

# Using J. River Media Center/iTunes Synchronizer Utility with Lossless Audio Files

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If your music library consists of mp3 audio files, the utility is quite easy to configure. Basically you configure J. River Media Center and iTunes libraries to point at the same set of mp3 files.

For those of us using a lossless format such as flac, things are a bit more difficult, since iTunes doesn't natively support flac at all (without 3<sup>rd</sup> party help) and even with 3<sup>rd</sup> party help can only play flac files, but not sync them to an ipod or iphone.

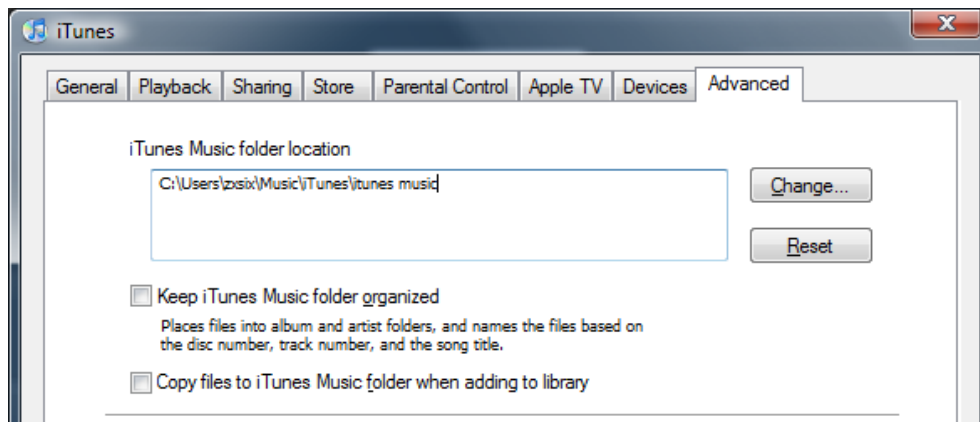
So, lets get a few things straight...

- 1) I don't sync my entire JRMCD library with iTunes. I only sync the songs that I would want on my ipods and iphones.
- 2) Smartlists in JRMCD are created to determine what songs end up getting sync'd with iTunes, and ultimately get sync'd onto the ipods and iphones.
- 3) I see iTunes itself as nothing but a temp folder. I don't listen to music in iTunes and I certainly don't manage my songs in iTunes. iTunes only exists on my computer by necessity for installing applications, firmware, and podcasts onto my iphone.

Ok, now that that's out of the way, let's check a few settings that will help us later.

## ***Preparation Steps - iTunes***

- 1) Start up iTunes.
- 2) Choose Edit > Preferences from the main menu.
- 3) Click on the Advanced tab.
- 4) Write the value of the itunes music folder location here: \_\_\_\_\_
- 5) Uncheck both of the checkboxes shown in the screenshot.
- 6) Close the preferences window by clicking OK.
- 7) If there are any songs in the music section in iTunes, these should be deleted so that we may start with a clean iTunes library.

