

# Panasonic®

## Operating Instructions/取扱説明書

Video Encoder Board/ビデオエンコーダーボード

Model No. **AJ-YDX30G**

ENGLISH

日本語

GPL/LPGL



Before operating this product, please read the instructions carefully and save this manual for future use.

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- 取扱説明書をよくお読みの上、正しく安全にお使いください。
- 保証書は、「お買い上げ日・販売店名」などの記入を確かめ、取扱説明書とともに大切に保管してください。

**CAUTION:**

These servicing instructions are for use by qualified service personnel only. To reduce the risk of fire or electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

- To avoid fire, electric shock, damage or malfunction to your equipment, do not disassemble or remodel.
- Immediately stop using the card if you notice smoke, strange smells or sounds, or if liquid gets into the card.

Pursuant to at the directive 2004/108/EC, article 9(2)

Panasonic Testing Centre

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N52

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**Note concerning illustrations in these instructions**

- Illustrations (camera-recorder, menu screens, etc.) in these operating instructions differ slightly from the actual camera-recorder.

**Terminology**

- Both SD Memory Cards and SDHC Memory Cards as referred to as iSD Memory Cards in these operating instructions.
- Memory cards with the "P2" logo (optional AJ-P2C064X, etc.) are referred to as "P2 cards" in these operating instructions.
- Video that is created during a single recording operation is referred to as a *iclipi* in these operating instructions.

This product is licensed under the AVC patent portfolio license for the personal and non-commercial use of a consumer to (i) encode video in compliance with the AVC Standard ("AVC Video") and/or (ii) decode AVC Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed to provide AVC Video. No license is granted or shall be implied for any other use. Additional information may be obtained from MPEG LA, LLC. See <http://www.mpegla.com>.

**Software information**

1. This product includes GNU General Public License (GPL) and GNU Lesser General Public License (LGPL) software. Customers are granted permission to acquire, modify, and redistribute the source code of these software. Details on the GPL/LGPL can be found on the supplied CD-ROM under the LDOC folder (original English text only). For details on acquiring the source code, visit the following website.  
<http://panasonic.biz/sav/>  
Do not contact Panasonic with questions regarding the content of the acquired source code.

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## Caution

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- Do not touch this product with wet hands.
- Do not drop this product or subject it to strong shock.
- Avoid touching the product components and board pattern. (Follow these precautions to protect against damage from electrostatic shock.)

## Overview

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The AJ-YDX30G (hereafter “this board”) is a video encoder board for a memory card camera recorder (hereafter “P2 cam”).

If proxy data cannot be recorded even when this board is installed correctly, then firmware update on the main unit may be necessary.

English: <http://pro-av.panasonic.net/>

## Features

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Installation of this board enables recording of high resolution proxy video.

Material filmed with the P2 cam can be made into compressed data files and recorded in an area separate from the material.

Supported formats for video recording include MPEG4 as well as the high resolution H.264/AVC, and for audio recording, AAC as well as uncompressed audio (LPCM) are supported.

For file formats, selection of the traditional MP4 format is also possible in addition to the MOV format that allows non-linear editing. An audiovisual file and a real-time metadata file (time code, user's bit and UMID information) can be recorded simultaneously in a P2 card and an SD memory card.

Filmed material can be recorded as data files of a smaller size than the original materials, allowing checking of clips or editing to be done effectively.

## Supported models

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Memory card camera recorder: AJ-HPX3100G

## Bundled items

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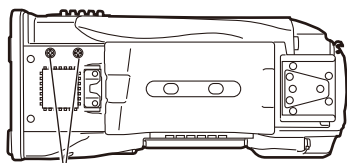
2.6 mm screws × 4

# Installation in AJ-HPX3100G

## CAUTION:

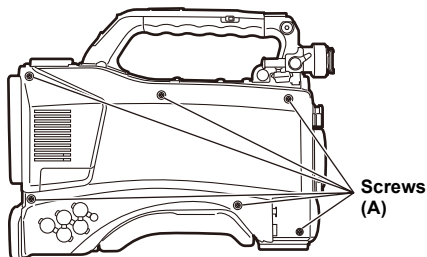
These servicing instructions are for use by qualified service personnel only. To reduce the risk of fire or electric shock do not perform any servicing other than as directed in the operating instructions unless you are qualified to do so.

- 1 Make sure that the power of AJ-HPX3100G is turned OFF. Confirm that there is no battery, or no input to the DC IN terminal.
- 2 Remove the two screws (A: 3.0 mm diameter black screws) from the bottom of the AJ-HPX3100G.



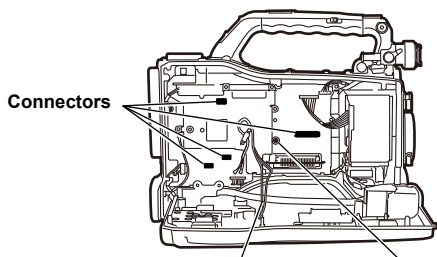
Screws (A)

- 3 Remove six screws (A) on the left side viewed from the front of the AJ-HPX3100G, and remove the L side panel. Be careful not to put load on the wires or connectors when you remove the L side panel.



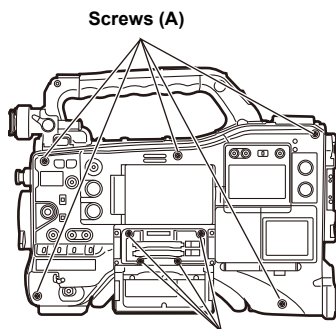
Screws (A)

- 4 Remove one screw (B: 2.6 mm diameter silver screw) from the inside of the left side.



Wire bundle      Connectors      Screws (B)

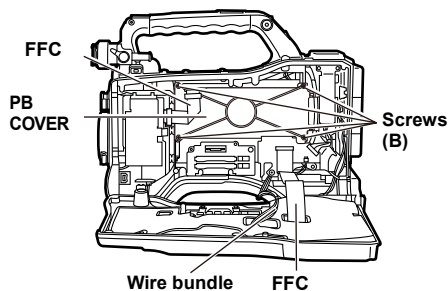
- 5 Remove five screws (A) and four screws (C: 2.6 mm diameter black screws) on the right side viewed from the front of the AJ-HPX3100G, and then remove the R side panel. Be careful not to put load on the wires and FFC when you remove the R side panel.



Screws (A)

Screws (C)

- 6 Remove the four screws (B) mounted on the PB COVER.



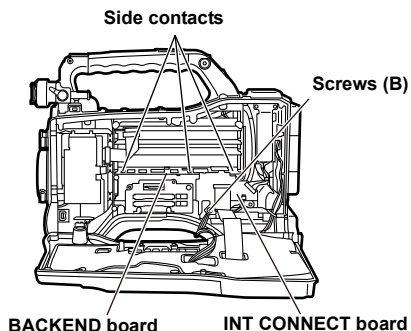
FFC

PB COVER

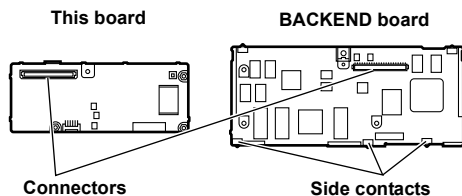
Screws (B)

Wire bundle      FFC

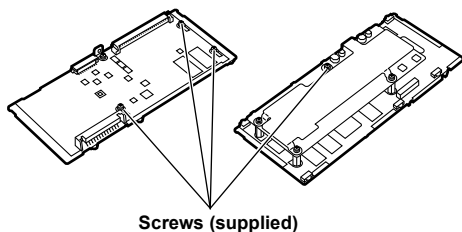
- 7** Remove one screw (B), and first remove the INT CONNECT board, then remove the BACKEND board. At this time, be careful not to touch the side contacts.



