



HD-SDI DEMULTIPLEXER CARD MY8-SDI-D

Owner's Manual
Bedienungsanleitung
Mode d'emploi
Manual de instrucciones
Manuale di istruzioni
Руководство пользователя
使用说明书
取扱説明書

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FCC INFORMATION (U.S.A.)

1. **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product **MUST** be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic

devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference. Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable. If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

The above statements apply **ONLY** to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA. (class B)

CANADA

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

• This applies only to products distributed by Yamaha Canada Music Ltd. (class B)
• Ceci ne s'applique qu'aux produits distribués par Yamaha Canada Musique Ltée.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

* Please keep this manual in a safe place for future reference.



WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

- Before installing the card in an audio device please check to make sure that the device is compatible with the card and check possible restrictions regarding the maximum number of Yamaha and third-party expansion cards that can be simultaneously installed. Refer to the owner's manual supplied with the audio device, and/or the Yamaha Pro Audio web site at:
<http://www.yamahaproaudio.com/>
- Do not install the card in any Yamaha products not specified by Yamaha for use with the card to avoid possible electrical shock, fire, or equipment damage.
- Do not attempt to disassemble or modify the card. Do not apply excessive force to card connectors or other card components. Mishandling of the card may lead to shock, fire hazard, or equipment failure.
- Be sure to disconnect the power cable of the host device before installing the card and connecting/disconnecting the cables (in order to eliminate shock hazard, undesired noise, and avoid equipment damage).
- Turn off all peripheral devices connected to the host device before installation, and unplug all related cables (in order to eliminate shock hazard, undesired noise, and avoid equipment damage).



CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

- Be sure to properly ground the host device to prevent electrical shock and/or malfunction.
- Do not touch the metallic leads (pins) of the circuit board when handling the card. The pins are sharp and may cause hand cuts.
- Wear a pair of heavy gloves during installation to avoid scratching or cutting your hands on sharp edges.
- Avoid touching exposed connectors and metal parts to minimize the possibility of bad connections.
- Drain all static electricity from your clothing and body before handling the card. Static electricity can damage the card. Touch an exposed metal part of the host device or other grounded object beforehand.
- Do not drop the card or subject it to physical shock as this can result in breakage and/or malfunction.
- Do not drop screws or other small parts inside the card. If power is applied while screws or similar metal objects are loose inside the unit the card may malfunction or be damaged. If you cannot retrieve dropped objects yourself, refer the problem to qualified Yamaha service personnel.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

- The illustrations as shown in this manual are for instructional purposes only, and may be different from the ones on your equipment.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

Information for Users on Collection and Disposal of Old Equipment



This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling of old products, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC.

By disposing of these products correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

[For business users in the European Union]

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

This symbol is only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

European models

Purchaser/User Information specified in EN55103-1 and EN55103-2.

Conforms to Environments: E1, E2, E3 and E4

Introduction

Thank you for choosing the Yamaha MY8-SDI-D HD-SDI^(*) De-multiplexer card. The MY8-SDI-D is an HD-SDI de-multiplexer Mini-YGDAI card for use with compatible Yamaha professional audio equipment. The card enables you to input up to two audio groups (four channels per group; total eight channels) to a host device, by selecting them from four audio groups (total 16 channels) that are multiplexed into a HD-SDI signal.

To take full advantage of the superior functionality of the MY8-SDI-D and enjoy years of trouble-free use, please read this manual before you begin using the product.

* This card does not support SD-SDI.

About the host devices in which the MY8-SDI-D can be installed

Before installing the card in a host device, please refer to the Yamaha Pro Audio web site for the latest information on the compatible host devices in which the card can be installed. Yamaha Pro Audio website:

<http://www.yamahaproaudio.com/>

Installation information

Please refer to the owner's manual supplied with the host device for installation information. In addition to securing the card in place, the fixing screws at the left and right of the card function as electrical grounds. Be sure to screw them in tightly.