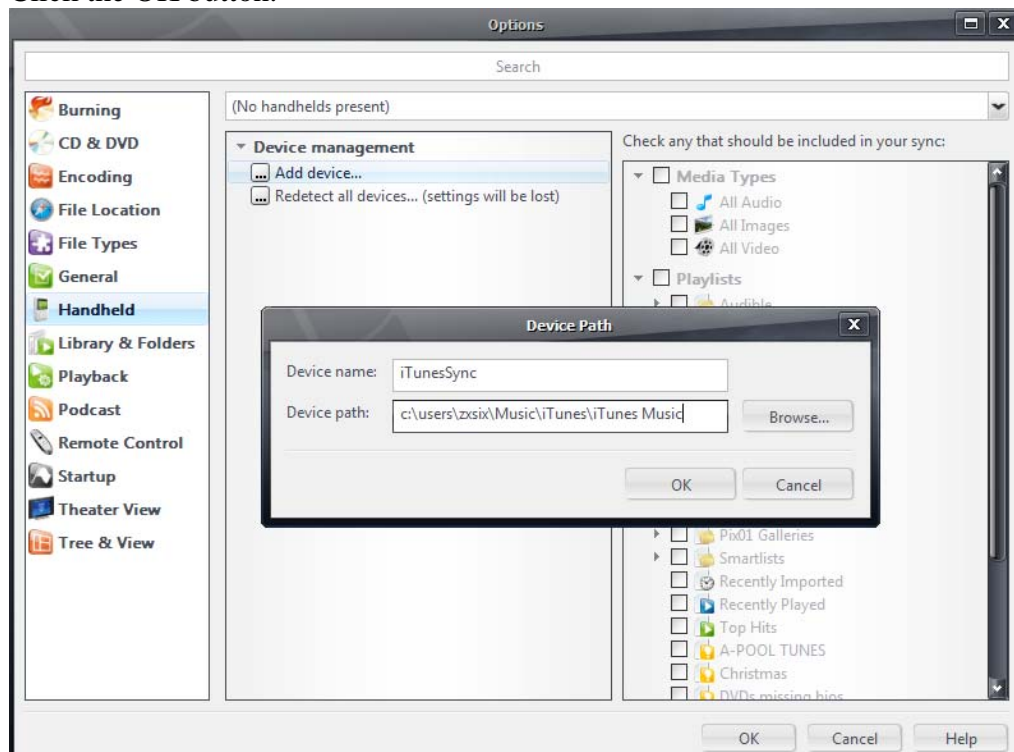


## Preparation Steps – Smartlists in JRMCMC

Create smartlists in JRMCMC that include the songs that you will want eventually sync'd to your ipod or iphone. *For help with smartlist creation, refer to J. River's documentation.*

## Preparation Steps – JRMCMC Portable Folder Setup

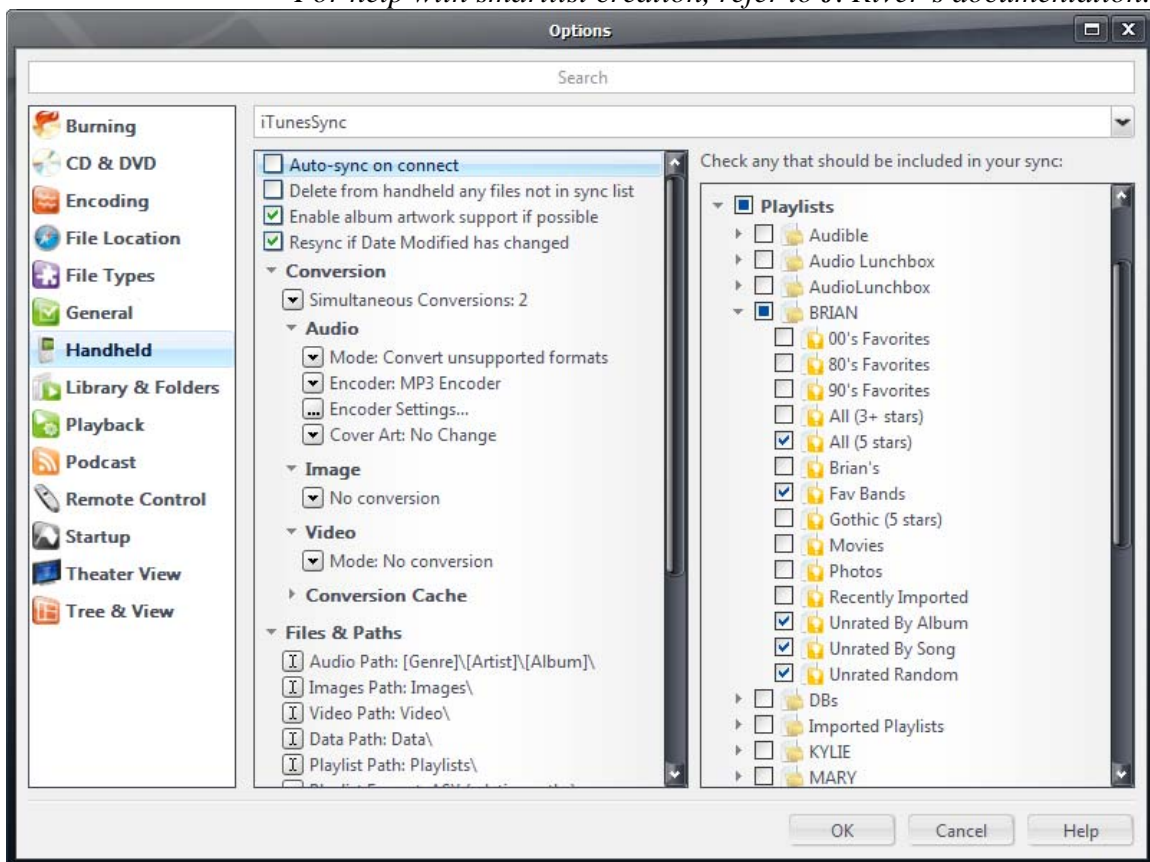
- 1) Start up J. River Media Center.
- 2) Choose Tools > Options from the main menu.
- 3) Choose the Handheld branch on the left.
- 4) Click on Add Device.
- 5) For device name, type iTunesSync.
- 6) For device path, type in the folder you wrote down in step 4 of the Preparation Steps – iTunes section above.
- 7) Click the OK button.



