erase the wrong file.

## Reformatting a MultiMediaCard



- The MultiMediaCard needs to be reformatted when:
- The files on the MultiMediaCard are corrupted.
  - You need to erase all the files on the MultiMediaCard.

- 1 Insert the MultiMediaCard into an empty slot (page 9).
- 2 Press the **MENU** button repeatedly until **ERASE** is displayed.
- 3 Press the **REC** button. **FORMAT Card #1** is displayed. Use the **◀◀|** and **▶▶|** keys to select Card #1 or Card #2.

- 4 Press the **▶||** button to format (press **■** to cancel).

The confirmation message will be displayed.

**WARNING! FORMAT Y/N**

- 5 Press the **▶||** button to format (press **■** twice to cancel).

Formatting will begin.

### Notes

- Formatting permanently erases all files from a MultiMediaCard.
- The capacity of 32Mb and 16Mb MultiMediaCards will be displayed as 31Mb and 15Mb by MM-FX500. This is because some memory space is reserved for the file index.

# REALJUKEBOX INSTALLATION

RealJukebox Basic Update 1 is meant for creating MP3 files from audio CDs. The setup file for RealJukebox Basic Update 1 can be found in the RealJukebox folder on the installation CD.

RealJukebox Basic Update 1 is a free version. Therefore there are some limitations (e.g. Encoding Bit Rate is limited to 96Kbps for MP3 encoding).

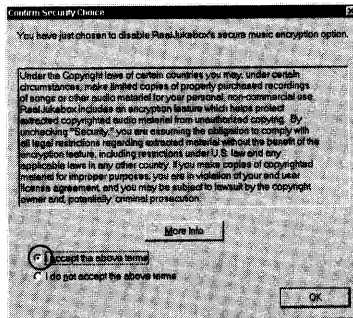
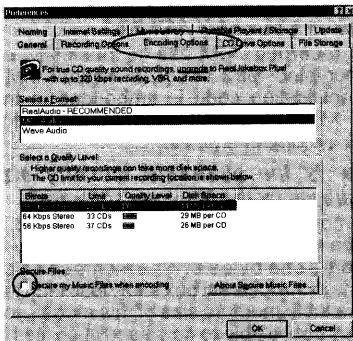
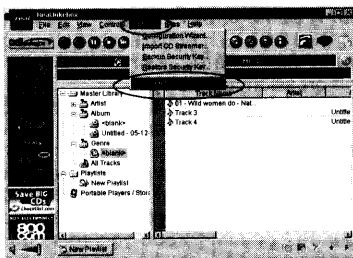
AIWA do not offer assistance to users with this software but the web site:

<http://www.real.com>

provides online help and upgrade information.

## Note

- RealJukeBox provides various encoding options. To play the encoded files on MM-FX500, select Options - Preferences - Encoding Options from the RealJukeBox menu bar. Then select MP3 Audio as the encoding option and uncheck the Secure File check box. MP3 files created with this software can be played with the MM-FX500 Manager Player or transferred to the MM-FX500 MultiMediaCard and played on MM-FX500.



## **FREQUENTLY ASKED QUESTIONS**

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### ***What is an MP3 file?***

- An MP3 (MPEG1, Audio Layer 3) file is an audio file created using audio data compression technology. The MP3 audio format allows you to enjoy high quality music playback from files that are a fraction of the size of a normal CD audio file. You can create MP3 files from your favorite CDs, or by downloading songs from the internet and store them on your PC or MM-FX500 recorder. MP3 files typically end with the extension .mp3 and may also be used with a variety of other applications such as language programs and internet broadcasts.

### ***What is a recorded AFX file?***

- A recorded AFX file is basically an encrypted MP3 file. The original MMC identification code is embedded in the AFX file by the MM-FX500 recorder during the recording process.

### ***How is the available memory size displayed by the Manager software?***

- A memory card is composed of blocks. A whole block will be used even if you try to store a one-byte file. While some selected files in the local list box show less than the available memory size of this model, you may not be able to download such files to the recorder.

