

# MP3 Player user manual

## imagine the possibilities

Thank you for purchasing this Samsung product. To receive a more complete service, please register your product at www.samsung.com/global/register



# features of your new MP3 Player

Good looking. Smart. Reliable. And lots of fun. Your new MP3 player is all this and more. Its compact silhouette takes up the tiniest space in your pocket, and its state-of-the-art technology delivers rich sound. You'll love your new MP3 player, whether you're exercising, downloading your favorite tunes, or even listening to FM Radio. Use it once, and you'll wonder how you ever lived without it.

#### USER-FRIENDLY INTERFACE!

The MP3 player is an USB-integrated product with no need for a USB cable, which offers you fast data transfer and convenient recharging.

#### FREEDOM OF YOUR FAVORITE SELECTION WITH THIS MP3 PLAYER!

You can create playlists of your favorite music.

#### EXPANSION AND COMPATIBILITY

With your new player, you're not limited to MP3 files. Your player supports MP3 and WMA formats.

#### TOUCH NAVIGATION!

You can tap on the touch pad to navigate through the menus.

#### LONGER PLAY TIME AND SHORTER DOWNLOADING!

A fully charged battery can play up to 16 hours of music.

Download times are shorter. Because of its USB 2.0 capability, the player is much faster than models with USB 1.1.

#### ACOUSTIC WONDER

Your new MP3 player has built-in DNSe™ (Digital Natural Sound engine), Samsung's unique sound technology created to deliver richer, deeper sound for an unbelievable listening experience.

#### WHERE FORM MEETS FUNCTION

Sure, it's sleek and good looking. But it's also easy to hold and use, too.

# safety information

## What the icons and signs in this user manual mean :

	Means that death or serious personal injury is a risk.
	Means that there is a potential risk for personal injury or material damage.
	To reduce the risk of fire, explosion, electric shock, or personal injury when using your MP3 Player, follow these basic safety precautions:
NOTE	Means hints or referential pages that may be helpful to operate the player.

	Do NOT attempt.	
$\boxtimes$	Do NOT disassemble.	
Ø	Do NOT touch.	
*	Follow directions explicitly.	
-	Unplug the power plug from the wall socket.	
	Call the service center for help.	

These warning signs are here to prevent injury to you and others. Please follow them explicitly.

After reading this section, keep it in a safe place for future reference.

# safety information

This manual describes how to properly use your new mp3 player. Read it carefully to avoid damaging the player and injuring yourself. Pay particular attention to the following serious warnings:

# PROTECT YOURSELF



Do not disassemble, repair, or modify this product on your own.



 Do not get the product wet or drop it in water. If the product gets wet, do not switch it on because you could get an electric shock. Instead, contact Samsung Customer Service Centre near you.

 Do not use the product during a thunderstorm, as it may cause malfunction or a risk of electric shock.



• Do not use the earphone while you are driving a bicycle, automobile or motorcycle.

Otherwise it can cause a serious accident and, furthermore, it is prohibited by the law in some areas.

Using the earphone while walking or jogging on a road, in particular, on a crosswalk can lead to a serious accident.

- For your safety, make sure the earphone cable does not get in the way of your arm or other surrounding objects while you are taking exercise or a walk.
- Take caution when you use the player with the USB plug pulled out. The sharp USB connection plug may cause injury.



 Do not place the product in damp, dusty, or sooty areas because these environments could lead to fire or electric shock.

# PROTECT YOURSELF



 Using earphones or headphones for an extended time may cause serious damage to your hearing.

If you are exposed to sound louder than 85db for an extended time, you may adversely affect your hearing. The louder the sound is, the more seriously damaged your hearing may be (an ordinary conversation is between 50 to 60db and road noise is approximately 80db).

You are strongly advised to set the volume level to medium (the medium level is usually less than 2/3 of the maximum).

 If you feel a ringing in the ear(s), lower the volume or stop using the earphones or headphones.

## PROTECT YOUR MP3 PLAYER

- Do not leave the player in temperatures above 95°F (35°C), such as a sauna or a parked car.
  - Do not cause excessive impact on the player by dropping it.
  - Do not place heavy objects on top of the player.
  - Prevent any foreign particles or dust from entering into the product.
  - Do not place the product near magnetic objects.



- Be sure to backup important data. Samsung is not responsible for data loss.
- Use only accessories provided by or approved by Samsung.



 Do not spray water on the product. Never clean the product with chemical substances such as benzene or thinner, as it may cause fire, electric shock or deteriorate the surface.



• Failure to follow these instructions may lead to physical injuries or damage to the player.



 When printing this user manual, we recommend that you print in color and check "Fit to Page" in the print option for better viewing.

# contents

## THE BASICS



9 What's included

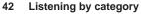
- 10 Your MP3 Player
- 13 Screen displays
- 14 Using the touch button
- 15 Charging the battery
- 16 Caring for the battery
- 16 Turning the power on & off
- 17 Playing music
- 17 Controlling the volume
- 18 Disabling the buttons
- 18 Browsing for files using "File Browser"
- 19 Deleting files with "File Browser"
- 20 Changing the settings and preferences
- 20 Music Settings
- 23 FM Radio Settings
- 27 Sound Settings
- 28 Display Settings
- 29 Language Settings
- 31 Date/Time Settings
- 32 System Settings
- 36 Resetting the system

### SAMSUNG MEDIA STUDIO

- 37 PC requirements
- 38 Installing Samsung Media Studio
- 39 Transferring files to the Player with Samsung Media Studio

# <u>contents</u>

## LISTENING TO MUSIC



- 43 To switch back to the current play screen
- 44 Pausing
- 44 Searching within a track
- 44 Playing from the beginning of the current track
- 44 Playing the previous track
- 44 Playing the next track
- 45 Creating a Playlist using Samsung Media Studio
- 45 Creating a Playlist
- 46 Adding music files to a Playlist you've created
- 47 Transferring a Playlist to your player using Media Studio
- 48 Creating a playlist on your mp3 player
- 49 Playing a playlist
- 50 Deleting a file from the playlist
- 50 Deleting all files from the playlist
- 51 User button custom function
- 51 To set User Button Mode

# contents

### MORE THAN MUSIC

#### Listening to FM Radio

55

55

56

57

57

57

58

58

- To use the mute function
- To search for FM stations
- To switch to Preset Mode
- To switch to Manual Mode
- To store stations in the Preset memory
- To listen to preset stations
- To delete a preset
- 59 To record FM Radio broadcasting
- 59 To stop recording
- 60 Using Datacasts

#### 64 Voice Recording

- 64 To make a voice recording
- 65 To stop voice recording

TROUBLESHOOTING

#### 66 Troubleshooting

66



69 Menu Tree

70 Product Specifications

71 License



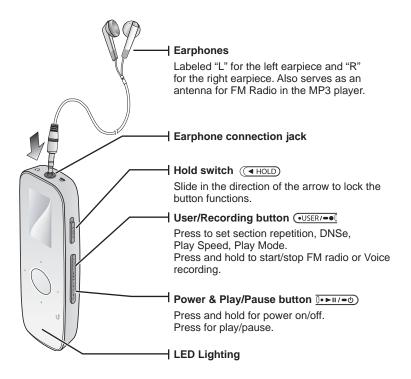
## WHAT'S INCLUDED

Your new MP3 player comes with these accessories. If you're missing any of these items, contact a Samsung Customer Service centre near you.



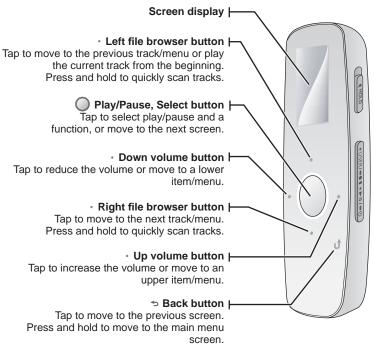
The accessories in your box may look slightly different to these pictured.

## YOUR MP3 PLAYER

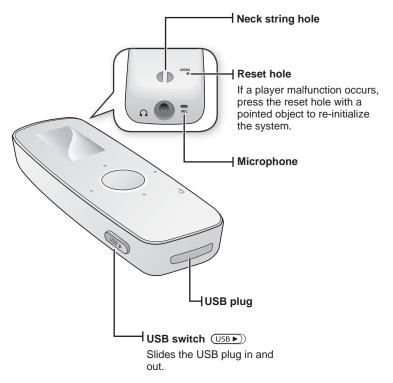


## YOUR MP3 PLAYER (Continued)

These buttons are 'Touch Sensitive' buttons.

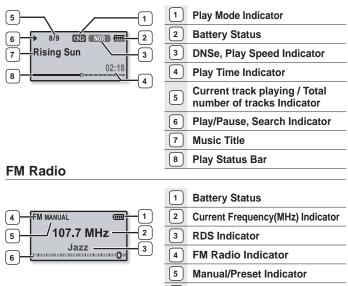


## YOUR MP3 PLAYER (Continued)



## SCREEN DISPLAYS

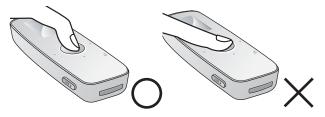
### Music



- 6 Frequency Location Indicator
- The screen pictures are for illustration purposes only. The actual screen may differ. NOTE

# USING THE TOUCH BUTTON

Tap on the touch button with your fingertip.



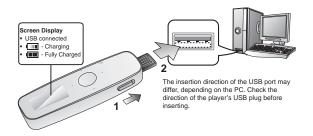
- To avoid damage to the touch button, do not use any object other than your fingers to operate it.
  - Do not tap on the touch button if your fingers are not clean.
  - Do not tap on the touch button with gloves on.
  - The touch button may not function if you use a fingernail or other instruments such as a ballpoint pen.

NOTE

# CHARGING THE BATTERY

Charge the player before using it for the first time and when you haven't used it for awhile.

The battery for your mp3 player will fully charge in about 4 hours, although total charging time varies depending on your PC environment.



