

# **Guide for Uploading and Maintaining the Emby Streaming System**

Rev. 2022

# Table of Contents

Prerequisites:.....	3
What's what?.....	3
Notes on Naming.....	5
For Serial Shows:.....	6
For Movies:.....	12
How to add Length Column.....	14
Splitting and Joining Files.....	16
Splitting.....	16
Joining.....	18
Adding metadata manually.....	21
Movies.....	22
Manually identifying.....	22
Manually adding metadata for movies.....	23
Shows.....	25
Manually identifying.....	25
Manually adding metadata for shows.....	25

## Prerequisites:

- [MakeMKV](#) is installed
- [VLC](#) player is installed
- [MKVToolNix](#) is installed
- *Optional:* [Bulk Rename Utility](#) is installed
- Emby server share is added
- **Before uploading anything, it is important to have an idea of what shows and movies should be in the server based on cover. After adding some content (specifically content without a database ID), Emby can misidentify the show/movie and therefore disguise it in with other content. “Disguised” content CANNOT be searched by it’s true name, and therefore must be identified and corrected.**

## What’s what?

Content that goes into the **tv folder** is:

- Content that follows a consistent Season/Episode format (Does **not** necessarily need to have been aired)
  - This applies to smaller collections of shows as well.
    - Example: A collection of PBS Frontline episodes should be uploaded to the respective PBS Frontline seasons, **not** uploaded in a way that preserves the fact they were together on a disc.
- Content that would benefit from the Season/Episode organization scheme
  - Example: A particularly large collection of various TV shows on a certain topic where files would typically be split and distributed to their respective shows if the collection was smaller. (*Discretion should be taken as to if the content is more recognizable by the name of the show, or the **physical** case it’s in. The former should be split up while the latter should use the following organizational method or **Collections***) These should be organized where **Season # = Disc case** and **Episode # = Disc number**. i.e. Where there are 7 disc cases with 2 discs in each, the 5<sup>th</sup> disc case, 2<sup>nd</sup> disc would be then 2<sup>nd</sup> episode of the 5<sup>th</sup> season. These will then of course need to be imaged and named manually in Emby, as there is no entry in a database that carries that format. See “Adding metadata manually”)
  - Example: Educational content that is not found on a database, where there are multiple episodes per disc. In this case, it would be beneficial to use the structure mentioned in the above example.
    - For many learning series, there will often be a listing on the back of the case. For episode ordering, just use the position in the list as the number of the episode. In cases where a listing cannot be found, just place it as **S01E01**, and future acquisitions can be appended as needed.

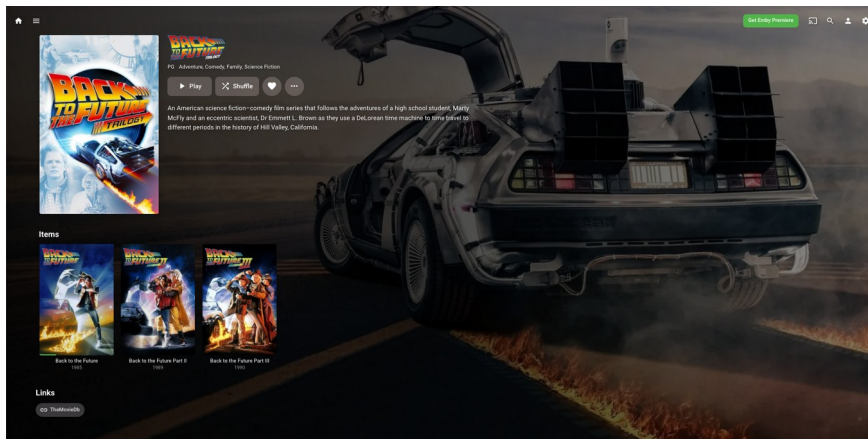
Content that goes into the **movie folder** is:

- A film by a major film studio

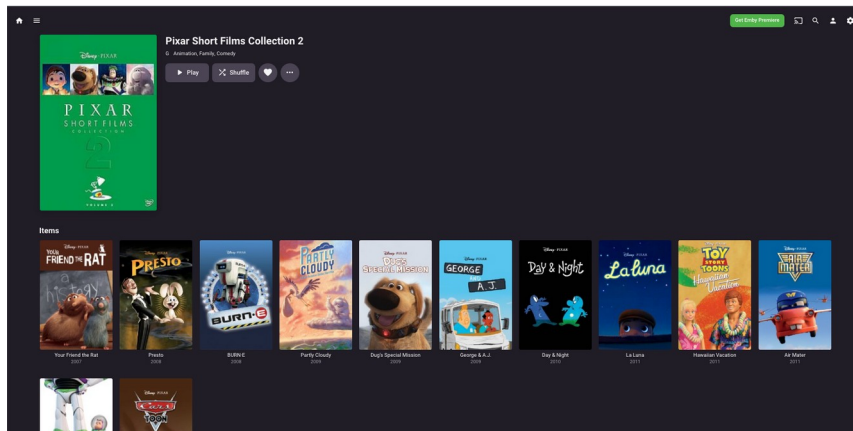
- An educational documentary that **may** or may not have aired on tv, but does **not** fit into a series
  - For many networks (especially History channel), the show will be denoted as being in a series by a colon following the series name.
    - The following should **not** be included in the movie folder, and **should** be in the TV folder.
      - “Modern Marvels: Car Crashes”
      - PBS Documentary that denotes **Frontline**, or **American Experience** as being the originating series on the box
    - The following **should** be included in the movie folder.
      - TV episode by a network that are one-off and don’t really fit into a series
        - Example: History Channel documentary “Secrets of Body Language” that aired on TV, but does not fit into a series.

Another option for organization are **Collections**. Collections can be used on items in either TV or Movie libraries. Collections are less structured than Season/Episode formatting and can be used to tie related items together. The best way to describe this is with an example.

- Example: A collection can be made called the Back to the Future Trilogy, and upon viewing the user can see the titles for each Back to the Future movie.



- Example: A collection can be made of Pixar shorts, where each item in the collection has a title and an image and the user can open whichever short they choose.



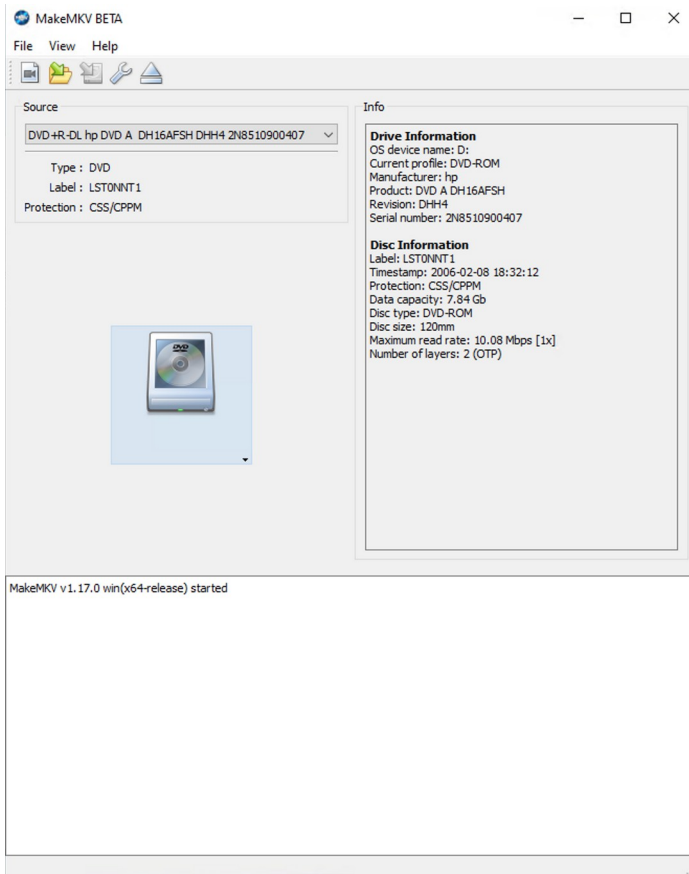
**Rule of thumb:** If the database being used denotes the content as a Movie or TV Movie, it should go into the movie folder, while if its an episode of a series it should be go into the tv folder. If the content is not in a database, then it is up to your discretion with the aid of the rules above.