- 8** Insert the connector of this board into the connector of the BACKEND board removed in 7.



- 9** Fasten the BACKEND board and this board with four screws (supplied).



- 10** Insert the BACKEND board into the original position, and fasten with the screw (B) at the position removed in step 4.

- 11** Insert the INT CONNECT board into the original position, and fasten with the screw (B) at the position removed in step 7. When inserting these boards, do so slowly so that they are inserted straight without tilting. Also be careful not to pinch cables.

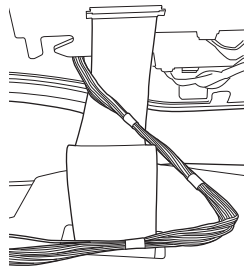
If the boards are inserted tilted, then the camera recorder may have recording problems etc.

- 12** Return the PB COVER to the original position, and fasten with the screws (B) at the positions removed in step 6.

- 13** Return the side panel to the original position, and fasten with the screws (A and C) at the positions removed in steps 2, 3, and 5.

**<Notes>**

- Be careful not to put load on the wires or connectors when you attach the L side panel.
- When you attach the R side panel, handle the cords as shown below.



**<Note>**

Use the +No.2 screwdriver for removing and attaching of the screws (A), and +No.1 screwdriver for the screws (B) and (C).

# Proxy configuration

## Configuration menu

To record proxy data with the P2 cam, perform configuration on the <PROXY SETTING> screen in the SYSTEM SETTING page of the configuration menu.

When this board is installed in the P2 cam, the following configuration menu items are enabled.

PROXY SETTING screen

Item/ Data storage	Variable range	Remarks
REC MEDIA  - C U F -	OFF P2 P2&SD	Select media for proxy data recording. <b>OFF:</b> No proxy data is recorded. <b>P2:</b> Proxy data is recorded on the P2 card. <b>P2&amp;SD:</b> Proxy data is recorded on both the P2 card and the SD memory card.
REC MODE (HD)  - C U F -	STD 2CH MP4 LOW 2CH MOV HQ 2CH MOV HQ 4CH MOV SHQ 2CH MOV	Specify the recording mode of proxy data recording. (HD mode only) For details of each mode, see "Recording modes and recording signals (video and audio)" (page 7).
REC MODE (SD)  - C U F -	STD 2CH MP4 LOW 2CH MOV	Specify the recording mode of proxy data recording. (SD mode only) For details of each mode, see "Recording modes and recording signals (video and audio)" (page 7).
TC SUPER  - C U F -	OFF UPPER LOWER	Specify an option for superimposing the time code display on the video recorded as proxy data. <b>OFF:</b> Time code display is not superimposed on the recorded video. <b>UPPER:</b> Time code display is superimposed on the upper area of the recorded video. <b>LOWER:</b> Time code display is superimposed on the lower area of the recorded video.

Item/ Data storage	Variable range	Remarks
PROXY DISP  - C U F R	OFF ON	Select whether to display a message on the Viewfinder and the LCD monitor when starting proxy data recording. <b>OFF:</b> No message is displayed. <b>ON:</b> A message is displayed. <b>&lt;Notes&gt;</b> ● It is also displayed on VF INDICATOR screen. ● Write/read cannot be done on the SD Memory Cards unless VF MENU R/W item is set to ON in the <SD CARD R/W SELECT> screen of FILE page.
STREAMING MODE  - C U F -	OFF RTP HTTP	Selects the mode for the streaming function. <b>OFF:</b> Stops the streaming function. <b>RTP:</b> Selects RTP mode. <b>HTTP:</b> Selects HTTP live streaming mode. <b>&lt;Note&gt;</b> This is displayed only when the wireless LAN function is enabled. For further details, refer to the User Guide of the Wireless LAN Upgrade Software Key (AJ-SFU3100G, optional).

\_\_\_\_\_ is the factory setting mode.

- Proxy data cannot be recorded in the following modes even if the REC MEDIA item is set to "P2" or "P2&SD".
  - ◆ INTERVAL REC (including ONE SHOT REC)
  - ◆ LOOP REC
- In ONE CLIP REC mode, when a clip can be recorded combined with the previous clip (when "1\*CLIP" is displayed), the proxy function cannot be set. Close the menu once, hold down the STOP button for about 2 seconds to end clip consolidation, and try again.
- Changes may occur to the PROXY SETTING menu when using a P2 camera with this board loaded to read SD memory card data written from the <SD CARD READ/WRITE> screen of the FILE page in the SETTING MENU of a P2 camera that does not have this board loaded.

## Checking settings

You can confirm the menu values of REC MEDIA, REC MODE, and TC SUPER on the FUNCTION screen of MODE CHECK by pulling MARKER SEL or MODE CHK/MENU CANCEL switch of the P2 cam toward you 3 times.

## Checking version information

The following versions are displayed on the <DIAGNOSTIC> screen in the MAINTENANCE page of the configuration menu.

Item/ Data storage	Variable range	Remarks
PROXY FPGA		Displays the FPGA version of the proxy board.
- - - -		
PROXY SOFT		Displays the software version of the proxy board.
- - - -		

## Recording modes and recording signals (video and audio)

Recording modes	Video			Audio		
	Resolution	Codec	Bit rate	Codec	Number of channels	Bit rate per channel
<b>STD 2CH MP4</b>	320 × 240 (QVGA)	MPEG-4 Simple Profile	1500 kbps	AAC-LC	2CH	64 kbps
<b>LOW 2CH MOV</b>	1080i mode 480 × 270 480-59.94i mode 352 × 240 (SIF_NTSC) 576-50i mode 352 × 288 (SIF_PAL)	H.264 Baseline Profile	800 kbps	AAC-LC	2CH	64 kbps
<b>HQ 2CH MOV</b>	640 × 360	H.264 High Profile	1500 kbps	AAC-LC	2CH	64 kbps
<b>HQ 4CH MOV</b>	640 × 360	H.264 High Profile	1500 kbps	AAC-LC	4CH	64 kbps
<b>SHQ 2CH MOV</b>	960 × 540	H.264 High Profile	3500 kbps	Linear PCM	2CH	768 kbps

## Recording proxy data

Set the REC MEDIA item to “P2” or “P2&SD” and then press the REC button to start proxy data recording together with material recording.

To display the recording information of proxy data on the Viewfinder of the P2 cam, select the PROXY DISP item from the P2 cam menu, the <PROXY SETTING> screen of the SYSTEM SETTING page, or the <VF INDICATOR> screen of the VF page, and set it to “ON”.

When recording is started, “PROXY REC P2” or “PROXY REC P2&SD” is displayed.



# Recording on SD memory cards

To record proxy data, use Panasonic SD Memory Cards or SDHC Memory Cards with a class specification of class 2 or higher.

For the latest information not available in the Operating Instructions, visit the support desk at the following website.

