FOR.A®

INSTALLATION GUIDE

MFR-8SDI
MFR-8SDIGB
MFR-8SDO
MFR-8SDOGB
MFR-8SDODL
MFR-8AAI
MFR-8AAO
MFR-8AESI
MFR-8AESO
MFR-8AESPO
MFR-8MADIPO
MFR-16MV

6th Edition

FOR-A COMPANY LIMITED

Upon Receipt

MFR-3000 / MFR-3100EX option cards and their accessories are fully inspected and adjusted prior to shipment.
Check your received items against the packing lists below. Check to ensure no damage has occurred during shipment. If damage has occurred, or items are missing, inform your supplier immediately.

◆ **Packing List**

ITEM	QTY	REMARKS
MFR-8SDI MFR-8SDIGB MFR-8SDO MFR-8SDOGB MFR-8SDODL MFR-8AAI MFR-8AAO MFR-8AESI MFR-8AESO MFR-8AESPO MFR-8MADIPO MFR-16MV	1	
Label	1	
Installation Guide	1	This guide book

Before Starting

MFR-8SDI/8SDIGB/8AAI/8AESI are input cards for MFR-3000 / MFR-3100EX units.
MFR-8SDO/8SDOGB/8AAO/8AESO/8AESPO/8MADIPO and MFR-16MV are output cards for
MFR-3000 / MFR-3100EX units.
MFR-8SDODL is an output card for MFR-3100EX units.
If installing the card to MFR-3000, go to Sec. 1 (p3-6).
If installing the card to MFR-3100EX, go to Sec. 2 (p7-10).

1. MFR-3000

◆ **Available Slots and Number for MFR-3000 Input / Output Cards**

Slot	Slot number	Installable cards	Installable number of cards
Input slot	No.01-08 (INPUT1-8)	MFR-8SDI/8SDIGB MFR-8AAI/8AESI	Up to 8 cards
Output slot	No.09-16 (OUTPUT1-8)	MFR-8SDO/8SDOGB MFR-8AAO/8AESO MFR-8AESPO/8MADIPO	Up to 8 cards
		MFR-16MV	Up to 4 cards *

*   Installable into slots No. **09-10**, **11-12**, **13-14**, and **15-16.**

◆ **Matrix Size**
<Standard SDI Signal Routing>
The matrix size of the router varies depending on the number of installed cards as shown below.
(64 x 64 to 8 x 8)

		Number of cards: MFR-8SDO or MFR-8SDOGB (3G-SDI output)							
		8	7	6	5	4	3	2	1
Number of cards: MFR-8SDI or MFR-8SDIGB (3G-SDI input)	8	64 x 64	64 x 56	64 x 48	64 x 40	64 x 32	64 x 24	64 x 16	64 x 8
	7	56 x 64	56 x 56	56 x 48	56 x 40	56 x 32	56 x 24	56 x 16	56 x 8
	6	48 x 64	48 x 56	48 x 48	48 x 40	48 x 32	48 x 24	48 x 16	48 x 8
	5	40 x 64	40 x 56	40 x 48	40 x 40	40 x 32	40 x 24	40 x 16	40 x 8
	4	32 x 64	32 x 56	32 x 48	32 x 40	32 x 32	32 x 24	32 x 16	32 x 8
	3	24 x 64	24 x 56	24 x 48	24 x 40	24 x 32	24 x 24	24 x 16	24 x 8
	2	16 x 64	16 x 56	16 x 48	16 x 40	16 x 32	16 x 24	16 x 16	16 x 8
	1	8 x 64	8 x 56	8 x 48	8 x 40	8 x 32	8 x 24	8 x 16	8 x 8

<12G-SDI Signal Routing>
The matrix size of the router varies depending on the number of installed cards as shown below.
(16 x 16 to 2 x 2)