Accessories

Owner's Manual

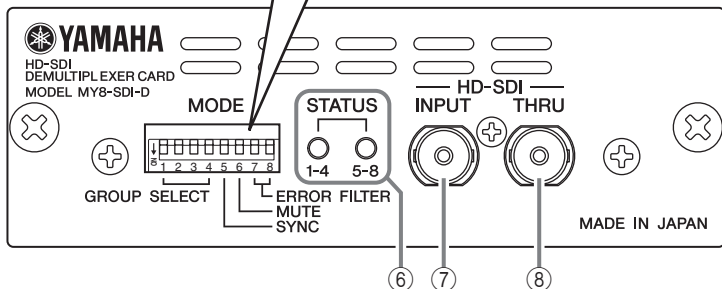
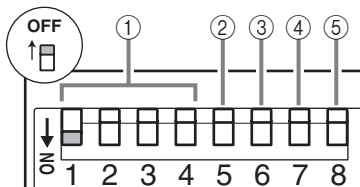
Part Names and Functions

■ Panel

MODE Switches

Move the switches down to set to ON. Raise the switches to set to OFF.

Do not change the switch settings if the host device is powered on.



① GROUP SELECT Switches (SW1-4)

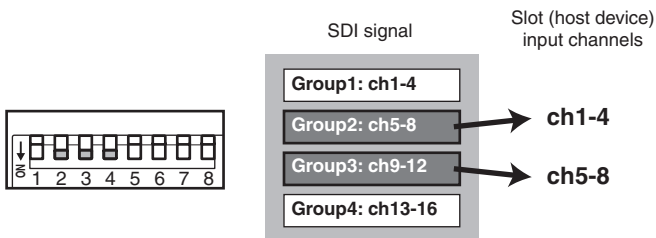
Set these switches to ON to select the following embedded audio groups. Up to two groups of audio can be input to slot channels 1-4 and 5-8.

SW1	SW2	SW3	SW4
Group1 (ch1-4)	Group2 (ch5-8)	Group3 (ch9-12)	Group4 (ch13-16)

Note:

- If only one switch is set to ON, audio will be input to channels 1-4, but not to channels 5-8.
- If all four switches are set to OFF, no audio will be input to any channels.

- If more than two GROUP SELECT switches are set to ON, only the first two switches (in ascending order) will actually be on.
For example, if SW2, SW3, and SW4 are set to ON, Group 2 and Group 3 audio will be input to slot channels 1-4 and 5-8 respectively, and Group 4 audio will not be input.



② SYNC Switch (SW5)

Typically set this switch to OFF.

OFF: An audio clock will be generated based on the phase data of the embedded audio.

ON: An audio clock will be generated from video signals.

If the SYNC switch is set to ON, the phase between audio groups may not be identical. Set this switch to ON only if you cannot input audio with the switch set to OFF.

③ MUTE Switch (SW6)

Typically set this switch to OFF.

OFF: Audio will not be muted regardless of whether or not an HD-SDI input error is detected.

ON: Audio will be muted if an HD-SDI input error is detected (the STATUS LED lights up in a color other than green). Use this setting if you want to use muted audio to indicate an error.

Note: _____

Keep in mind that connecting or disconnecting a cable may cause noise even if this switch is set to ON.

④ ERROR FILTER Switch (SW7)

Typically set this switch to OFF. This switch is used to analyze the causes of errors.

OFF: A filter is not applied to a detected HD-SDI input error. Each STATUS LED indicates the type of all HD-SDI input errors as shown in the list below. Audio will be muted if SW6 is set to ON.

HD-SDI Input Errors

Details	ON	OFF
Video standard error	error	error
Chromaticity checksum error	—	error
Brightness checksum error	—	error
Chromaticity CRC error	—	error
Brightness CRC error	—	error
Line number error	—	error
Start of active line (SAV) code word error	—	error
End of active line (EAV) code word error	—	error

ON: A filter is applied to a detected HD-SDI input error (excluding the video standard error). The STATUS LEDs will not indicate an error status. Audio will be input to the slot channels, and will not be muted regardless of the SW6 setting.