### ***How do I upgrade the memory?***

- You may upgrade the memory by inserting another MMC card (16MB or 32MB). These are commercially available.

### ***Why does the LCD display 128kbps when playing back a recorded AFX file but the REC MODE menu shows MUSIC 44KHz?***

- In the REC MODE menu, MUSIC 44KHz means music sampling rate. During playback, 128kbps means music data transfer rate (bit rate).

### ***Can the MM-FX500 recorder support MP3 files with VBR (Variable Bitrate) format?***

- No, the recorder will not support VBR format.

### ***Is there a standard volume level for MP3 files?***

- The volume level of MP3 files (encoded data from audio CDs) depends on the software used for encoding.

### ***Is there a standard volume level for recorded AFX files?***

- The volume level of recorded AFX files (recorded by the MM-FX500 recorder) depends on the Line-in input level.

### ***How many minutes of MP3/AFX files can this recorder hold?***

- It depends on the memory size of the recorder. A recorder with 32MB of memory can hold approximately 30 minutes of the near-CD-quality sound of MP3/AFX files.

## MM-FX500 LCD error/warning messages

LCD DISPLAY	DESCRIPTION
ERROR!!! FORMATTING	Cannot format MMC (MultiMediaCard) due to serious card error (e.g. card damage). Use MM-FX500 Manager to format the card.
ERASE ERROR	File erase error.
REC Error...	File creation error during recording.
REC Fail	Encoder error during recording.
Reading Fail...	MMC reading error during recording.
Writing Fail...	MMC writing error during recording.
FAT Sys-Fail	File Allocation Error during recording.
Dir Full	Directory Full (>=99 files in a MMC).
Memory Low	Not enough memory in MMC for recording.

## Explanation of menu selections

MENU	DISPLAY	EXPLANATION
MEMORY	TOTAL	Total memory in specified MMC.
	REMAIN	Remaining memory in specified MMC.
	No Card...	No card is found in specified MMC slot.
REC MODE	MUSIC 44KHz	Music recording with sampling rate 44kHz.
	VOICE 16KHz	Voice recording with sampling rate 16kHz.
REC LEVEL	LOW LVL	Low level recording. Suitable for high output level music sources.
	MID LVL	Mid level recording (default). Suitable for most music sources.
	HIGH LVL	High level recording. Suitable for low output level music sources.
REC SLOT	None	No card is found.
	Low	Memory low.
	Full	Directory full (>=99 files).

### ***The buttons are not functioning***

- Check to see if the battery is installed properly. Check the + and - marks of the battery.
- Check to see if the battery is worn out. You may need to replace the battery.
- Check to see if the HOLD switch is set to the HOLD position.
- Check to see if the memory status is alright. Initialise the recorder using MM-FX500 Manager or using the Format menu on the MM-FX500 recorder.
- Try reinstalling the battery. Sometimes you will need to reinstall the battery as this will initialize the recorder.

### ***Blank or false display error***

- Try reinstalling the battery. This will initialize the recorder.

### ***The recorder is not recognized by the PC***

If MM-FX500 Manager does not recognize the player, refer to the following:

- First, check if the parallel cable is connected properly, or if the player is on (in STOP mode).
- Click the MMC Refresh button.
- Make sure the correct MMC slot is selected.
- Generally, MM-FX500 Manager supports SPP, EPP and ECP parallel port modes. We recommend ECP mode (I/O address 0378, IRQ7) for the best communication between the PC and MM-FX500 recorder.
- If MM-FX500 Manager fails to recognize MM-FX500 recorder in ECP mode, try other modes such as SPP and EPP.
- Refresh the printer port using Device Manager in Windows (right click My Computer → Properties → Device Manager → Ports → Printer Port → Refresh).

### ***Unable to transfer data from recorder to PC***

- High quality MP3 files are prevented from being uploaded onto PCs to protect copyright.