- 1. Slide the [ USB )] switch.
  - The USB plug is revealed.

2. Connect the USB plug to the USB port (++++) on your PC as in the figure.

# CARING FOR THE BATTERY

Your battery will last longer if you follow these simple guidelines for caring and storing the player.

- Recharge the battery within the temperature range of 5°C~35°C (40°F~95°F).
- Do not overcharge (longer than 12 hours). Excessive charging or discharging may shorten the battery's life.
- · Battery life naturally shortens slowly over time.



 If you are charging the player while it is connected to a laptop computer, make sure the laptop's battery is also fully charged or that the laptop is plugged into its power source.

## **TURNING THE POWER ON & OFF**

#### **Turning the Power on**

Press and hold the [1+>=/-0] button.

Power is turned on.

#### Turning the Power off

Press and hold the [0. > 1/-0] button.

Power is turned off.



 Your mp3 player will be automatically turned off when none of the buttons have been pressed for a specific length of time in the pause mode. The factory setting for <Auto Power Off> is 1 minute, but you can change this length of time. See page 33 for more information.

	8/9	CND NOR (
Ri	sing \$	Sun
_		02:18

# PLAYING MUSIC

Load music files onto your new mp3 player using Samsung Media Studio. Learn more about Media Studio on page 39.

- 1. Press and hold [ -] to move to the main menu screen.
- Tap the [Left, Right] button to select <Music> and tap []].
  - The <Music> list will appear.
- 3. Use the **[Up, Down] button** and **[**] to select a music file of your choice.
- 4. Tap [O] to play the selected music file.
  - The music file will begin playing.
  - Tap [ 5] to move to the previous screen.
- NOTE Press and hold [ 1 ] to move to the main menu screen.

# CONTROLLING THE VOLUME

#### Tap the [Up, Down] button.

- You will see a volume control icon.
- The volume range is 00 to 30.
- Tap the **[Up] button** to increase the volume and tap the **[Down] button** to decrease it.









## **DISABLING THE BUTTONS**

The hold function disables all the other buttons on the mp3 player, so that if you accidentally bump one, while working out for example, your music won't be interrupted.

- 1. Slide the [ ( I HOLD ] switch in the direction of the arrow to enable the Lock function
- Slide the [ ( HOLD )] switch in the opposite direction of the arrow to release the Lock function.

## **BROWSING FOR FILES USING "File Browser"**

Search easily for files using the "File Browser" function.

- 1. Press and hold [ ] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <File Browser> and tap [\_].
  - The <File Browser> folder list containing "Music, Playlists, Datacasts, and Recorded Files" appears.
- 3. Tap the [Up, Down] button to select a desired folder.
- 4. Tap [ ] to bring up the file list in the selected folder.
- 5. Tap the [Up, Down] button to select a desired file.
- 6. Tap [O].
  - The file will start playing.

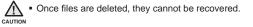






## **DELETING FILES WITH "File Browser"**

- 1. Press and hold [ -] to move to the main menu screen.
- Tap the [Left, Right] button to select <File Browser> and tap [O].
  - The <File Browser> folder list appears.
- Tap the [Up, Down] button to select a desired folder and tap [O].
- Tap the [Up, Down] button to select the file that you want to delete and press the [<u>.USER/-e0</u>] button.
- 5. Tap the [Up, Down] button to select <Delete File> and tap [\_].
  - The confirmation window will appear.
- Tap the [Left, Right] button to select <Yes> and tap [\_].
  - The file will be deleted





• The currently played file will not be deleted.

Music	
Playlists	
Datacasts	
Recorded Files	

•	Music Space.mp3
٦	Rising Sun.mp3
-	<b>.</b> .

Add to Playlist
Delete from Playl
Delete File

# CHANGING THE SETTINGS AND PREFERENCES

Your mp3 player comes with settings and preferences that were set up at the factory, but you can change these pre-set values to truly customize your player.

- Tap [ 1 Ito move to the previous screen.
  - Press and hold [ > ] to move to the main menu screen.

## **Music Settings**

V

NOTE

- 1. Press and hold [ >] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Settings> and tap [.].
  - The <Settings> menu appears.
- 3. Tap the [Up, Down] button to select <Music> and tap [\_].
  - The <Music> menu appears.
- Use the [Up, Down] button and [O] to set functions.



Sound Effect
DNSe
Play Mode
Play Speed

- Tap the [Up, Down] button to move up or down through the current menu.
- Tap [O] to move to the next item/select the menu.



 If the <Settings> screen is open and you don't press any buttons for a while, the unsaved settings will be lost, and the player will return to the previous screen.

#### What is DNSe?

Digital Natural Sound Engine (DNSe) is a sound effect function for MP3 players developed by Samsung. It provides various sound settings to enhance the type of music you're listening to.

#### **Music setting options**

**Sound Effect:** You can set the street mode, clarity and master EQ. **<Street Mode>** : Allows you to hear the music outdoors clearly by filtering out some of the street noise. Select either <Off> or <On>. **<Clarity>** : You can enjoy clearer sound with improved quality. Select from <0 - 2>.

#### <Master EQ> : You can optimize sound settings.

Tap the [Left, Right] button to select the frequency you want to adjust. Tap the [Up, Down] button to adjust the selected frequency's level and then tap [O].

**DNSe:** Select the right sound for each music genre. Select from <Normal>, <Studio>, <Rock>, <Classical>, <Jazz>, <Ballad>, <Club>, <R&B>, <Dance>, <Concert Hall>, and <User>. You can also set <EQ> and <3D & BASS> in the DNSe mode when you have selected <User>. See page 22.

**Play Mode:** Select playback mode such as repeat settings. Select from <Normal>, <Repeat>, <Repeat One>, and <Shuffle>.

**Play Speed:** Adjust the playback speed of music/recording files. Select <x0.7>, <x0.8>, <x0.9>, <x1.0(Normal)>, <x1.1>, <x1.2>, or <x1.3>. (The higher the number is, the faster the playback speed is.)

Skip Interval: You can fast forward through a file at various intervals. Skip a whole track or skip several seconds at a time. Select from <1 Song>, <5sec>, <10sec>, <30sec> and <1min>.

**Tag:** You can select to display the track information for a music file containing ID3 Tag. Select either <Off> or <On>.



- If the file was developed with a variable bit rate(VBR), the actual length of the skip interval may not be exactly what you select.
- The adjusted play speed may differ from the actual speed, depending on the file.
- What is ID3 Tag?

This is what is attached to an MP3 to carry information relevant to the file, such as the title, artist, album, year, genre and a comment field.

## To set the Digital Natural Sound engine (DNSe) (Continued)

## <EQ>

You can adjust individual frequencies to adjust the sound to your preference.

- 1 Tap the **[Up, Down] button** in the DNSe menu to select **<User>** and tap the **[Right] button**.
- Tap the [Up, Down] button to select <EQ> and tap [O].
  - The <EQ> setting screen appears.
- 3. Tap the [Left, Right] button to select the frequency you want to adjust and tap the [Up, Down] button to adjust the selected frequency's level.
  - You can select from -10 to +10 for the selected frequency's level.
- 4. Tap [O].
  - The confirmation window will appear.
- 5. Tap the [Left, Right] button to select <Yes> and tap [.].
  - The setting is completed.

### <3D & BASS>

You can set the 3D surround sound and bass boost level.

- 1. Tap the [Up, Down] button in the DNSe menu to select <User> and tap the [Right] button.
- 2. Tap the [Up, Down] button to select <3D & BASS> and tap [\_].
  - The <3D & Bass> setting screen appears.
- 3. Tap the [Left, Right] button to select <3D> or <Bass> and tap the [Up, Down] button.

• You can select a <3D> level from 0 to 4, and <Bass> from 0 to 4.

- **4.** Tap [O].
  - The confirmation window will appear.
- 5. Tap the [Left, Right] button to select <Yes> and tap [O].
  - The setting is completed.





### **FM Radio Settings**

You can set FM radio frequencies automatically and also select the FM Radio mode, receiving area and sensitivity.

- 1. Press and hold [ >] to move to the main menu screen.
- Tap the [Left, Right] button to select <Settings> and tap [].
  - The <Settings> menu appears.
- 3. Tap the [Up, Down] button to select <FM Radio> and tap [\_].
  - The <FM Radio> menu appears.
- Use the [Up, Down] button and [O] to set functions.

Music	I
FM Radio	
User Button Mode	
Sound	

Mode	
Auto Preset	
FM Region	
FM Sensitivity	

#### FM Radio setting options

**Mode:** You can switch to Manual or Preset mode. Select either <Manual> or <Preset>. If no preset frequencies are set, the player will not switch to Preset mode.

Auto Preset: Automatically scans for available frequencies. See page 25.

**FM Region:** You can change an FM area setting in preparation for overseas travel. Select from <Korea/US>, <Japan>, and <Other Countries>.

**FM Sensitivity:** To receive more or fewer FM radio frequencies, adjust the <FM Sensitivity>. Select either <Low>, <Middle>, and <High>. If you select <High>, the more frequencies can be received.

**RDS Display :** Radio Data System(RDS) provides the reception and display of messages such as broadcasting information.

Select either <Program Type> or <Program Service>. See page 26.



 Your previously stored radio frequencies will be deleted when you change the <FM Region> on your player.

- FM region can be deleted or changed according to the target region of the player.
- Frequency range by region
  - Korea/US: Search for FM frequencies in 100 kHz increments between 87.5 MHz~108.0 MHz.
  - Japan: Search for FM frequencies in 100 kHz increments between 76.0 MHz~108.0 MHz.
  - Other Countries: Search for FM frequencies in 50 kHz increments between 87.50 MHz~108.00 MHz.

#### the basics 25

## CHANGING THE SETTINGS AND PREFERENCES (Continued)

#### To set Auto Preset

You can preset up to 30 stations in your MP3 player's memory and return to them with the press of just one button. Have the MP3 player find and store stations automatically.