⑤ ERROR FILTER Switch (SW8)

Typically set this switch to OFF. This switch is used to analyze the causes of errors.

OFF: A filter is not applied to a detected embedded audio error. Each STATUS LED indicates the type of error as shown in the list below. Audio will be muted if SW6 is set to ON.

Embedded Audio Errors

Details	ON	OFF
UNLOCK	error	error
Presence of any audio group packet	error	error
CRC error of video signal sent to audio block	error	error
Phase data error of the selected audio group(s)	error	error
Data block number error	—	error
Parity error in audio packet	—	error
Error correcting code error	—	error
Checksum error in the selected audio group(s)	—	error

ON: A filter is applied to a detected embedded audio error marked with a [—] in the list above. The STATUS LEDs will not indicate the status of errors marked

with [—] in the list. Audio will be input to the slot channels, and will not be muted regardless of the SW6 setting.

⑥ STATUS LED

[1-4] LED: Indicates the status of channels 1 through 4

[5-8] LED: Indicates the status of channels 5 through 8

LED Indicator	Description of Status (Error)
Off (dark)	No SDI-input signal is detected or being input. Alternatively, no audio group has been selected.
Red flash (Slow* ¹)	SD-SDI signals are being input.
Orange flash (Slow* ¹)	An SDI input error has occurred.
Red	Embedded audio is unlocked.
Red flash (Fast* ²)	No selected audio group packet exists.
Orange flash (Fast* ²)	A CRC error has occurred in the video signal sent to the audio block.
Orange	An error has occurred in the embedded audio packet.
Green	Embedded audio is locked correctly.

*1. Flashes approximately once per second.

*2. Flashes approximately four times per second.

Note:

- If an error that cannot be attributed to any channel has occurred, STATUS LEDs [1-4] and [5-8] will provide the same indication.
- If multiple errors have occurred simultaneously, the priority of the STATUS LEDs indication is the descending order of the list above.

⑦ HD-SDI INPUT Connector

This is a BNC connector that inputs HD-SDI signals.

⑧ HD-SDI THRU Connector

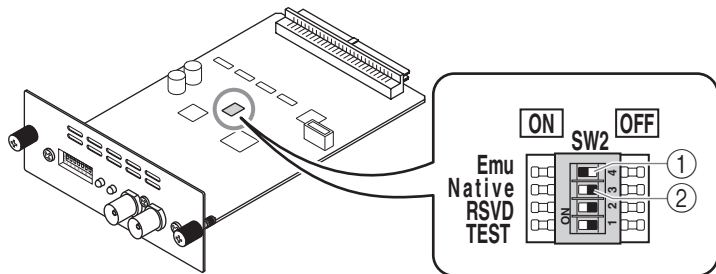
This is a BNC connector that outputs non re-clock and active thru HD-SDI signals.

Note:

We recommend that you use a 5C-FB coaxial cable^(*), or a coaxial cable that features excellent performance equivalent to that of the 5C-FB cable. The 5C-FB cable transmits HD-SDI signals over a distance of up to 100 meters.

* The attenuation of the 5C-FB cable at 750 MHz is approximately 20dB/100m.

■ Dip Switches (SW2)



① Emu Switch

If you set this switch to ON and the Native switch to OFF, the host device will recognize the card as a Yamaha MY8-AD96 AD card.

② Native Switch

If you use the card in a future host device that supports the Native mode, setting this switch to ON and the Emu switch to OFF will enable you to make best use of the MY8-SDI-D function.