- 8) In the new options that appear, check the boxes and fill in the options as shown in the next screenshot.
  - a. Check "Delete from handheld any files not in sync list".  
*As I rate songs, those changes will indicate some songs to no longer end up on my iphone. For this to work, they need to be removed from the sync folder, and therefore be removed from iTunes.*
  - b. Check "Enable Album Artwork If Possible".

- c. Check “Resync if date modified has changed”.
- d. Set “Mode” to “Convert unsupported formats”
- e. Set “Encoder” to “MP3 Encoder”.
- f. Set “Audio Path” so that it is the same as the folder structure your music files are kept in. *In my case this is [Genre]\[Artist]\[Album]\*
- g. Set “Playlist Path” to “ASX, relative paths”.  
*This keeps iTunes from duplicating tracks by importing the tracks, then importing them again for each m3u playlist they are included in.*
- h. Set “Supported Types” to “mp3,jpg”
- i. On the right side, check boxes for each smartlist you created earlier that will determine the files you want sync’d to your ipod or iphone.

*For help with smartlist creation, refer to J. River’s documentation.*



## Preparation Steps – JRMC Database Field Setup

Since our music library is made up of flac files, no match will be found when using the sync utility since the files in the iTunes library will be referencing mp3 files. A special database field must be created in JRMC to map to the mp3 file.