#### Automatic - automatically store all the stations the player receives

- 1. Tap the [Up, Down] button in the FM Radio setting menu to select <Auto Preset> and tap [...].
  - The Auto Preset confirmation window will appear.
- 2. Tap the [Left, Right] button to select <Yes> and tap [O].
  - Up to 30 frequencies are automatically set.
  - When you have completed your settings, tap the [Left, Right] button to select a desired preset frequency in Preset mode.

#### To cancel Auto Preset

If you want to cancel the auto preset, press any button in the process.

The auto preset setting is canceled, and only frequencies set up to that point are stored.

Ø	<ul> <li>Always</li> </ul>
NOTE	frequen

connect your earphones to the player when searching or setting ncies and listening to FM Radio.

The earphones serve as antennas to receive FM radio reception.

- In poor reception areas, the player may not be able to find an available FM frequency.
- You may want to re-set the stored stations if you're going to listen to your MP3 player in a different city. To delete the preset stations and store new ones, simply repeat the process.



#### To set RDS Display

Radio Data System(RDS) provides the reception and display of messages such as broadcasting information. The program information such as News, Sports or Music, or the broadcasting station information is displayed on the screen.

- 1. Tap the [Up, Down] button in the FM Radio setting menu to select <RDS Display> and tap [\_].
  - The <RDS Display> menu appears.
- 2. Tap the [Up, Down] button to select the RDS display mode and tap [\_].
  - Select either <Program Type> or <Program Service>.





#### **RDS Display Options**

Program Type : Displays the type of program currently being broadcast.

**Program Service :** Displays the name of broadcasting station and is composed of 8 characters. If the Program Service information is being received, the Program Service name (BBC, AFO, NDR, etc.) is shown on the display. If the Program Service information isn't received, the original FM frequency is shown.



• If FM signal strength is weak, the RDS information might not be displayed.

## **Sound Settings**

You can set the beep sound and volume limit.

- 1. Press and hold [ -> ] to move to the main menu screen.
- Tap the [Left, Right] button to select <Settings> and tap [].
  - The <Settings> menu appears.
- 3. Tap the [Up, Down] button to select <Sound> and tap [\_].
  - The <Sound> menu appears.
- Use the [Up, Down] button and [O] to set functions.

#### **Sound Setting Options**

Beep Sound: Sets the beep sound for button operations to on or off. Select from <Offs and <Ons.

Volume Limit: You can avoid hearing damage by setting the limit of the volume when using the earphone. <On> will limit the maximum volume level to 15. The maximum volume level when volume limit is set to <Off> is 30. Even if you have selected <Off>, the volume will be set back to 15 to avoid hearing damage when you turn the player back on.

Music FM Radio User Button Mode Sound

Beep Sound Volume Limit

## **Display Settings**

Change the display off time, the screen saver and LED backlight effect.

- 1. Press and hold [ ] to move to the main menu screen.
- Tap the [Left, Right] button to select <Settings> and tap [].
  - The <Settings> menu appears.
- Tap the [Up, Down] button to select <Display> and tap [\_].
  - The <Display> menu appears.
- 4. Use the [Up, Down] button and [O] to set functions.

Display
Language
Date/Time Set
System

Display Off Screen Saver LED Effect

#### **Display Setting Options**

**Display Off:** If no button is tapped within the time shown below, the screen display will automatically be turned off. Select either <15sec>, <30sec>, <1min>, <3min>, <5min>, or <Always On>. Press any button to turn the display back on.

Screen Saver: You can set an image to use as a screen saver. Select the screen saver image from <Random>, the current time or the three images and select the wait time from <15sec>, <30sec>, <1min>, <3min>, <5min> and <Off>. If no button is tapped within the time shown above, the player will display the screen saver image.

**LED Effect:** Select LED backlight effect. Select either <Off>, <Button> (turns on when a button is pressed), <Random> or <Always on>.

## Language Settings

The menus on your new mp3 player can be set to appear in any one of the available languages. You can change your preference language easily.

- 1. Press and hold [ ] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Settings> and tap [].
  - The <Settings> menu appears.
- 3. Tap the [Up, Down] button to select <Language> and tap [).
  - The <Language> menu appears.
- 4. Use the [Up, Down] button and [O] to set functions.

Display
Language
Date/Time Set
System

Menu	
ID3 Tag	

#### Language setting options

Menu: Set the menu language. Select <English>, < >, <Français>, <Deutsch>, <Italiano>, <日本語>, <中文(简体)>, <中文(繁體)>, <Español>, <Pyccĸий>, <Magyar>, <Nederlands>, <Polski>, <Português>, <Svenska>, <ไทย>, <Čeština>, <Eλληνικά>, <Türkçe>, <Norsk>, <Dansk>, <Svenska>, <Español (Sudamérica)>, <Português (Brasil)>, <Indonesia>, <Tiếng Việt>, <Bulgarian>, <Română>, <Ykpaïнська>, <Slovenštán> or <Slovenský>.

**ID3 Tag:** Set the language in which the track information will appear. Select from <English>, <Korean>, <French>, <German>, <Italian>, <Japanese>, <Chinese(S)>, <Chinese(T)>, <Spanish>, <Russian>, <Hungarian>, <Dutch>, <Polish>, <Portuguese>, <Swedish>, <Thai>, <Finnish>, <Danish>, <Norwegian>, <Afrikaans>, <Basque>, <Catalan>, <Czech>, <Estonian>, <Greek>, <Hrvatski>, <Icelandic>, <Rumanian>, <Slovak>, <Slovene> <Turkish> and <Vietnamese>.



• The supported languages can be changed or added.

#### What is ID3 Tag?

This is what is attached to an MP3 to carry information relevant to the file, such as the title, artist, album, year, genre and a comment field.

### **Date/Time Settings**

Setting the time will allow the unit to correctly date and time stamp recorded files.

- 1. Press and hold [ >] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Settings> and tap [].
  - The <Settings> menu appears.
- 3. Tap the [Up, Down] button to select <Date/ Time Set> and tap [\_].
  - The <Date/Time Set> menu appears.
- 4. Use the [Up, Down] button and [O] to set functions.

#### Date/Time setting options

Date: You can set the current date. Tap the [Left, Right] button to move to Year, Month, Date and tap the [Up, Down] button to set each item.

Time: You can set the current time. Tap the [Left, Right] button to move to Hour, Min, AM/PM and tap the [Up, Down] button to set each item.

1

Date	
Time	

## **System Settings**

Choose the sleep timer, auto power off, PC connection and default setting that's right for you.

- 1. Press and hold [ >] to move to the main menu screen.
- Tap the [Left, Right] button to select <Settings> and tap [].
  - The <Settings> menu appears.
- Tap the [Up, Down] button to select <System> and tap [].
  - The <System> menu appears.
- 4. Use the [Up, Down] button and [O] to set functions.

Display	
Language	
Date/Time Set	
System	

Sleep
Auto Power Off
PC Connection
Library Update

#### System setting options

Sleep: Turns off power automatically after the preset time. Select either <Off>, <15 min>, <30 min>, <60 min>, <90 min>, or <120 min>.

Auto Power Off: Automatically turns power off when there is no button operation after the preset time in the pause mode. Select either <15sec>, <30sec>, <1min>, <3min>, <5min> or <Always On>.

**PC Connection:** You can set USB connection to the PC to either <Removable Disk> or <MTP>. The default (factory) setting of PC connection is set to <MTP>. Selecting <Removable Disk> will use the player as a removable storage device. See page 34.

Library Update: The player will automatically update the library when you disconnect the USB plug. However, if the library update does not work properly, please update it manually. Tap the [Left, Right] button to select <Yes> and tap []].

**Default Set:** Returns all settings to the default value. Select either <Yes> or <No>. <Yes> initializes all settings to default. <No> cancels default settings.

**Format :** Formats the internal memory. Select either <Yes> or <No>. Selecting <Yes> will format the internal memory and delete all files on the player. Selecting <No> does not format the internal memory. Check before formatting it.

About: Checks the firmware version and memory capacity. <Firmware Version> displays the current firmware version. <Used> indicates the usage, <Available> indicates the remaining capacity and <Total> indicates the total memory capacity.



#### Regarding the Built-In Memory

1GB=1,000,000,000 bytes : actual formatted capacity may be less as the internal firmware uses a portion of the memory.

#### When the pc connection is set to <removable disk>

#### Using as a removable disk

You can use the player as a removable storage device.



- Before you start Connect the player to your PC.
- 1. Open files/folders to transfer from your PC.
- 2. Open <My Computer> → <U4> from the desktop.
- Select the files/folders to transfer from your PC and drag-and-drop them to a folder of your choice in the <U4>.
  - The selected folders or files are transferred to the player.





• The file transfer message will appear during file download or upload.

Disconnecting the USB plug while the message is displayed may cause malfunction of the player.

- The order of music files displayed in your PC may differ from the play order on your player.
- If you transfer a DRM file(charged file) to the removable disk, the file will not be played.



What is DRM?

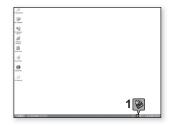
Digital Rights Management (DRM) is a technology and service to prevent the illegal use of digital contents and protect the profit and rights of copyright holders. DRM files are charged music files applied with the illegal copy protection technology of legally purchased MP3 music.

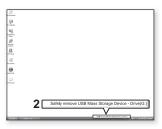
#### When the pc connection is set to <removable disk> (Continued)

#### **Disconnecting from your PC**

Follow the steps below to prevent damage to the player and data when disconnecting from your PC.

- 1. Place the mouse cursor on top of the 🖗 icon on the taskbar at the bottom right corner of the desktop and click the left mouse button.
- 2. Click the <Safely Remove USB Mass Storage Device Drive> message.
- 3. Disconnect the player from your PC.







- Do not disconnect the player from the PC during file transfer. This may CAUTION cause damage to data and the player.
  - You cannot safely disconnect the player while files within the player are being played on your PC. Please retry after file playback is finished.

## **RESETTING THE SYSTEM**

If your mp3 player won't turn on, won't play music, or isn't recognized by your computer when you connect it, you may have to reset the system.



