

Digitizing cassette tapes

How to digitize a cassette

TAPE EXAMINATION

Remove tape from its case and give it a visual inspection. Start by looking through the center window (if the housing has one) and use a pencil to wind the tape and examine the tape path, looking for the following features:

1. Are there any foreign objects in the tape window? Dust, debris, pests?
2. Is there any mold visible on the tape pack?
3. Are there any liquid stains visible on the housing or case?
4. Are there any visible flaws of the tape pack such as tears, or clinching?

If the tape is missing its pad AND is held together by screws, please do the following:

- take a new cassette shell from the bookcase and unscrew it, throwing away the "dummy" reels inside
- unscrew the original cassette's shell and carefully place the reels into the new shell, being mindful of the tape path
- screw the new shell back together and write the aNUMBER with a wax pencil on the new shell
- for shells that have been welded together, without screws, we can't open them until we get a bench vise so set those aside for future conservation

If the tape has broken OR detached from a reel AND the housing is held together with screws, please do the following:

- unscrew the housing
- if the tape has broken - splice it with the 1/8" Editall block
- if the tape has detached from the reel, place reel on its side on the desk
 - on the outside edge of the reel is a wedge, remove the wedge
 - place end of tape in hole left by the wedge, with plenty of extra tape on the back side
 - from the side, insert the wedge into it's slot until you hear a click. if more than 1 cm of tape exists on the trailing side, trim it.

Note any flaws in the "Original recording notes" field in Filemaker.

SYSTEM SETUP

Turn on the rack with the cassette decks and turn on the decks themselves

Verify that

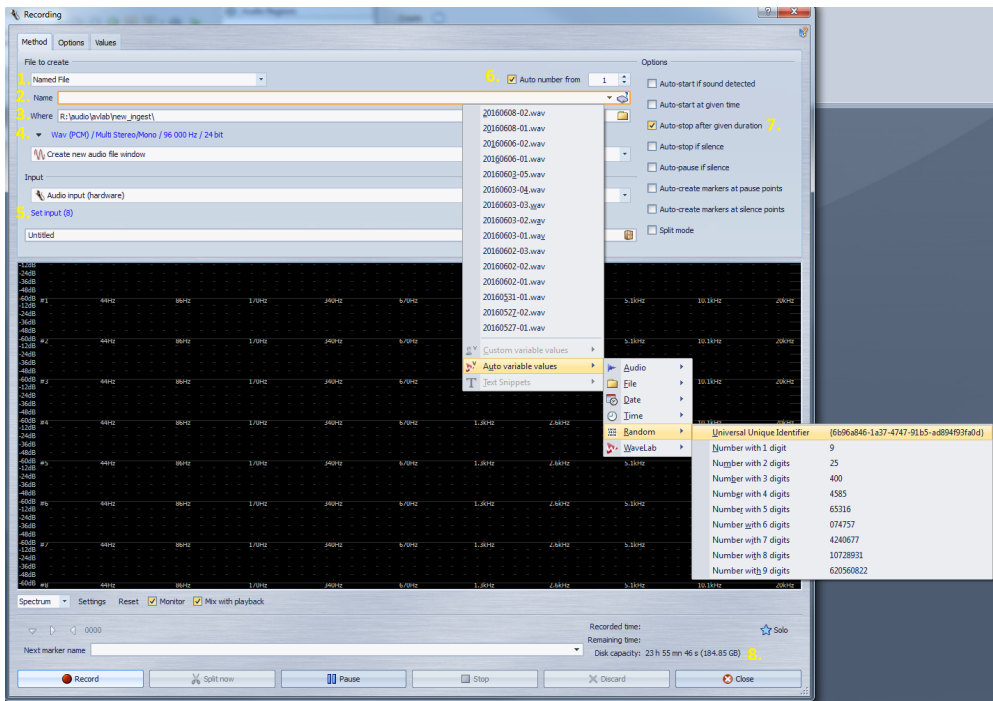
1. The pitch knobs are at "0"
2. The reverse mode is set to auto/ the character that looks like a sideways "u"
3. That Dolby noise reduction is "off"

Place the tapes in the machines with the A (or 1) side facing towards you. If the tape housing does not have a labelled "Side A" or "Side B," consider the side with the item number to be the A side.