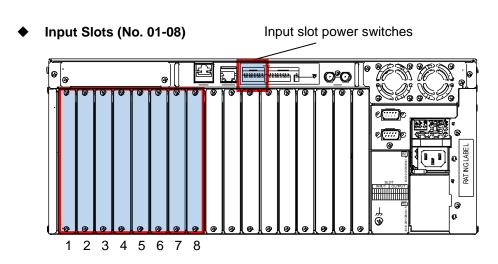|		Number of cards: MFR-8SDOGB (12G-SDI output)							
		8	7	6	5	4	3	2	1
Number of cards: MFR-8SDIGB (12G-SDI input)	8	16 x 16	16 x 14	16 x 12	16 x 10	16 x 8	16 x 6	16 x 4	16 x 2
	7	14 x 16	14 x 14	14 x 12	14 x 10	14 x 8	14 x 6	14 x 4	14 x 2
	6	12 x 16	12 x 14	12 x 12	12 x 10	12 x 8	12 x 6	12 x 4	12 x 2
	5	10 x 16	10 x 14	10 x 12	10 x 10	10 x 8	10 x 6	10 x 4	10 x 2
	4	8 x 16	8 x 14	8 x 12	8 x 10	8 x 8	8 x 6	8 x 4	8 x 2
	3	6 x 16	6 x 14	6 x 12	6 x 10	6 x 8	6 x 6	6 x 4	6 x 2
	2	4 x 16	4 x 14	4 x 12	4 x 10	4 x 8	4 x 6	4 x 4	4 x 2
	1	2 x 16	2 x 14	2 x 12	2 x 10	2 x 8	2 x 6	2 x 4	2 x 2

One MFR-16MV produces 16 outputs per card. (Requires 2 slots.) 2 systems of multi-viewer output
are available per card.
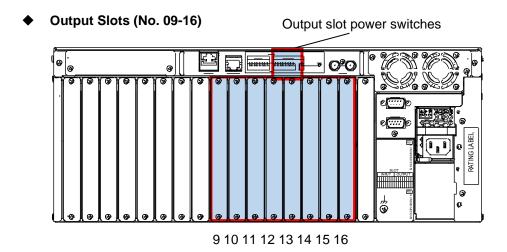
<AUDIO Signal Routing>

Matrix size varies depending on the number of installed MFR-8SDI, MFR-8AAI, MFR-8AAO, MFR-8AESI, MFR-8AESO, MFR-8AESPO or MFR-8MADIPO cards as shown below.

(1 stereo pair = 2 channels)

		Number of cards: MFR-8AAO/8AESO/8AESPO/8MADIPO							
		8	7	6	5	4	3	2	1
Number of cards: MFR-8SDI, MFR-8AAI or MFR-8AESI	8	64 x 64	64 x 56	64 x 48	64 x 40	64 x 32	64 x 24	64 x 16	64 x 8
	7	56 x 64	56 x 56	56 x 48	56 x 40	56 x 32	56 x 24	56 x 16	56 x 8
	6	48 x 64	48 x 56	48 x 48	48 x 40	48 x 32	48 x 24	48 x 16	48 x 8
	5	40 x 64	40 x 56	40 x 48	40 x 40	40 x 32	40 x 24	40 x 16	40 x 8
	4	32 x 64	32 x 56	32 x 48	32 x 40	32 x 32	32 x 24	32 x 16	32 x 8
	3	24 x 64	24 x 56	24 x 48	24 x 40	24 x 32	24 x 24	24 x 16	24 x 8
	2	16 x 64	16 x 56	16 x 48	16 x 40	16 x 32	16 x 24	16 x 16	16 x 8
	1	8 x 64	8 x 56	8 x 48	8 x 40	8 x 32	8 x 24	8 x 16	8 x 8

◆ **Input Slots (No. 01-08)**

Input slot power switches

1 2 3 4 5 6 7 8

◆ **Output Slots (No. 09-16)**

Output slot power switches

9 10 11 12 13 14 15 16

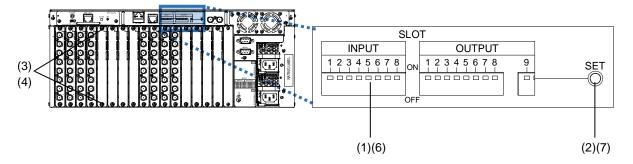# 1-1. Installing the Input / Output Cards

Before starting the installation, save the MFR-3000 system settings. See Sec. 9 "Saving / Loading All Page Settings (All Files)" in the MFR-3000 Web-based Control User Manual for details.