## Notes on Naming

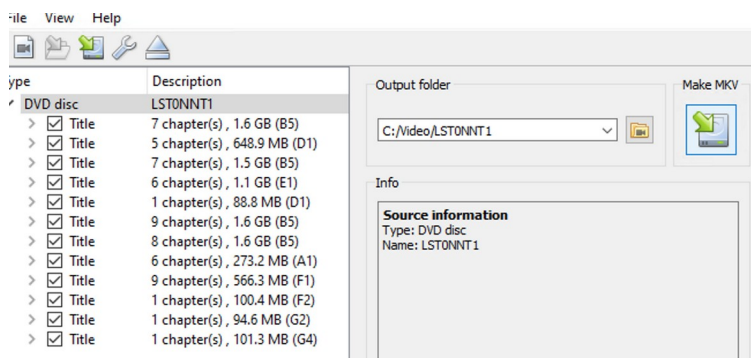
- When **Title.Year** format is mentioned in this guide, periods should be placed in place of spaces in the title of content.
  - Example: “Band of Brothers” from 2009 should become **Band.of.Brothers.2009**
  - If a year cannot be found, use the date of purchase. If both are unknown, leave the year off the end and just use **Title**
- Special episodes can be placed in a **Season 0** folder and named using **Title.Year.S00E##** format.
- Episodes that appear to be combined episodes with no clear break in the middle (i.e re-edited for DVD release) can be uploaded to Emby using **Show.S##E##-##**. If there does appear to be credits and a title card between the episodes, they should be split and be named as usual. See “*Splitting and Joining Files*”

## For Serial Shows:

1. Insert the disc
2. Open the MakeMKV program and this screen should be seen:

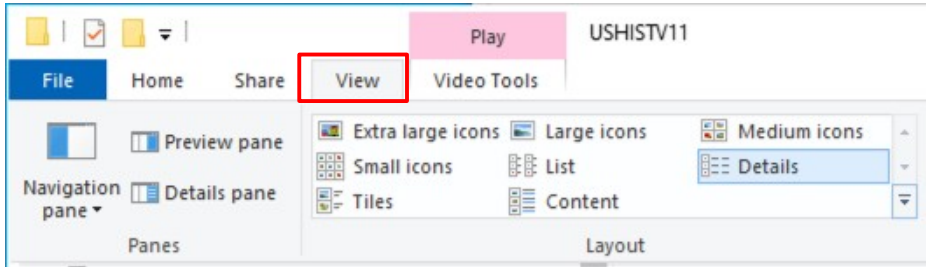


3. Click on the highlighted button to open the disc. After that process has finished, this screen should be seen:



4. Click on the highlighted button in the upper right-hand corner, and it will begin to copy the contents of the disc onto the computer. It will ask to create a folder to store the contents into, click "Yes".
5. After that process has finished, navigate to the path that can be seen in the above image under "Output folder" to the left of the highlighted button in the upper right-hand corner.

- After opening the folder, you will want to change the view to detailed view to view the informational columns.
- Click on “View” in the upper left-hand corner, and in the ribbon click on “Details”



- After changing the view, typically one of three setups will be seen.

**A)**

Name	Date	Type	Size	Length
A1_t07	7/5/2022 7:48 AM	MKV Video File (VLC)	274,341 KB	00:07:00
B5_t00	7/5/2022 7:36 AM	MKV Video File (VLC)	1,684,672 KB	00:42:15
B5_t02	7/5/2022 7:40 AM	MKV Video File (VLC)	1,611,021 KB	00:40:19
B5_t05	7/5/2022 7:44 AM	MKV Video File (VLC)	1,673,372 KB	00:43:29
B5_t06	7/5/2022 7:46 AM	MKV Video File (VLC)	1,702,385 KB	00:42:44
D1_t01	7/5/2022 7:39 AM	MKV Video File (VLC)	651,247 KB	00:16:08
D1_t04	7/5/2022 7:44 AM	MKV Video File (VLC)	89,183 KB	00:02:18
E1_t03	7/5/2022 7:42 AM	MKV Video File (VLC)	1,205,967 KB	00:29:57
F1_t08	7/5/2022 7:49 AM	MKV Video File (VLC)	568,617 KB	00:14:21
F2_t09	7/5/2022 7:50 AM	MKV Video File (VLC)	100,875 KB	00:02:33
G2_t10	7/5/2022 7:50 AM	MKV Video File (VLC)	95,099 KB	00:02:24
G4_t11	7/5/2022 7:50 AM	MKV Video File (VLC)	101,716 KB	00:02:32

**B)**

Name	Date	Type	Size	Length
B4_t00	7/5/2022 9:37 AM	MKV Video File (VLC)	1,636,050 KB	00:42:33
B4_t01	7/5/2022 9:39 AM	MKV Video File (VLC)	1,640,459 KB	00:42:46
B4_t02	7/5/2022 9:41 AM	MKV Video File (VLC)	1,725,846 KB	00:43:17
B4_t03	7/5/2022 9:43 AM	MKV Video File (VLC)	1,665,677 KB	00:43:12

A) In Case A, there are multiple files of varying lengths. (This will most likely be seen in the first or last disc of a series) It's necessary to differentiate episode files from special feature files (these are highlighted in the first image) by using the length column to identify files of similar length that are likely to be an episode (If it's not visible, please see [“How to add Length Column”](#) near the end of this document) Then, using tvDB, theMovieDB, and IMDB to view the synopses/titles of the episodes, the files must be skimmed through using VLC to identify the episodes on a Season#/Episode# basis.

B) In Case B, there are only a few files that are all of similar length. (This will most likely be seen in the middle discs of a series). If this follows a disc that has been skimmed and named, it is typically safe to assume that the files are in episode order and can be named as such. However, one or two episodes after naming should be checked against a synopsis/title to confirm that it matches the Season/Episode identification.

C) In Case C (*not pictured*), it is very similar to Case B, however there is one file that is close to the sum of the lengths of the other files. In this case, this longer file is a video that is all the other files combined and therefore can be ignored unless needed.

7. Files should be named with the aid of one of the databases mentioned above. (If the disc being uploaded was not found in any of the databases, it will need to be added manually. See [“Adding metadata manually”](#) towards the end of this document.) Shows are named in **Title.S##E##** format. Therefore, the Case A example would become this:

Name	Date	Type	Size	Length
A1_t07	7/5/2022 7:48 AM	MKV Video File (VLC)	274,341 KB	00:07:00
D1_t01	7/5/2022 7:39 AM	MKV Video File (VLC)	651,247 KB	00:16:08
D1_t04	7/5/2022 7:44 AM	MKV Video File (VLC)	89,183 KB	00:02:18
F1_t08	7/5/2022 7:49 AM	MKV Video File (VLC)	568,617 KB	00:14:21
F2_t09	7/5/2022 7:50 AM	MKV Video File (VLC)	100,875 KB	00:02:33
G2_t10	7/5/2022 7:50 AM	MKV Video File (VLC)	95,099 KB	00:02:24
G4_t11	7/5/2022 7:50 AM	MKV Video File (VLC)	101,716 KB	00:02:32
Lost.S01E01	7/5/2022 7:36 AM	MKV Video File (VLC)	1,684,672 KB	00:42:15
Lost.S01E02	7/5/2022 7:42 AM	MKV Video File (VLC)	1,611,021 KB	00:40:19
Lost.S01E03	7/5/2022 7:40 AM	MKV Video File (VLC)	1,673,372 KB	00:43:29
Lost.S01E04	7/5/2022 7:44 AM	MKV Video File (VLC)	1,702,385 KB	00:42:44

**Notice:** the omission of the 5<sup>th</sup> file that was ~29 minutes long was due to it being a shortened duplicate. Duplicate, combined, and split files are common and must be dealt with. **Duplicate** files can be determined by content and checking the end of the shortened file to confirm that it cuts off at an unexpected moment and can thusly be deleted. **Combined** and **split** files must be split or joined respectively. See [“Splitting and Joining Files”](#) at the end of this document.

8. After the naming of the files on the computer, they must then be uploaded to the “tv” folder of the Emby file share. Before uploading, two folders must be created:
- One should be made directly inside the “tv” folder and it should follow a **Title.Year [id=]** convention
    - The addition of the **id** portion is to aid in Emby’s identification of the show so that it pulls the correct images and synopses. The show ID from any database can be used. **If no ID can be located as there is not an entry, after uploading you MUST refer to “Adding metadata manually” to ensure the content was identified correctly.**

1. tvDB ([tvdbid= ])

In this example, the complete title would be **Lost.2004 [tvdbid=73739]**

**Lost**

After their plane, Oceanic Air flight 815, tore apart whilst thousands of miles off course, the survivors find themselves on a mysterious deserted island where they soon find out they are not alone.