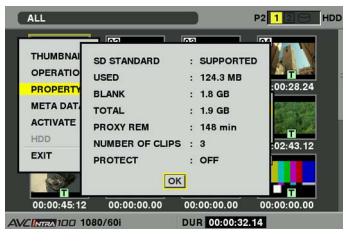
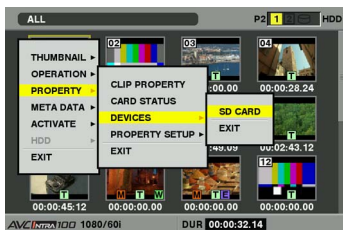
English: <http://pro-av.panasonic.net/>

Make sure to format the SD memory card on the P2 cam when recording the proxy data on to the SD memory card.

- For more information about handling of SD memory cards, see the P2 cam's instruction manual.

## Checking an SD Memory Card

1. Insert an SD memory card into the P2 cam.
2. Press the THUMBNAIL button to display the thumbnail screen.
3. Press the THUMBNAIL MENU button.
4. Select PROPERTY → DEVICES → SD CARD, using the cursor buttons and the SET button.



- Format status is displayed under “SD STANDARD” item.  
If “NOT SUPPORTED” is displayed, format the card using the P2 cam.
- Check the remaining recording time of proxy data with the PROXY REM item.  
Remaining of the SD memory card (PROXY REM) that is displayed can be a guideline to the recording remainder of the proxy, but it may be different from the actual available space. Recordable time may be greatly small compared to the available space when short recording is repeated.  
Also, it will display “999min” if the remainder is exceeding 999 min.  
When proxy data is not recorded on the SD memory card, the remaining recording time is not displayed.
- Check the number of clips recorded on the SD memory card by selecting the NUMBER OF CLIPS item.  
If the recorded number of clips exceeds 1,000, proxy data recording will not be performed, even if the SD memory card still has free space.
- Shot mark and text memo cannot be added to the clips on the SD memory card.
- Proxy data recorded on the SD memory card will not be deleted by deletion of the clips recorded on the P2 card from the thumbnail screen of the P2 cam.
- The proxy data cannot be recorded onto the SD memory card with version upgrade data for the P2 cam.

### <Notes>

- You can also check the remaining recording time on the MODE CHECK screen of the Viewfinder or the LCD monitor while recording on the SD memory card.
- When proxy data cannot be recorded on the SD memory card even when the REC MEDIA item on the <PROXY SETTING> screen of the configuration menu is set to P2&SD, “SD CARD WRITE ERR” is displayed when recording is started. At this time, check the SD memory card. See “Error displays regarding recording of proxy data” (page 12) for details.
- Data erased by formatting cannot be restored, so be sure to perform the format after first checking the data.

## Formatting an SD memory card

1. Insert an SD memory card into the camera recorder.
2. Press the THUMBNAIL button to display the thumbnail screen.
3. Press the THUMBNAIL MENU button.
4. Select OPERATION → FORMAT → SD CARD → YES, using the cursor buttons and the SET button.

This completes formatting of the SD memory card.

## Approximate recording time for proxy data recording

Recording modes	Total recording rate	Recording time (for 1GB)
STD 2CH MP4	Approx. 1650 kbps	Approx. 78 minutes
LOW 2CH MOV	Approx. 950 kbps	Approx. 135 minutes
HQ 2CH MOV	Approx. 1650 kbps	Approx. 78 minutes
HQ 4CH MOV	Approx. 1780 kbps	Approx. 72 minutes
SHQ 2CH MOV	Approx. 5060 kbps	Approx. 25 minutes

(Reference values when Panasonic brand SD memory cards or SDHC memory cards are used for continuous recording. Actual recording time depends on the kind of scenes and the number of clips.)

## PROXY Recording in ONE CLIP REC mode

PROXY recording is also possible in ONE CLIP REC mode. As PROXY data is also similarly compiled into a combined clip, the P2 viewer can also handle this data as a single clip. However, note the following points when recording PROXY data to a SD memory card.

- If the SD memory card is removed and replaced while combining to the clip, the PROXY is not recorded to the next SD memory card until the clip stops being combined. Check that there is sufficient space and also the number of files (recordable up to a maximum of 1000 clips) before use. In the event that the SD memory card is replaced while combining, continue recording the PROXY by pressing and holding the STOP button for about 2 seconds to stop combining and to start recording to a new clip.
- If the SD memory card is stopped while recording, the PROXY data will not match the clip data recorded to the P2 card and will be incomplete.
- The parts of PROXY setting menu are restricted when combining to the clip. Press and hold the STOP button for about 2 seconds to stop combining to the clip when switching this menu.

# Checking proxy data

- **P** indicator is displayed for a clip of material that incorporates proxy data.
- The details of recorded proxy data can be checked from the properties of the clip. For operation methods, see "Checking detailed information of proxy data" (page 11).
- Proxy data is recorded on a P2 card and/or to an SD memory card as an audiovisual file and a real-time metadata file.

## Audiovisual file:

XXXXXXXXX.MP4

or,

XXXXXXXXX.MOV

## Real-time metadata file:

XXXXXXXXX.BIN

Time code, user's bit and UMID information are recorded for each frame.

Check the proxy data using the P2 viewer. You may not be able to check depending on the version of the P2 viewer. For information on the P2 viewer, please visit: English <http://pro-av.panasonic.net/>

## <Note>

Some P2 devices handle clips with proxy data recorded by installing this board as unknown clips. Therefore **?** (unknown clip indicator) is displayed on thumbnails and the following operations are disabled. (Excluding STD, 2CH, and MP4 modes.)

- DELETE
- REPAIR CLIP
- RE-CONNECTION
- COPY
- EXCH.THUMBNAIL
- Addition or deletion of TEXT MEMO and SHOT MARK

Nevertheless, playback is possible. Also, these devices display a clip with proxy data, which is made of multiple clips consolidated, and is displayed as individual incomplete clips (with **!** mark). (Excluding STD, 2CH, and MP4 modes.)

## Checking detailed information of proxy data

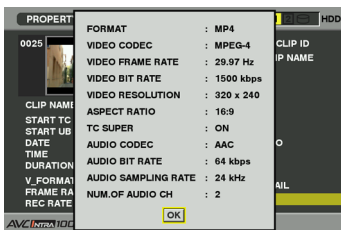
Operation methods and panels may be different depending on the model or version of the P2 cam.

1. Press the THUMBNAIL button.  
The thumbnail screen is displayed on the LCD monitor.
2. Press the THUMBNAIL MENU button, and from the thumbnail menu, select PROPERTY → CLIP PROPERTY.

A screen like the following will be displayed, then place the pointer on "PROXY" using the cursor buttons.



3. Press the SET button.  
Details of proxy data like the following will be displayed.



### Format:

Displays the file format of recorded data.

### Video codec:

Displays the video codec information of recorded data.

### Video frame rate:

Displays the video frame rate information of recorded data.

### Video bit rate:

Displays the video bit rate information of recorded data.

### Video resolution:

Displays the video resolution of recorded data.

### Aspect ratio:

Displays the aspect ratio of recorded data.

### TC super:

Displays whether TC (time code) display is superimposed on recorded video.

### Audio codec:

Displays the audio codec information of recorded data.

### Audio bit rate:

Displays the audio bit rate information of recorded data.

### Audio sampling:

Displays the audio sampling rate information of recorded data.

### Number of audio channels:

Displays the number of audio channels of recorded data.

