

First-Aid for Damaged Videotape

Please use this text with our video guide Step 1 to 3. Created on 2012.07.04., Last updated on 2012.07.08

[Disclaimer] This guide is an example of first-aid treatment for damaged home use videotape. There is no guarantee that all videotapes can be saved using this particular treatment. Film Preservation Society will not take any responsibility for any negative results, directly or indirectly, caused by the use of this guide.

● Things You Need

Rubber Gloves for medical use

Mask

Paper & Pen

Ruler

Digital Camera

Two Basins or Buckets

Hard Brush i.e. Toothbrush

Soft Brush

Towel

Percussion Screwdriver

#0 or #00, i.e. Screwdriver

for Eyewear

Cutter

Scissors

Tweezers

Sellotape

● If Available

Distilled Water

Blower

Cutting Mat

Dehumidifier or Circulator

● Others

Hand Drill

Y-shaped Screwdriver

or Star-shaped Screwdriver

VHS-C Adapter

for replaying VHS-C tape

VCR, Monitor, and Headphones

for replay

Introduction

There are multiple formats for magnetic tape such as open reel or Betamax. Here we call the four most popular formats, (a) VHS, (b) VHS-C, (c) Hi8, and (d) MiniDV as Home Use Videotape and introduce first-aid treatment in case of damages caused by natural disasters.

Water damaged home use videotapes especially require to be treated quickly because they will develop mold and bacteria, which might cause stickiness to develop creating fatal injury for replay.

In order to avoid such symptoms, there is a need to carry out the most appropriate treatment as soon as possible (if possible, within 48 hours). However, it is rare for the image and the audio to be completely compromised even if the home use videotape was left sitting in contaminated liquid such as seawater for a few months. Please do not give up, even in such horrible conditions.

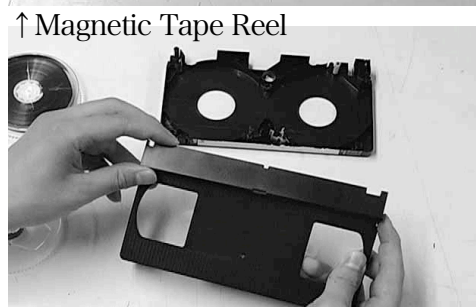
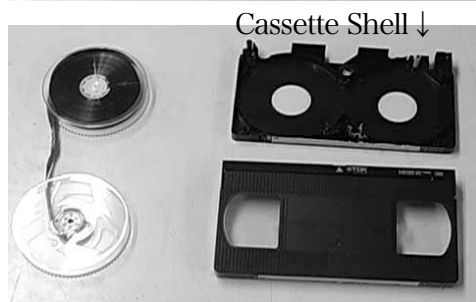
The first-aid treatment we introduce here has been developed as an option for those who may not have technical knowledge or skills. This process does not ensure long term preservation treatment, nor does it guarantee saving the videotapes, but will increase the possibility of avoiding the worst result such as never being able to view the videotape. If anyone is unsure, has rare footage, or any other formats aside from (a) - (d), please contact Film Preservation Society's Film Salvation Project.

Warning:

Please do not place any magnetic material (magnetic necklace, magnets, toys or tools with magnets) near the videotape throughout the entire procedure. It could cause noise on the image.

Video Guide Step 1 Assessment

【Terminology for this guide】



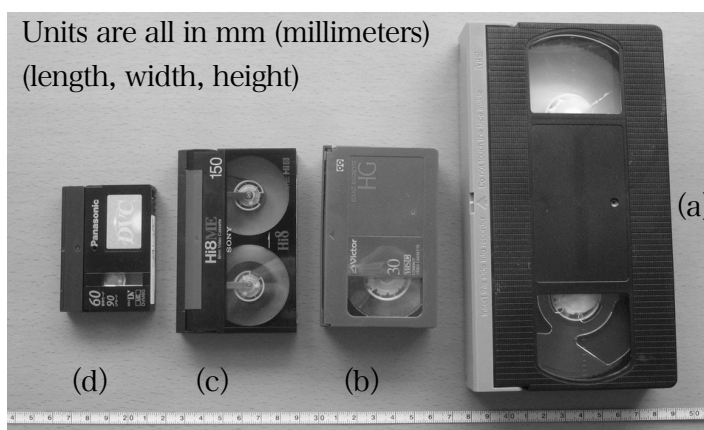
The moveable part is the Lid

[1] Identify videotape format

Home use videotape formats are mainly (a) VHS, (b) VHS-C, (c) Hi8, (d) miniDV. If you have a deck for each format, you can check later if the appropriate first-aid treatment was done, by replaying.

- (a) VHS (189×104×25)
- (b) VHS-C (92×59×23)
- (c) Hi8 (96×63×25)
- (d) miniDV (67×49×13)

Units are all in mm (millimeters)
(length, width, height)



[2] Identify videotape condition

Please exclude any videotape if it fits under any of the categories below.

- A. Only the protection case or the surface of the tape is dirty or wet and the magnetic tape inside of the cassette shell is not affected.
- B. Due to fire, the videotape is melted or warped from physical damage.
- C. Severe mold is identified inside the cassette shell.