**Aliases**

Lost: Missing Pieces

English

**THE TVDB.COM SERIES ID** 73739

**STATUS** Ended

**FIRST AIRED** September 22, 2004

**AIRS** Tuesday, at 9:00pm

**NETWORKS** ABC (US)

**AVERAGE RUNTIME** 45 minutes

**GENRES** Action, Adventure, Drama, Fantasy, Mystery, Science Fiction, Thriller

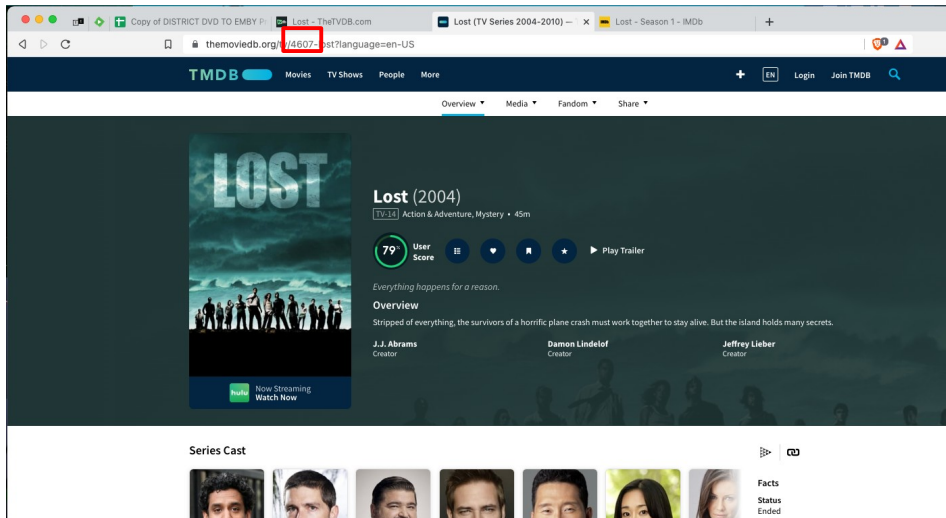
**ORIGINAL COUNTRY** United States of America

**ORIGINAL LANGUAGE** English



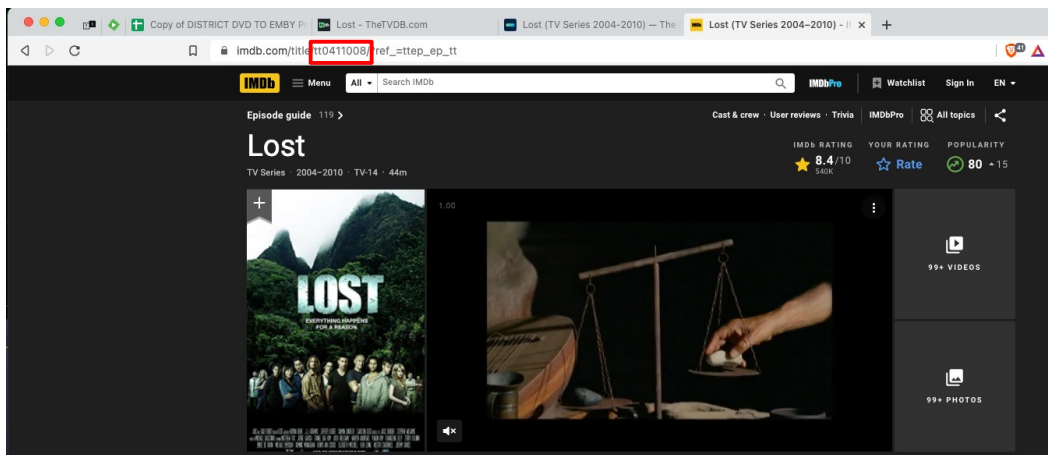
## 2. theMovieDB ([tmbid= ])

In this example, the complete title would be **Lost.2004 [tmbid=4607]**

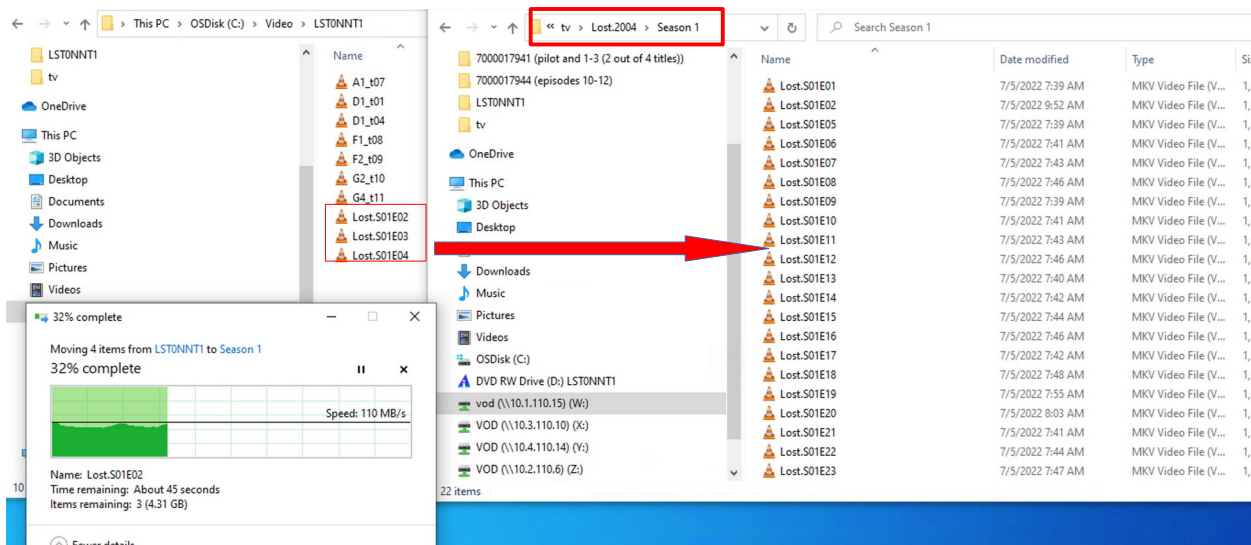


## 3. IMDB ([imdbid= ])

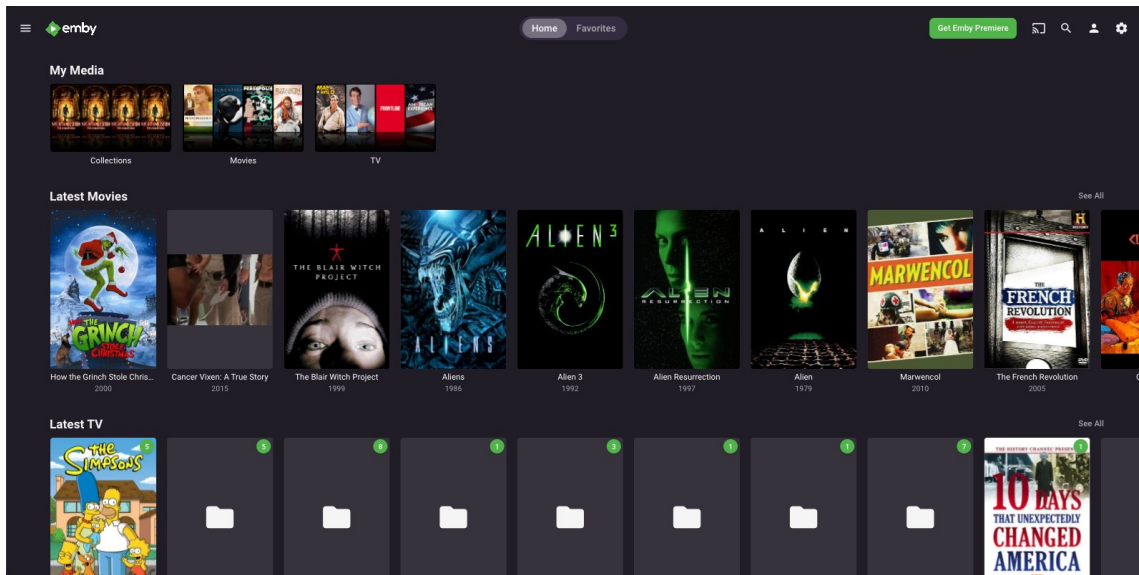
In this example, the complete title would be **Lost.2004 [imdbid=tt0411008]**



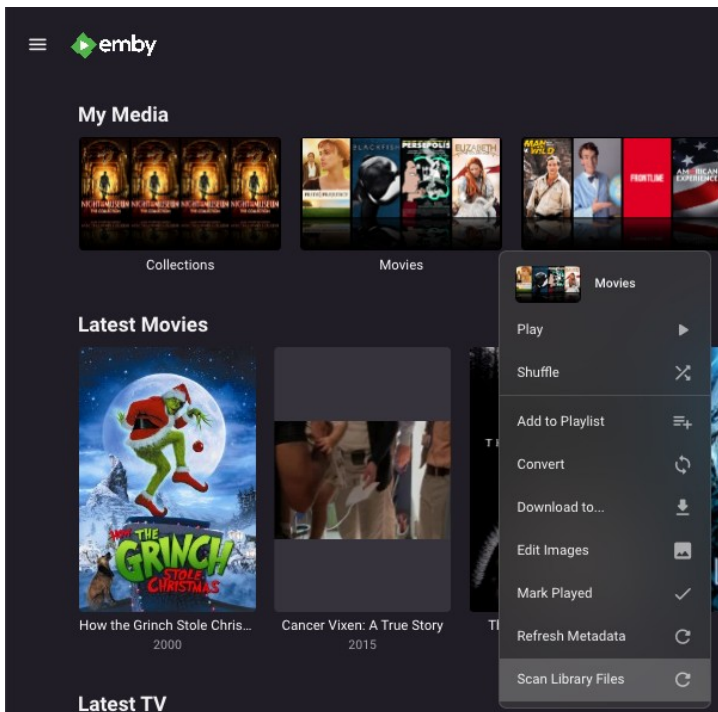
2. Then, inside that newly created folder a Season folder following **Season #** should be made.
9. Finally, the named files on the computer can be uploaded to that **Season #** folder as seen below. (Ignore the omission of the ID in the show directory in this screenshot)



