



SD-SDI input module

IM-584

User's Manual

Ver.1.00



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2005.10

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ASTRODESIGN,Inc

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Introduction

Thank you for purchasing the IM-584 SD-SDI input module.

This document describes the functions and operating method of the IM-584, as well as the precautions to observe when using it. Be sure to read this document before using the OM-584 since improper use may result in accidents. After reading, please retain this document in a safe place for future reference.

Safety Precautions

Warning

Avoid contact with foreign substances

- **Do not spill liquid or drop a flammable substance or metal inside the module. Usage under such conditions may result in fire, electrical shock or malfunction.**

Do not disassemble

- **Do not attempt to disassemble this module. To avoid the risk of electrical shock or injury to the user, or malfunction of the module, do not open the case or remove/reinstall the internal board.**

Caution

Handling of the module

- **The module consists of precision components; handle it with extreme care**
To avoid the risk of electrical shock, injury, or malfunction, do not remove or add a module while the power is on.
- **When removing the module, be careful to avoid brushing your hand against the connectors.**

Avoid mechanical shock and impact

- **The module is a precision instrument that may be damaged by mechanical shock and impact. Be extremely careful when transporting the module.**
- **Do not drop the module.**

In case of an abnormality or malfunction

- **If an abnormality or malfunction occurs, unplug the power cord and then contact your local dealer or the ASTRODESIGN sales group.**

1

About the IM-584

1.1 Overview

- The IM-584 is an SD-SDI input module that can be installed in the SC-2055 series (2 inputs, 2 outputs).
- Equipped with connectors for SD-SDI input (1CH) and Monitor OUT output (1CH).
- Accepts SMPTE-259M-compliant serial digital signals.

2

Names and Functions of Individual Components

2.1 IM-584 rear panel view and component names

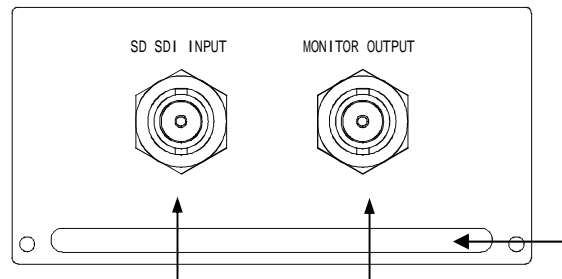


Fig. 2.1 IM-584 Rear Panel View

Table 2.1 Names of Rear Panel Parts

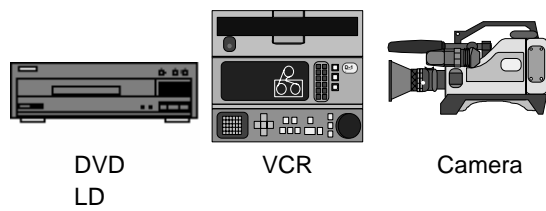
Number	Name	Description
	SD-SDI input connector	SD-SDI (D1) input connector (BNC connector)
	MONITOR output connector	SD-SDI monitor output connector (BNC connector)
	Handle	Use when inserting or removing the module

3

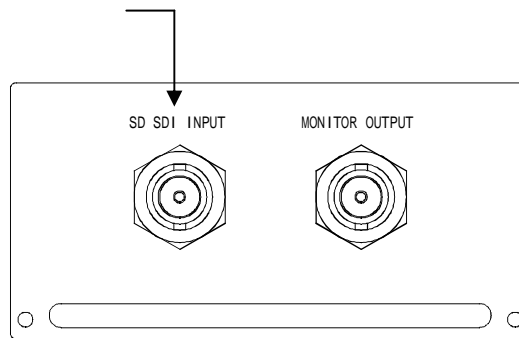
Connecting the Module

3.1 Connecting the input signal

As shown in the figure, appropriately connect the SD-SDI output signal from the IM-584's input connector to a device, such as a VCR or DVD.