# Error displays regarding recording of proxy data

If an error occurs during proxy data recording, refer to the following for the appropriate action.

Error display (Viewfinder and LCD monitor)	Operation and causes	Action
PROXY BOARD ERROR or, PROXY REC WARNING	<p><b>Recording of the proxy data will stop, but recording of the material will continue.</b></p> <ul style="list-style-type: none"> <li>● Problem in this board (PROXY BOARD ERROR)</li> <li>● Problem in proxy data (PROXY REC WARNING)</li> <li>● If an error occurs in recording the proxy data, proxy data in the recording are processed as follows.               <ul style="list-style-type: none"> <li>◆ P2 data recorded on the P2 card is deleted.</li> <li>◆ Proxy data recorded on the SD memory card cannot be restored.</li> </ul> </li> </ul>	<p>The proxy data is not recorded correctly. Check the playback of the record after turning off the power of the P2 cam once and turning it on again.</p>
NEAR END (SD)	<p><b>Recording of the material and proxy data continues.</b></p> <ul style="list-style-type: none"> <li>● Remaining recording space of the SD memory card is low. (As a guide, less than about 1 minute)</li> </ul>	<p>Insert a new SD memory card after recording ends.</p>
EOM (SD)	<p><b>Recording of the proxy data to the SD memory card stops, but the recording to the P2 card continues.</b></p> <ul style="list-style-type: none"> <li>● SD memory card is full.</li> </ul>	<p>Insert new SD memory card after the recording is completed.</p> <ul style="list-style-type: none"> <li>● The proxy data recording to the SD memory card will be deleted.</li> </ul> <p>To restore the deleted proxy data, select the clip on P2 card, and copy it onto the SD memory card (see page 13).</p>
SD CARD WRITE ERR	<p><b>Recording of the proxy data will stop, but recording of the material will continue.</b></p> <p>Displayed when the REC MEDIA item on the &lt;PROXY SETTING&gt; screen of the configuration menu is set to P2&amp;SD, but proxy data cannot be recorded on the SD memory card.</p> <ul style="list-style-type: none"> <li>■ Message is displayed at the start of recording           <ul style="list-style-type: none"> <li>◆ SD memory card formatted in an unsupported format.</li> <li>◆ SD memory card contains more than 1,000 recorded clips.</li> <li>◆ Proxy data is not recorded on the SD memory card, but it is recorded on the P2 card.</li> </ul> </li> <li>■ Message is displayed during recording           <ul style="list-style-type: none"> <li>◆ SD memory card removed during recording.</li> <li>◆ Error occurs during recording on the SD memory card.</li> </ul> </li> </ul>	<p>Check the status of the SD memory card, and insert another recordable card (see page 8).</p>
NO SD CARD or, SD CARD PROTECTED	<p><b>Proxy data is not recorded on the SD memory card, but it is recorded on the P2 card.</b></p> <ul style="list-style-type: none"> <li>● No SD memory card is inserted. (NO SD CARD)</li> <li>● The SD memory card is protected. (SD CARD PROTECTED)</li> </ul>	<p>Check the status of the SD memory card.</p>

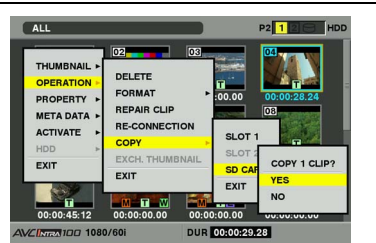
## About copying proxy data to SD Memory Cards

### Copying clips to an SD memory card

1. Press the THUMBNAIL button to display the thumbnail screen.
2. Position the pointer over the clips to be copied using the cursor buttons, and press the SET button.
3. Press the THUMBNAIL MENU button.
4. Select OPERATION → COPY → SD CARD → YES, using the cursor buttons and the SET button.

#### <Notes>

- When “EOM (SD)” is displayed and the proxy data being recorded onto the SD Memory Cards is deleted, you can restore the deleted proxy data by copying the proxy data from the P2 Cards by performing this operation.
- The material is not copied.



# Specifications

## Video encoder board

Dimensions (W × H × D)

Approx. 135 mm × 18 mm × 52 mm

(Approx. 5-5/16 inches ×

11/16 inches × 2-1/16 inches)

(excluding fittings)

Mass: Approx. 52 g (0.11 lb)

File format:

MP4 (ISO/IEC14496 standard)

MOV (QuickTime format)

Video compression format:

MPEG4 Simple Profile

H.264/AVC Baseline Profile

H.264/AVC High Profile

Audio compression format:

AAC-LC

Linear PCM

Number of channels:

Recording modes	File format	VIDEO			
		Resolution	Codec	Framerate	Bit rate
STD 2CH MP4	MP4	320 × 240 (QVGA)	MPEG-4 Simple Profile	30 fps/ 24 fps/ 25 fps	1500 kbps
LOW 2CH MOV	MOV	1080i mode 480 × 270 480-59.94i mode 352 × 240 (SIF_NTSC) 576-50i mode 352 × 288 (SIF_PAL)	H.264 Baseline Profile		800 kbps
HQ 2CH MOV	MOV	640 × 360	H.264 High Profile		1500 kbps
HQ 4CH MOV	MOV	640 × 360	H.264 High Profile		1500 kbps
SHQ 2CH MOV	MOV	960 × 540	H.264 High Profile		3500 kbps

Recording modes	AUDIO			
	Codec	Number of channels	Bit rate per channel	Sampling frequency
STD 2CH MP4	AAC-LC	2CH	64 kbps	24 kHz
LOW 2CH MOV	AAC-LC	2CH	64 kbps	48 kHz
HQ 2CH MOV	AAC-LC	2CH	64 kbps	48 kHz
HQ 4CH MOV	AAC-LC	4CH	64 kbps	48 kHz
SHQ 2CH MOV	Linear PCM	2CH	768 kbps	48 kHz

Weight and dimensions when shown are approximately. Specifications are subject to change without notice.

**AJ-YDX30G を取り付ける際は、必ず販売店にご相談ください。**

- QuickTime および QuickTime ロゴはライセンスに基づいて使用される Apple Inc. の商標または登録商標です。

#### 本書内のイラストについて

- カメラ本体、メニュー画面などのイラストは、実際とは異なることがあります。

#### 用語について

- SDメモリーカード、SDHCメモリーカード、どちらもSDメモリーカードと記載していません。
- 「P2」ロゴがついたメモリーカード（別売のAJ-P2C064XGなど）を「P2カード」と記載しています。
- 1回の記録動作により作成された映像を「クリップ」と呼び、そのように記載しています。

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- AVC規格に準拠する動画（以下、AVCビデオ）を記録する場合
- 個人的かつ非営利的活動に従事する消費者によって記録されたAVCビデオを再生する場合
- ライセンスをうけた提供者から入手されたAVCビデオを再生する場合

詳細については米国法人MPEG LA, LLC (<http://www.mpegla.com>) をご参照ください。

#### 本製品に関するソフトウェア情報

1. 本製品には、GNU General Public License (GPL) ならびにGNU Lesser General Public License (LGPL) に基づきライセンスされるソフトウェアが含まれており、お客様は、これらのソフトウェアのソースコードの入手・改変・再配布の権利があることをお知らせいたします。  
ソースコードの入手については、下記のホームページをご覧ください。  
<http://panasonic.biz/sav/>  
なお、お客様が入手されたソースコードの内容等についてのお問い合わせは、ご遠慮ください。