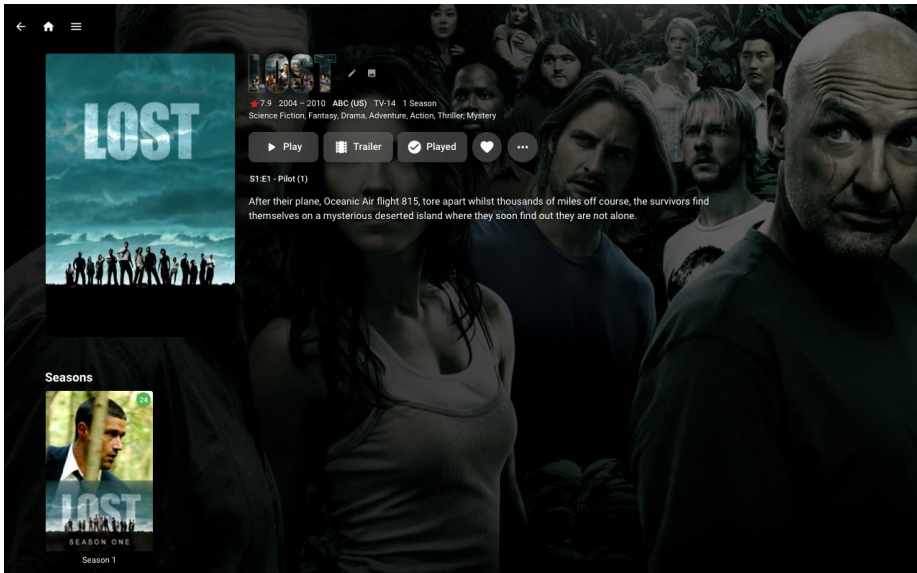
10. After uploading, navigate to the Emby home screen where the Collections, Movies, and TV libraries can be seen.



11. Right click on the three dots in the lower right-hand corner of the TV library tile, and select “Scan library files”. This process may take a few minutes.



12. Confirm that the show has uploaded and been identified correctly, and repeat this process for remaining discs.



**Reminder:** If content was uploaded without an ID, you must refer to ***“Adding metadata manually”*** to ensure the correct identification of content.

## For Movies:

*Note: The process is very similar (and much simpler) to uploading shows, and therefore will include minimal screenshots for brevity. Please refer to the visuals in the shows guide to aid in this process.*

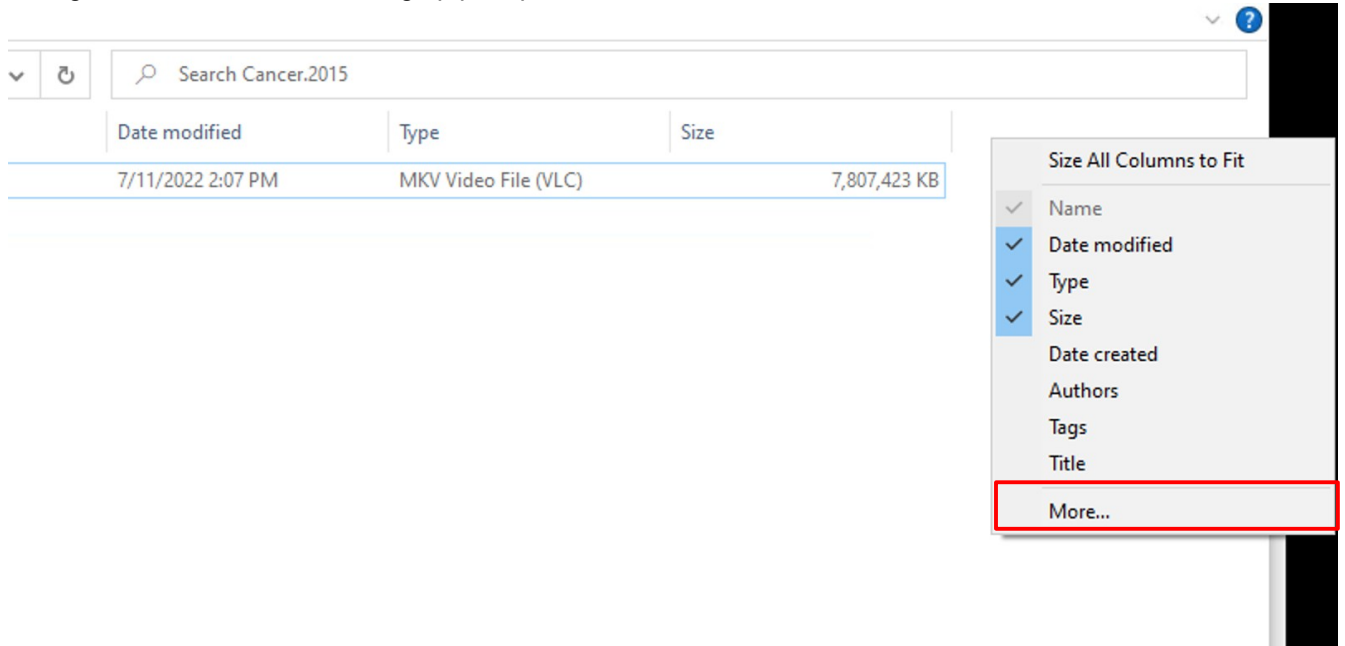
1. Insert the disc to be read.
2. Open the MakeMKV program and open the disc with the large button in the center.
3. Click on the button in the upper right-hand corner, and it will begin to copy the contents of the disc onto the computer. It will ask to create a folder to store the contents into, click "Yes".
4. After the process is finished, repeat for the special features disc if present or for the second part of the movie if present.
5. Navigate to the Output Directory.
6. In most cases, using the Length column, there will be one long file and many other small files. *(If there are multiple files of similar length, investigation is required and combining/splitting/deleting may be needed. If there appears to be a duplicate yet one file is slightly longer, take the longer of the two.)* This can be assumed to be the movie and other special features that were included on the disc.
  1. *In PBS and other network documentaries that qualified for the movie category, there will typically only be one file which can be assumed to be the movie.*
7. File naming:
  1. **If there was only one movie disc**, the movie file should be named using **Title.Year** format. The special features (the smaller files) should be named using **Title.Feature#.Year** format. *Note: The feature number is not unique to the content and is just used to differentiate files.*
  2. **If there was a movie disc and a special features disc**, the movie file should be named using **Title.Year** format, and the special features on each disc should be denoted as such.
    1. Example: If special features were found on Disc 1 along with the movie file, they should be named as **Title.Feature#.Year.Disc1**
    2. All features on the special features disc should be named as **Title.Feature#.Year.Disc#**, where the feature numbering resets at 1 for each disc. (In most cases the disc number will be 2)
  3. **If the movie is spread out across multiple discs**, the movie files will need to be combined (See *"Splitting and Joining Files"*), and the combined file named in **Title.Year** format. The special features can be named as outlined above in case 2.
8. Repeat the above process for all discs to gather the files needed before assembling and uploading.
9. After all files are gathered, create a file in the Emby server movie folder following **Title.Year [id=]** format as outlined in step 8.1 of the shows guide. ***If no ID can be located as there is not an entry, after uploading you MUST refer to "Adding metadata manually" to ensure the content was identified correctly.***
10. Create a folder named **extras** in the newly created folder.
11. Copy all special feature files to the **extras** folder and copy the movie file to the **Title.Year [id=]** folder.
12. After uploading, navigate to the Emby home screen where the Collections, Movies, and TV libraries can be seen.
13. Right click on the three dots in the lower right-hand corner of the Movies library tile, and select "Scan library files". This process may take a few minutes.

14. Confirm that the movie has uploaded and been identified correctly, and repeat this process for remaining discs.

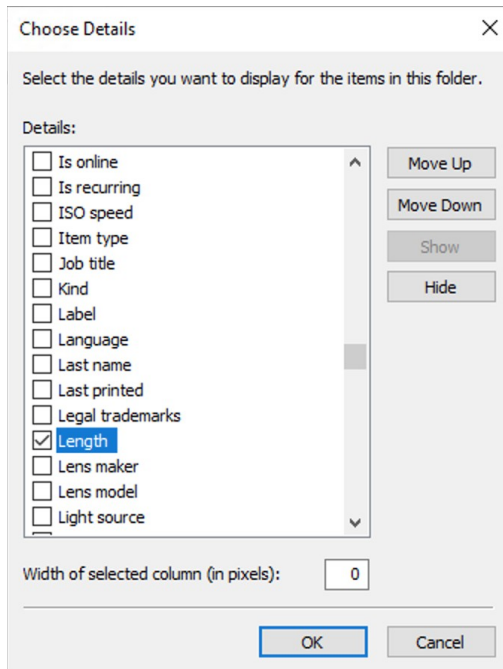
**Reminder:** If content was uploaded without an ID, you must refer to *“Adding metadata manually”* to ensure the correct identification of content.

