Sun City Summerlin Computer Club Seminar

A Tour of Digital Music Using MediaMonkey

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Agenda

- Basics of Digital Music
- Audio File Formats and Standards
- Building Your Music Collection
- MediaMonkey Tour
 - Organizing Your Music Library
 - MediaMonkey Settings, Skins and Views
 - Ripping Music CDs
 - Adding Files to the Library
 - Editing File Tag Information
 - Creating Playlists
 - Downloading Music to Your Mobile Device or Flash Drive
 - Internet Radio
 - Video DVDS and Files
- Streaming Music Services
- Useful Web Links for More Information

Basics of Digital Music

• Music is represented as a stream of numbers.

- Measurements of recorded electrical voltage level at an instant.
- Generally, use 16 bits (2 bytes) per measurement (sample).
- For stereo, two streams one for each channel (left / right).
- Standard audio CD sample rate is 44,100 times per second.
- Can later convert the stream of numbers back to voltages.
- Number stream may be saved in various ways
 - On an audio CD.
 - In a music file on a PC hard disk (.WAV, .MP3, .FLAC or .AAC)
 - Music files may be compressed in various ways or left uncompressed.
- Let's look at a .MP3 file with Audacity Music Editor

Audio File Formats (1)

• Microsoft WAVE (.WAV)

- 44,100 samples/sec, stereo, 16-bit samples each channel.
- Each 16-bit value can range from -32768 to + 32767.
- Uncompressed, consumes about 10.6 MBytes per minute of sound (44,100 * 2 * 2 * 60).
- True audio CD Quality (same specs).
- Motion Picture Experts Group 1 Audio Layer 3 (.MP3)
 - Compressed size varies based on sample rate.
 - .MP3 is "lossy" removes very high and low frequencies.
 - 256 Kbits/sec (Music store quality), 64 Kbits/sec (FM quality).
 - At 256 Kbits/sec, uses about 2 MB per minute of sound (20% of .WAV).
 - Little point in going higher than 256 Kbits/sec for MP3.

Audio File Formats (2)

• Microsoft Windows Media Audio (.WMA)

- Compressed, size varies based on sample rate.
- Supports Digital Rights Management standards.
- MS claims files about half the size of .MP3 files.
 (My experiments didn't confirm that).

• Apple Advanced Code (.AAC)

- Compressed, size varies based on sample rate.
- Supports Digital Rights Management standards.
- Proprietary to Apple.
- Other Formats:
 - Free-Lossless (.FLAC), Ogg-Vorbis (.ogg)
- More Information
 - <u>http://ekei.com/audio</u>

Building Your Music Collection

- Convert your own music CD collection to music files.
 - Use MediaMonkey, iTunes or any of the many other popular CD "rippers".
- Buy "used" CDs (save about 50%) to rip.
- Borrow music CDs to rip?
 - From friends, public library.
- Use the Library's Freegal music service (6 free songs / week)
- Buy digital music on-line (unlocked MP3 files).
 - \$.99 per song, \$9.99 per "album" (sometimes less, sometimes more).
 - Amazon.com and iTunes.com are now the biggest music stores.
- Record Internet streaming audio
 - Use a stream recoding tool like Total Recorder.
 - Have to split and tag the recorded steam into individual .mp3 files.
- Convert your old analog audio tapes and LPs to music files.
 - Need a "line-in" recording tool (e.g. Spin It Again or GoldWave).
 - After recording, need to separate and "clean-up" the recorded sound.

Organizing Your Music Library

- *Physical* Placement of your music files.
 - Folder and file hierarchy important.
 - Best is Artist > Album > Song name.
 - Default location is your personal "My Music" or "Music" folder.
 - If have two hard drives, consider placing on the non-boot drive.
- Use MediaMonkey to *index* your music files into a Library.
- Set up descriptive "tags" in your music files
 - Artist name, song name, album name, genre, date, album artist, composer
 - Tedious work. But, once done, these are recognized by all players and music organizer programs.
- Adjust physical file names based on tag values.
 - Some Media Manager programs support this.