Press the Reset hole at the rear of the player with a pointed object such as a safety clip.

- The system will be initialized.
- Your settings and files will not be affected.

# samsung media studio

Samsung Media Studio is an easy-to-use software application that helps you organize your files on your PC. With your files already sorted and organized in Media Studio, you can quickly transfer them to your mp3 without searching your entire hard drive for the right file.

# PC REQUIREMENTS

Your PC system must meet the following minimum specifications in order to install and run Media Studio:

- Pentium 500MHz or higher
- USB Port 2.0
- Windows XP Service Pack 2 or higher
- DirectX 9.0 or higher
- 100MB of free hard disc space
- CD Rom Drive (2X or higher)
- Windows Media Player 10.0 or higher
- Resolution 1024 X 768 or higher
- Internet Explorer 6.0 or higher
- 512 MB RAM or higher

# INSTALLING SAMSUNG MEDIA STUDIO



 Ensure that you run the <Media Studio> installer in your PC's administrator account. Otherwise, <Media Studio> will not be installed. To find the administrator account, please refer to your PC's user manual.

1. Insert the Installation CD provided with the player into the CD-ROM drive of your computer.



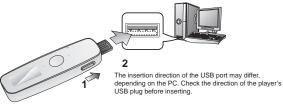
#### 2. Click <Install now>.

- Follow the instruction to start installation.
- <Media Studio> installation starts and then creates an *icon* on your desktop when installation is complete.

• Use care when inserting the Installation CD into a vertically oriented CD-ROM drive.

# TRANSFERRING FILES TO THE PLAYER WITH SAMSUNG MEDIA STUDIO

<Media Studio> file transfer is the easiest way to get your files from your PC to your MP3 player. <Media Studio> enables you to select and organize your files and folders before transferring them to your player. This will make finding files on your MP3 player easier and faster.



- 1. Slide the [ USB )] switch.
  - The USB plug is revealed.
- 2. Connect the USB plug to the USB port (⊷↔) on your PC as in the figure.
  - USB connected> appears on the screen display of the player.
  - Media Studio> will automatically start when the player is connected to your PC.
  - If the program does not start automatically, double click the <Media Studio> icon 
     on the desktop.

Ejecting the USB Plug

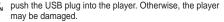
Slide the [(USB)] switch to eject the USB plug from the player.

Inserting the USB Plug

 Push the USB plug back into the player while sliding the [USB )] switch.



Be sure to slide and hold the [USB)] switch when you





# TRANSFERRING FILES TO THE PLAYER WITH SAMSUNG MEDIA STUDIO (Continued)

- 3. Click the icon.
  - Click to display music list.
- Click <Add File> on the bottom of <Media Studio>.
  - The <Open> window will appear.
- 5. Select the files to add and click <Open>.
  - The files are added to the list on the left side of the <Media Studio> Screen.

- 6. Select the file to transfer from the list on the left side.
- 7. Click the 🎒 icon.
  - The file you selected is transferred to the player.



# TRANSFERRING FILES TO THE PLAYER WITH SAMSUNG MEDIA STUDIO (Continued)



 Do not disconnect the USB plug during file transfer. Disconnecting during transfer may damage the player or your PC.

 Connect the player to the computer directly rather than through a USB hub to avoid an unstable connection.



- All functions are disabled during connection.
- If you connect the USB plug to the PC and the player's Battery charge is low, the player will be charged for several minutes before connecting to the PC.
  - Use FAT 32 for the file system when formatting the player on your PC. In Windows Vista, click Restore device defaults and format it.
  - Samsung Media Studio has a thorough Help function. If you can't find the answer to your question about Media Studio, click <MENU> → <Help> → <Help> on the top of the <Media Studio> program.
  - Music recognition technology and related data are provided by Gracenote and Gracenote CDDB<sup>®</sup> Music Recognition Service<sup>SM</sup>.
  - CDDB is a registered trademark of Gracenote. The Gracenote logo and logotype, the Gracenote CDDB logo and logotype, and the "Powered by Gracenote CDDB" logo are trademarks of Gracenote. Music Recognition Service and MRS are service marks of Gracenote.

# listening to music

- Before you start Connect the earphones, then turn on the player, and check the battery.
- Tap [ 1 Ito move to the previous screen.

Press and hold [ • ] to move to the main menu screen.

# LISTENING BY CATEGORY



- 1. Press and hold [ -] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Music> and tap [].
  - The <Music> list appears.
- 3. Tap the [Up, Down] button to select the desired list and tap [.].
  - The music files appear.
- 4. Tap the [Up, Down] button to select the file to play and tap [O].
  - The music will start playing.

# LISTENING BY CATEGORY (Continued)

#### Music List

B

File information including the artist name, album name, music title and genre will be displayed according to the ID3 Tag information on the appropriate music file. A file without an ID3 Tag is displayed as [Unknown].

Now Playing : Plays a recently played file or moves to the playback screen of the current file.

Artists : To play by artist

**Songs** : To play in numeric or alphabetical order **Playlists** : To play by Playlist.

Albums : To play by album Genres : To play by genre

Recently Added: The player displays the file list, sorted by the transferred date. Recorded Files : Shows all recorded files.

Music Browser : Shows all the music files stored in the Music Folder.

- MP3 and WMA music files are compatible with the player.
- MP1 or MP2 files which only have a changed extension to MP3 may not play on the player.
- What is an ID3 Tag?

This is what is attached to an MP3 to carry information relevant to the file such as the title, artist, album, year, genre and a comment field.

# TO SWITCH BACK TO THE CURRENT PLAY SCREEN

You can return to the current play screen at any time while using other functions.

- 1. Press and hold [ -] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Music> and press and hold [\_].
  - The player switches back to the current play screen.



# PAUSING

- 1. Press the [1. Press the press the
  - The music playback will be paused.
- Press the [0 → PI/=0] button again.
  - The music will play from the point where it stopped.

# SEARCHING WITHIN A TRACK

- 1. Press and hold the [Left. Right] button while the selected track is playing.
  - It searches to the beginning or the end of the track.
- 2. Release the button at the point you wish to start.
  - It starts playing from the point you release the button.

# PLAYING FROM THE BEGINNING OF THE CURRENT TRACK

Tap the [Left] button after 3 seconds of play has elapsed from the beginning of the track

The current track starts playing from the beginning.

# PLAYING THE PREVIOUS TRACK

Tap the [Left] button before 3 seconds of play has elapsed from the beginning of the track.

Tap the [Left] button twice after 3 seconds of play has elapsed from the beginning of the track.

The previous track will start plaving.

# PLAYING THE NEXT TRACK

#### Tap the [Right] button.

The next track will start playing.



When playing Variable Bit Rate (VBR) files, the previous track may not play even if you tap the [Left] button within 3 seconds. CAUTION

44 listening to music

## CREATING A PLAYLIST USING SAMSUNG MEDIA STUDIO

With <Media Studio>, you can create your own collection, or playlist, of audio files.

 Before you start - Connect the player to your PC. Media Studio must be installed on your PC.

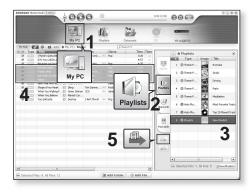
### **Creating a Playlist**

SAMEU	ING Media Stadic 💌		000 -	D:00 / D:			0088
	we o Playl		My PC Playlists		YP-U4(MTP)		
-	Type	mate	Tite	Co			
1	C There Play		Exercise	Playlists	Type Hall	i are ( t) deve	J4[MTP]]_ (8)
2	C These Hayl		Sudy	0 000	Rsing	s Sun ingð	4,090KB
3	C These Rayl	1	Driving	0 0.00			
•	@ These PlayL	「日本語」	Par E Create Playhats		(8)		
5	C Theme Playl	4	No Title :	New Playlists			
6	Auto Playlota	1	No Type I Parket	-			
7	Auto Playfols	0	* * * * * *	⊠3	- 1		
				OK B Cancel			
					ane		
				4			
				4	2) 2)		
				v Playlists	-		
				v Flaynsts	@ [		
۹.			/			103M6 /	m New Folder
	lected lists: 0, Al II	sta: 7	Elses Astartights @Neutland	as Dynamic Mode			

- 1. Click <Playlists> on the top of <Media Studio>.
  - The <Playlists> window appears.
- 2. Click <New Playlists> on the bottom.
  - The <Create Playlists> window appears.
- 3. Type in the playlist title and click [OK].
  - A new playlist will be named and stored in the <Playlists> section of <Media Studio>.

## CREATING A PLAYLIST USING SAMSUNG MEDIA STUDIO (Continued)

## Adding music files to a Playlist you've created



- 1. Click <My PC> on the top of <Media Studio>.
  - The <My PC> window appears.
- 2. Click <Playlists> in the right corner of the window.
  - The <Playlists> window appears.
- 3. Double click on a playlist in the right window.
- 4. Select files that you want to transfer in the <My PC> window.
- 5. Click 🚇.
  - The selected files will be added to the playlist.

## CREATING A PLAYLIST USING SAMSUNG MEDIA STUDIO (Continued)

### Transferring a Playlist to your player using Media Studio

	e Play		My PC PL	aylists	1	5)		YP4	HIMTPI	
	Type	Image	Title	File Co	-		(3)	107-10 A	( ) of are ( )	APPLIAMTER
1	C There Playl		Exercise		Play	lists	EM .	Type	Tile Name	-
2	C These Hayl	2	Study			0.00	NV PC	1023	Rising Sun Inp3	4,0
3	@ These PlayL		Driving		0	0.00	- are			
•	@ These Playl	20	Party		0	0:00	r/o			
5	() Theme PlayL	Ŧ.	Meditation		0	0:00	PlayInts			
5	🖉 Auto Playfota	5	Most Pavorite Tradio		0	0:00	-			
7	C Auto Haylsts	0	Top 25 Played Tradis		0	0:00	Euro CD			
8	O Phyliats		New Paylots		+	15:50				
	2						E Portable			
	2			-		- 1	unane			
				- 3	圓		4			
				-			45			
					_			-		
a -						-		0	1.15M	./ El NewFol

- 1. Click <Playlists> on the top of <Media Studio>.
  - The <Playlists> window appears.
- 2. Select a playlist in the <Playlists> section.
- 3. Click 🚇.
  - The selected playlist will be transferred to the player in <Music>  $\rightarrow$  <Playlists>.