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## ご注意

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- 本製品をぬれた手で触れないでください。
- 本製品を落としたり、強い衝撃を加えないでください。
- 本製品の部品や基板のパターンには手をふれないようにしてください。（静電気による破壊を防止するためにお守りください）

## 概要

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AJ-YDX30G（以下、“本ボード”と記載）は、メモリーカードカメラレコーダー（以下、“P2カム”と記載）用のビデオエンコーダーボードです。

本ボードを正しく装着したにもかかわらず、プロキシデータの記録ができない場合、本体側ファームウェアのアップデートが必要となる場合があります。ファームウェアに関する最新情報は、下記ウェブサイトよりP2のサポートページをご覧ください。

日本語：<http://panasonic.biz/sav/>

英語：<http://pro-av.panasonic.net/>

## 特長

---

本ボードを装着することにより、高解像度プロキシ映像の記録に対応します。P2カムで撮影した素材を圧縮データファイルにして、素材とは別の領域に記録することができます。映像はMPEG4型式のフォーマットに加え、高解像度のH.264/AVC型式のフォーマットでの映像記録、また、音声についてはAACのほか、非圧縮音声（LPCM）に対応しています。ファイル形式は従来からのMP4形式に加え、ノンリニア編集により適したMOV形式も選択可能です。映像音声ファイルとリアルタイムメタデータファイル（タイムコード・ユーザーズビット・UMID情報）を、P2カードおよびSDメモリーカードに同時に記録することができます。撮影した素材を元の素材よりも容量の少ないデータファイルとして記録することができ、クリップ確認や編集作業を効果的に行えます。

## 対応モデル

---

メモリーカードカメラレコーダー

: AJ-HPX3100G

## 同梱品

---

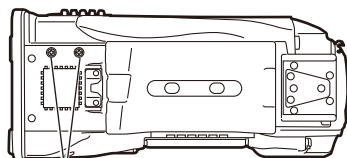
2.6mm径ねじ×4

# AJ-HPX3100G への取り付け

AJ-YDX30Gを取り付ける際は、必ず販売店にご相談ください。

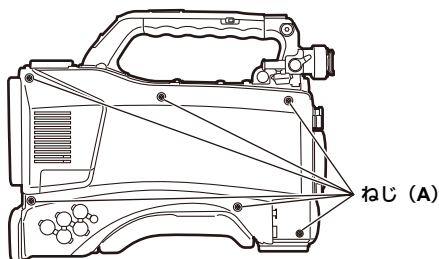
1 AJ-HPX3100Gの電源がOFFになっていることを確認してください。バッテリー、あるいはDC IN端子に入力がないことを確認してください。

2 AJ-HPX3100G底面のねじ (A : 3.0 mm 径 黒色ねじ) を2本外します。



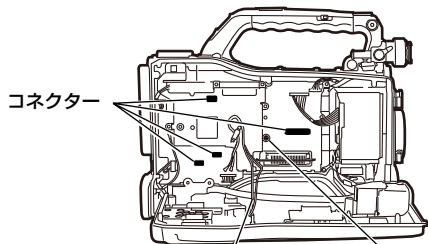
ねじ (A)

3 AJ-HPX3100Gの正面から見て左側のねじ (A) を6本外し、Lサイドパネルを外します。Lサイドパネルを外したときに線材に負荷がかからないよう、またコネクタに負荷がかからないように注意してください。



ねじ (A)

4 左側内部のねじ (B : 2.6 mm 径 銀色ねじ) を1本外します。

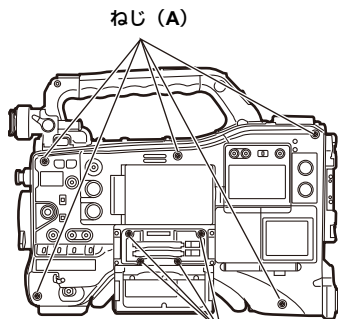


コネクタ

束線

ねじ (B)

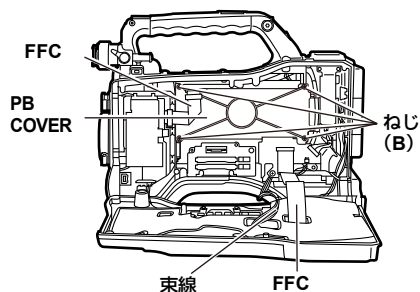
5 AJ-HPX3100Gの正面から見て右側のねじ (A) 5本、およびねじ (C : 2.6 mm 径 黒色ねじ) 4本を外し、Rサイドパネルを外します。Rサイドパネルを外したときに束線、FFCに負荷がかからないように注意してください。



ねじ (A)

ねじ (C)

6 PB COVERについているねじ (B)を4本外し、PB COVERを外します。



FFC

PB COVER

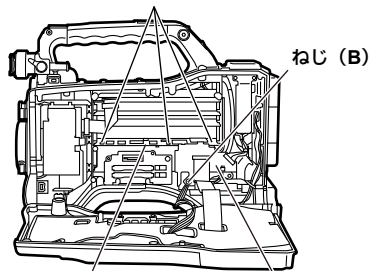
ねじ (B)

束線

FFC

- 7** ねじ (B) を1本外し、INT CONNECT基板を外してから、BACKEND基板を外します。このとき、サイドコンタクトに手を触れないよう、注意してください。

サイドコンタクト



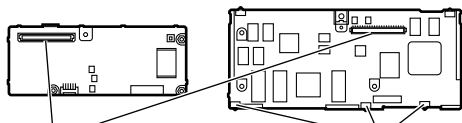
BACKEND基板

INT CONNECT基板

- 8** 7で外したBACKEND基板のコネクターに本ボードのコネクターをはめ込みます。

本ボード

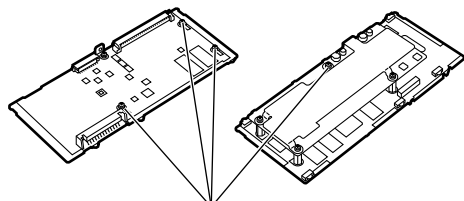
BACKEND基板



コネクター

サイドコンタクト

- 9** BACKEND基板と本ボードを、ねじ (同梱品) 4本を使って固定します。



ねじ (同梱品)

- 10** BACKEND基板を元の位置に差し、4で外した箇所をねじ (B) で止めます。

- 11** INT CONNECT基板を元の位置に差し、7で外した箇所をねじ (B) で止めます。基板を挿す際は、斜め差しにならないよう、まっすぐ、ゆっくりと行ってください。また、ケーブルを挟み込まないよう、気を付けてください。

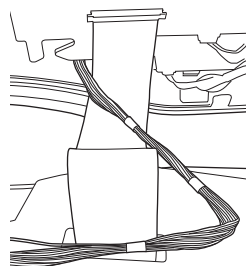
基板が斜め差しになっている場合、カメラレコーダーが記録障害などを起こす場合があります。

- 12** PB COVERを元の位置に戻し、6で外した箇所をねじ (B) で止めます。

- 13** サイドパネルを元の位置に戻し、2、3、5で外した箇所をねじ (A、C) で止めます。

<ノート>

- L サイドパネルを取り付ける際、線材に負荷がかからないよう、またコネクターに負荷がかからないように注意してください。
- R サイドパネルを取り付ける際、下記に示すようにコードの処理をしてください。