From the device's SD-SDI connector





4

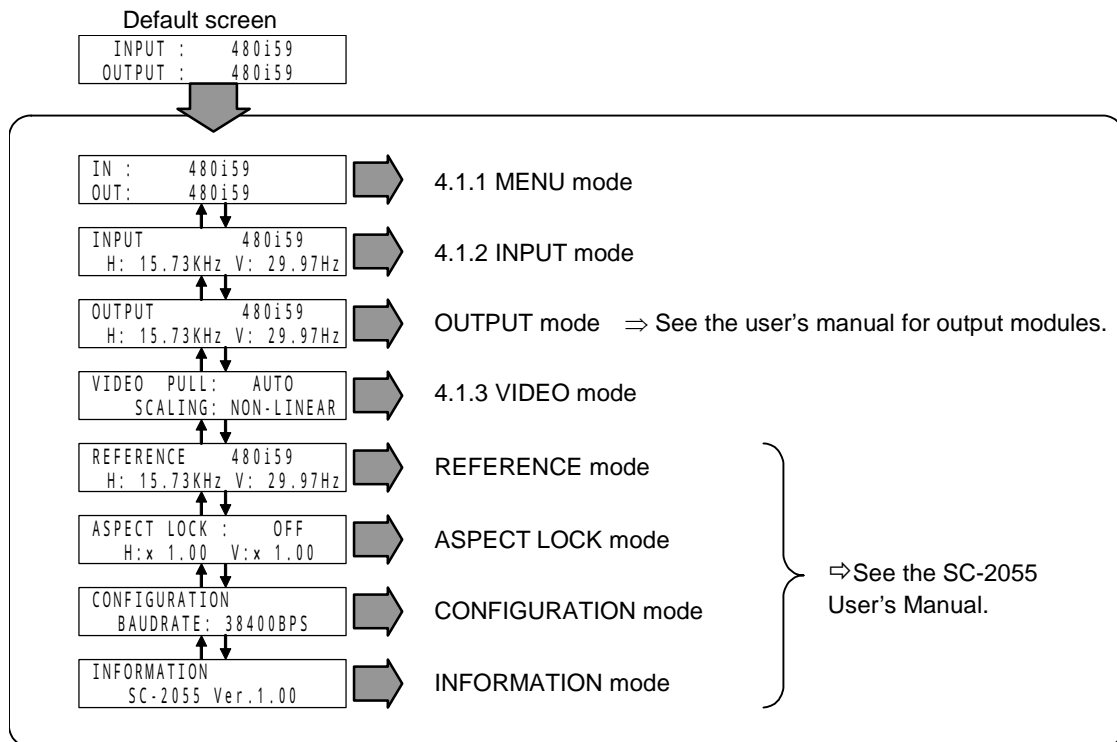
Adjustments and Settings

4.1 Menu structure

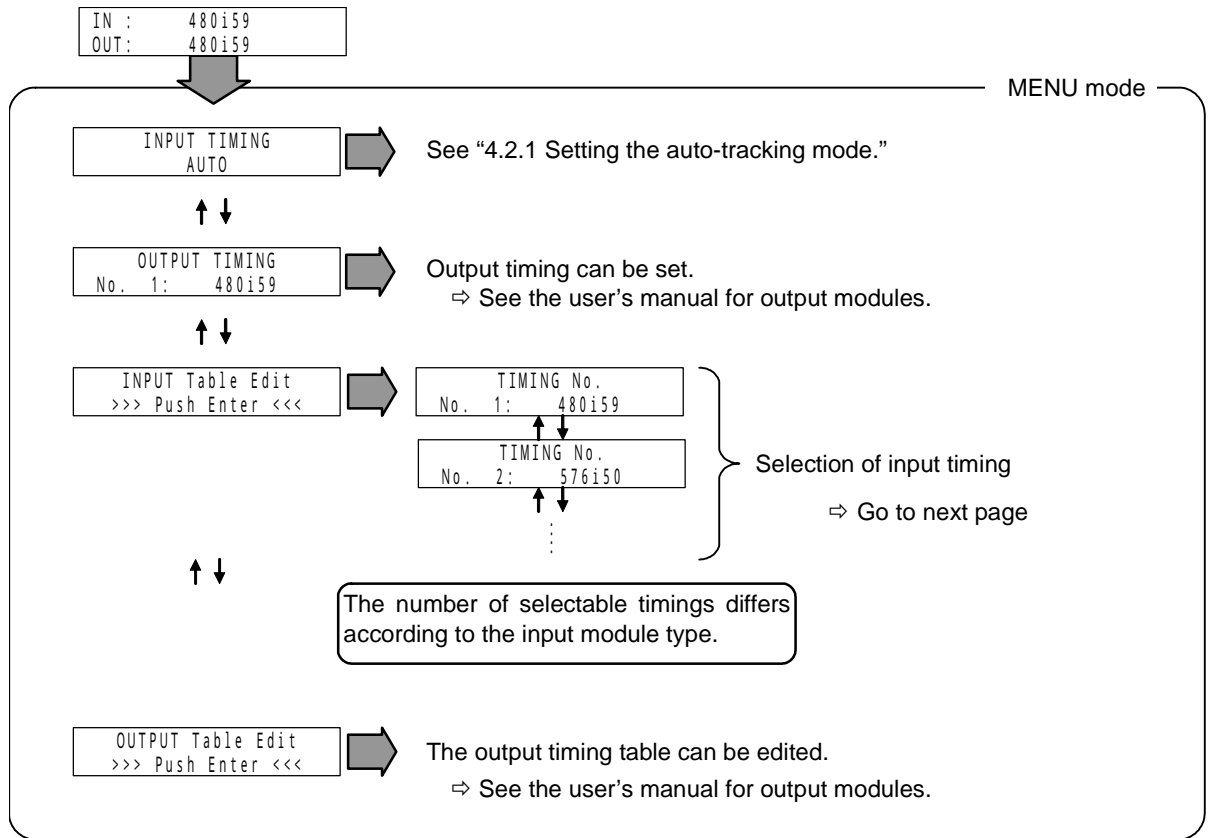