• The player can play up to 400 music files for each playlist.

# CREATING A PLAYLIST ON YOUR MP3 PLAYER

If you've already downloaded files to your mp3 player, you can create a "Favorites" playlist without Media Studio or your PC.

- 1. Press and hold [ 5] to move to the main menu screen.
- Tap the [Left, Right] button to select <File Browser> and tap [\_].
- 3. Tap the [Up, Down] button to select <Music> and tap [\_].
  - The music file(s) appear.
- 4. Tap the **[Up**, **Down] button** to select a file to add to the playlist list and press the **[(•USER/=•0] button**.
  - The Playlist menu appears.
- 5. Tap the [Up, Down] button to select <Add to Playlist> and tap [.].
  - <Playlist 1> to <Playlist 5> appears.
- Tap the [Up, Down] button to select a playlist number to add the selected file and tap [\_].
  - The selected file will be added to the playlist.
  - You can check the playlist in <Music>  $\rightarrow$  <Playlists>  $\rightarrow$  <Playlist 1> to <Playlist 5> in the main menu.
- You can add up to 400 music files to each playlist (<Playlist 1> to <Playlist 5>).

Add to Playlist Delete from Playl... Delete File

Playlist 1	
Playlist 2	
Playlist 3	
Playlist 4	

# PLAYING A PLAYLIST

- 1. Press and hold [ ] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Music> and tap [\_].
  - The <Music> list appears.
- 3. Tap the [Up, Down] button to select <Playlists> and tap [\_].
  - The playlist(s) appear.
- 4. Tap the [Up, Down] button to select the playlist of your choice and tap [\_].
  - Music files stored in the selected playlist appear.
  - If there is no file found in the selected playlist, you will see a <No file> message on the screen.
- 5. Tap the [Up, Down] button to select a music file to play and tap [O].
  - The music file will start playing.

NOTE

See pages 45 and 47 to see how to transfer the playlist using <Media Studio>.

Genres Playlists Recently Added Recorded Files

Playlist 1	
Playlist 2	
Playlist 3	
Playlist 4	

# DELETING A FILE FROM THE PLAYLIST

- 1. Press and hold [ 5] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Music> and tap [\_].
  - The <Music> list appears.
- 3. Tap the [Up, Down] button to select <Playlists> and tap []].
  - The playlist(s) appear.
- **4.** Tap the **[Up, Down] button** to select the playlist of your choice and tap **[**].
  - Music files stored in the selected playlist appear.
- Tap the [Up, Down] button to select a file to delete from the playlist and press the [(-USER/-e)] button.
  - The Playlist menu appears.
- 6. Tap the [Up, Down] button to select <Delete from Playlist> and tap [O].
  - The delete confirmation window appears.
- Tap the [Left, Right] button to select <Yes> and tap [].
  - The selected file is deleted from the playlist.

## DELETING ALL FILES FROM THE PLAYLIST

Follow the steps 1-4 above.

- 5. Press the [OUSER/OO] button.
  - The Playlist menu appears.
- 6. Tap the [Up, Down] button to select <Delete All from Playlist> and tap [\_].
  - The delete confirmation window appears.
- 7. Tap the [Left, Right] button to select <Yes> and tap [O].
  - All files are deleted from the playlist.
- 50 \_ listening to music

Playlist 1 Playlist 2 Playlist 3 Playlist 4

Add to Playlist Delete from Playlist Delete All from P...

Add to Playlist Delete from Playl... Delete All from Play

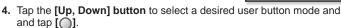
# USER BUTTON CUSTOM FUNCTION

You can set the (•USER/••[] button to control one of four modes listed below. After setting, you can access the mode directly with the (•USER/••[] button.

### To set the User Button Mode

Use the **USER/-** button during playback for simple mode change.

- 1. Press and hold [ >] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Settings> and tap [].
  - The <Settings> menu appears.
- 3. Tap the [Up, Down] button to select <User Button Mode> and tap [\_].
  - The <User Button Mode> menu appears.



#### **User Button Mode Options**

Repeat A-B: Sets section repeat.

DNSe: Allows you to select an appropriate sound effect for music.

Play Speed: Adjusts the playback speed between fast and slow.

Play Mode: Selects the repeat playback mode.





V Repeat A-B	
DNSe	
Play Speed	
Play Mode	

# **USER BUTTON CUSTOM FUNCTION (Continued)**

#### To set Section Repeat

This function enables you to listen to specific parts of a track repeatedly. It's helpful when learning a language.

- Set the User Button Mode to <Repeat A-B> and play a file of your choice.
- 2. Press the [(•USER/-••[] button at the beginning of the section you want to repeat.
  - The starting point is set and < ♥ > mark will appear on the play status bar.
- **3.** Press the [(•USER/-••[] button again to set the ending of the section you want to repeat.
- ▶ 8/9 CND NOR 000 Rising Sun ● 02:18

CNP NOR COM

01:20

8/9

**Rising Sun** 

< V > mark will appear on the play status bar and the specified section starts to play repeatedly.

#### **To cancel Section Repeat**

Press the [ • USER/ • • [] button again during Section Repeat.

Section Repeat will be canceled.

until after the current track ends.



- Section Repeat will be automatically canceled in the following case.
   The starting point of the section repeat is set but the ending point is not set
- You can't specify the end point in less than 3 seconds after the start of the section repetition.

# **USER BUTTON CUSTOM FUNCTION (Continued)**

#### To use the DNSe button

Select the right sound for each music genre.

- 1. Set the User Button Mode to **<DNSe>** and play a file of your choice.
- Press the [(•USER/-•[] button to select a desired DNSe.



- DNSe mode changes in the following order each time the button is pressed NOR (Normal) → STUDIO (Studio) → ROCK (Rock) →
  - $(CLASS) (Classical) \rightarrow (JAZZ) (Jazz) \rightarrow (FALLAD) (Ballad) \rightarrow$

```
CLUB (Club) \rightarrow RPB (R&B) \rightarrow DHNLE (Dance) \rightarrow CHALL (Concert Hall) \rightarrow USER (User).
```



#### What is DNSe?

Digital Natural Sound Engine (DNSe) is a sound effect function for MP3 players developed by Samsung. It provides various sound settings to enhance the type of music you're listening to.

#### To use the Play Speed button

Speed up or slow down your favorite music by adjusting the play speed.

- Set the User Button Mode to <Play Speed> and play a file of your choice.
- 2. Press the [(•USER/••[] button to select a desired play speed.

	8/9	CND (X 1.1)
Ris	sing S	Sun
_		02:18

- Playback speed changes in the following order each time the button is pressed <NOR(Normal)>, <X 1.1>, <X 1.2>, <X 1.3>, <X 0.7>, <X 0.8>, <X 0.9>.
- The higher the number is, the faster the speed is.



 The adjusted play speed may differ from the actual speed, depending on the file.

# **USER BUTTON CUSTOM FUNCTION (Continued)**

#### To use the Play Mode button

Select playback mode such as repeat settings.

- 1. Set the User Button Mode to **<Play Mode>** and play a file of your choice.
- Press the [(•USER/-•()] button to select a desired play mode.

	8/9	( <u>CNP</u> ) NOR (IIII
Ri	sing	Sun
		02:18
		ě

 Playback mode changes in the following order each time the button is pressed CtD (Normal) CtD (Repeat) CtD (Repeat One) CtD (Shuffle).

#### **Play Mode Options**

- CND : Plays all files of the current music list in order one time.
- CFD : Repeats playing all files of the current music list.
- CID : Repeats playing one file.
- Repeats playing all files of the current music list at random.

# more than music

You'll enjoy much more than music with your new mp3 player. Listen to FM Radio, Using Datacasts, Voice recording. Your mp3 player brings this and more right to the palm of your hand.

# LISTENING TO FM RADIO

- Before you start Connect the earphones, then turn on the player, and check the battery.
- NOTE
- Tap [ 1 Ito move to the previous screen.
- Press and hold [ > ] to move to the main menu screen.
- 1. Press and hold [ >] to move to the main menu screen.
- Tap the [Left, Right] button to select <FM Radio> and tap [\_].



FM radio reception will start.

### To use the mute function

- 1. Press the [0+>=/-0] button while listening to FM Radio.
  - Sound is muted.
- 2. Press the [0+>=/-to)] button once again to resume listening.
- NOTE
- Always connect your earphones to the player when searching or setting frequencies and listening to FM Radio.

The earphones serve as antennas to receive FM radio reception.

• In poor reception areas, the player may not be able to find an available FM frequency.

#### To search for FM stations

- 1. Press and hold the [Left, Right] button and then release in Manual mode.
  - The search will stop at the frequency nearest from the point the button is released.



#### OR,

- 1. Tap the [Left, Right] button to progress through the frequencies one by one in Manual mode.
  - Moves to frequencies whenever the button is pressed.

FM MANUAL	(000)
107.7 MH	z
Jazz	
	0

### To switch to Preset Mode

Select this mode if you want to search through your saved FM presets one preset at a time.

Press and hold [O] in Manual mode.

• You will see <PRESET> on the screen.

If no preset frequencies are set, the player will not switch to Preset mode. NOTE

## To switch to Manual Mode

Select this mode if you want to manually search through the FM band one frequency at a time.

Press and hold [O] in Preset mode.

• You will see <MANUAL> on the screen.

## To store stations in the Preset memory

You can store up to 30 stations in your MP3 player's memory and return to them with the press of just one number. Have the MP3 player choose only the stations you want using the manual process, or find and store the local stations automatically.