# How to add Length Column

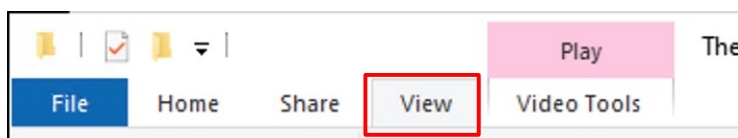
1. Right click on detail bar to bring up prompt and click on “More...”



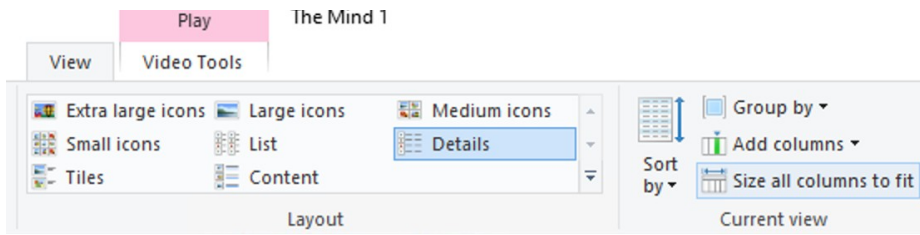
2. Scroll down in the “Choose Details” window until you find “Length”, check the box, and click OK.



3. If columns are not sized to fit, click on “View” in the upper right-hand corner of the window



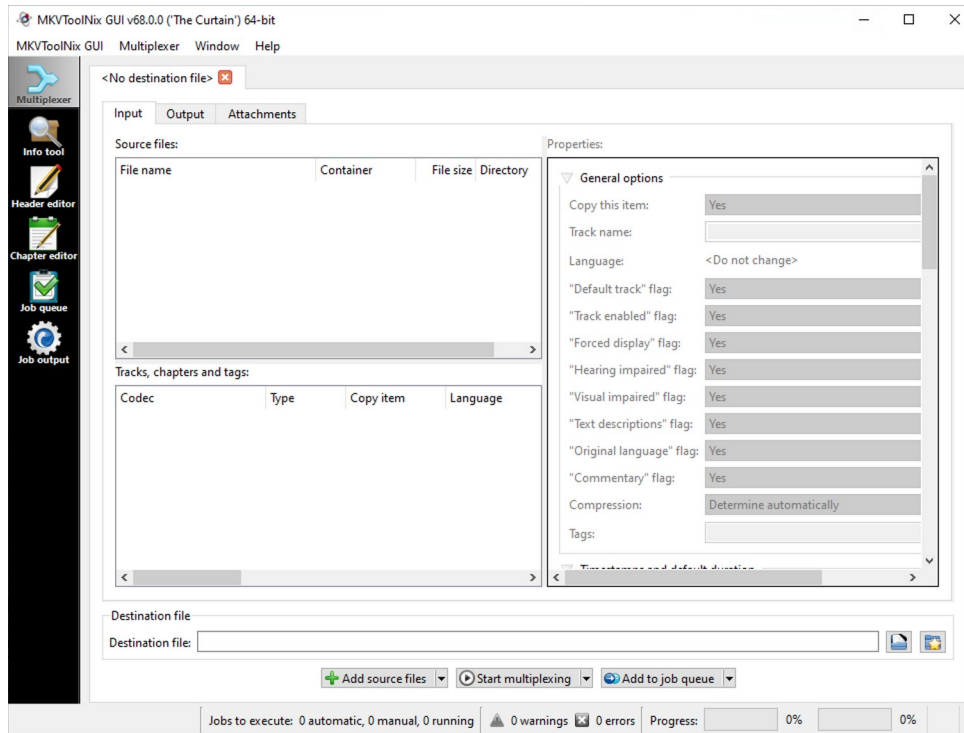
4. Finally, click on “Size all columns to fit”



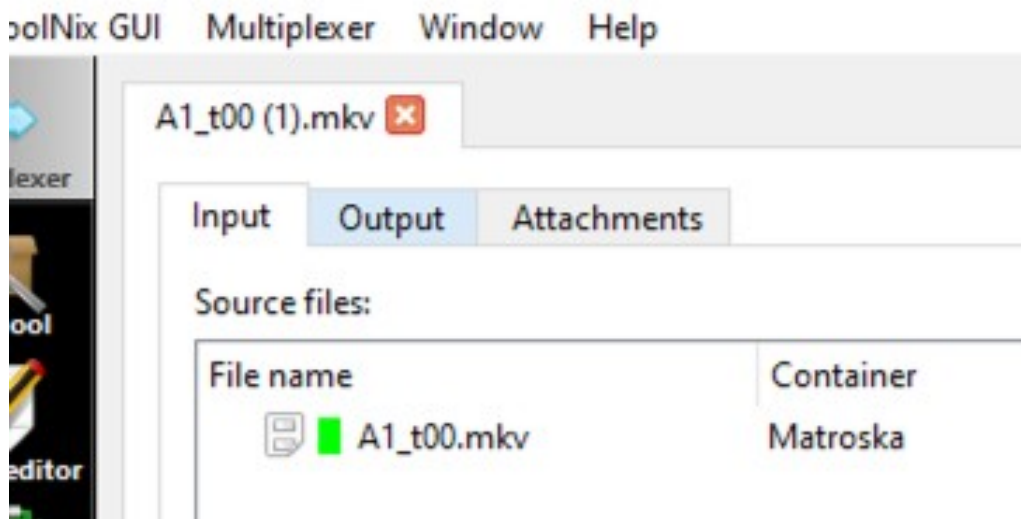
# Splitting and Joining Files

## Splitting

1. First, take note of the timestamp(s) where you would like the video split.
2. Open the MKVToolNix GUI, and you should see this screen.

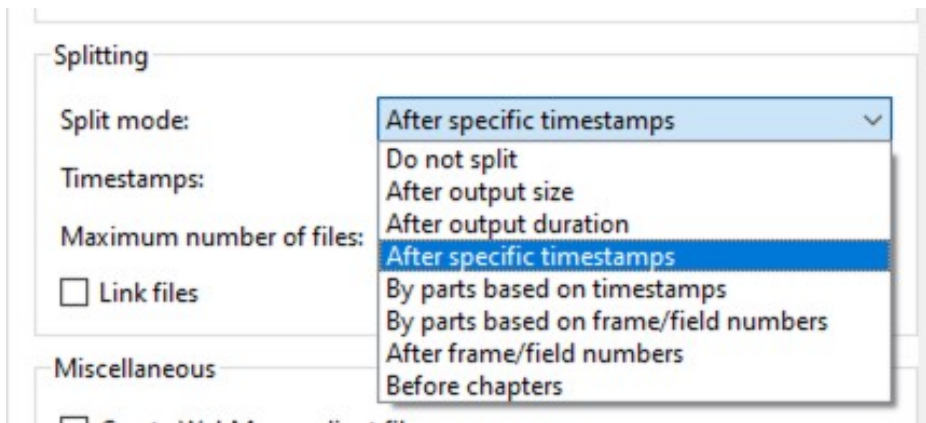


3. Click on "Add source files" towards the bottom of the screen, and select the video file you would like to split.
4. Navigate to the "Output" tab in the upper left-hand corner.

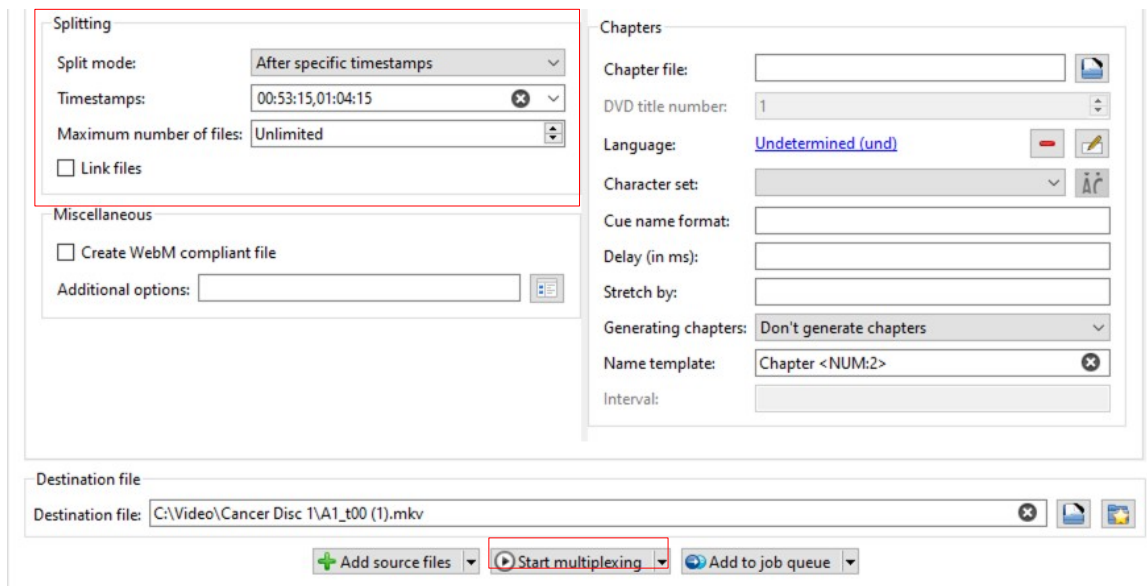




- In the “Splitting” section on the left-hand side, select “After specific timestamps” or any other option you think might work more effectively.



