Panasonic

User Guide

High-Definition Video Restoring Software
AVCCAM Restorer V3.0
for Macintosh®

Before use, please read these instructions completely.

Before Use

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Before Use

Introduction

■ Contents of this user guide
- The description of Macintosh® in this user guide is based on the Mac OS X 10.5.2 screen.
- Please note that the explanations and screen images in this user guide may differ from the actual explanations and screen images due to version upgrades of the software and the use environments of personal computers.

■ Terms used in this user guide
- In this user guide, the AVCCAM Restorer V3.0 is referred to as "AVCCAM Restorer".

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Overview

What can AVCCAM Restorer do?

The AVCCAM Restorer is software for restoring inconsistencies in video data recorded on an SD card.

❖ The software mainly targets inconsistent data created under the following conditions.
- when the camera recorder fails to complete writing of the file in the normal manner due to the power being cut or the like, or when the user answers [No] to a [REPAIR CLIP? YES/NO?] message displayed upon re-inserting the SD card.
- when the writing of the recorded video data to the SD card has failed.
- when a "DATA ERROR" message is displayed by the 3D camera-recorder.

● **Note that it will not always be possible to restore the data using this software.**
● **Occasionally, the software restore SD card even the card is in normal condition due to strengthening additional information. In this case, there is no influence to preserved clips even if the restoration is applied or not.**
● **This software targets recorded data that has been damaged for restoration. It is not capable of performing processing to restore deleted data.**

● **It will not always be possible to restore the thumbnail pictures. Note, however, that when an SD card is set in the camera-recorder on completion of restoration processing and the playback format is set to the format of the restored clip, thumbnail images will be displayed (except in the case of AG-3DA1). If the playback format fails to match the format of the restored clip, or is AG-3DA1, the [!] mark is displayed.**
● **For details about how to use camera-recorder, see the operating instructions.**
● **For some inconsistencies, it will not be possible to recover the index, the shot mark, and other meta-data.**
● **Clips which are the result of continuous recording over a long period may be split into a number of clips for restoration.**
● **When a camera-recorder or USB card reader not capable of receiving output data from this software is connected to the personal computer, it is not possible to record to the media, and consequently, not possible to restore the inconsistent data.**
● **This software sometimes performs further restoration after initial restoration by the camera recorder. This further restoration is performed when a detailed analysis of the inconsistencies shows that further restoration is possible.**
● **When an SD card which has undergone restoration using this software is inserted into the camera-recorder and the restored content is checked using the thumbnail window, the thumbnails may be displayed in an order which differs from the order in which the clips were recorded.**

System requirements

■ **AVCCAM Restorer V3.0**

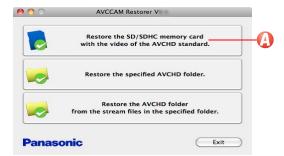| CPU of Personal computer	Intel® Core™ Duo 2.0 GHz or higher CPU (including compatible CPU)
OS	Pre-installed Mac OS X 10.4 (Intel Mac) Mac OS X 10.5 (Intel Mac) Mac OS X 10.6 (Intel Mac) Mac OS X 10.7 (Intel Mac) Mac OS X 10.8 (Intel Mac)

● Even if the system requirements mentioned in this user guide are fulfilled, some personal computers cannot be used.
● When devices are connected through USB hubs or by using extension cables, proper operation is not guaranteed.
● Operation is not guaranteed in a multi-boot environment.
● Log on with an administrator account before using this software.
● Operation on a multi-monitor system is not guaranteed.
● The operation of this software is not guaranteed if the drive or folder targeted for restoration is simultaneously accessed by other software. Be sure that any other software has finished its operations before using this restoration software.

● This software can handle the contents on HFS Plus, FAT16 and FAT32. Operation for the contents on other file systems is not guaranteed.
● This software will only run on personal computers having an internal clock set to times after 0.00 on January 1, 1970. On personal computers having a clock which is set to any time outside this range, the software may run abnormally, or fail to run at all.
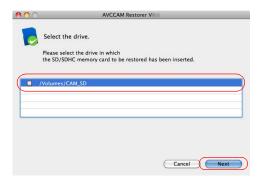
Operation

Start Up and Shut Down of AVCCAM Restorer

■ Restoring Video on SD/SDHC/SDXC memory card.

❖ When the personal computer has an SD card slot, insert the SD card into the slot. Alternatively, connect the computer to a USB card reader with the SD card inserted (see the respective operating instructions for how to connect the card reader and personal computer).

❖ It is also possible to restore data on an SD card inserted into a camera-recorder that is connected to the computer (see the camera-recorder operating instructions for details about how to connect the camera-recorder to the personal computer).