<ノート>

ねじの取り外し、取り付けには、ねじ (A) は +No.2、ねじ (B)、(C) は +No.1のドライバーをご使用ください。

# プロキシの設定

## 設定メニュー

P2カムでプロキシデータを記録する場合は、設定メニューのSYSTEM SETTINGページの<PROXY SETTING>画面で設定します。

本ボードをP2カムに装着すると、下記の設定メニューが有効になります。

### PROXY SETTING画面

項目/ データ保存	可変範囲	備考
REC MEDIA	OFF P2 P2&SD	プロキシデータの記録を行うメディアを選択します。 <b>OFF:</b> プロキシデータの記録を行いません。 <b>P2:</b> P2カードにプロキシデータの記録を行います。 <b>P2&amp;SD:</b> P2カードとSDメモ리카ードの両方にプロキシデータの記録を行います。
	C U F	
REC MODE (HD)	STD 2CH MP4 LOW 2CH MOV HQ 2CH MOV HQ 4CH MOV SHQ 2CH MOV	プロキシデータの記録モードを設定します。(HDモード時のみ) 各モードの詳細は、「記録モードと記録信号(ビデオ、オーディオ)」(7ページ)を参照してください。
	C U F	
REC MODE (SD)	STD 2CH MP4 LOW 2CH MOV	プロキシデータの記録モードを設定します。(SDモード時のみ) 各モードの詳細は、「記録モードと記録信号(ビデオ、オーディオ)」(7ページ)を参照してください。
	C U F	
TC SUPER	OFF UPPER LOWER	プロキシデータの記録映像にタイムコードの表示をスーパーインポーズする設定を行います。 <b>OFF:</b> タイムコードの表示を記録映像にスーパーインポーズしません。 <b>UPPER:</b> 記録映像の上部にタイムコードの表示をスーパーインポーズします。 <b>LOWER:</b> 記録映像の下部にタイムコードの表示をスーパーインポーズします。
	C U F	

項目/ データ保存	可変範囲	備考
PROXY DISP	OFF ON	プロキシデータの記録開始時にビューファインダー、液晶モニターにメッセージを表示するか選択します。 <b>OFF:</b> メッセージを表示しません。 <b>ON:</b> メッセージを表示します。 <b>&lt;ノート&gt;</b> ● VF INDICATOR画面でも表示されます。 ● FILEページの<SD CARD R/W SELECT>画面でVF MENU R/W項目をONに設定しないと、SDメモ리카ードに書き込み/読み出しはできません。
	C U F R	
STREAMING MODE	OFF RTP HTTP	ストリーミング機能の選択をします。 <b>OFF:</b> ストリーミング機能を停止します。 <b>RTP:</b> RTPモードを選択します。 <b>HTTP:</b> HTTPライブストリーミングモードを選択します。 <b>&lt;ノート&gt;</b> 本項目は無線 LAN 機能が有効になっているときのみ表示されます。詳しくは無線 LAN アップグレードソフトウェア AJ-SFU3100G (別売) の操作説明書を参照してください。
	C U F	

可変範囲の\_\_\_\_はプリセットモードです。

- 下記のモードのときは、REC MEDIA項目を“P2”または“P2&SD”に設定してもプロキシデータの記録が行えません。
  - ◆ INTERVAL REC (ONE SHOT RECを含む)
  - ◆ LOOP REC
- ONE CLIP RECで、前のクリップに連結して記録可能な状態のとき(「1\*CLIP」と表示されているとき)は、プロキシ機能の設定はできません。一度メニューを閉じた後、STOPボタンを約2秒間押し続けてクリップ連結を終了させてから、再度操作してください。
- 本ボードを装着していないP2カムで、設定メニューのFILEページの<SD CARD READ/ WRITE>画面からWRITEしたSDメモ리카ードのデータを、本ボードを装着したP2カムで読み込みする場合、プロキシの設定メニューが変更される場合があります。

## 設定状態の確認

P2カムのMARKER SEL、MODE CHK / MENU CANCELスイッチを3回手前に引くとMODE CHECKのFUNCTION画面表示にREC MEDIA、REC MODE、TC SUPERのメニュー値を確認することができます。

## バージョン情報の確認

設定メニューのMAINTENANCEページの<DIAGNOSTIC>画面に以下のバージョンを表示します。

項目/ データ保存	可変範囲	備考
PROXY FPGA		本ボードのFPGAのバージョンを表示します。
PROXY SOFT		本ボードのソフトバージョンを表示します。

## 記録モードと記録信号（ビデオ、オーディオ）

記録モード	ビデオ			オーディオ		
	解像度	コーデック	ビットレート	コーデック	チャンネル数	1チャンネルあたりのビットレート
STD 2CH MP4	320 × 240 (QVGA)	MPEG-4 Simple Profile	1500 kbps	AAC-LC	2CH	64 kbps
LOW 2CH MOV	1080iモード 480 × 270 480-59.94iモード 352 × 240 (SIF_NTSC) 576-50iモード 352 × 288 (SIF_PAL)	H.264 Baseline Profile	800 kbps	AAC-LC	2CH	64 kbps
HQ 2CH MOV	640 × 360	H.264 High Profile	1500 kbps	AAC-LC	2CH	64 kbps
HQ 4CH MOV	640 × 360	H.264 High Profile	1500 kbps	AAC-LC	4CH	64 kbps
SHQ 2CH MOV	960 × 540	H.264 High Profile	3500 kbps	リニアPCM	2CH	768 kbps

## プロキシデータの記録

REC MEDIA項目を“P2”または“P2&SD”に設定して、RECボタンを押すことにより、本素材の記録と同時に、プロキシ記録を開始します。

P2カムのビューファインダーにプロキシデータの記録情報を表示する場合は、P2カムのメニュー、SYSTEM SETTINGページの<PROXY SETTING>画面、またはVFページの<VF INDICATOR>画面からPROXY DISP項目を選択して“ON”に設定します。

記録開始時に“PROXY REC P2”または“PROXY REC P2&SD”が表示されます。

# SD メモリーカードへの記録

プロキシデータを記録する場合は、class2以上のクラス表示のある当社製SDメモリーカードまたはSDHCメモリーカードをご使用ください。

取扱説明書に記載された情報以外の最新情報は、下記のウェブサイトのサポートデスクを参照してください。

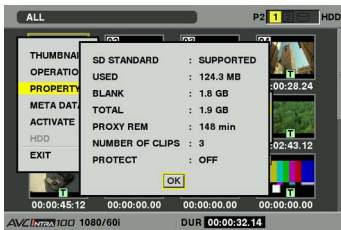
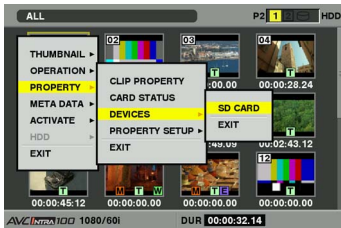
日本語 : <http://panasonic.biz/sav/>  
英語 : <http://pro-av.panasonic.net/>

プロキシデータの記録をSDメモリーカードに行う場合、必ずP2カムでフォーマットしてください。

- SDメモリーカードの取り扱いについては、P2カムの取扱説明書を参照してください。

## SDメモリーカードを確認する

1. SDメモリーカードをP2カムに挿入します。
2. THUMBNAIL ボタンを押して、サムネイル画面を表示します。
3. THUMBNAIL MENU ボタンを押します。
4. カーソルボタンとSETボタンで、PROPERTY → DEVICES → SD CARD を選択します。