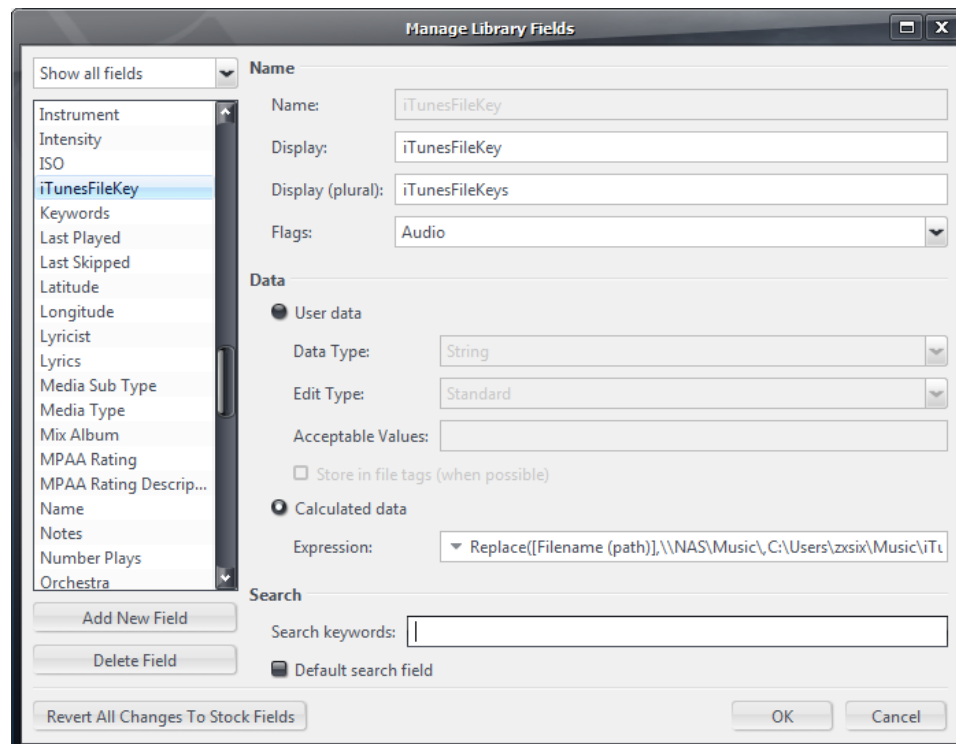
- 1) Choose Tools > Options from the JRMC Main Menu.
- 2) Choose the Library and Folders branch on the left.
- 3) Click on “Manage Library Fields”.
- 4) Add a new field called **iTunesFileKey**.  
*This is the critical piece in making the sync utility work with flac files.*
- 5) Change the “Flags” field to “Audio”.
- 6) Change the “Data Type” to “Calculated Data”.
- 7) Fill in the appropriate expression to map your file location of the flac files that the JRMC library references to the file location of the mp3 files that the iTunes library will reference. You will have to experiment to see what works for you. Here’s the expression I use:

**Replace([Filename (path)],\\NAS\Music\C:\Users\zxsix\Music\iTunes\iTunes Music)\Replace([Filename (name)],flac,mp3)**

Copy and paste this into your field expression as a starting point.

*Basically what this does, is replace the path that the flac files are located in (\\NAS\Music\) with the path that iTunes’s mp3 files are located in (C:\Users\zxsix\Music\iTunes\iTunes Music\). It then changes the extension from .flac to .mp3.*

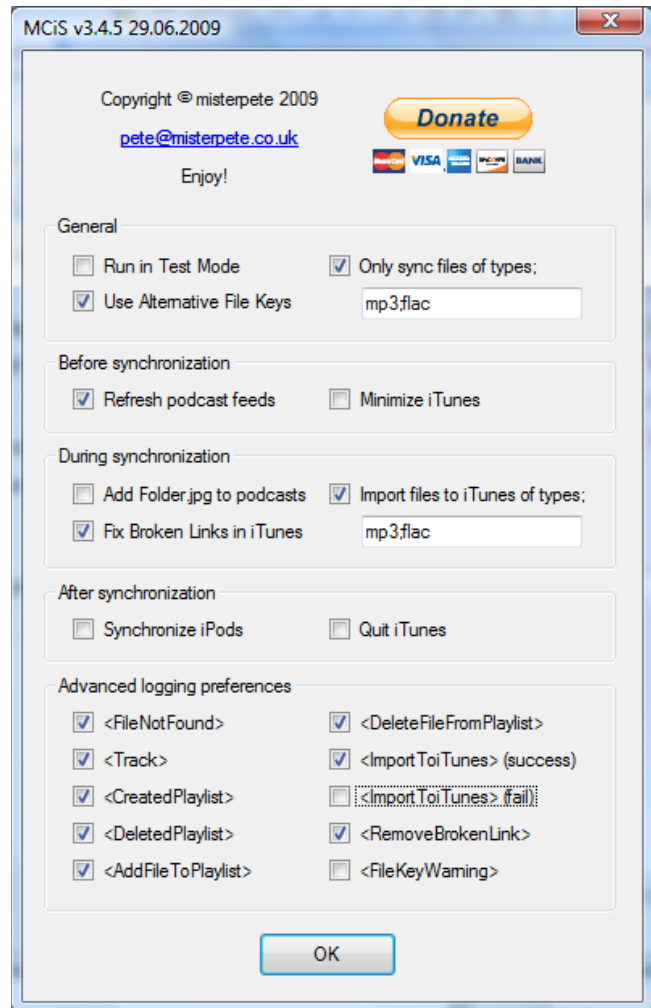
- 8) Click OK twice to save changes and exit the preferences screen.