MediaMonkey 5 Media Manager

/	Music >							⊤ ≡	-	٩.
Home	Genre			Artist			Album		Playing 434/5767 (335:21:3	(11)
Playing	All (95 Genre)		All (971 Artist)		All (554 Albur	n)			Beatles, The - Beatles Classics, The	03
Munic	D		48th Highlanders	Pipes & Drums	40s Mania				427. Life Goes On	
Classical Music	60's		A Harris		76s Classic R				Beatles, The - Beatles Classics, The	0
Podcasts	Acoustic		Abba		A Collection of				428. Long Tall Sally	
	Alternative		-	ertin-In-The-Fields & Nexille Marriner		A Fresh Aire Christmas [1988]			Beatles, The - Beatles Classics, The	
Video	Alternative Rock		Ace			A Touch of Elegance			429. Love Me Do	
TV	Ambient		Acker Blik	Actor Bilk		anquility			Beatles, The - Beatles Classics, The	
E Playlists	Ambient Alternative		Adam Mansell On	chestra & The Broadway singers	Abba Classic	8			430. Lucy in the Sky with Diamonds	
Ξ _Ψ Accessible tracks	Ballad		Aerosmith		Absolutely Liv	e			Beatles, The - Beatles Classics, The	(
:= Holday Music	Title	Artist	Album Artist	Album -	Date Genre	Track #	Length Source	Bitrate File type	431. Nowhere Man	
The Most played (50)	Long Tall Sally	Deatles, The	Beatles, The	Beatles Classics, The	2000 Pop	0	01:44	128 mp3	Beatles, The - Beatles Classics, The	
	Love Me Do	Beatles, The	Beetles, The	Beatles Classics, The	Classic	00	02:24	128 mp3	432. Penny Lane - 1967	
Ξ _T Recently added (10B)	Lucy in the Sky with Diamonds	Beatles, The	Beatles, The	Beatles Classics. The	Rock	00	03:28	128 mp8	Beatles, The - Beatles Classics, The	
i Tom Favorites 2022	Nowhere Man	Deatles, The	Reaties, The	Beatles Classics, The	Classic	0	02:42	128 mp3	433. Please Mr. Postman	
Ξ _Ψ Top rated (6 hrs)	Penny Lane - 1967	Beatles, The	Beatles, The	Beatles Classics, The	1967 Pop	0	03.03	128 mp3	Beatles, The - Beatles Classics, The	
ET Unrated (108)	Please Mr. Postman	Beatles, The	Beatles, The	Beatles Classics, The	1968 Rocknipl	0	02:85	128 mp8	434. Twist And Shout	
Devices & Services	Twist And Shout	Deaties, The	Seaties, The	Beatles Classics, The	Rock	00	02:24	128 mp3	Reatles, The - Reatles Classics, The	
Folders	When fm 64	Beatles, The	Beetles, The	Beatles Classics, The	Pop	0	02.38	128 mp3	435. When Im 64	
) Web	With a Little Help From My Friends	Beatles, The	Beatles, The	Beatles Classics. The	1996 Rock	00	02:44	128 mp8	Beatles, The - Beatles Classics, The	
	Vesterday	Deatles, The	Seatles, The	Beatles Classics, The	2000 Rock	00	02:05	128 mp3	436. With a Uttle Help From My Riend	le l
Pinned	You've Bot to Hide Your Love	Beatles, The	Beetles, The	Beatles Classics, The	Balled	0	02:11	128 mp3	Beatles, The - Beatles Classics, The	
	Octopus's Garden	Beatles, The	Beatles, The	Beatles Classics, The	1969 Rock	5	02:52	128 mp8	437. Yesterday	
	Live And Let Die	Reaties, The	Seatles, The	Beatles Classics, The	1987 Rock	9	02:14	128 mp3	Beatles, The - Beatles Classics, The	
	All The Lonely People [instrumenta]	Beatles, The	Beetles, The	Beatles Classics, The	Pop	0	02.05	128 mp3	438. You've Bot to Hide Your Love	
	Rocky Raccoon	Beatles, The	Beatles, The	Beatles Classics. The	Rock	00	03:41	128 mp8	Beatles, The - Beatles Classics, The	
	Thats What I Want	Reaties, The	Reaties, The	Beatles Classics, The	Rock	0	02:52	128 mp3	439. Octopus's Garden	
	Ticket to ride	Beatles, The	Seatles, The	Beatles Classics, The	2000 Rock	0	03:11	128 mp3	Beatles, The - Beatles Classics, The	
	We Can Work It Out	Beatles, The	Beatles, The	Beatles Classics, The	2000 Ballad	0	02:15	192 mp8	440. Live And Let Die	
	Lonely Days Lonely Nights	Ree Gees	Various	Bee Gees Classics	Disco	0	03:47	128 mp3	Beatles, The - Beatles Classics, The	
	Shadow Dancing	Andy Gibb	Various	Bee Dees Classics	1978 Disco	0	04.33	128 mp3	441. All The Lonely People [instrument	tail)
	Words	Bee Gees	Various	Bee Gees Classics	Disco	0	03:16	192 mp8	Beatles, The - Beatles Classics, The	
	Likust Want To Bie Your Everything 5767 Nex 27.6 08.335 21:31 (Selected: 1 Ne. 2.4 M8.02:34)	Andy Gibb	Various	Ree Gees Classics	1977 Disco	1	02:47	128 mp3	442. Rocky Raccoon	