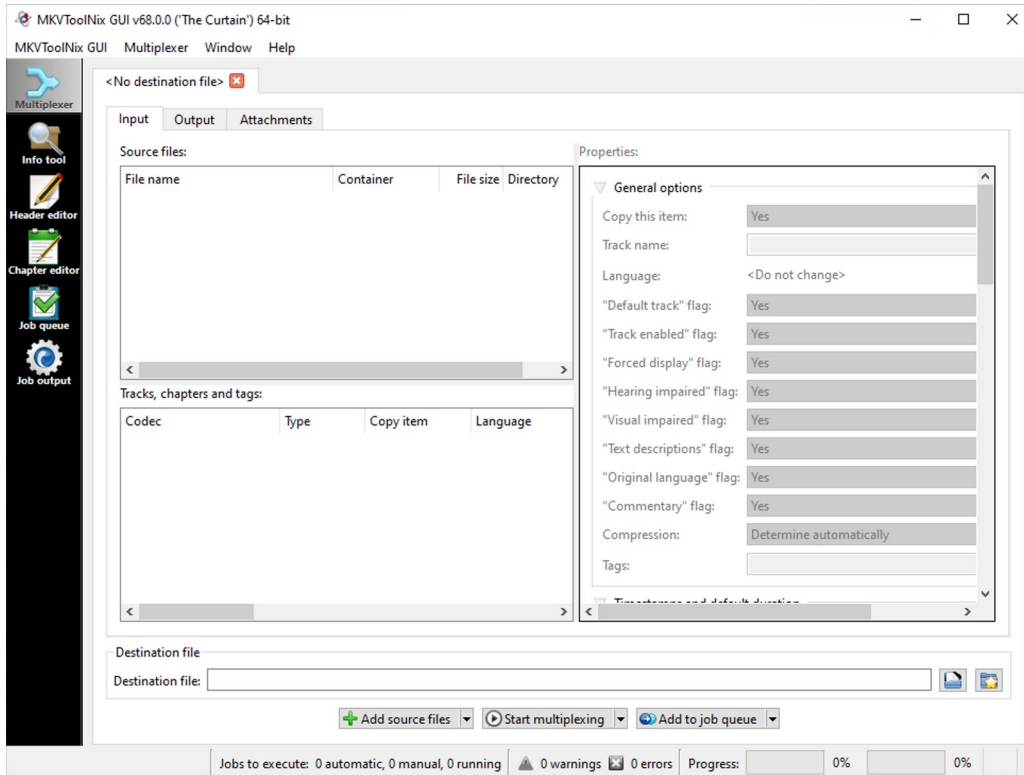
- Input the time stamp(s) in **HH:MM:SS** format (separated by commas if more than one) and then click on “Start multiplexing” at the bottom of the window.



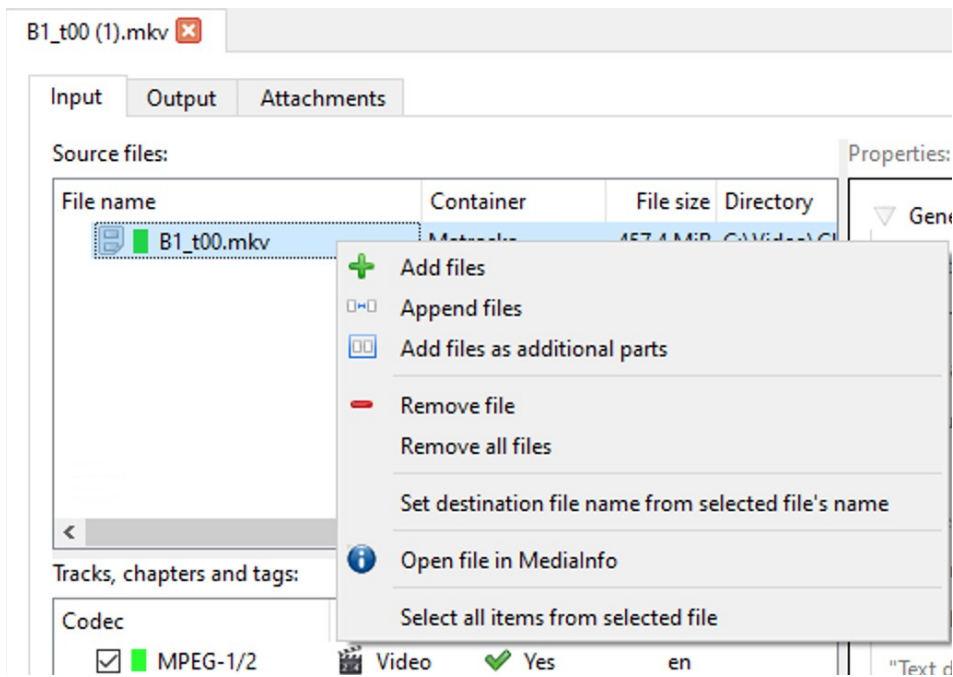
- The finished files can be seen in the originating file's folder. *Note: In this example, because we chose 2 spots to split the video, we ended up with 3 video files. Be sure to select the right ones.*

# Joining

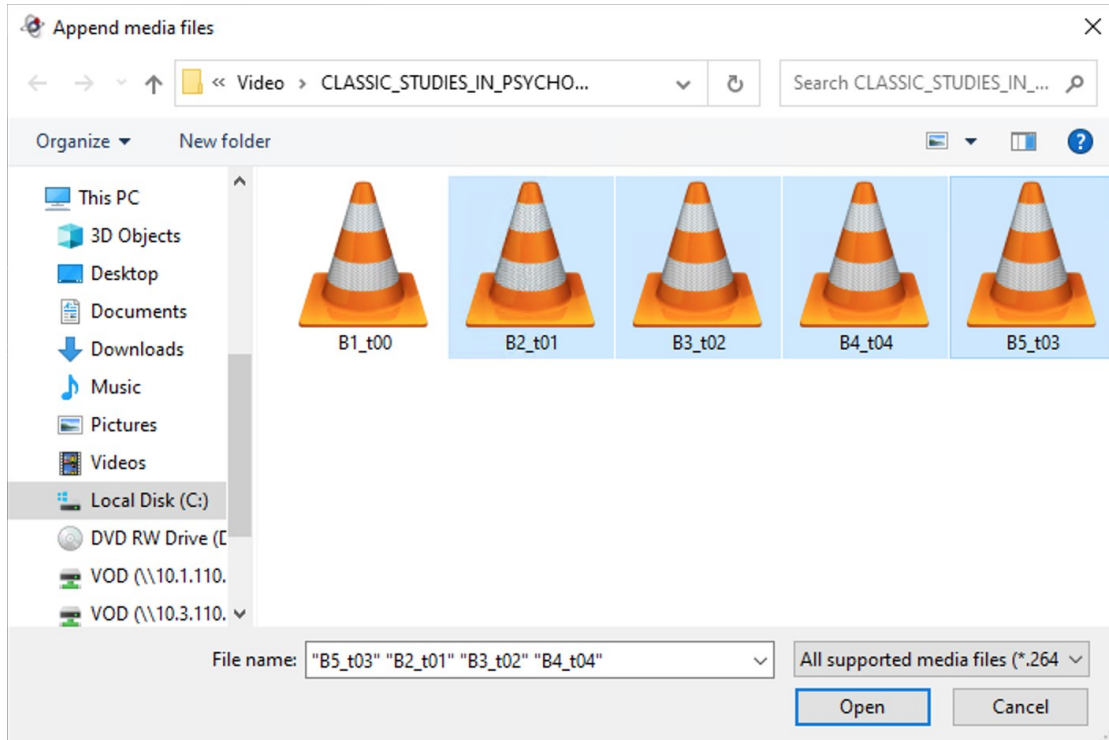
1. Open the MKVToolNix GUI program and you should see this screen.



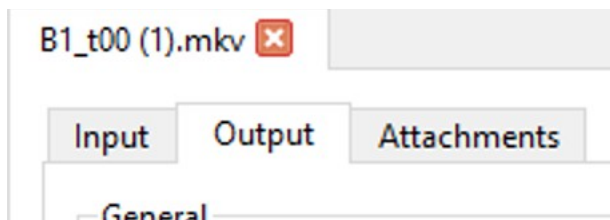
2. Click on the “Add source files” button at the bottom of the program window, and select the file you would like to be first.
3. After the first file is added, right click on the file in the program, and click on “Add files” in the pop-up menu.