! CAUTION	Installation should only be performed by qualified technical person. To protect cards from electrostatic damage, do not touch the components on the cards. Although the Input / Output Cards can be installed while the power of the MFR-3000 is turned on, it is recommended to turn off the power and disconnect all unit power cords before an installation is performed.

The procedure below shows how to install an input card (**MFR-8SDI**) into **Slot 5** of your MFR-3000 as an example.

(1)   On the MFR-3000 rear panel, set **INPUT Dipswitch 5** to **DOWN** position as shown below. *

(2)   Hold down the **SET** switch for **1 sec. or more** to turn Off the Slot 5 power.
(3)   Remove the Slot 5 blank panel by removing the top and bottom screws. (If you are replacing the card, remove the installed card.)
(4)   Align the guide rails precisely on the top and bottom of the card, then gently insert the card into the slot. Tighten the supplied two screws on the top and bottom edges to secure the card to the chassis.
(5)   Put a supplied label on the card. Use the label matched to the slot number (5 in this example).
(6)   Set **INPUT Dipswitch 5** to **UP** position. *
(7)   Hold down the **SET** switch for **1 sec. or more** to turn On the Slot 5 power.

*   When installing an MFR-16MV, the two dipswitches of the two MFR-16MV slots need to be set in the DOWN position (1) then UP position (6).
*   The slot power supply can also be turned ON/OFF using "Web based control: **Slot Status page.**"

The installation is now complete.

1-2. Verifying the Installation

Follow the steps below to verify that the Input / Output card is properly installed and perform the card setup in the menu.

(1) Launch a Web browser (e.g. Microsoft Edge) and access the PC-LAN port address "http://192.168.1.12".

(2) After accessing the address, a username and a password will be requested. Enter the following username and password.

Username: user
Password: password (default)

 IMPORTANT

The above address, username, and password are default settings. If settings have been changed, enter the new address, username and password.

(3) Open the "Web-based Control: **Slot Status** page" and verify that the card is properly installed. Perform the card setup in the page, if necessary.

Refer to the above pages in the MFR-3000 Web-based Control User Manual for more details.

2. MFR-3100EX

◆ **Available Slots and Number for MFR-3100EX Input / Output Cards**

Slot	Slot number	Installable cards	Installable number of cards
Input slot	No.01-08 (INPUT1-8)	MFR-8SDI/8SDIGB MFR-8AAI/8AESI	Up to 8 cards
Output slot	OUTPUT1-9 (No.09-17)	MFR-8SDO/8SDOGB MFR-8AAO/8AESO MFR-8AESPO/8MADIPO MFR-8SDODL	Up to 9 cards
		MFR-16MV	Up to 4 cards *

* Installable into slots No. **09-10**, **11-12**, **13-14**, and **15-16.**

◆ **Matrix Size**

<Standard SDI Signal Routing>

The matrix size of the router varies depending on the number of installed cards as shown below. (64 x 72 to 8 x 8)