MediaMonkey Main Screen

A Tour of MediaMonkey

MediaMonkey 5 Media Manager

• Where to get it

- www.mediamonkey.com
- Standard edition is free, Gold edition \$24.95, Lifetime Gold edition \$\$49.95
- Developed by Ventis Media

Comprehensive Media Manager and Player

- Music Player, Organizer, Tagger, CD Ripper
- Video Player
- DVD, Blu-ray Player
- Playlists Create, export, burn to audio or MP3 CD
- Download media to your Android or iOS devices
- Media sharing on your in-house LAN
- Internet Radio
- Podcasts
- File format converter

Highly Configurable Look and Feel

- Skins
- Views

Key MediaMonkey Settings

- Most Settings Found in Tools > Options menu
 - Let's browse
- Many Settings Also in the View Menu
 - Let's browse
- Some Settings Offered When a Tool Function is Invoked
 - Tools > Rip Audio CD
 - Tools > Convert Format

Setting Up the Screen

+ New tab		Open the View Mer
✓ Left panel		 Checkboxes for var
√ Right panel		 Link to the Layout s
 Bottom panel 		 Checkbox for Visua
		 Checkbox for Party
Menu bar		(Disables some me
🎝 Layout		 Skin selector (4 cho
Visualization		 Mode selector (Des
Party Mode Ctrl+Alt+M	\$	 Main panel view set I prefer the List view
Skin	•	 Previous lets you g
Mode	•	Choosing Column
Main panel view	►	– Right click the title
Previous	•	U
	,	 Pick "Choose Colu
Next		 A column selector
C Refresh	F5	

Г

٠	Ор	en the View Menu
	_	Checkboxes for various panels
	_	Link to the Layout section of Settings
	_	Checkbox for Visualization (while playing songs)
	-	Checkbox for Party Mode and its Settings (Disables some menu functions)
	—	Skin selector (4 choices built-in)
	_	Mode selector (Desktop or Tablet)
	-	Main panel view selector (4 choices) I prefer the List view
	_	Previous lets you go back to a prior View
•	Ch	oosing Column Headings
	—	Right click the title bar
	—	Pick "Choose Columns / Sort"
	—	A column selector dialog will appear

CD Ripping

• Ripping (Definition)

- Copying contents of an Audio CD to your hard disk.
- Digital audio data is converted to: .WAV, .MP3., .WMA, .AAC, .FLAC
- Often audio album, artist and track information looked up in an Internet CD Database (CDDB). Used to tag the ripped files.
- Legal, fair *personal* use of copyrighted material you own.
- Many CD rippers available (shareware, freeware, jukeboxes).
 - Can search for "CD Rippers"
 - MediaMonkey or iTunes are very easy to use for ripping.
 - Easy Place CD in your CD drive and "rip away".
 - Ripped files can go in any folder usually the default is "My Music".

Demo - Ripping An Audio CD

- We'll use MediaMonkey, but *iTunes* is also good.
- Insert the audio CD to be ripped.
- In MediaMonkey, click the CD/DVD drive in the left-hand pane. Then go to Tools > Rip Audio CD
- A "Rip CD" dialog will open listing the tracks on the CD and offering various settings for ripping.
 - Choose the MP3 encoder in the drop down.
 - The "standard" version only offers "VBR ~192 kbps Very High Quality" sample rate. The Gold version offers more choices.
 - Click the Configure button to choose the target folder and file name layout for the ripped files.
 - Choose "Standard read" for the Rip type.
 - Check "Eject CD after ripping".
 - Check "On the fly encoding".
 - Uncheck any tracks you don't want to rip.
 - Click OK to start the rip. It should run 3 to 5 minutes, based on track count.

Adding Files to the Library

- We'll use MediaMonkey; *iTunes or Media Player also work.*
- Demo Adding Files to a MediaMonkey Library
 - Go to File > Add / Rescan files to the Library.
 - A dialog will appear showing all the current folders being monitored.
 - Click "Add Location" and browse to the folder containing the new tracks and check it. Repeat for each folder of tracks to be added.
 - When finished, click "SCAN NOW ".
 - MediaMonkey will scan (or rescan) the entire collection of folders, index all the music files and build / update library entries.
 - The Library is indexed by Genre, Artist, Album and Song Title.

Editing Music File Tags

- We'll use MediaMonkey; *iTunes or Media Player also work.*
- Demo Editing the tag information for a set of MP3 files.
 - In the left-hand pane, click "Music" (or you can select a playlist)
 - Select one or a set of files by clicking, shift clicking, right clicking.
 - Right click on the file or set and then select "Properties".
 - A multi-tabbed File Properties dialog will appear. The Basic tab is normally the only one you would use.
 - If editing a set of files, only fields that would apply to the entire set are active.
 - Make changes as desired and then click OK to save the changes.
 - The tags in the selected file(s) are updated and the Library entries are updated.