From the default screen, push the rotary encoder to enter the menu structure described below.
For the operation method, see the SC-2055 User's Manual.

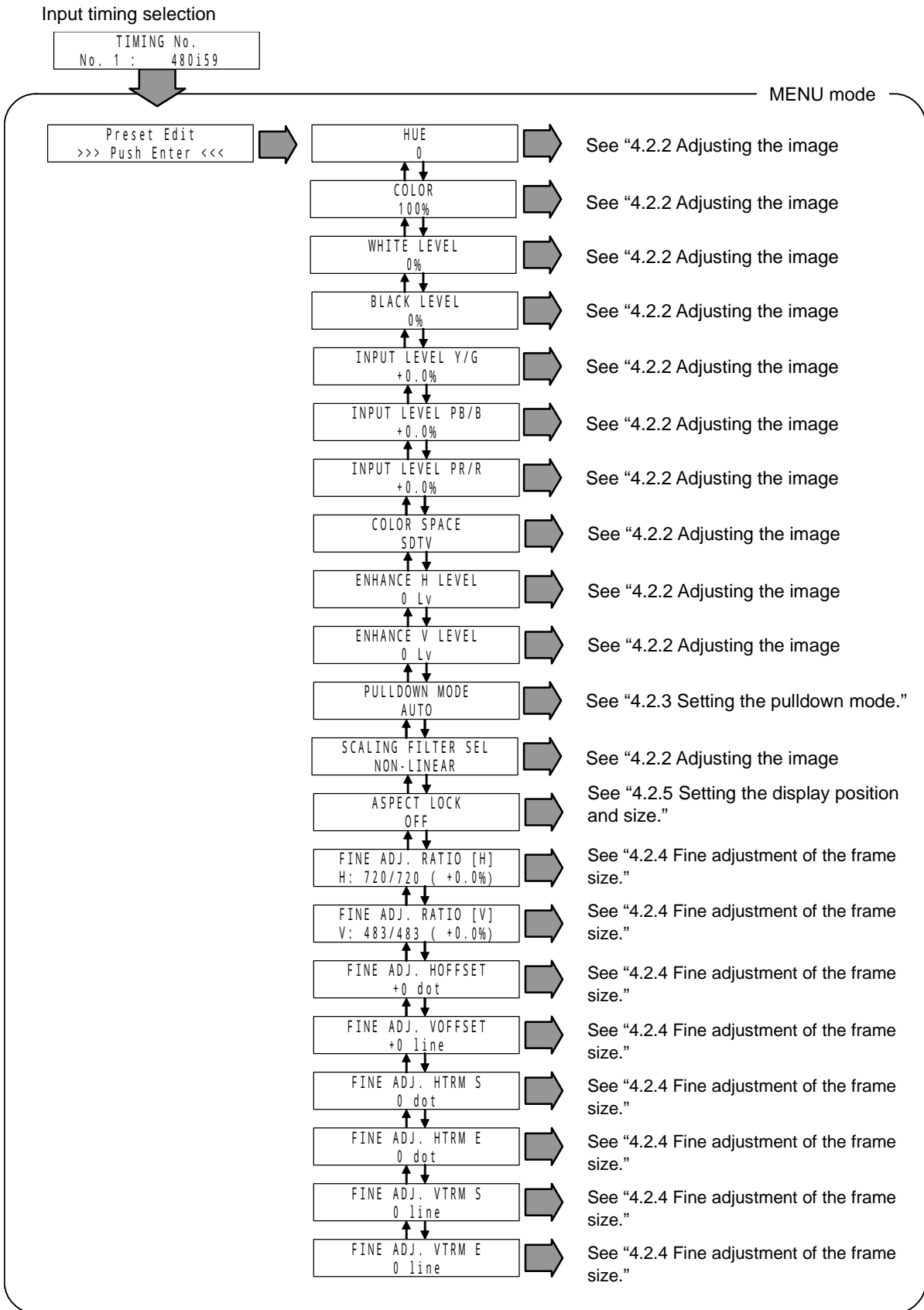
Symbols are defined below.