## Preparation – JRMC & iTunes Synchronizer Options

Launch the synchronizer utility and choose Settings from the main menu.  
Set the options as indicated below. Refer to screenshot.

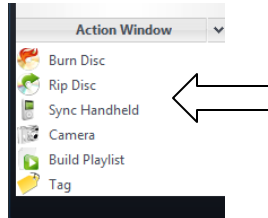
- 1) Check “Use Alternative File Keys”.  
*This is the most critical setting when you have a lossless library. It tells the utility to use the iTunesFileKey reference field instead of the Filename (path) field in JRMC when attempting to match the files to sync.*
- 2) Check “Only sync files of types” and specify each file type you use for music files in JRMC. *In my case, that’s flac and mp3 files.* Separate with a semicolon.
- 3) Check “Refresh Podcast Feeds” if you have podcasts in iTunes that you sync to the ipod or iphone.
- 4) Check “Fix Broken Links in iTunes”.  
*Since rating or changing tags on songs will inevitably cause a song to no longer be included in the smartlists that determine which files get sync’d, we’ll want those songs to be removed from the iTunes library when this happens.*
- 5) Set “Import files to iTunes of types” to each file type that you use in your JRMC music library. *In my case, this is mp3 and flac files.* Separate with a semicolon.
- 6) Choose “Synchronize iPods” if you will have the device connected to it’s usb cable and want it to be sync’d by iTunes when the utility finishes.
- 7) Logging preferences: I recommend checking all boxes for your first few syncs. Since we’re populating the iTunes library with only a subset of the JRMC library, there will be several log entries where importing tracks into iTunes will fail. This is normal. You can reduce these unnecessary log entries by not checking the two log options as shown in the screenshot.



Ok, now that the setup stuff is done. Let's move on to the regular process of using it.

### **Step 1 – Use JRMC to populate the mp3 files folder**

- 1) Start J. River Media Center if not already running.
- 2) In the Action Window, click Sync Handheld.