#### Manual - choose only the stations you want to store

- Tap the [Left, Right] button to select a frequency to preset in Manual mode and press the [(•USER/-•••] button.
  - The selected frequency will be added to the preset list.
  - If the same frequency is already set, the setting is disabled.
- NOTE To scan for a preset frequency automatically, refer to page 25.









#### To listen to preset stations

While in Preset mode, tap the **[Left, Right] button F** to scroll through preset stations.

You can listen to the stored radio frequency.



#### To delete a preset

Follow the steps below to delete frequencies while listening to FM Radio.

- While in Preset mode, tap the [Left, Right] button to search for a preset frequency to delete and press the [(•USER/-••)] button.
  - The Delete confirmation window appears.
- 2. Tap the [Left, Right] button to select <Yes> and tap [\_].
  - The selected frequency will be deleted.
  - If you don't want to delete the preset number, select <No>.
- 3. To delete other preset frequencies, follow 1-2 steps above.

Delete?
Yes No

### To record FM Radio broadcasting

You can record an FM radio program at any time while listening to the radio.

- Tap the [Left, Right] button to select a frequency to record in the FM Radio screen and press and hold the [(•USER/-•[] button.
  - The recording starts.
  - Press the [<u>0+>17-0</u>] button if you want to pause recording.

#### To stop recording

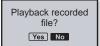
- 1. Press and hold the [(•USER/-•[]] button during the recording.
  - A message appears asking you if you want to listen to the file you just recorded.
- 2. Tap the [Left, Right] button to select <Yes> or <No> and tap [\_].
  - Selecting <Yes> will play the just recorded file.
  - Selecting <No> will not play the recorded file.



NOTE

- $\bullet$  The recorded file is stored in <File Browser>  $\rightarrow$  <Recorded Files>  $\rightarrow$  <FM Radio>.
- Each FM Radio recording file can be as long as 5 hours.
- You can store a maximum of 999 files for FM radio recording.
- You can make a recording for up to approximately 31 hours. (based on 128Kbps, 2GB)
- The recording file name will be automatically specified, for example, as such as "FM\_YYMMDD\_XXX.mp3". "FM" means FM radio recording, "YYMMDD" indicates the recorded date and "XXX" is the recording file number.





# **USING DATACASTS**

Using <Media Studio>, you can transfer a file and the blog information registered on RSS to the player for your entertainment.



#### What is RSS?

RSS stands for Rich Site Summary or Really Simple Syndication. It is an xml-based data transmission system used to deliver information on frequently updated web sites such as news and blogs to users in a more convenient and easy way.

#### What are Datacasts?

You can automatically receive updated information without having to visit your frequently visited news, blog and UCC sites every time.

• Before you start - Media Studio must be installed on your PC. See page 38.

### **Registering a Channel**

You can create a new channel by registering RSS-supported web sites or web pages on your computer.

- 1. Click <Subscribe> on the bottom of the <Datacasts> of <Media Studio>.
- 2. Enter an address in the <URL> and Click <▶Next>.
  - When you copy a web address and click <Subscribe>, the copied address is displayed automatically in the <URL>.

Channel Subscription	8
$^{\ast}$ Enter the address of RSS or Blog to add. (to add $\rightarrow$ to subscribe)	
· URL	
If URL is not valid, try to find a feed URL automatically.	
0	
2	
(Previous Next) & Cercel	

- The setting confirmation window appears if the Web address supports RSS.
- 3. Click <OK>.
  - The channel you want is registered.
  - The Sicon appears in Datacasts for the registered channel.



Refer to the <Datacasts> of <Media Studio> for detailed instructions.

## **USING DATACASTS (Continued)**

### **Creating a New Channel Group**

You can create a new group to manage channels by the category.

- Click <New Group> on the bottom of <Datacasts> of <Media Studio>.
- Type in a group name and description and click <OK>.

Group Creation	6
* Do you want to create a new group?	
• group name	
* description	
• description	

#### Transferring a Datacast from <Media Studio>

 Before you start - Connect the player to your PC. Media Studio must be installed on your PC. See page 38.

- <Media Studio> will automatically start when the player is connected to your PC.
  - If the program does not start automatically, double click the <Media Studio> *icon* on the desktop.
- 2. Click <Datacasts> on the top of <Media Studio>.
  - Datacasts group channel list appears.
- **3.** Click a desired group channel.



## **USING DATACASTS (Continued)**

## Transferring a Datacast from <Media Studio> (continued)

4. Click a desired channel.

- 5. Select the post you want to transfer.
- 6. Click the 🛶 icon.
  - The Post of the selected channel will be transferred to the player in <File Browser> → <Datacasts>.

Al Reducted ( entre)	00 9	)		0.88 / 8.00	000	
10 M	L/G		25. SILLASIS	Ő		
- <b>-</b>	Dracasta) News					
BusinessWeek Online	Top News	Resires	50,644	° ₩	Type substances	
All Post Count 1159 Unneed Post Count 1159				Porphal		
				. Ento		
International Contract Parts	Unwad Post					
Politieva.com 114	0 114			19	_	
harecook 192	159	_			1	
ADC Move Visid 127	12			100		
-						
				1944		
				-	4	
					AC10	6/ (Discutated
			(Bass)	0.00/10.00		
	00		25.a		000	
			25.		000	
	<b>00</b>		24.4 VIII.CAN IN		808	801
		D Besik., (2)	24.4 VIII.CAN IN	CH/100		()*equip a.
	COO     Poplar      Concerno Reveal      t of Handsets'	) Da Besia(27 ?	sincasts back	011/200 0 0		()*equip a.
No Mais Induiceants	Concepto Parents     ConceptoParents     ConceptoParents     ConceptoParents     Concept	Basia (2) P	Statute Staty) v . bri collor(s	OHI/100	Here a constraint of the second secon	8 01 407-04071-0.
What build readers	Concepto Parents     ConceptoParents     ConceptoParents     ConceptoParents     Concept	) Besk., (2 ? fra sostens, cor the comp	ancasts Sauth *	OIII/100	Here a constraint of the second secon	()*equip a.
No malandar wetter No malandar wetter No Mill Control the Heat Senser Sens	Construction	) De Besker, (P 7 frig systems, con the comp	wincests Stack+ but offort's Ceteory	OHI/100	Here a constraint of the second secon	()*equip a.
It indicate over	Concerning and the sparse of the sparse	Besia(P P P P P P P P P P P P P P P P P P	wincests Stack+ but offort's Ceteory	OM/200		()*equip a.
All industries of the land of	Abar and abar abar abar abar abar abar abar aba	Basile	ADX	OM/200		()*equip a.
Industrial control Industrial control Industrial Industrindustrial Industrindustrial Industrial Industrial	Construction     C	Banks (2) Register (2) P P P P P P P P P P P P P	wincests Stack+ but offort's Ceteory	OM/200		()*equip a.
All to de not al control of the latence of the late	Construction     C	Basis. 77	ADX ADX ADX ADX ADX ADX ADX ADX	OM/200		()*equip a.
Constraints of the second	Paylor     Paylor	Basia	And a second sec	OM/200		©©3
All to be head or other and the head of thead of the head of the head of the head of the head of theh	Construction     C	8 8 8 8 8 8 8 8 8 8 8 8 8 8	And a second sec	OM/200		()*equip a.



- Click to on the top of <Media Studio> to move to the previous screen.
- In <Datacasts> of <Media Studio>, if the post has the attachment(music file), you can download the attachment to the player.
   However, there may be times the attachment will not download, depending on the policy of the applicable website.

#### **Viewing Datacasts**

You can enjoy the transferred music files in <Datacasts> on your player.



• Before you start - Transfer a desired channel post to the player using <Media Studio>. See pages 60~62.



Tap [ 1 Ito move to the previous screen.

Press and hold [ 1] to move to the main menu screen.

- 1. Press and hold [ 5] to move to the main menu screen.
- Tap the [Left, Right] button to select <Datacasts> and tap [].



- The <Datacasts> list appears.
- If there is no datacast found, you will see a <No file> message on the screen.
- **3.** Tap the **[Up, Down] button** to select a desired channel list and tap **[**].
- My Channel 1
   My Channel 2
   My Channel 3
   My Channel 4

- The music files appear.
- 4. Tap the [Up, Down] button to select a desired file and tap [O].
  - The selected music file will begin playing.

# **VOICE RECORDING**

You can record your own voice, speeches, lectures, and other outside sounds with your mp3 player.

## To make a voice recording

#### Method 1

You can record a voice recording at any time while using other functions.

Press and hold the [ • USER/••[] button.

 Voice recording will start as soon as the file name is displayed.

• FM radio recording will be started while you are listening to FM broadcasting.

#### Method 2

NOTE

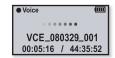
- 1. Press and hold [ ] to move to the main menu screen.
- 2. Tap the [Left, Right] button to select <Voice REC> and tap [O].



- **3.** Tap [O].
  - Voice recording will start as soon as the file name is displayed.



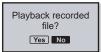
Press the [<u>].►u/-o</u>] button if you want to pause recording.



## **VOICE RECORDING (Continued)**

### To stop voice recording

- 1. Press and hold the [(-USER/-••()] button when you want recording to stop.
  - A message appears asking you if you want to listen to the file you just recorded.



- 2. Tap the [Left, Right] button to select <Yes> or <No> and tap [O].
  - Selecting <Yes> will play the just recorded file.
  - Selecting <No> will not play the recorded file.



 Do not put the microphone too close to or far away from your mouth as it may cause a poor recording.

• Voice recording does not perform properly when the battery is low.



- $\bullet$  The recorded file is stored in <File Browser>  $\rightarrow$  <Recorded Files>  $\rightarrow$  <Voice>.
- Each voice recording file can be as long as 5 hours.
- You can store a maximum of 999 files for voice recording.
- You can make a recording for up to approximately 42 hours. (based on 96Kbps, 2GB)
- The recording file name will be automatically specified, for example, as such as "VCE\_YYMMDD\_XXX.mp3". "VCE" means voice recording, "YYMMDD" indicates the recorded date and "XXX" is the recording file number.