### ***Unable to transfer data from PC to recorder***

- Check to be sure that the supplied 25-to-15 pin parallel cable is properly connected to your PC and the recorder.
- Check to be sure there is an MMC with available memory inserted. Click on the MMC Refresh button to check the remaining memory level and check the size of the files stored in the player.
- Check if the battery is low. You may need to replace the battery.
- Make sure the original MMC is selected when downloading a recorded AFX file.
- Make sure MP3 files to be downloaded do not contain a bitrate higher than 192kbps.
- Make sure MP3 files to be downloaded are not in VBR (variable bit rate) format.

### ***Communication error during file transfer***

- Disconnect parallel port sharing devices.
- Eliminate use of parallel-Port-Selector. Connect the recorder to the PC parallel port directly.

### ***An MP3 file is not displayed in the MMC display list box even if it can be downloaded***

If you had no problem communicating with the recorder previously, it may be that the recorder could not be recognized by the MM-FX500 Manager software. In this case:

- Format the MMC card by clicking the MMC Format button.
- You may also try unplugging and then reconnecting the cable.

### ***The MM-FX500 recorder cannot play certain files with extension MP3***

- The files may not be in MP3 (MPEG1 Audio Layer 3) format.
- The files may be in VBR (Variable Bitrate) format.



**Lost data**

Occasionally your MM-FX500 may not read the MultiMediaCard. If this happens refer to the following:

- Format the MMC in the recorder using MM-FX500 Manager or the Format menu on the recorder.
- Shut down other software during file transfers.

AIWA Co., Ltd. will not be responsible for lost or damaged data downloaded to your MM-FX500 recorder. We recommend you to back up your data in a safe place such as on your hard drive or a floppy diskette.

**Parallel-Port-Sharing devices/Parallel-Port-Selector**

This model has not been tested using Parallel-Port-Sharing devices or Parallel-Port selectors. We cannot guarantee the recorder for customers using their MM-FX500 recorder with Parallel-Port-Sharing devices or Parallel-Port-Selectors.

**Exiting the manager**

- After terminating communication between your PC and the recorder, you should exit MM-FX500 Manager before unplugging the parallel cable from the player.

**Cassette adaptors**

You may use a cassette adaptor for a car stereo system to listen to recordings on your car audio system. Connect the plug of the cassette adaptor with the headphone jack of the recorder and insert the cassette adaptor into the car stereo player.

**How to set the Parallel Port mode to ECP and the Parallel Port I/O address to 0378**

You must change the mode using the CMOS setup utility. (If your system is an IBM ThinkPad, do not follow the steps below. Please refer to the last section "Setup for IBM ThinkPad.")

- 1 Turn off your PC.
- 2 Boot up your PC to get into the CMOS setup utility.

To get into the CMOS setup utility, refer to the operating instructions for your PC.

- 3 Once you get into the CMOS setup utility, set the Printer Port Mode to ECP and the Parallel Port address to 0378. The ways of setting the Printer Port Mode and the address will differ, depending on the BIOS of your computer.

You may refer to the following for some BIOS examples.

**PhoenixBIOS**

For the PhoenixBIOS NoteBIOS 4.0, do the following:

- 1 Use the right/left arrow key to select the Peripherals menu.
- 2 Use the up/down arrow key to select Parallel Mode.
- 3 On the Parallel Mode item, use the space bar to set the Parallel Mode value to ECP.
- 4 Use the up/down arrow key to select Parallel Port.
- 5 On the Parallel Port item, use the space bar to set the Parallel Port to 378, IRQ 7.
- 6 Now, save your settings and exit the CMOS setup utility. Then restart your system.

### **Award BIOS**

- 1 Use the up/down arrow key to select Integrated Peripherals. Then press the Enter key.
- 2 Use the up/down arrow key to select Parallel Port Mode
- 3 Use the Page up/down key to set the value of the Parallel Port Mode item to ECP.
- 4 Use the up/down arrow key to select Onboard Parallel Port.
- 5 Use the Page up/down key to set the value of the Onboard Parallel Port item to 378/IRQ7.
- 6 Save your settings and exit the CMOS setup utility. Then restart your system.