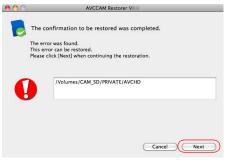### 1 Double click, AVCCAM Restorer application.

2 Click Ⓐ.

3 Select the connected SD card drive and then select [Next].

After displaying a confirmation window, detection of the data for restoration begins. (Note that when no error for restoration is found, a message indicating that detection has finished will be displayed. At this point, click on [Finish] to return to the start-up window. And when no data for restoration is found or when restoration cannot be made, a error message will be displayed. At this point, click on [Select] to return to the start-up window.)

4 **When data for restoration is found, a confirmation message is displayed. Click on [Next] to proceed.**

The restoration then begins.
Note, however, that if content on the card has been recorded using the 3D camera-recorder, a prompt to switch to the other simultaneously used card will appear, irrespective of whether there is content to be restored. (→ See A onwards)

5 **When the window indicating that restoration has finished is displayed, click [Finish] to return to the start-up window.**

• The restored video can be checked using the camera-recorder.

A **When content on the card has been recorded by the 3D camera-recorder, the card switching prompt will appear. Either switch the SD card to the simultaneously used SD card, or insert this SD card in a different drive, select that drive, and then click [Next].**

B **When the data for restoration is found, a further confirmation message appears. Click [Next].**

The restoration then begins.

When the initially inserted SD card requires restoration, the SD card switching prompt will appear again. Either switch to the initial SD card or insert the initial SD card in a different drive, select that drive, and then click [Next].
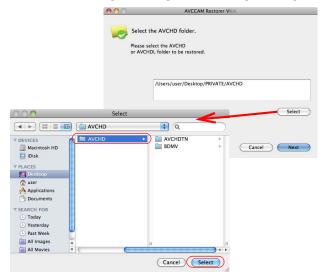
C **When the window indicating that restoration has finished is displayed, click [Finish] to return to the start-up window.**

• The restored video can be checked using the 3D camera-recorder.

Note, this software does not restore thumbnail images, so clips repaired with this software will be displayed without a thumbnail image (exclamation mark displayed) by the 3D camera-recorder, but playback is possible. For details, please see the 3D camera-recorder operating instructions.

■ **Restoring video held on the personal computer**
This software can also be used to restore inconsistent video data acquired.

● **This function does not work on Mac OS X 10.8 (Intel Mac).**

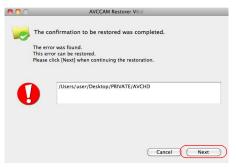1) **Click** **B** **on the AVCCAM Restorer in the start-up window.**

2) **Select a folder containing data on the personal computer, and click [Select].**

• Select either the [AVCHDL] folder or the [AVCHD] folder.

3) **Click [Next].**
A confirmation window is displayed, and the detection of data for restoration begins. (Note that when no error for restoration is found, a message indicating that detection has finished will be displayed. At this point, click on [Finish] to return to the start-up window. And when no data for restoration is found or when restoration cannot be made, a error message will be displayed. At this point, click on [Select] to return to the start-up window.)

4) When the data for restoration is found, a further confirmation message appears. Click [Next].

The restoration then begins.
Note, however, that if content on the card has been recorded using the 3D camera recorder, you will be prompted to specify content recorded on the simultaneously used SD card, irrespective of whether there is content to be restored. (→ See A) onwards)

5) When the window indicating that restoration has finished is displayed, click [Finish] to return to the start-up window.

• The restored video can be checked using iMovie '11. Also, in Mac OS X 10.4 to 10.6, you can check clips other than PS1080/60P, 50P, SA480/60i and SA576/50i on the camera recorder if the video has been restored using the AVCCAM viewer. (→ page 11)

A) When content on the card has been recorded by the 3D camera-recorder, a prompt for selecting simultaneously recorded content will appear. Select the appropriate content folder, then click [Next].

B) When the data for restoration is found, a further confirmation message appears. Click [Next].

The restoration then begins.

C) When the window indicating that restoration has finished is displayed, click [Finish] to return to the start-up window.

• The restored video can be checked as a 2D-video using iMovie '11. With Mac OS X 10.4 to 10.6, videos restored using AVCCAM Viewer can be checked using the 3D camera-recorder. (→ page 13)

Note, this software does not restore thumbnail images, so clips repaired with this software will be displayed without a thumbnail image (exclamation mark displayed) by the 3D camera-recorder, but playback is possible. For details, please see the 3D camera-recorder operating instructions.
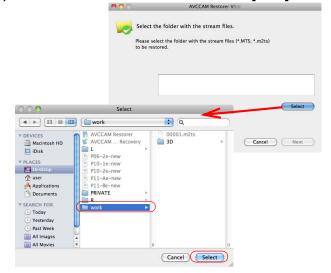
■ **Restoring AVCHD files from stream files only**

If only stream files remain on a personal computer or the like, they can be restored using this software.
However, if a stream is located in \PRIVATE or a folder under \PRIVATE, it cannot be restored. In this case move the relevant stream to a folder outside \PRIVATE, specify this folder, and carry out restore.
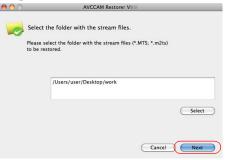
1) Click ⓒ on the AVCCAM Restorer in the start-up window.