- SD STANDARDの項目にフォーマットの状態が表示されます。NOT SUPPORTEDが表示された場合は、P2カムでフォーマットしてください。
- PROXY REM項目で、プロキシデータの記録残量時間を確認します。表示されるSDメモリーカードの残量 (PROXY REM) はプロキシの記録残量の目安になりますが、実際の空き容量とは異なる場合があります。短い記録を繰り返すと、記録可能な時間は空き容量に比べ大きく減少することがあります。また残量が999minを超えた場合、999minと表示します。SDメモリーカードにプロキシを記録しない場合、残量時間は表示されません。
- NUMBER OF CLIPS項目で、SDメモリーカードに記録されているクリップ数を確認します。クリップ数が1000以上になると、容量が残っていてもSDメモリーカードにプロキシデータを記録することができません。
- SDメモリーカード内のクリップには、ショットマーク、およびテキストメモを付けることができません。
- P2カムのサムネイル画面で、P2カードに記録されたクリップを削除しても、SDメモリーカードに記録されたプロキシデータは削除されません。
- P2カム本体のバージョンアップ用のデータが入ったSDメモリーカードにはプロキシデータの記録はできません。

## <ノート>

- SDメモリーカードに記録中は、ビューファインダーや液晶モニターのMODE CHECK画面でも記録残量を確認できます。
- 設定メニュー<PROXY SETTING>画面のREC MEDIA項目がP2&SDに設定されているのに、SDメモリーカードにプロキシデータを記録できない場合は、記録開始時に“SD CARD WRITE ERR”と表示されます。このときは、SDメモリーカードを確認してください。詳しくは、「プロキシデータの記録に関するエラー表示」(12ページ)を参照してください。
- フォーマットにより消去されたデータは、復元することができませんので、必ずデータを確認した後に実行してください。

## フォーマットを行う

1. SD メモリーカードをP2カムに挿入します。
2. THUMBNAIL ボタンを押して、サムネイル画面を表示します。
3. THUMBNAIL MENU ボタンを押します。
4. カーソルボタンとSET ボタンで、OPERATION → FORMAT → SD CARD → YES を選択します。

以上でSD メモリーカードのフォーマットが完了します。

## プロキシデータ記録時間の目安

記録モード	トータル記録レート	記録時間 (1GBあたり)
STD 2CH MP4	約1650 kbps	約78分
LOW 2CH MOV	約950 kbps	約135分
HQ 2CH MOV	約1650 kbps	約78分
HQ 4CH MOV	約1780 kbps	約72分
SHQ 2CH MOV	約5060 kbps	約25分

(連続して記録した場合の当社製品での参考値です。記録時間はシーンやクリップ数によって異なります)

## ONE CLIP REC モードでのプロキシ記録について

ONE CLIP REC モードにおいてもプロキシ記録は可能です。プロキシデータも同様に連結したクリップとしてまとめられるため、P2ビューアーなどで、1つのクリップとして取り扱うことが可能です。ただしSDメモリーカードにプロキシデータを記録する場合、以下の点に注意してください。

- クリップ連結を継続している途中でSDメモリーカードを抜いて交換した場合、以後クリップ連結を終了するまではSDメモリーカードにプロキシ記録は行われません。十分な空き容量、ファイル数(最大1000クリップまで記録可能)を確認してご使用ください。万一、途中でSDメモリーカードを交換した後、プロキシ記録を続けたい場合は、STOP ボタンを約2秒間押しして連結を一度終了してから、新たなクリップとして記録を開始してください。
- 途中で記録を中止したSDメモリーカード上のプロキシデータは、P2カードに記録されたクリップのデータと一致せず、不完全な状態になります。
- クリップ連結を継続中は、<PROXY SETTING>画面に表示される一部のメニューは変更できません。これらは、STOP ボタンを約2秒間押ししてクリップ連結を終了させてから操作してください。



# プロキシデータの確認

■ プロキシデータの記録を行った素材のクリップには **P** のインジケーターが表示されません。

■ 記録されたプロキシデータの詳細情報を、クリップのプロパティから確認することができます。  
操作方法は、「プロキシデータの詳細情報を確認する」(11ページ)を参照してください。

■ プロキシデータは、映像音声ファイルとリアルタイムメタデータファイルとして、P2カードやSDメモ리카ードに記録されます。

## 映像音声ファイル：

XXXXXXXXX.MP4

または、  
XXXXXXXXX.MOV

## リアルタイムメタデータファイル：

XXXXXXXXX.BIN

フレーム単位にタイムコード、ユーザーズビット、UMID情報を記録します。

プロキシデータは、P2ビューアーで確認してください。P2ビューアーのバージョンによっては確認できない場合があります。  
P2ビューアーに関する情報は、下記のホームページをご覧ください。

日本語：<http://panasonic.biz/sav/>

英語：<http://pro-av.panasonic.net/>

## <ノート>

本ボードを装着して記録したプロキシデータ付きのクリップは、一部のP2機器では不明クリップとして扱われるため、サムネイル上に **?** (不明クリップインジケーター) が表示されるとともに、以下の操作ができません。(ただしSTD 2CH MP4モードを除きます。)

- DELETE
- REPAIR CLIP
- RE-CONNECTION
- COPY
- EXCH.THUMBNAIL
- TEXT MEMO、SHOT MARKの付加、削除

なお、再生は可能です。

またこれらの機器では、複数のクリップが連結されたプロキシデータ付きクリップは、個々の不完全クリップ (**!** マーク付き) として表示されます。(STD 2CH MP4モードを除きます。)

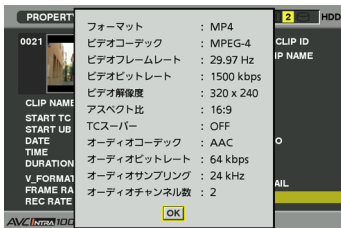
## プロキシデータの詳細情報を確認する

操作方法やパネルはP2カムの機種やバージョンにより異なる場合があります。

1. THUMBNAIL ボタンを押します。  
液晶モニターにサムネール画面が表示されます。
2. THUMBNAIL MENU ボタンを押し、  
THUMBNAIL MENU から PROPERTY →  
CLIP PROPERTY と選択します。  
下記のような画面が表示されますので、カーソルボタンでカーソルを「PROXY」の項目に合わせます。



