

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**
 - <http://ekei.com/audio>

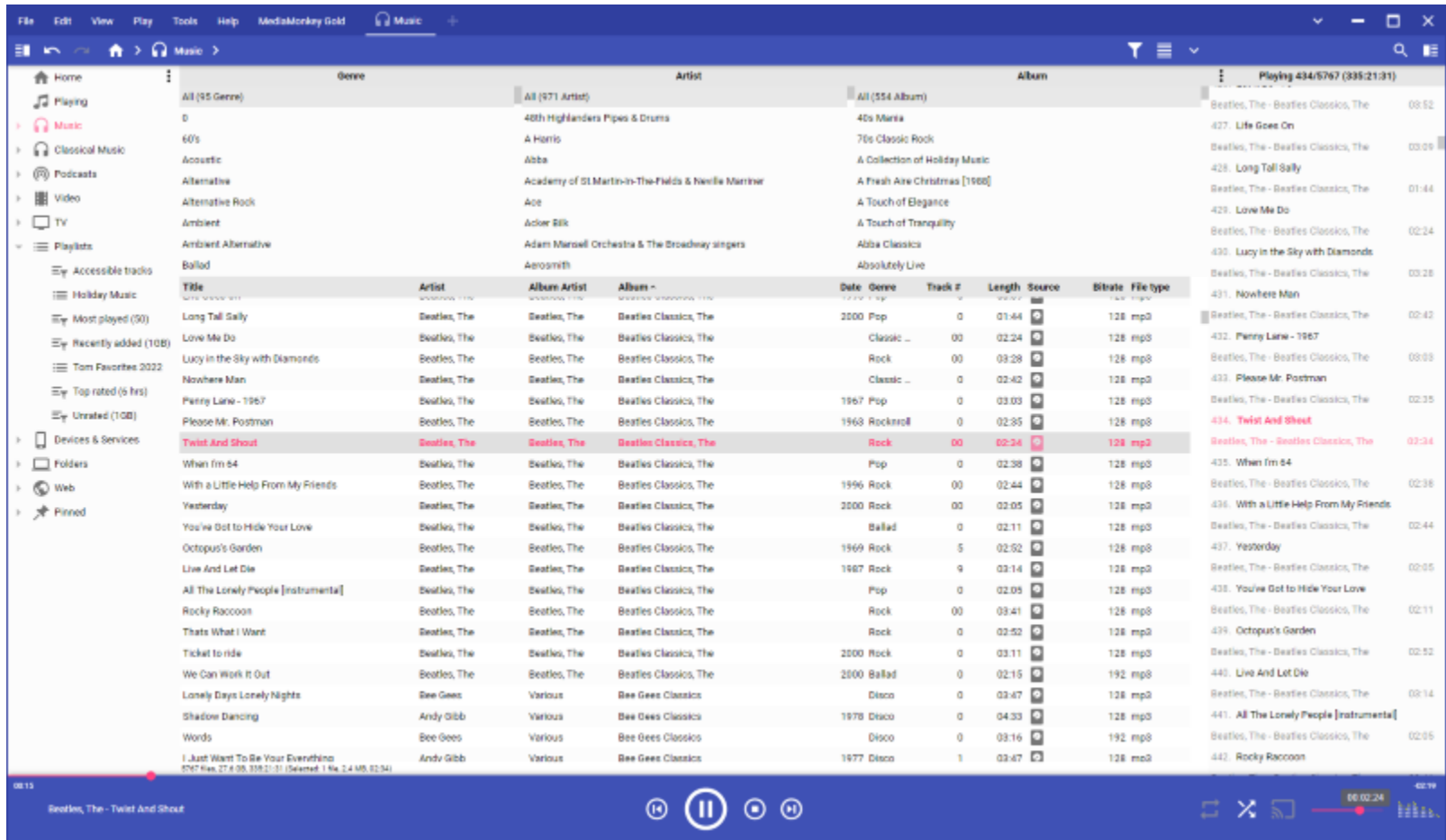
Building Your Music Collection

- **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



MediaMonkey Main Screen

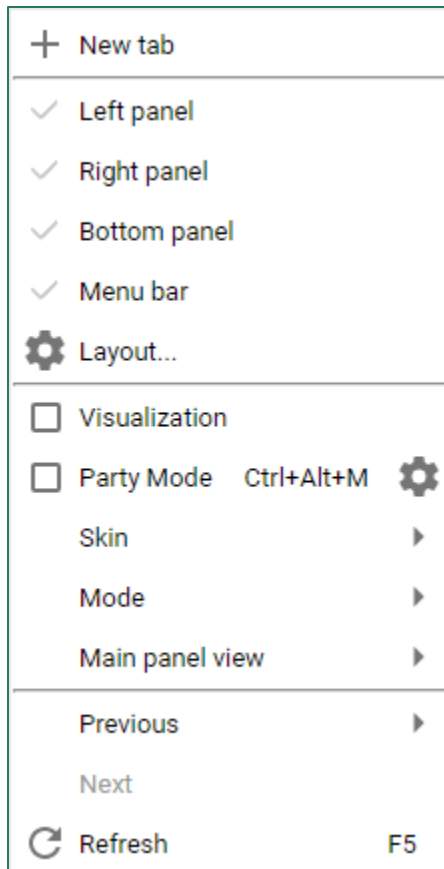
MediaMonkey 5 Media Manager

- **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



- **Open 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
- **Choosing 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.

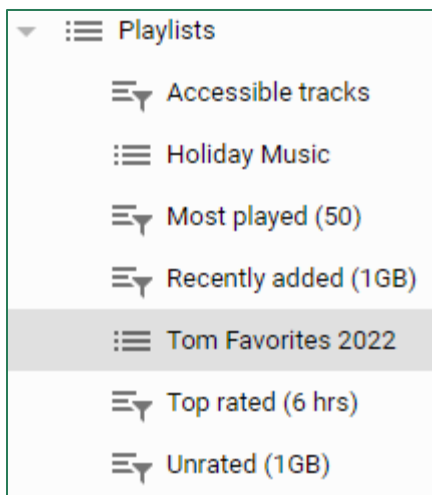
Adding Files to the Library

- **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



- **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.**

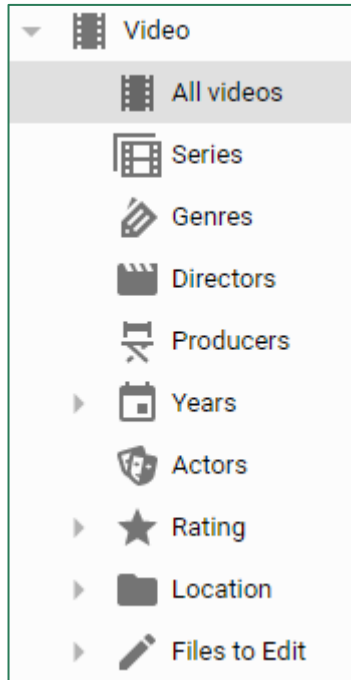
Demo – Downloading a PlayList

- **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)

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

Streaming Music Services (2)

- **Spotify (free & \$10 monthly)**
 - <https://www.spotify.com/us/>
- **YouTbe Music (free & \$10 per month)**
 - <https://www.youtube.com/musicpremium>
- **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

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