	PUSH operation
	Rotate operation



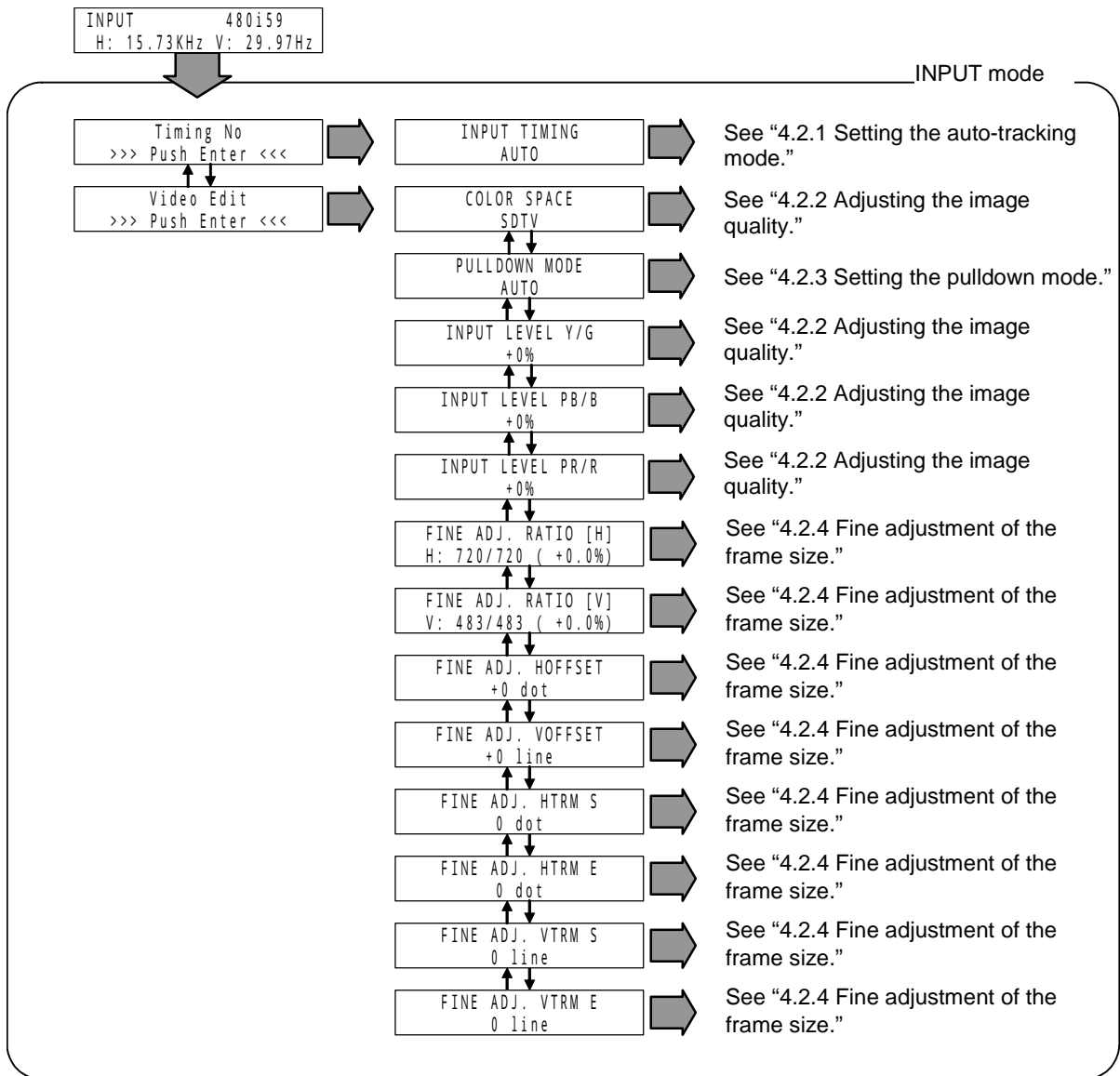
4.1.1 MENU mode





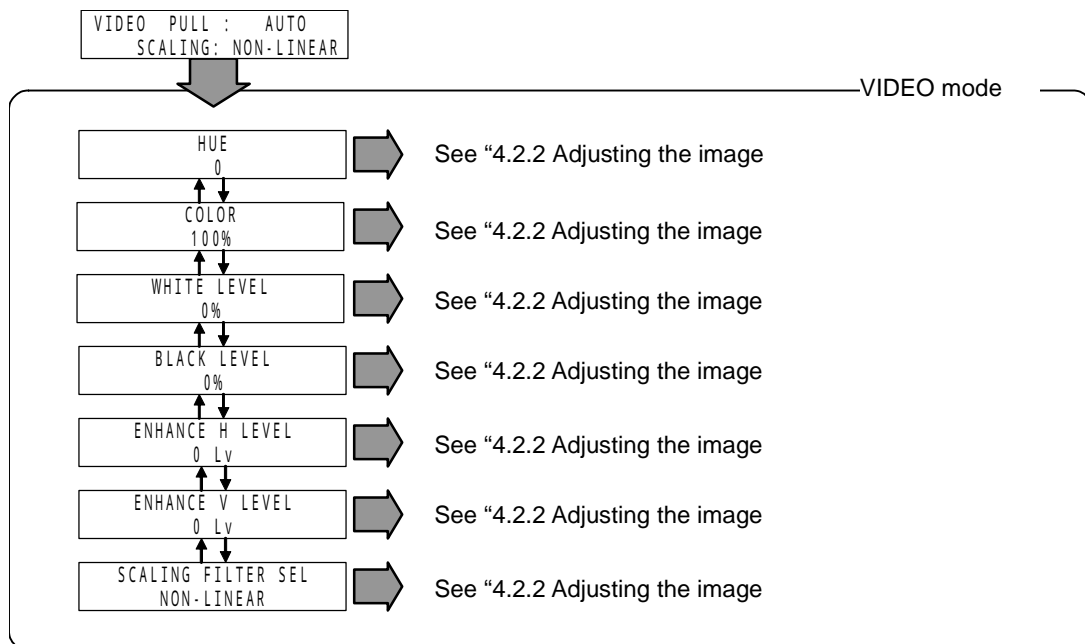
4.1.2 INPUT mode

The default screen of the INPUT mode displays the selected input timing.



4.1.3 VIDEO mode

The default screen of the VIDEO mode displays the pulldown mode and scaling filter settings.



4.2 Setting parameters

4.2.1 Setting the auto-tracking mode

Sets the input timing.

Setting Parameter	Description	Setting Value	Comments
INPUT TIMING	Auto Tracking Mode	AUTO/ Timing name 1	Sets the auto-tracking mode.