2) Select the stream file folder and click [Next].

3) Click [Next].

![AVCCAM Restorer V— Select the folder with the stream files. Please select the folder with the stream files (*.MTS; *.m2ts) to be restored. /Users/user/Desktop/work Select Cancel Next]

4) When data for restoration is found, a confirmation message is displayed. Click on [Next] to proceed. The restoration then begins.

Note, however, that if content has been recorded using the 3D camera-recorder, a prompt to specify the other simultaneously recorded content (on another SD card) is displayed irrespective of whether there is content to be restored. (→ See A onwards)
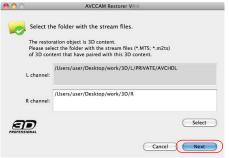
![AVCCAM Restorer V— The confirmation to be restored was completed. The error was found. This error can be restored. Please click [Next] when continuing the restoration. /Users/user/Desktop/work/PRIVATE/AVCHDL Cancel Next]

5) When the window indicating that restoration has finished is displayed, click [Finish] to return to the start-up window.

• The restored video can be checked using iMovie '11. Also, in Mac OS X 10.4 to 10.6, you can check clips other than PS1080/60P, 50P, SA480/60i and SA576/50i on the camera recorder if the video has been restored using the AVCCAM viewer.

■ **To check restored video with the camera-recorder**

Import restored video into AVCCAM Viewer and then copy it onto an SD card. For details, please see the AVCCAM Viewer operating instructions. AVCCAM Viewer can be downloaded free of charge from the Panasonic website. For details please see the Panasonic website.
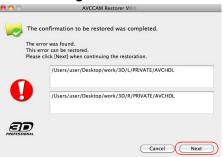<http://pro-av.panasonic.net/>

If you are not using AVCCAM Viewer, follow the steps below.

1) Format the SD card with the camera-recorder with the same SystemFreq (59.94 Hz/50 Hz) as the mts file.

2) Copy the mts file to PRIVATE\AVCHD\BDMV\STREAM on the SD card.
(The extension of m2ts files will change to mts when they are copied.)

3) Restore the SD memory card using AVCCAM Restorer. (→ page 6)

A) When content has been recorded by the 3D camera-recorder, a request for selection of the content recorded simultaneously is displayed. Select the content folder and then click [Next].

B) When the data for restoration is found, a further confirmation message appears. Click [Next]. The restoration then begins.

C) When the window indicating that restoration has finished is displayed, click [Finish] to return to the start-up window.

• The restored video can be checked as a 2D-video using iMovie '11. With Mac OS X 10.4 to 10.6, videos restored using AVCCAM Viewer can be checked using the 3D camera-recorder. (→ page 13)

Note, this software does not restore thumbnail images, so clips repaired with this software will be displayed without a thumbnail image (exclamation mark displayed) by the 3D camera-recorder, but playback is possible. For details, please see the 3D camera-recorder operating instructions.

■ **About the 3D contents file name**
In order to use a 3D camera recorder to check video restored from stream files or recovered from AVCCAM SD Card File Recovery, the files on the left and right must have a common element in their file names. Before restoring files using the AVCCAM Restorer, ensure that the files on the left begin in sequence with 20000.mts, and the files on the right with 30000.mts, and that the last four digits are the same for either side.

■ To check restored video with the 3D-camera recorder

Import the left and right contents into AVCCAM Viewer, and then copy them onto an SD card. For details, please see the AVCCAM Viewer operating instructions.
AVCCAM Viewer can be downloaded free of charge from the Panasonic website. For details please see the Panasonic website.
<http://pro-av.panasonic.net/>

If you are not using AVCCAM Viewer, follow the steps below for each contents.

1) Format the SD card with the camera-recorder with the same SystemFreq (59.94 Hz/50 Hz) as the mts file.

2) Copy the mts file to PRIVATE\AVCHD\BDMV\STREAM on the SD card.
(The extension of m2ts files will change to mts when they are copied.)

3) Restore the SD memory card using AVCCAM Restorer. (→ page 6)

To close the software

Click the [Exit] button in the lower right portion of the start-up window.