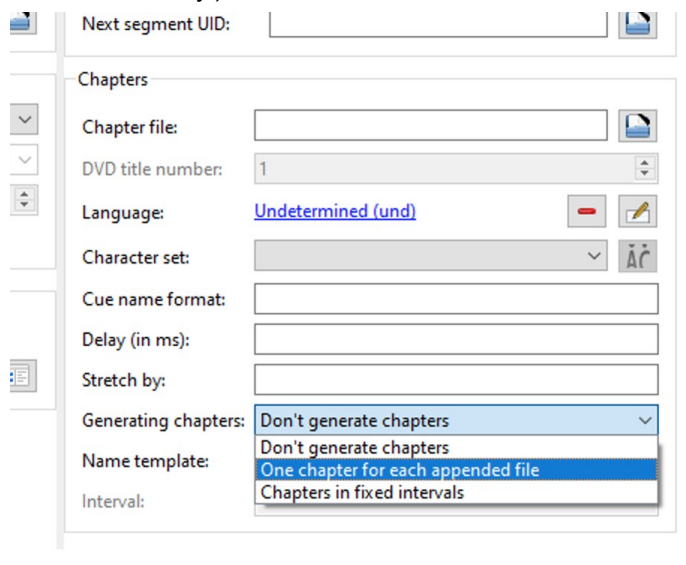
4. Select the files that you would like to be appended to the first file, and click “Open”



5. If the files were not added in the correct order, they can be adjusted by dragging and dropping within the “Source files” list.
6. Navigate to the “Output” tab.



7. On the right-hand side, click on the dropdown “Generating chapters:” and select “One chapter for each appended file”. (This is to ensure chapters are generated so that teachers can navigate through each video file in Emby.)

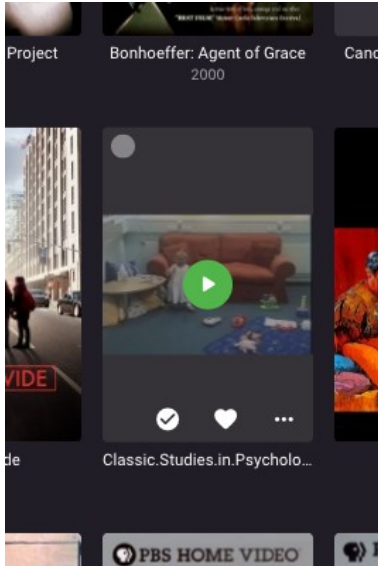


8. Finally, click on "Start multiplexing".
9. Once finished, the final file can be found in the originating file's folder.

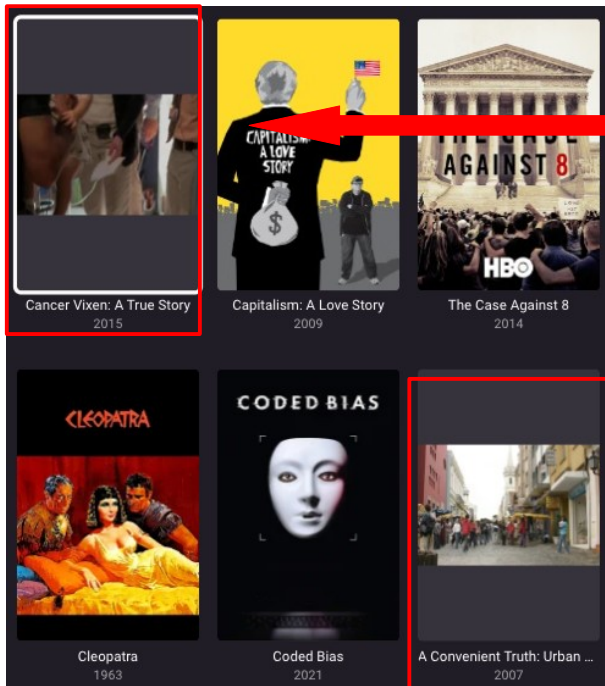
# Adding metadata manually

Content that will need its metadata adjusted can typically be found in 3 forms.

## 1. Completely unidentified



## 2. Correct or Incorrect title and missing images



Should be: "Cancer: the Emperor of All Maladies", and cover image is missing

Correctly identified, but cover image is missing

### 3. Entirely misidentified



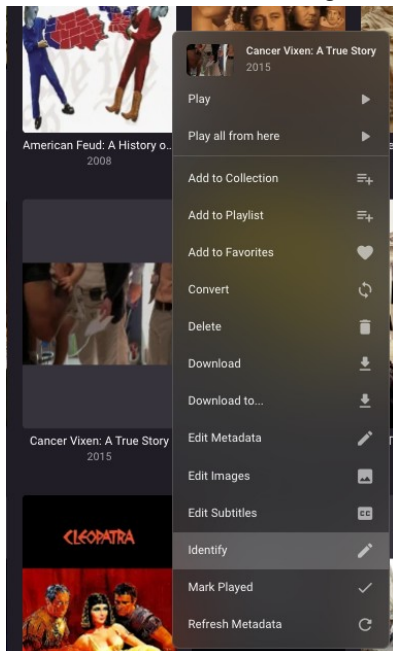
For any of the above, the process is the same.

## Movies

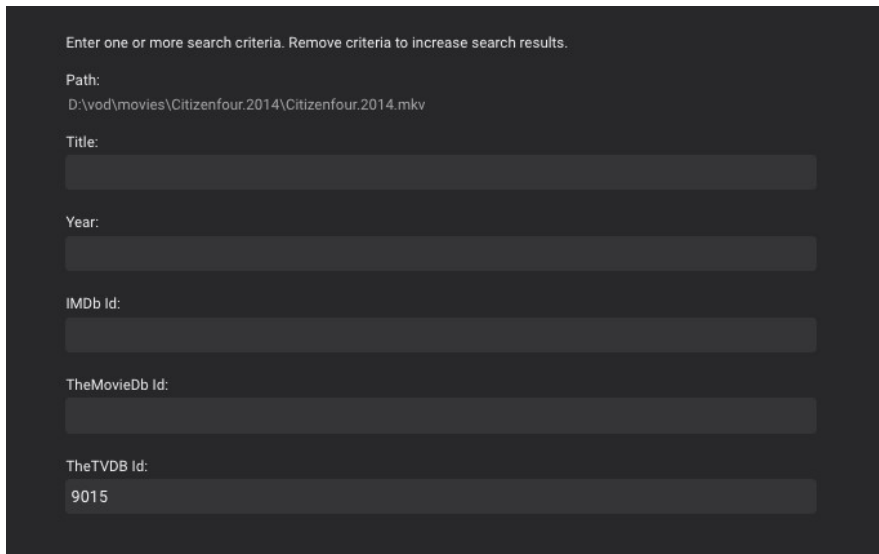
### Manually identifying

If an ID was not found at the time of uploading but ended up being found after, it can be used to identify the content and pull down the correct information.

1. Click on the 3 dots in the lower right corner of the content in question and click on "Identify"



2. A window like this should pop-up. Preferably, paste in a database ID to identify it quickly, or a title and year can be used to select the right movie/show.



Enter one or more search criteria. Remove criteria to increase search results.

Path:  
D:\vod\movies\Citizenfour.2014\Citizenfour.2014.mkv

Title:  
[Input field]

Year:  
[Input field]

IMDb Id:  
[Input field]

TheMovieDb Id:  
[Input field]

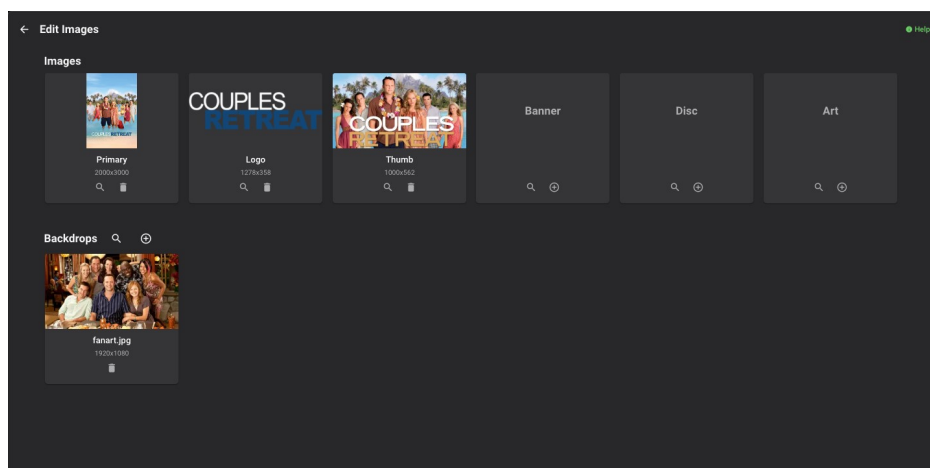
TheTVDB Id:  
9015

3. Click on “Ok” and then select the right movie from the options
4. Click on “Ok’, make sure “Replace existing images is checked” and then click on “Ok”.
5. After some loading and waiting a minute or so, go back to the movie library homepage and refresh to confirm the change was made.