Creating and Updating Playlists

≡ _▼ Accessible tracks
i Holiday Music
Ξ _▼ Most played (50)
≡ _▼ Recently added (1GB)
:≡ Tom Favorites 2022
Ξ _▼ Top rated (6 hrs)
Ξ _▼ Unrated (1GB)

- A Playlist is an ordered list of tracks that can be played, burned or downloaded. Each item in the playlist is a link to the actual file.
- To start a new Playlist:
 - Go to Edit > New Playlist or right-click in the Playlist area and choose New Playlist.
 - Enter the name of the Playlist at the top of the list.
 - To add tracks to a Playlist:
 - Drag and drop files from the Music list to the Playlist.
 - Right click a track and choose Send to and then select the desired Playlist name.
- To remove tracks from a Playlist:
 - Select one or more tracks in the Playlist.
 - Right-click and select Remove; then indicate "Remove from Playlist only".
- To reorder tracks in a Playlist:
 - Click on a track and drag it up or down in the list.

Demo – Downloading a PlayList

• *Demo* – Download a Play List to a Flash Drive

- Plug in your flash drive to a USB port.
- Select or create a Play List (see previous slide).
- Sort or order the playlist to suit.
- Right click the Playlist in the lefthand pane. Hover over "Send To"
- Choose the flash drive from the list of Send to targets.
- MediaMonkey will copy the songs in the Playlist to the flash drive.
- You can ow plug the flash drive into your car stereo or take it to a party.

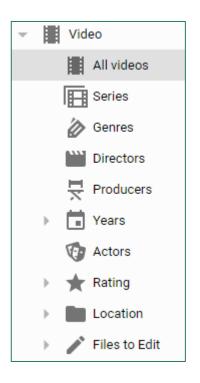
• *Demo* - Download a Play List to an Android Hand-held.

- Plug in your Android device to a USB port.
- Select USB "File" mode on your phone. Windows will "mount" your phone in File Explorer.
- Follow the steps above for copying to a flash drive but select your phone as the target of the "Send To".
- Or ... copy the music files to a micro-SD card and plug it in to your device.

Demo – Streaming Internet Radio

- MediaMonkey supports streaming of Internet radio stations
- Thousands of streams are accessible most for free
- In the lefthand pane, click to open the Web area
 - Choices are Amazon, iHeart.com, Last.fm and Radio
 - Under Radio are: Internet Radio, Radio Cast, Shoutcast, Radio Forest
 - You can explore to yor heart's content.
- Demo Exploring Internet streaming radio

Playing and Managing Videos



MediaMonkey can play video DVDs

- Insert the DVD into your PC's DVD drive.
- MediaMonkey will recognize the DVD and offer to play it.
- MediaMonkey can play video files added to your library
 - Click to open the Video section in the left-hand pane.
 - Click the "All videos" item to display all videos in your library.
 - Double-click an item to play it.
 - Can filter the displayed list by various criteria.
 - Can right click and select Properties to edit tags.
 - Can right click and select Remove to remove from the library and optionally from the computer.

Streaming Music Services (1)

- <u>https://www.consumerreports.org/streaming-music-services/best-</u> music-streaming-service-for-you/
- Amazon Prime Music (Free with a Prime subscription) or Amazon Music Unlimited (\$8 monthly)
 - <u>https://www.amazon.com/music</u>
- Apple Music (\$10 / month)
 - <u>https://www.apple.com/apple-music</u>
- Napster (\$5 and \$10 monthly)
 - <u>http://us.napster.com</u>
- Pandora (Free, \$5, \$10 monthly)
 - <u>http://www.Pandora.com</u>

Streaming Music Services (2)

- Spotify (free & \$10 monthly)
 - <u>https://www.spotify.com/us/</u>
- YouTube Music (free & \$10 per month)
 - <u>https://www.youtube.com/musicpremium</u>
- Shoutcast (Internet Radio stations)
 - Available via iTunes & other Music Library programs
- Sirius XM Satellite radio (\$17 / month)
- Music channels on Cox, DirecTV & Dish (Bundled)

Other Useful Web Links

- <u>https://electronics.howstuffworks.com/cd.htm</u>
- <u>https://www.audacityteam.org/download/</u>
- <u>https://www.goldwave.com/goldwave.php</u>
- <u>http://www.itunes.com</u>
- <u>http://www.videolan.org</u>
- <u>http://www.microsoft.com</u>
- <u>http://www.ashampoo.com</u>
- <u>https://acoustica.com/products/spin-it-again</u>