		Number of cards: MFR-8SDO or MFR-8SDODL								
		9	8	7	6	5	4	3	2	1
Number of cards: MFR-8SDI	8	64 x 72	64 x 64	64 x 56	64 x 48	64 x 40	64 x 32	64 x 24	64 x 16	64 x 8
	7	56 x 72	56 x 64	56 x 56	56 x 48	56 x 40	56 x 32	56 x 24	56 x 16	56 x 8
	6	48 x 72	48 x 64	48 x 56	48 x 48	48 x 40	48 x 32	48 x 24	48 x 16	48 x 8
	5	40 x 72	40 x 64	40 x 56	40 x 48	40 x 40	40 x 32	40 x 24	40 x 16	40 x 8
	4	32 x 72	32 x 64	32 x 56	32 x 48	32 x 40	32 x 32	32 x 24	32 x 16	32 x 8
	3	24 x 72	24 x 64	24 x 56	24 x 48	24 x 40	24 x 32	24 x 24	24 x 16	24 x 8
	2	16 x 72	16 x 64	16 x 56	16 x 48	16 x 40	16 x 32	16 x 24	16 x 16	16 x 8
	1	8 x 72	8 x 64	8 x 56	8 x 48	8 x 40	8 x 32	8 x 24	8 x 16	8 x 8

<12G-SDI Signal Routing>

The matrix size of the router varies depending on the number of installed cards as shown below. (16 x 18 to 2 x 2)

		Number of cards: MFR-8SDOGB (12G-SDI output)								
		9	8	7	6	5	4	3	2	1
Number of cards: MFR-8SDIGB (12G-SDI input)	8	16 x 18	16 x 16	16 x 14	16 x 12	16 x 10	16 x 8	16 x 6	16 x 4	16 x 2
	7	14 x 18	14 x 16	14 x 14	14 x 12	14 x 10	14 x 8	14 x 6	14 x 4	14 x 2
	6	12 x 18	12 x 16	12 x 14	12 x 12	12 x 10	12 x 8	12 x 6	12 x 4	12 x 2
	5	10 x 18	10 x 16	10 x 14	10 x 12	10 x 10	10 x 8	10 x 6	10 x 4	10 x 2
	4	8 x 18	8 x 16	8 x 14	8 x 12	8 x 10	8 x 8	8 x 6	8 x 4	8 x 2
	3	6 x 18	6 x 16	6 x 14	6 x 12	6 x 10	6 x 8	6 x 6	6 x 4	6 x 2
	2	4 x 18	4 x 16	4 x 14	4 x 12	4 x 10	4 x 8	4 x 6	4 x 4	4 x 2
	1	2 x 18	2 x 16	2 x 14	2 x 12	2 x 10	2 x 8	2 x 6	2 x 4	2 x 2

One MFR-16MV produces 16 outputs per card. (Requires 2 slots.) 2 systems of multi-viewer output are available per card.
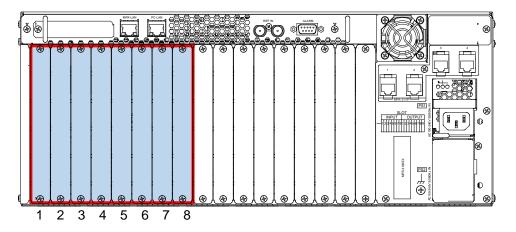
<AUDIO Signal Routing>

Matrix size varies depending on the number of installed MFR-8SDI[*1], MFR-8AAI, MFR-8AAO, MFR-8AESI, MFR-8AESO, MFR-8AESPO or MFR-8MADIPO cards as shown below.