1 The number of timing names that can be selected differs according to the input module type.

4.2.2 Adjusting the image quality

Adjusts image quality and sets parameters related to video display.

Setting Parameter	Description	Setting Value	Comments
HUE	Hue adjustment	-180 to +180° (1° increments)	Adjusts the hue.
COLOR	Color adjustment	0 to 150% (1% increments)	Adjusts the color density.
WHITE LEVEL	White level adjustment	-30 to +30% (1% increments)	Adjusts white areas (white level) throughout the entire screen.
BLACK LEVEL	Black level adjustment	-30 to +30% (1% increments)	Adjusts the standard level of brightness (black level) throughout the entire screen.
INPUT LEVEL Y/G	Input video level (Y/G) adjustment	-30 to +30% (0.1% increments)	Adjusts the input video level.
INPUT LEVEL PB/B	Input video level (PB/B) adjustment	-30 to +30% (0.1% increments)	Adjusts the input video level.
INPUT LEVEL PR/R	Input video level (PR/R) adjustment	-30 to +30% (0.1% increments)	Adjusts the input video level.
COLOR SPACE	Color space setting	SDTV/HDTV/ HDTV1035	Sets the color space.
ENHANCE H LEVEL	Enhance H setting	Level 0 to 15	Controls video frequency characteristics and adjusts the contour enhancement.
ENHANCE V LEVEL	Enhance V setting	Level 0 to 15	Controls video frequency characteristics and adjusts the contour enhancement.
SCALING FILTER SEL	Scaling filter selection	PIXEL/LINEAR/ NON-LINEAR	Sets the scaling filter.

4.2.3 Setting the pulldown mode

Automatically identifies 24/30 frame video data such as video signals from film and computer graphic sources.

Setting Parameter	Setting Value	Comments
PULLDOWN MODE	AUTO	Automatically identifies which pulldown mode (VIDEO, 22PULLDOWN or 32PULLDOWN) is appropriate for the video source.
	VIDEO	This mode converts a normal interlaced motion picture video signal into a progressive signal.
	22PULLDOWN	For a still image video source, such as a source that reproduces a 1 frame image with even and odd fields, this mode automatically detects and displays a 2-2, 2-2 pulldown pattern from the flow of images on the screen.
	32PULLDOWN	For the video source of a motion picture signal (24 frames per second) converted to a video signal (60 fields per second), this mode automatically detects and displays a 2-3, 2-3, 2-3 pulldown pattern from the flow of images on the screen.

Note

When 22PULLDOWN or 32PULLDOWN is used, the image signal may become distorted if the interpolation pattern does not match the interpolation pattern for the input image source.

4.2.4 Fine adjustment of the frame size

Finely adjusts the size of the image to be displayed.

Setting Parameter	Description	Setting Value	Comments
FINE ADJ. RATIO [H]	Zoom ratio [H]	±30% of H ACTIVE at input timing	Adjusts the zoom ratio with the horizontal active width. 1
FINE ADJ. RATIO [V]	Zoom ratio [V]	±30% of V ACTIVE at input timing	Adjusts the zoom ratio with the vertical active width. 1
FINE ADJ. H OFFSET	Offset [H]	-127 to +127	Sets the horizontal offset.
FINE ADJ. V OFFSET	Offset [V]	-31 to +31	Sets the vertical offset.
FINE ADJ. H TRM S	H trimming Start position	0 to 128	Sets the horizontal trimming start position. 2
FINE ADJ. H TRM E	H trimming End position	0 to 128	Sets the horizontal trimming end position. 2
FINE ADJ. V TRM S	V trimming Start position	0 to 32	Sets the vertical trimming start position. 3
FINE ADJ. V TRM E	V trimming End position	0 to 32	Sets the vertical trimming end position. 3

1 MIN and MAX values differ according to the input timing.

2 If the input timing scanning method is progressive and the pixel clock is 74.25MHz, settings are in 1-dot increments. In all other cases, settings are in 2-dot increments.

3 If the input timing scanning method is progressive, settings are in 1-line increments. If the input timing scanning method is interlace or segment-frame, settings are in 2-line increments.

4.2.5 Setting the display position and size

Changes the image display size and specifies the display position.