3. SET ボタンを押します。  
下記のようなプロキシデータに関する詳細情報が表示されます。



### フォーマット :

記録データのファイルフォーマット形式を表示します。

### ビデオコーデック :

記録データのビデオコーデック情報を表示します。

### ビデオフレームレート :

記録データのビデオフレームレート情報を表示します。

### ビデオビットレート :

記録データのビデオビットレート情報を表示します。

### ビデオ解像度 :

記録データのビデオ解像度を表示します。

### アスペクト比 :

記録データのアスペクト比を表示します。

### TCスーパー :

記録映像に TC (タイムコード) の表示がスーパーインポーズされているかを表示します。

### オーディオコーデック :

記録データのオーディオコーデック情報を表示します。

### オーディオビットレート :

記録データのオーディオビットレート情報を表示します。

### オーディオサンプリング :

記録データのオーディオサンプリングレート情報を表示します。

### オーディオチャンネル数 :

記録データのオーディオチャンネル数を表示します。

# プロキシデータの記録に関するエラー表示

プロキシデータの記録を行うとき、エラーが発生した場合、下記の内容を確認して処理を行ってください。

エラー表示 (ビューファインダー および液晶モニター)	動作と原因	処理
PROXY BOARD ERROR または PROXY REC WARNING	<p>プロキシデータの記録は停止しますが、<b>本素材の記録は継続します。</b></p> <ul style="list-style-type: none"> <li>● 本ボードの異常 (PROXY BOARD ERROR)</li> <li>● プロキシデータの記録異常 (PROXY REC WARNING)</li> <li>● プロキシデータの記録異常が発生した場合、記録中のプロキシデータは以下のように処理されます。           <ul style="list-style-type: none"> <li>◆ P2カードに記録中のプロキシデータは削除されます。</li> <li>◆ SDメモリーカードに記録中のプロキシデータは修復されません。</li> </ul> </li> </ul>	<p>プロキシデータが正しく記録されません。P2 カムの電源を OFF にし、再度電源を ON にして記録再生を確認してください。</p>
NEAR END (SD)	<p>本素材とプロキシデータの記録は継続します。</p> <ul style="list-style-type: none"> <li>● SDメモリーカードの記録残容量が少なくなった。(目安として約1分未満)</li> </ul>	<p>記録終了後に新しいSDメモリーカードを挿入してください。</p>
EOM (SD)	<p>SDメモリーカードへのプロキシデータの記録は停止しますが、P2カードへの記録は継続します。</p> <ul style="list-style-type: none"> <li>● SDメモリーカードの記録容量が無い。</li> </ul>	<p>記録終了後に新しいSDメモリーカードを挿入してください。</p> <ul style="list-style-type: none"> <li>● SDメモリーカードに記録中のプロキシデータは削除されます。</li> </ul> <p>削除されたプロキシデータを復元する場合は、P2カードのクリップを選択してSDメモリーカードにコピーしてください。(13ページ参照)</p>
SD CARD WRITE ERR	<p>SDメモリーカードへのプロキシデータの記録は停止しますが、P2カードへの記録は継続します。</p> <p>設定メニュー &lt;PROXY SETTING&gt; 画面の REC MEDIA 項目が P2&amp;SD に設定されているにもかかわらず、SDメモリーカードにプロキシデータの記録ができないときに表示します。</p> <ul style="list-style-type: none"> <li>■ 記録開始時に表示する場合           <ul style="list-style-type: none"> <li>◆ SDメモリーカードのフォーマットが違う</li> <li>◆ SDメモリーカードに1000以上のクリップが記録されている</li> <li>◆ P2カム本体のバージョンアップ用データが入ったSDメモリーカードに記録を行おうとした</li> </ul> </li> <li>■ 記録中に表示する場合           <ul style="list-style-type: none"> <li>◆ 記録中にSDメモリーカードが取り出された</li> <li>◆ SDメモリーカードへの記録に異常が発生した</li> </ul> </li> </ul>	<p>SDメモリーカードの状態を確認して、記録可能なカードを挿入してください。(8ページ参照)</p>
NO SD CARD または SD CARD PROTECTED	<p>SDメモリーカードへのプロキシデータ記録は行われませんが、P2カードへの記録は行います。</p> <ul style="list-style-type: none"> <li>● SDメモリーカードが挿入されていません。(NO SD CARD)</li> <li>● SDメモリーカードがプロテクトされています。(SD CARD PROTECTED)</li> </ul>	<p>SDメモリーカードの状態を確認してください。</p>

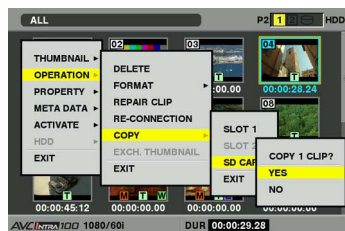
## プロキシデータのSDメモリーカードへのコピーについて

### クリップをSDメモリーカードにコピーする

1. THUMBNAIL ボタンを押して、サムネール画面を表示します。
2. カーソルボタンで、コピーするクリップにポインターを移動してSET ボタンを押します。
3. THUMBNAIL MENU ボタンを押します。
4. カーソルボタンとSET ボタンで、OPERATION → COPY → SD CARD → YES を選択します。

### <ノート>

- “EOM (SD)” が表示されてSDメモリーカードに記録中のプロキシデータが削除された場合、この操作を行うとプロキシデータがP2カードからコピーされ、削除されたプロキシデータを復元できません。
- 本素材はコピーされません。



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などのご相談は、まず、  
**お買い上げの販売店**  
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お買い上げ日・販売店名などの記入を必ずお確かめの上、お買い上げの販売店からお受け取りください。  
内容をよくお読みいただき、大切に保存してください。  
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**保証期間：お買い上げ日から本体1年間**

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日本語

## 修理を依頼されるとき

この取扱説明書を再度ご確認くださいの上、お買い上げの販売店までご連絡ください。

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保証書の記載内容に従って、修理させていただきます。詳しくは保証書をご覧ください。

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修理により、機能、性能の回復が可能な場合は、ご希望により有料で修理させていただきます。

### ご連絡いただきたい内容

品名	ビデオエンコーダーボード
品番	AJ-YDX30G
製造番号	
お買い上げ日	
故障の状況	

# 定 格

## ビデオエンコーダーボード

外形寸法（幅 × 高さ × 奥行き）：  
約 135 mm × 18 mm × 52 mm

質量：約 52 g

ファイルフォーマット：

MP4（ISO/IEC14496規格）

MOV（QuickTime形式）

ビデオ圧縮フォーマット：

MPEG4 Simple Profile

H.264/AVC Baseline Profile

H.264/AVC High Profile

オーディオ圧縮フォーマット：

AAC-LC

リニアPCM

記録モード：

記録モード	ファイルフォーマット	VIDEO			
		解像度	コーデック	フレームレート	ビットレート
STD 2CH MP4	MP4	320 × 240 (QVGA)	MPEG-4 Simple Profile	30 fps / 24 fps / 25 fps	1500 kbps
LOW 2CH MOV	MOV	1080iモード 480 × 270 480-59.94iモード 352 × 240 (SIF_NTSC) 576-50iモード 352 × 288 (SIF_PAL)	H.264 Baseline Profile		800 kbps
HQ 2CH MOV	MOV	640 × 360	H.264 High Profile		1500 kbps
HQ 4CH MOV	MOV	640 × 360	H.264 High Profile		1500 kbps
SHQ 2CH MOV	MOV	960 × 540	H.264 High Profile		3500 kbps

記録モード	AUDIO			
	コーデック	チャンネル数	1チャンネルあたりのビットレート	サンプリング周波数
STD 2CH MP4	AAC-LC	2CH	64 kbps	24 kHz
LOW 2CH MOV	AAC-LC	2CH	64 kbps	48 kHz
HQ 2CH MOV	AAC-LC	2CH	64 kbps	48 kHz
HQ 4CH MOV	AAC-LC	4CH	64 kbps	48 kHz
SHQ 2CH MOV	リニアPCM	2CH	768 kbps	48 kHz

この仕様は、性能向上のため変更することがあります。

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# LGPL

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Version 2.1, February 1999

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