Remedy

A. Normally, magnetic tape is protected by two layers, the protection case and the cassette shell. Therefore there is a possibility that the magnetic tape inside has not endured any damages. In that case wiping away the dirt and moisture on the surface should allow the tape to be replayed. Please be careful as to not let the dirt or moisture on the surface to get inside while carrying the videotape.

B. Playing videotape with physical warping is difficult and requires professional work. If only the cassette shell is damaged and there is no damages to ~~on~~ the magnetic tape inside, then taking out the magnetic tape and replacing the cassette shell can possibly make the videotape playable. We recommend that you contact us ahead of time if you make that decision.

C. Trying to play videotape with mold inside the cassette shell can damage your deck. It is difficult to remove the severe mold with the simple and easy washing procedure and it requires professional work.

Video Guide Step 2 Simple & Easy Washing

1. If the surface of the videotape is dirty, wipe away with a towel.
2. Using a digital camera or a sketch, record any text information that accompany the videotape. Washing can erase the text information, so in order to be able to identify which record goes with which videotape, we recommend numbering all videotapes.
3. If there is a back label, cut the label vertically.
4. Remove all of the screws (two to five) on the backside of the videotape. Since compression type videotape is assembled without using any screws, it will not have anything in the screw holes. In that situation, use a hand drill to create a hole in the screw holes to dismantle the tape. Y-shaped and star-shaped screws can be used in a VHS tape. In that situation, use the appropriate screwdriver to dismantle it. Aside from removing the screws, VHS-C requires removing tabs (3 spots) by using a percussion screwdriver.
5. Slowly open the top of the cassette shell. Please open from the top because opening it upside down can cause the magnetic tape reel to pop out or any parts to fall out.
6. Remove the magnetic tape reel and place in a safe location. If the magnetic tape is not on top or at the end, but in the middle, please wash as is. Attempting to rewind before washing increases the risk of spreading dirt. If the magnetic tape is torn, also please wash as is. Repairs will be done after the washing.
7. Remove the each of the parts inside of the cassette shell. Before removing them, to ensure accurate re-assembly, make a record using a digital camera or a sketch. Even with the same videotape format, the parts can differ based on the brand and year it was made.

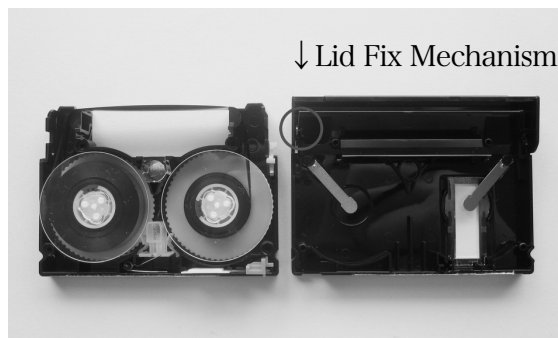
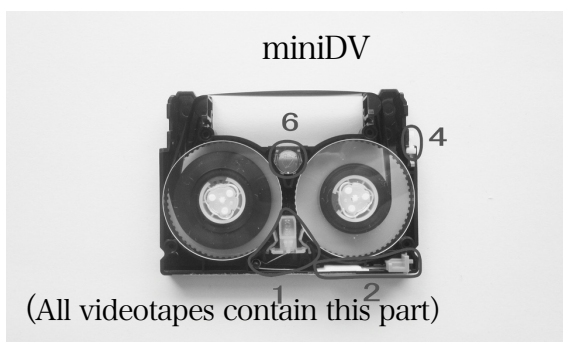
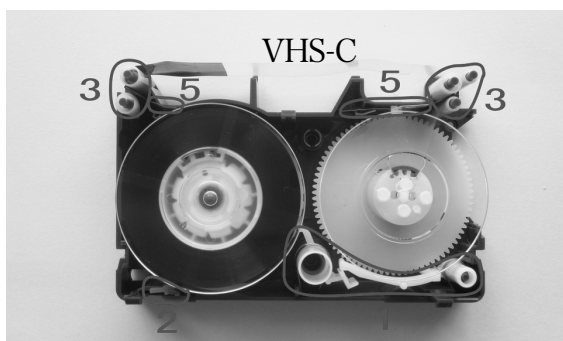
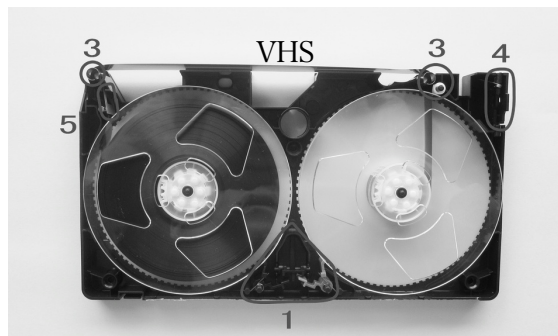
Warning:

Magnetic tape can easily be damaged so please handle with care. Please do not touch the surface of the magnetic tape with your bare hands.