# troubleshooting

If you have a problem with your new mp3 player, check for a solution in this list. If the problem persists, contact your local Samsung Customer Service Centre.

PROBLEM	SOLUTION		
Power will not turn on.	<ul> <li>Power will not turn on if the battery is completely drained. Recharge the battery and turn the power on again.</li> <li>Press the Reset hole.</li> </ul>		
Buttons do not work.	<ul> <li>Check if the ( HOLD) switch is in the direction of the arrow position.</li> <li>Check if you pressed the right button, then press again.</li> <li>Press the Reset hole.</li> </ul>		
The screen will not turn on.	<ul> <li>If <display off=""> is selected from <settings>         → <display>, the screen display can be         turned off. Tap any button and see if it turns on.</display></settings></display></li> <li>The screen may not be visible under direct         sunlight.</li> </ul>		

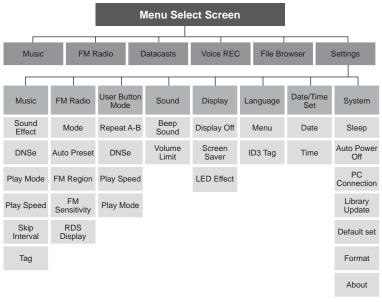
PROBLEM	SOLUTION		
<b>D</b>	• The power is automatically turned off when the battery is completely drained. Recharge the battery.		
Power is turning off.	<ul> <li>If <auto off="" power=""> is selected from</auto></li> <li><settings> → <system>, the Power will be turned off when the player is in Pause mode. Turn on the Player.</system></settings></li> </ul>		
Battery life differs from what is stated in the manual.	<ul> <li>The battery life can vary depending on the sound mode and display setting.</li> </ul>		
	<ul> <li>Battery life may be shortened when the player is left for extended periods in low or high temperatures.</li> </ul>		
Media Studio Program malfunction.	Check if your PC meets the basic system requirements.		
Connection to your PC is disabled.	Check the USB plug if it's correctly connected and try again.		
	<ul> <li>Run Windows Update. Select Key Updates and Service Packs, then update all. Reboot your PC and reconnect.</li> </ul>		
	Check if the available file has been saved in the memory of the player.		
Player isn't playing.	Check if the music file is damaged.		
	Check if there is enough battery power.		

PROBLEM	SOLUTION		
File upload doesn't work.	Check if the USB plug is securely connected.     Reconnect if necessary.		
	Check if the memory is full.		
	Press the Reset hole.		
Files or data are missing.	• Check if the USB plug has been disconnected during file or data transmission. If this is the case, it may cause serious damage not only to files/data but also to the product. Samsung is not responsible for any data lost.		
Abnormal play time display during play.	Check if the file is in Variable Bit Rate (VBR) format.		
Abnormal display of file name.	• Go to <b><settings></settings></b> → <b><language></language></b> → <b><id3< b=""> <b>Tag&gt;</b> in the Main Menu screen and set an appropriate language and update the library manually.</id3<></b>		
The product is hot.	• Heat may be generated during recharging. This has no effect on the product life or functions.		
The file transfer rate is too slow.	<ul> <li>If you are running multiple programs including <media studio=""> on your PC, the file transfer rate will be slow. Exit unnecessary programs and try transferring again.</media></li> </ul>		



# MENU TREE

Here's a quick look at how the menus and functions are organized on your new mp3 player.



# **PRODUCT SPECIFICATIONS**

Model Nam	Model Name			YP-U4		
Rating			DC 3.7V/ 500mA			
Built-in Battery Power		300 mAh/ DC 3.7V				
File Compatibility			MPEG1/2/2.5 Layer3(8kbps ~ 320kbps, 8kHz ~ 48kHz) WMA(48kbps ~ 192kbps, 8kHz ~ 48kHz)			
Supported Number of Folders/Files         Folder: Max. 1000 / File: Max. 3000		00				
Earphone Output 20mW/Ch. (France 5mW/Ch.) (based of			sed on 16Ω)			
Output Frequency Range		40Hz~20kHz				
Signal to Noise Ratio 90 dB			90 dB with 20 kH	0 dB with 20 kHz LPF(based on 1kHz 0 dB)		
Play Time		Maximum of 16 hours for music playback (based on: MP3 128kbps, Volume: 15, Normal Mode, Display Off)				
Temperature Range for Operation		-5~35°C (23~95°F)				
Case		Plastics				
Weight		27.5g				
Dimensions (WxHxD)		27 X 83 X 13 mm				
FM Radio	Radio FM Frequency		7.5~108.0MHz	FM T.H.D	1%	
	FM Signal to Noise Ratio	5	5 dB	FM Useable Sensitiivity	38dBµ	

The contents of this Manual are subject to change without prior notice for further improvement.

# LICENSE

The product player accompanying this user manual is licensed under certain intellectual property rights of certain third parties. This license is limited to private non-commercial use by end-user consumers for licensed contents. No rights are granted for commercial use.

The license does not cover any product player other than this product player and the license does not extend to any unlicensed product player or process conforming to ISO/IEC 11172-3 or ISO/IEC 13818-3 used or sold in combination with this product player. The license only covers the use of this product player to encode and/or decode audio files conforming to the ISO/IEC 11172-3 or ISO/IEC 13818-3. No rights are granted under this license for product features or functions that do not conform to the ISO/IEC 11172-3 or ISO/IEC 13818-3.

## **EUROPE ONLY**

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.



# CONTACT SAMSUNG WORLD WIDE

If you have any questions or comments relating to Samsung products, please contact the SAMSUNG customer care center.

Country	Customer Care Center 🖀	Web Site	
CANADA	1-800-SAMSUNG(726-7864)	www.samsung.com/ca	
MEXICO	01-800-SAMSUNG(726-7864)	www.samsung.com	
U.S.A	1-800-SAMSUNG(726-7864)	www.samsung.com	
ARGENTINE	0800-333-3733	www.samsung.com/ar	
BRAZIL	0800-124-421 , 4004-0000	www.samsung.com	
CHILE	800-SAMSUNG(726-7864)	www.samsung.com/cl	
NICARAGUA	00-1800-5077267		
HONDURAS	800-7919267		
COSTA RICA	0-800-507-7267	www.samsung.com/latin	
ECUADOR	1-800-10-7267	www.samsung.com/latin	
EL SALVADOR	800-6225	www.samsung.com/latin	
GUATEMALA	1-800-299-0013	www.samsung.com/latin	
JAMAICA	1-800-234-7267	www.samsung.com/latin	
PANAMA	800-7267	www.samsung.com/latin	
PUERTO RICO	1-800-682-3180	www.samsung.com/latin	
REP. DOMINICA	1-800-751-2676	www.samsung.com/latin	
TRINIDAD & TOBAGO	1-800-SAMSUNG(726-7864)	www.samsung.com/latin	
VENEZUELA	0-800-100-5303	www.samsung.com/latin	
COLOMBIA	01-8000112112	www.samsung.com.co	
BELGIUM	0032 (0)2 201 24 18	www.samsung.com/be	
CZECH REPUBLIC	844 000 844	www.samsung.com/cz	
DENMARK	70 70 19 70	www.samsung.com/dk	
FINLAND	030-6227 515	www.samsung.com/fi	
FRANCE	3260 SAMSUNG (€ 0,15/Min),		
FRANCE	08 25 08 65 65 (€ 0,15/Min)	www.samsung.com	
GERMANY	01805 - SAMSUNG(726-7864) (€ 0,14/Min)	www.samsung.com	
HUNGARY	06-80-SAMSUNG(726-7864)	www.samsung.com	
ITALIA	800-SAMSUNG(726-7864)	www.samsung.com	
LUXEMBURG	0035 (0)2 261 03 710	www.samsung.com/be	
NETHERLANDS	0900-SAMSUNG(726-7864) (€ 0,10/Min)	www.samsung.com/nl	

Country	Customer Care Center 🖀	Web Site
NORWAY	815-56 480	www.samsung.com/no
POLAND	0 801 801 881 , 022-607-93-33	www.samsung.com/pl
PORTUGAL	80820-SAMSUNG(726-7864)	www.samsung.com/pt
SLOVAKIA	0800-SAMSUNG(726-7864)	www.samsung.com/sk
SPAIN	902 10 11 30	www.samsung.com
SWEDEN	0771-400 200	www.samsung.com/se
U.K	0845 SAMSUNG (7267864)	www.samsung.com
EIRE	0818 717 100	www.samsung.com/ie
AUSTRIA	0800-SAMSUNG(726-7864)	www.samsung.com/at
SWITZERLAND	0800-SAMSUNG(726-7864)	www.samsung.com/ch
RUSSIA	8-800-555-55-55	www.samsung.com
KAZAHSTAN	8-10-800-500-55-500	www.samsung.kz
UZBEKISTAN	8-10-800-500-55-500	www.samsung.uz
KYRGYZSTAN	00-800-500-55-500	
TADJIKISTAN	8-10-800-500-55-500	
UKRAINE	8-800-502-0000	www.samsung.com
LITHUANIA	8-800-77777	www.samsung.lt
LATVIA	800-7267	www.samsung.com/lv
ESTONIA	800-7267	www.samsung.ee
AUSTRALIA	1300 362 603	www.samsung.com
NEW ZEALAND	0800SAMSUNG(726-7864)	www.samsung.com/nz
CHINA	800-810-5858 , 010-6475 1880	www.samsung.com
HONG KONG	3698-4698	www.samsung.com/hk
INDIA	3030 8282 , 1800 110011	www.samsung.com
INDONESIA	0800-112-8888	www.samsung.com
MALAYSIA	1800-88-9999	www.samsung.com/my
PHILIPPINES	1800-10-SAMSUNG(726-7864)	www.samsung.com/ph
SINGAPORE	1800-SAMSUNG(726-7864)	www.samsung.com
THAILAND	1800-29-3232 , 02-689-3232	www.samsung.com
TAIWAN	0800-329-999	www.samsung.com/tw
VIETNAM	1 800 588 889	www.samsung.com
TURKEY	444 77 11	www.samsung.com
SOUTH AFRICA	0860-SAMSUNG(726-7864)	www.samsung.com
U.A.E	800-SAMSUNG (726-7864), 8000-4726	www.samsung.com

# REQUIRED PUBLIC STATEMENT FOR GPL/LGPL LICENSED SOFTWARE USED IN THIS PRODUCT

The following GPL executables and LGPL libraries are used in this product and are subject to the GPL/LGPL License Agreements included as part of this documentation Source code for these executables and libraries can be obtained via e-mail request to dmay.sec@samsung.com

#### GPL EXECUTABLES. I GPL LIBRARIES

- Linux Kernel, Busybox - uClibc, SDL

## GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

#### Preamble

The licenses for most software are designed to take away We protect your rights with two steps: (1) copyright the your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your permission to copy, distribute and/or modify the software. freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to

surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

software, and (2) offer you this license which gives you legal

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original , authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

# TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish,

that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine- terminated so long as such parties remain in full compliance. readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- Sections 1 and 2 above on a medium customarily used Program or works based on it. for software interchange; or,
- Subsection b above.)