Parameter	Description	Setting Value	Comments
ASPECT LOCK	Aspect setting	OFF/V JUST/ ARIB 13:9/ARIB 14:9/ ARIB 15:9/H JUST	Sets the image frame size.

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Timing Table List

5.1 Input timing table

No	Format	Clock (MHz)	H period (dot)	H disp (dot)	H sync (dot)	H bp (dot)	V total (line)	V disp (line)	V sync (line)	V bp (line)	Scan
1	480i59	13.5	858	720	63	59	525	483	6	30	Interlace
2	576i50	13.5	864	720	63	69	625	576	5	39	Interlace

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Main Specifications

6.1 Specifications

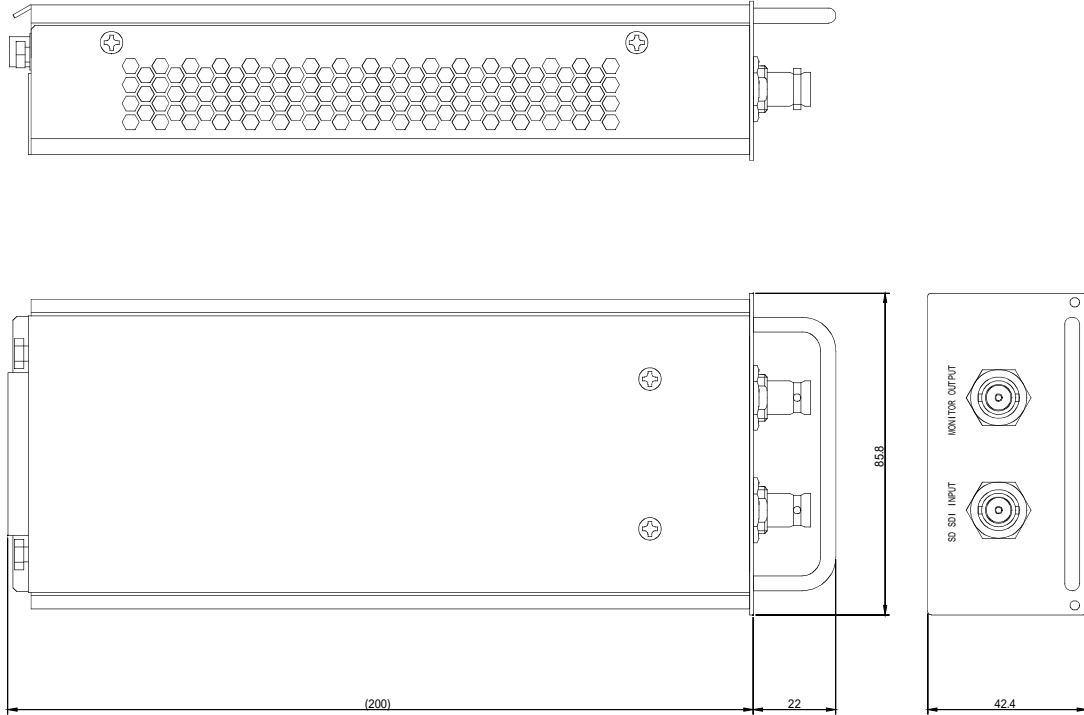
Table 6.1 IM-584 Specifications

Parameter	Specification
Supported standard	SMPTE-259M
Timing	720x480/59.94i 720x576/50i
Color format	YcbCr (SMPTE125M)/ 4:2:2
Image data resolution	10 bit
Number of channels	1system (BNC)

6.2 Accessory

User's Manual	1 copy
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6.3 Outline Drawing



Notes:

Documents with missing or incorrectly collated pages will be replaced.

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ASTRODESIGN, INC.

URL <http://WWW.astrodesign.co.jp>

First Sales Division
2-6-17 Haramachi, Meguro-ku, Tokyo, Japan 152-0011
Tel: (03) 5720-5838, Fax: (03) 5720-6353

Osaka Sales Office
1-18-27-1010 Higashi-Nakajima, Higashi-Yodogawa-ku,
Osaka, Japan 533-0033
Tel: (06) 6328-8558, Fax: (06) 6328-5058