## Manually adding metadata for movies

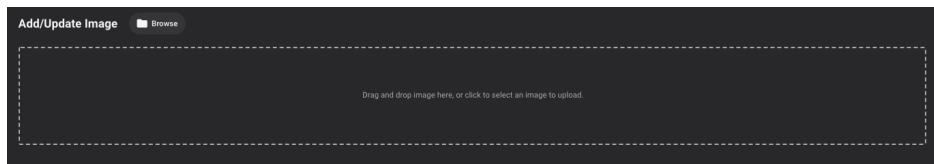
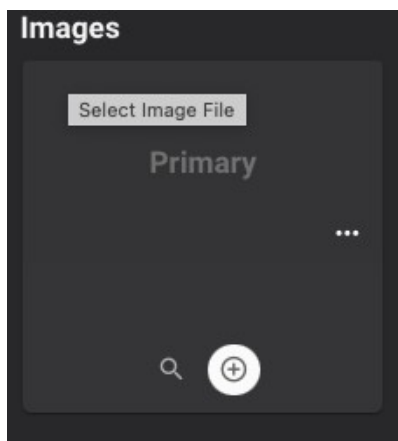
For institutional release only content this is especially necessary as they are often not found in databases.

1. Delete out incorrect images (if any) by clicking on the 3 dots in the lower right-hand corner, and click on “Edit Images”

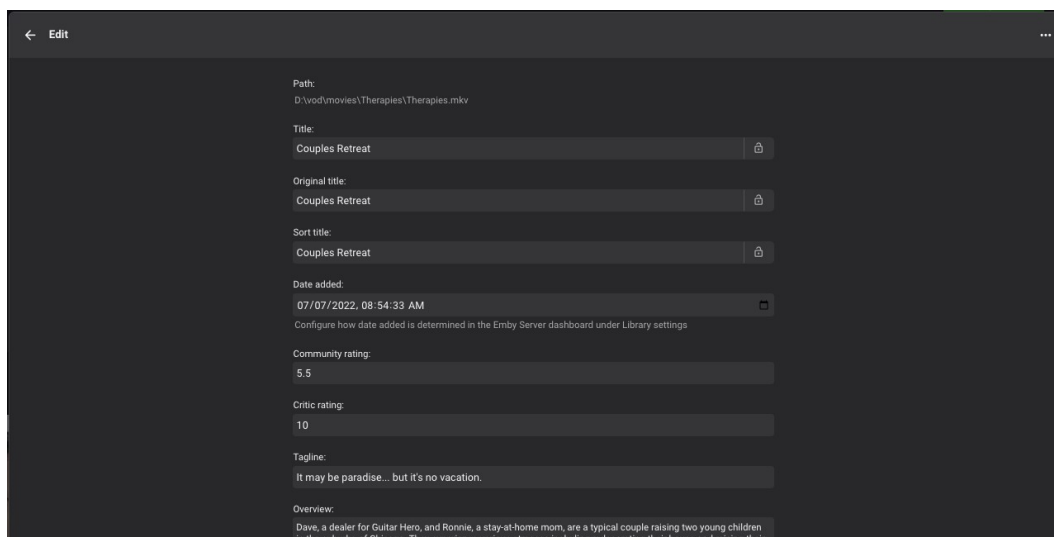


Click on the trashcan icon to delete all incorrect images.

2. Try and find the correct cover image online and download it. If one can't be found, take a picture of the DVD case and download it onto your computer.
  - a. If a picture must be taken, the aspect ratio *must be* 2:3 or Emby will flip the image with no option to flip it into the correct orientation. To crop an image to that ratio on an iOS device, refer to [this website](#)
3. Click the little plus sign symbol below the “Primary” image, and drag and drop the image you just downloaded or took.

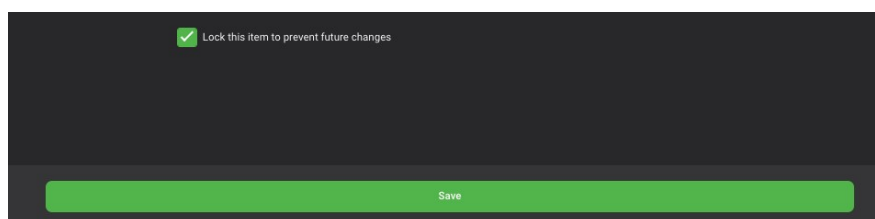


4. To fix the title and other data, go back to the 3 dots menu and click on “Edit Metadata”



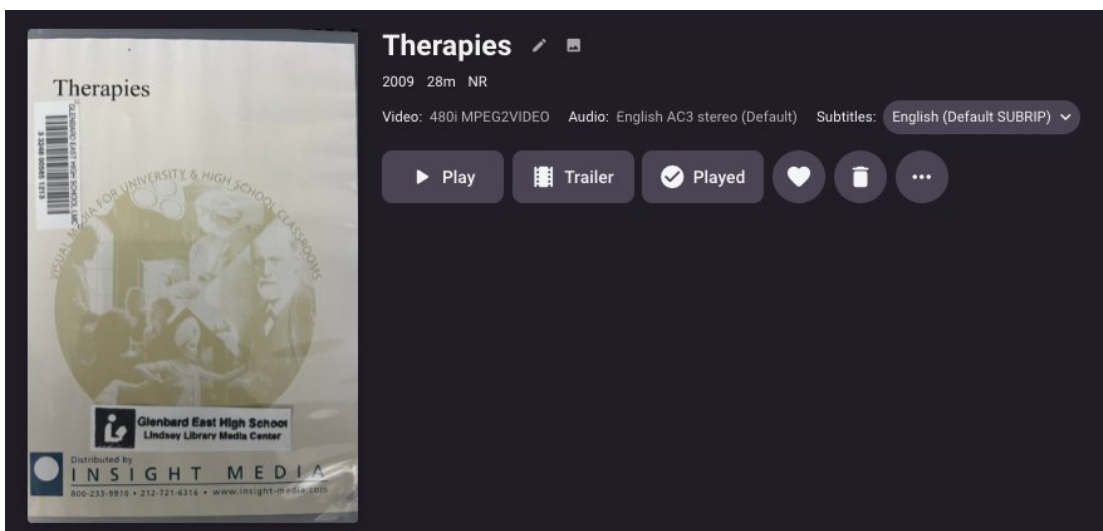
Go through and clear out/change any incorrect information.

- a. Make sure to get rid of ID's that may cause Emby to confuse it for something else
5. After all data has been adjusted, check “Lock this item to prevent future changes” at the bottom and click “Save”. This will ensure that Emby does not change any information.





6. After clicking save, ensure that everything looks correct.



## Shows

*For items in the TV library, the process of manually identifying/adding information to content is much the same and therefore will not include screenshots for brevity. Please refer to the "Manually identifying" section for Movies above if you need clarification.*

## Manually identifying

If an ID was not found at the time of uploading but ended up being found after, it can be used to identify the content and pull down the correct information.

1. Click on the 3 dots in the lower right corner of the content in question and click on "Identify"
2. A form should come up with fields to paste in information. Preferably, paste in a database ID to identify it quickly, or a title and year can be used to select the right movie/show.
3. Click on "Ok" and then select the right movie from the options
4. Click on "Ok", make sure "Replace existing images is checked" and then click on "Ok".
5. After some loading and waiting a minute or so, go back to the movie library homepage and refresh to confirm the change was made.

## Manually adding metadata for shows

For institutional release only content this is especially necessary as they are often not found in databases.

1. Delete out incorrect images (if any) for the **series** by clicking on the 3 dots in the lower right-hand corner of the series tile, and click on "Edit Images". Then, click on the trashcan icon to do so.
2. Try and find the correct cover image online and download it. If one can't be found, take a picture of the DVD case and download it onto your computer.

- a. If a picture must be taken, the aspect ratio *must be* 2:3 or Emby will flip the image with no option to flip it into the correct orientation. To crop an image to that ratio on an iOS device, refer to [this website](#)
3. Click the little plus sign symbol below the “Primary” image, and drag and drop the image you just downloaded or took.
4. To fix the title and other data, go back to the 3 dots menu and click on “Edit Metadata”. Go through and clear out/change any incorrect information.
  - a. Make sure to get rid of ID’s that may cause Emby to confuse it for something else
5. After all data has been adjusted, check “Lock this item to prevent future changes” at the bottom and click “Save”. This will ensure that Emby does not change any information.
6. After clicking save, ensure that everything looks correct for the series.
7. Then, for each season, and each episode within those seasons, repeat the steps above to correct/add any information you deem necessary.