### **How to check and set the Printer Port Mode and the Parallel Port I/O Address in Windows**

- 1 Right-click on the My Computer icon on the Windows desktop.
- 2 Click on the Property menu item. The System Properties dialog box will appear.
- 3 Click on the Device Manager tab.
- 4 Double-click on Ports (COM&LPT).
- 5 Double-click on ECP Printer Port (LPT1).  
If there is no such item, the Printer Port Mode is not set to ECP.  
To set it to ECP mode, you have to go to the CMOS setup utility as described in the above section.
- 6 Click on the Resources tab.

- 7 Check if the setting value of the input/output range is 0378–037F.  
If the setting value is not 0378–037F, you have to change the setting value as follows:
  - (1) Check the Use automatic settings item and click on the OK button.
  - (2) Reboot your system and go to the CMOS setup utility.
  - (3) Set the Printer Port I/O address to 0378, then save your settings and exit the CMOS setup utility.
- 8 Now, click on the OK button. Sometimes you may need to reboot your system.

### **Setup for IBM ThinkPad**

Since some IBM ThinkPads do not allow setting up the Printer Port Mode using the CMOS setup utility, you need to run the ThinkPad Configuration program provided with the IBM ThinkPad computer.

Follow the procedure below:

How to set up the ECP mode

- 1 Double-click on the ThinkPad Configuration icon on the Windows desktop. A dialog box will be displayed.
- 2 Click on the printer-shaped button located on the left side of the dialog box.
- 3 Select the Parallel Port.
- 4 Change the Operation Mode to ECP.
- 5 Save and exit.

### How to set up the Parallel Port address

Since the Parallel Port address for most IBM ThinkPad computers is set to 03BC, you need to set it to 0378 as follows:

My Computer (right-click) → Properties  
 → Device Manager → Ports(COM&LPT)  
 → ECP Printer Port (LPT1) → Resources  
 → uncheck the Use Automatic setting item  
 → Select a different Basic Configuration value.

Then setting value of the input/output range should be changed from 03BC–03BF to 0378–037F.

### Note

Refer to the operating instructions for your PC before setting the BIOS.

- If your MM-FX500 still is not recognised even though you set the Printer Port Mode to ECP and the I/O address to 0378, try setting the Printer Port I/O address to 0278.
- If you have a printer driver installed on your system, you may need to remove the driver.

## SPECIFICATIONS

### Memory card slot

For a removable 16MB or 32MB memory card

### Maximum output level

5mW + 5mW (32 ohms)

### Frequency range

20 Hz-20 kHz

### Load impedance

16-32 ohms

### Distortion rate

0.35% or less  
 S/N ratio 85 dB

### Power supply

DC 1.5 V using an LR6 (size AA) alkaline battery

### Battery life

Using an LR6 alkaline battery

Approx. 10 hours for playback  
 Approx. 8 hours for recording (Mic)  
 Approx. 3.5 hours for recording (Line in)

### PC Interface

Parallel port

### Built-in microphone

Electric condenser microphone (monaural)

### Maximum dimension

Approx.  
 65 (W) x 90 (H) x 18.7 (D)mm  
 2 5/8 (W) x 3 5/8 (H) x 3/4 (D)in.

### Weight

Approx. 77.5 g (2.7 oz)  
 excluding battery

### Accessories

25-to-15 pin parallel cable (1)  
 Installation CD (1)  
 Remote control (1)  
 Stereo headphones (1)  
 Carrying case (1)  
 MultiMediaCard (1)

### Supplied headphones HP-M054

Type: In-ear type  
 Impedance: 32 ohms  
 Sensitivity: 105 dB/mW

### Recommended commercially available headphones

Type: In-ear type/Verticle type/  
 Headband type  
 Impedance: 16-32 ohms  
 Sensitivity: 100-109 dB/mW

- The specifications and external appearance of this unit are subject to change without notice.

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