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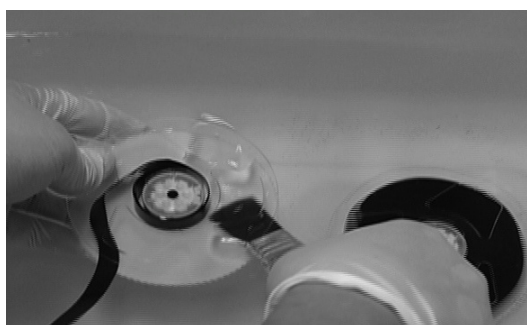
Inside parts of the cassette shell

- 1 Reel Stopper
- 2 Write-protection Tab
- 3 Guide Roller
- 4 Lid Fix Mechanism
- 5 Blade
- 6 Center Part



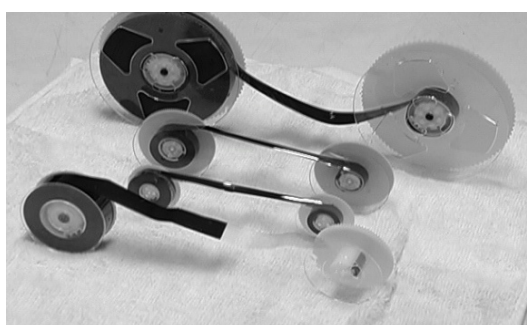
8. Prepare two basins of water (one will be used for washing magnetic tape reel. The other will be used to wash other parts). Because tap water contains chlorine, if possible, we recommend using distilled water to wash the magnetic tape reel.

9. Using a brush, wash all parts except the magnetic tape reel in the vat of water. Please clean off all of the dirt.



10. After washing, dry on a towel.

11. Simply wipe the dirt on the reel of the magnetic tape off with a towel



Warning:
Please do not touch the surface of the magnetic tape.

12. Unspool about two to three rotations of the magnetic tape, place the magnetic tape reel into the basin of water (for the magnetic tape), and rinse slowly as you move it through. If the magnetic tape or the reel is still not clean after this step, use a brush with soft bristles to carefully brush off all of the dirt.

13. Place the cleaned magnetic tape on a towel to dry. The drying can take a few days up to a few weeks. Using a blower to remove the moisture inside the magnetic tape reel can reduce the drying time. Also, placing the magnetic tape vertically can accelerate drying. A place with low humidity, good ventilation, and away from direct sunlight is the most appropriate location for drying (room temperature should not be a problem, but please avoid below freezing environments). Using a circulator or dehumidifier is another option. If it takes too long to dry or you add excessive heat, that can cause uneven drying which can cause noise on the image and/or the sound.

Video Guide Step 3 Assemblage

1. Check if the magnetic tape has dried completely.

- (1) For videotapes with guide roller (VHS, VHS-C) place it back inside the cassette shell.
- (2) Set the magnetic tape inside the cassette shell following the guide roller as it was ~~the~~ originally loaded.
- (3) Manually wind the magnetic tape on to the reel on the opposite side. By winding it, you can check if the magnetic tape is normal.
- (4) The drying is done if the reel which had the magnetic tape does not contain any moisture.

Warning:

The drying can take a few days up to a few weeks. If there is still some moisture, let it dry for a little while longer.

2. Repair the tape if the magnetic tape contains tears or cuts.

- (1) Place the edges of the severed area on top of each other and cut. Using a ruler will make it easier to cut.
- (2) Tape the newly cut edge together, making sure there is no space between the edges, using sellotape.
- (3) Cut off any excess sellotape using scissors.

Warning:

Make sure to only place the sellotape at the base on one side. The base side is the matt side inside of the roll. If you tape the other side, it can cause the image to not show or it may not be possible to play the videotape.

3. Put back all of the parts that were taken from the inside of the cassette shell. It is efficient to use tweezers for such detailed work.

Warning:

When putting back the reel stopper, please check to make sure the reel and the reel stopper are engaged correctly.

[If unable to re-assemble all of the parts]

If you have a spare videotape of the same format that is not damaged, by exchanging the entire cassette shell, you can re-assemble without taking out the small parts.

4. After putting all of the pieces back, close the top of the cassette shell. Holding up the lid will make it easier to close

5. After closing the top of the cassette shell, check if the lid opens smoothly. Pushing the lid fixing part will allow you to check the opening and closing of the lid.

6. Fix the backside of the videotape by putting back the screws. For compression type videotapes without screws, fix it by taping both sides.

This ends all of the first-aid treatment for damaged home use videotapes. We recommend that you check playback or dubbing as soon as possible after treating the videotape.

[Precautions for checking playback]

If the videotape is still dirty or has physical warping, it can partially cause noise on the image and/or the sound. There are two possibilities that cause noise, a problem with the videotape itself or a problem with the head of the playback deck. If it is the videotape itself, we recommend going through simple and easy washing procedures again. If there is still noise after multiple cleanings, the noise may have existed before getting damaged. If there is noise when playing back videotape that is not damaged, then there is a high chance that there is a problem with the head of the playback deck. We recommend using a commercially available cleaning tape.

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* We offer workshops on demand for First-Aid.