The source code for a work means the preferred form of 7. If, as a consequence of a court judgment or allegation the work for making modifications to it. For an executable of patent infringement or for any other reason (not limited work, complete source code means all the source code to patent issues), conditions are imposed on you (whether for all modules it contains, plus any associated interface by court order, agreement or otherwise) that contradict the definition files, plus the scripts used to control compilation conditions of this License, they do not excuse you from the and installation of the executable. However, as a special conditions of this License. If you cannot distribute so as to exception, the source code distributed need not include satisfy simultaneously your obligations under this License anything that is normally distributed (in either source or binary and any other pertinent obligations, then as a consequence form) with the major components (compiler, kernel, and so you may not distribute the Program at all. For example, if on) of the operating system on which the executable runs, a patent license would not permit royalty-free redistribution unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though If any portion of this section is held invalid or unenforceable third parties are not compelled to copy the source along with under any particular circumstance, the balance of the the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any It is not the purpose of this section to induce you to infringe any or rights, from you under this License will not have their licenses implemented by public license practices. Many people have

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. b) Accompany it with a written offer, valid for at least three These actions are prohibited by law if you do not accept vears, to give any third party, for a charge no more than this License. Therefore, by modifying or distributing the your cost of physically performing source distribution, a Program (or any work based on the Program), you indicate complete machine-readable copy of the corresponding your acceptance of this License to do so, and all its terms source code, to be distributed under the terms of and conditions for copying, distributing or modifying the

6. Each time you redistribute the Program (or any work c) Accompany it with the information you received as to based on the Program), the recipient automatically receives the offer to distribute corresponding source code. (This a license from the original licensor to copy, distribute or alternative is allowed only for noncommercial distribution modify the Program subject to these terms and conditions. and only if you received the program in object code You may not impose any further restrictions on the recipients' or executable form with such an offer, in accord with exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

> of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

> section is intended to apply and the section as a whole is intended to apply in other circumstances.

attempt otherwise to copy, modify, sublicense or distribute the patents or other property right claims or to contest validity of Program is void, and will automatically terminate your rights any such claims; this section has the sole purpose of protecting under this License. However, parties who have received copies. the integrity of the free software distribution system, which is distributed through that system in reliance on consistent THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES application of that system: it is up to the author/donor to decide PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY if he or she is willing to distribute software through any other OF ANY KIND, EITHER EXPRESSED OR IMPLIED. system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

in certain countries either by patents or by copyrighted YOU ASSUME THE COST OF ALL NECESSARY SERVICING, interfaces. the original copyright holder who places the REPAIR OR CORRECTION. Program under this License may add an explicit geographical distribution limitation excluding those countries, so that 12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Program specifies a version number of this License which PROGRAMTO OPERATE WITH ANY OTHER PROGRAMS). applies to it and "any later version", you have the option EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN of following the terms and conditions either of that version ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

free programs whose distribution conditions are different. write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation: we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

11 BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.

made generous contributions to the wide range of software EXCEPT WHEN OTHERWISE STATED IN WRITING INCLUDING. BUT NOT LIMITED TO. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS 8. If the distribution and/or use of the Program is restricted WITH YOU, SHOULD THE PROGRAM PROVE DEFECTIVE,

LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE. BE LIABLE TO YOU FOR DAMAGES. INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED Each version is given a distinguishing version number. If the BY YOU OR THIRD PARTIES OR A FAILURE OF THE

#### END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of 10. If you wish to incorporate parts of the Program into other the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

> To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found

one line to give the program's name and an idea of what it does.

Copyright (C) vvvv name of author

This program is free software; you can redistribute it and/ subroutine library, you may consider it more useful to permit or modify it under the terms of the GNU General Public linking proprietary applications with the library. If this is what License as published by the Free Software Foundation: you want to do, use the GNU Lesser General Public License either version 2 of the License, or (at your option) any instead of this License. later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY: without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation. Inc., 51 Franklin Street. Fifth Floor, Boston, MA 02110-1301, USA.

and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode.

Gnomovision version 69, Copyright (C) year name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are welcome to redistribute it under certain conditions: type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c': they could even be mouse-clicks or menu items--whatever suits your program.

or your school, if any, to sign a "copyright disclaimer" for the particular case, based on the explanations below. program, if necessary. Here is a sample; alter the names;

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers) written by James Hacker.

signature of Ty Coon, 1 April 1989 Ty Coon, President of Vice

# GNU LESSER GENERAL PUBLIC LICENSE

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This is the first released version of the Lesser GPL. It Also add information on how to contact you by electronic also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary You should also get your employer (if you work as a programmer) General Public License is the better strategy to use in any

> When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it: that you can change the software and use pieces of it in new free programs: and that you are informed that you can do these things.

This General Public License does not permit incorporating To protect your rights, we need to make restrictions that your program into proprietary programs. If your program is a forbid distributors to deny you these rights or to ask you to

surrender these rights. These restrictions translate to certain We call this license the "Lesser" General Public License responsibilities for you if you distribute copies of the library because it does Less to protect the user's freedom than the or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after For example, on rare occasions, there may be a special need making changes to the library and recompiling it. And you to encourage the widest possible use of a certain library, so must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version. so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries. and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally 0. This License Agreement applies to any software library or speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits holder or other authorized party saying it may be distributed such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

that it becomes a de-facto standard. To achieve this, nonfree programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in nonfree programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

### TERMS AND CONDITIONS FOR COPYING. DISTRIBUTION AND MODIFICATION

other program which contains a notice placed by the copyright under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/ or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification")

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains. plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted. and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that These requirements apply to the modified work as a whole. If uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

identifiable sections of that work are not derived from the Library. and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License. whose permissions for other licensees extend to the entire whole. and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

General Public License instead of this License to a given work may be a derivative work of the Library even though the copy of the Library. To do this, you must alter all the notices source code is not. Whether this is true is especially significant that refer to this License, so that they refer to the ordinary if the work can be linked without the Library, or if the work is GNU General Public License, version 2, instead of to this itself a library. The threshold for this to be true is not precisely License. (If a newer version than version 2 of the ordinary defined by law. GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

for that copy, so the ordinary GNU General Public License derivative work. (Executables containing this object code plus applies to all subsequent copies and derivative works made portions of the Library will still fall under Section 6.) from that copy.

of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that 6. As an exception to the Sections above, you may also you accompany it with the complete corresponding machine- combine or link a "work that uses the Library" with the Library readable source code, which must be distributed under the to produce a work containing portions of the Library, and terms of Sections 1 and 2 above on a medium customarily distribute that work under terms of your choice, provided that used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the You must give prominent notice with each copy of the work requirement to distribute the source code, even though third that the Library is used in it and that the Library and its use parties are not compelled to copy the source along with the are covered by this License. You must supply a copy of this object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library. and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a

3. You may opt to apply the terms of the ordinary GNU header file that is part of the Library, the object code for the

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the Once this change is made in a given copy, it is irreversible object file is unrestricted, regardless of whether it is legally a

Otherwise, if the work is a derivative of the Library, you may This option is useful when you wish to copy part of the code distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

> the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

> License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It

is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include 10. Each time you redistribute the Library (or any work anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs. unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction 11. If, as a consequence of a court judgment or allegation of means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
- b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

d) If distribution of the work is made by offering access to 9. You are not required to accept this License, since you have copy from a designated place, offer equivalent access to not signed it. However, nothing else grants you permission to copy the above specified materials from the same place, modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copving. distributing or modifying the Library or works based on it.

> based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

> patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit

royalty-free redistribution of the Library by all those who receive 14. If you wish to incorporate parts of the Library into other free copies directly or indirectly through you, then the only way you programs whose distribution conditions are incompatible with could satisfy both it and this License would be to refrain entirely these, write to the author to ask for permission. For software from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of 15. BECAUSE THE LIBRARY IS LICENSED FREE OF any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT made generous contributions to the wide range of software distributed through that system in reliance on consistent "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in SERVICING, REPAIR OR CORRECTION. certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

or new versions of the Lesser General Public License from LOSS OF DATA OR DATA BEING RENDERED INACCURATE time to time. Such new versions will be similar in spirit to OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR the present version, but may differ in detail to address new A FAILURE OF THE LIBRARY TO OPERATE WITH ANY problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any If you develop a new library, and you want it to be of the version ever published by the Free Software Foundation.

which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

### NO WARRANTY

CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY EXPRESSED OR IMPLIED. INCLUDING. BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/ OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE. BE LIABLE TO YOU FOR DAMAGES. INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO 13. The Free Software Foundation may publish revised and/ USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

greatest possible use to the public, we recommend making

it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library, It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

one line to give the library's name and an idea of what it does.

Copyright (C) year name of author

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990 Ty Coon, President of Vice

**REV.0.0** 