Rewind the tape if necessary.

Turn on the ADA and verify that it is set to 96kHz/24bit/Local clock

Turn on the computer and open up Wavelab. Select the record ready window by clicking the red circle at the bottom of the default layout window.



Verify that:

1. You are creating a "named file"
2. You select a UUID and delete the curly-braces around it
3. you save it to R:/audio/avlab/new_ingest
4. Wav (PCM) / Multi Stereo/Mono / 96 000 Hz / 24 bit
5. that you "Set Input (8)" like this:



- a.
6. Auto number from 1
7. Auto-stop is in the proper configuration
 - a. Auto-stop allows us to automatically stop the recording after a given duration. This is helpful because it means that we can add, at the end of the day, another session of tapes that we can then name the next day. Settings for auto-stop can be found in the Record Window->Values tab->Recording programming section->Duration.
 - b. Auto-stop for cassette tapes should be set at 02:00:00
8. Verify there's enough space on the disk
 - a. IT automatically gives us more when we need it, but check anyway

Press "RECORD" in the Wavelab recording window

Press Play on all cassette decks.

SAVING RECORDED FILES

Once all cassette decks have played through both sides they will stop on their own. Once this happens you can press "STOP" in the Wavelab recording window or you can wait until the timer has run out. 4 tabs, representing 4 files/ tapes, will be open in Wavelab.

Processing:

1. Verify that the files are playing at the correct speed and direction.
 - a. Thoroughly check through the entire file to make sure the recording has processed at the proper speed. If the tape runs past 01:26:00, check it after that point to verify there hasn't been a word-clock error
2. Ctrl + S to save

In FileMaker

- Enter Find mode
- Search by audio number (a1234)
 - be sure to get 1 single result
 - if you get more than 1 result, try searching for the audio number in the collection you're working on too
- Click "New Master"
- Enter rawCapture filename in box
 - This only works if the box is the FIRST THING you click in FileMaker
- For cassettes, you shouldn't need to fill out the rest of the form
- click "Export"
 - this triggers two scripts:
 - makes a txt file named by the rawCapture info you input, the text in the file is the aNumber from FM
 - exports <BEXT> chunk descriptive metadata

The screenshot shows a web-based form for the UC Library Audio Collections Database. The form is titled "Master/Service Copy Information" and includes a "Help" button. It contains several sections for data entry:

- Item Information:** Includes fields for Item Number (5632), Collection (UArch 120), University Archives Audio Recordings, Item Title (Population Pollution & Human Survival--), and Date (10/30/1969).
- Master Copy:** Includes fields for Master Copy (A5632/R7), Date (10/30/1969), Population Pollution & Human, and Duration (80:00:0).
- Enter Contents:** Includes fields for Date (2018-09-01), Engineer (Cecilia Wu), Media Brand, Machine, Serial Number, and checkboxes for CD, RR, DAT, and Wav. It also has a "Segments" field and a "CD Test" button.
- Post-processing:** Includes fields for Raw Capture Name - Faces AB (f4f04ec7-27cf-4f9d-b6f2) and Raw Capture Name - Faces CD. It has checkboxes for Reverse, Double speed of, Halve speed of, and Delete for Faces A, B, C, and D. There are "export" buttons for fAB and fCD.
- Disks:** Includes fields for Side A and Side B, with an "export" button.
- Service Copy:** Includes a field for Service Copy.

STORING TAPES AFTER RECORDING

Place a red dot on the item number sticker and return to archival box, in order.

TROUBLESHOOTING

Sometimes the tape decks will start playing a tape then after 3s just stop. Sometimes they'll then continue to play in reverse, stopping soon after because they were just rewound. Either way, if you just do a power cycle (turn it off and on) that usually solves the problem.

If the tape squeals as it plays, the tape has a very serious condition called "sticky shed syndrome." If you hear a tape squealing, stop digitization and set it aside to be baked. Do not fill out the above info.