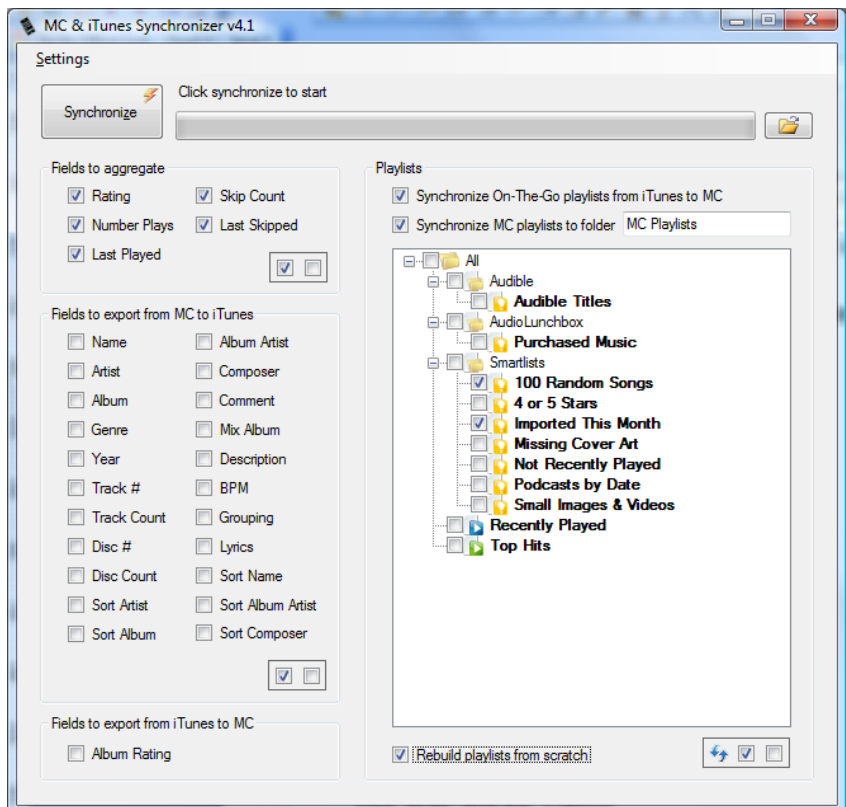


- 3) Click the Sync button after JRMC finishes calculating which files need to be transferred and which ones need to be deleted.
- 4) Once this process has been completed, click the Finish button.

You will need to do this after making rating changes and importing new songs into the JRMC library.

### **Step 2 – Run Synchronizer Utility to Update Libraries with changes**

- 1) Start the Synchronizer utility. (It will also start JRMC and iTunes if they weren't already started).
- 2) Make sure to set the choices are set the way you want them.  
The screenshot shows how I configure it.
- 3) I select all fields to aggregate. Fields selected here will be combined between the JRMC and iTunes databases.
- 4) I don't select any fields to export from JRMC to iTunes. I store all fields that are important to me in the file tags, so this is not necessary.
- 5) iTunes has an album rating field, JRMC does not. I choose not to copy that field information into JRMC.
- 6) Synchronize On-The-Go playlists will copy playlists built on the ipod back to JRMC.
- 7) Check the boxes to copy selected smartlists in JRMC to iTunes. This way the same lists can be sync'd to the ipod or iphone.
- 8) Rebuild playlists from scratch. This causes the playlists to be deleted from iTunes and recreated each time you sync. If this is disabled, then any new songs that would be added to the playlist will be added at the bottom instead of in the proper sort order. If you have dynamic playlists that change a lot, then this should be checked. Disabling it will result in a faster sync.



*You should only have to make these choices once. They will be used as defaults the next time you run the utility.*

- 9) Click the **Synchronize** button when ready. When it completes, you should review the log file by clicking the folder icon to the right of the status bar.

## **Workflow**

The JPMC & iTunes Synchronizer utility is a bi-directional sync. This means if you rate one song in JPMC and rate another song in iTunes, each library will be updated with the changed rating from the other. Also the playcount and skipcount values will be aggregated between both libraries (*if that option is checked*).

Even though it is a bi-directional sync, there are some basic workflows that you should keep in mind.

### **1 - Recently imported new tracks into the JPMC library**

1. Import new tracks and tag them as usual in JPMC.
2. In action window, select Sync Handheld and click Sync button when it's ready.
3. Run the JPMC & iTunes Synchronizer utility.  
*At this point it will need to add new tracks to the iTunes library and update the selected playlists.*
4. Review the log file to verify the expected results.

### **2 – Recently listened to and/or rated some tracks in JPMC.**

1. Play tracks in JPMC and edit the rating field as desired.
2. In action window, select Sync Handheld and click Sync button when it's ready.
3. Run the JPMC & iTunes Synchronizer utility.  
*At this point it will need to update the missing ratings in the iTunes library and update the selected playlists. Playcounts will also be aggregated between both libraries (if that option is checked).*
4. Review the log file to verify the expected results.

### **3 – Recently listened to and/or rated some tracks on ipod or iphone.**

1. Synchronize the device with iTunes.  
This will update the playcount and ratings in the iTunes library.
2. Run the JPMC & iTunes Synchronizer utility.  
*At this point it will need to update the missing ratings in the JPMC library and update the selected playlists. Playcounts will also be aggregated between both libraries (if that option is checked).*

Note: The rating changes may cause some files to be removed from the smartlists in JPMC. This is usually the case for me when I listen to songs in my unrated playlists. Inevitably some songs will be rated in such a way that indicates they are to no longer be included on my iphone. So, at this point, the JPMC library will contain newer information than the iTunes library. You will now need to redo the steps from Workflow 2 to completely bring both libraries back in sync, then sync to the ipod or iphone device again.