Emu/Native Switch Settings

Emu	Native	Function
ON	OFF	MY8-AD96 Emulation mode
OFF	ON	MY8-SDI-D Native mode
ON	ON	Reserved
OFF	OFF	Reserved

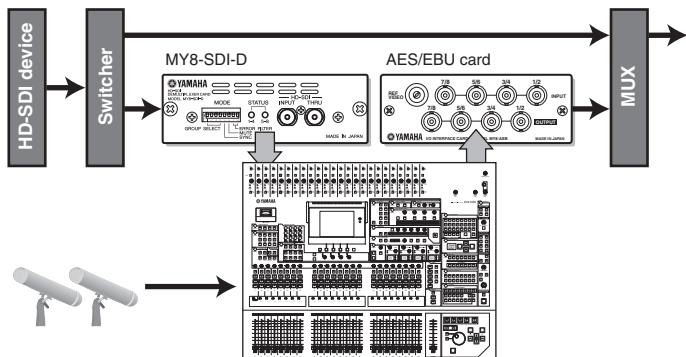
Leave the RSVD and TEST switches set to OFF. Otherwise, the unit will not operate properly.

About the Word Clock Settings

You cannot assign the MY8-SDI-D as the master clock.

If you need to synchronize the host device to a house sync signal (external digital system), use the WORD CLOCK IN connector to set the master clock of the host device to WORD CLOCK IN.

Connection Example



Appendix

■ Specifications

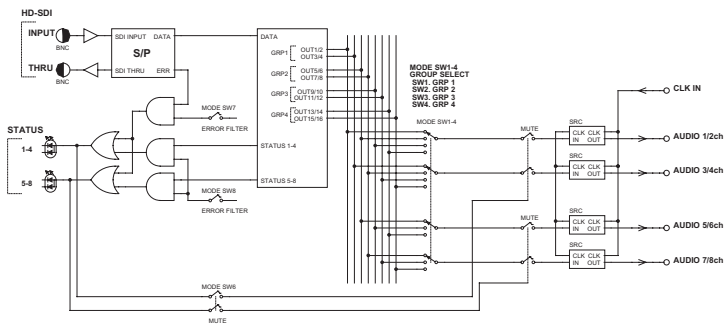
- 1. HD-SDI input**

SDI format	SMPTE 292M (1.485Gbps, 1.485/1.001Gbps)	
Embedded audio	SMPTE 299M	
Resolution	24bit	
Sampling frequency	48kHz	
Input level	800mV ±10%	
Input Impedance	75ohm	
Connector	BNC type	
- 2. HD-SDI output**

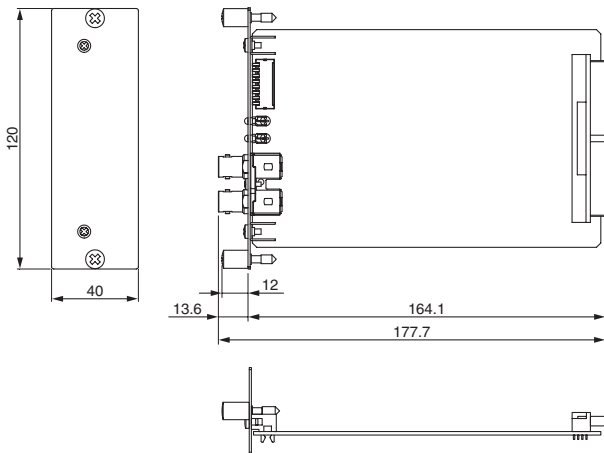
Output signal	non re-clock, active thru output	
Output level	800mV ±10%	
Output impedance	75ohm	
Connector	BNC type	
- 3. Supported format**

720p 50	720p 59.94	720p 60
1080i 50	1080i 59.94	1080i 60
1080p 25	1080p 29.97	1080p 30
1080p 24	1080p 23.97	
1080sF 24	1080sF 23.98	
1035i 59.94	1035i 60	

■ Block Diagram



■ Dimensions



Unit: mm

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135 Milner Avenue, Scarborough, Ontario,
M1S 3R1, Canada
Tel: 416-298-1311

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6600 Orangethorpe Ave., Buena Park, Calif. 90620,
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Tel: 714-522-9011

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Tel: 55-5804-0600

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CEP 04534-013 Sao Paulo, SP. BRAZIL
Tel: 011-3704-1377

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Madero Este-C1107CEK
Buenos Aires, Argentina
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