(The matrix sizes below do not indicate the number of audio channels, but the number of streams. Use the followings to find the number of audio channels: SDI embedded: 16 channels, AES/EBU: 2 channels, Analog: 2 channels, MADI: 64 channels)
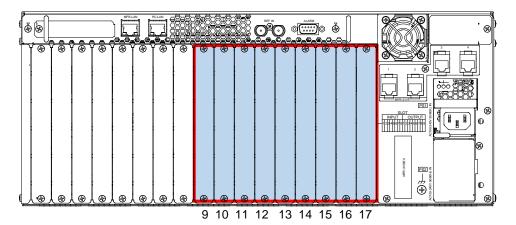
		Number of cards: MFR-8AAO/8AESO/8AESPO/8MADIPO								
		9	8	7	6	5	4	3	2	1
Number of cards: MFR-8SDI, MFR-8AAI or MFR-8AESI	8	64 x 72	64 x 64	64 x 56	64 x 48	64 x 40	64 x 32	64 x 24	64 x 16	64 x 8
	7	56 x 72	56 x 64	56 x 56	56 x 48	56 x 40	56 x 32	56 x 24	56 x 16	56 x 8
	6	48 x 72	48 x 64	48 x 56	48 x 48	48 x 40	48 x 32	48 x 24	48 x 16	48 x 8
	5	40 x 72	40 x 64	40 x 56	40 x 48	40 x 40	40 x 32	40 x 24	40 x 16	40 x 8
	4	32 x 72	32 x 64	32 x 56	32 x 48	32 x 40	32 x 32	32 x 24	32 x 16	32 x 8
	3	24 x 72	24 x 64	24 x 56	24 x 48	24 x 40	24 x 32	24 x 24	24 x 16	24 x 8
	2	16 x 72	16 x 64	16 x 56	16 x 48	16 x 40	16 x 32	16 x 24	16 x 16	16 x 8
	1	8 x 72	8 x 64	8 x 56	8 x 48	8 x 40	8 x 32	8 x 24	8 x 16	8 x 8

(*1) Used as MADI input card.

◆ **Input Slots (No. 01-08)**

1 2 3 4 5 6 7 8

◆ **Output Slots (No. 09-17)**

9 10 11 12 13 14 15 16 17

2-1. Installing the Input / Output Cards

Before starting the installation, save the MFR-3100EX system settings. See Sec. 9 "Saving / Loading All Page Settings (All Files)" in the MFR-3100EX Web-based Control User Manual for details.

⊙ **CAUTION**	Installation should only be performed by qualified technical person. To protect cards from electrostatic damage, do not touch the components on the cards. Although the Input / Output Cards can be installed while the power of the MFR-3100EX is turned on, it is recommended to turn off the power and disconnect all unit power cords before an installation is performed.

The procedure below shows how to install an input card (**MFR-8SDI**) into **Slot 5** of your MFR-3100EX as an example.

(1) Open [Web-based Control: **Slot Status** page] and turn **OFF** the Slot 5 Slot Power.
(2) Click **Send**. Slot 5 is powered off.
(3) Remove the Slot 5 blank panel by removing the top and bottom screws. (If you are replacing the card, remove the installed card.)
(4) Align the guide rails precisely on the top and bottom of the card, then gently insert the card into the slot. Tighten the supplied two screws on the top and bottom edges to secure the card to the chassis.
(5) Put a supplied label on the card. Use the label matched to the slot number (5 in this example).
(6) In the [Web-based Control: **Slot Status** page] turn **ON** the Slot 5 Slot Power.
(7) Click **Send**. Slot 5 is powered on.

*   For MFR-16MV cards, turn on/off the power of 2 slots.

The installation is now complete.

2-2. Verifying the Installation

Follow the steps below to verify that the Input / Output card is properly installed and perform the card setup in the menu.

(1) Launch a Web browser (e.g. Microsoft Edge) and access the PC-LAN port address "http://192.168.0.12".
(If MFR-31CPU is configured, enter "http://192.168.0.13.")

(2) After accessing the address, a username and a password will be requested. Enter the following username and password.

Username: user
Password: password (default)

IMPORTANT

The above address, username, and password are default settings. If settings have been changed, enter the new address, username and password.

(3) Open the "Web-based Control: **Slot Status** page" and verify that the card is properly installed. Perform the card setup in the page, if necessary.

Refer to the above pages in the MFR-3100EX Web-based Control User Manual for more details.

FOR.A®

FOR-A COMPANY LIMITED

Head Office 3-8-1 Ebisu, Shibuya-ku, Tokyo 150-0013, Japan
Overseas Division Tel: +81(0)3-3446-3936 Fax: +81(0)3-3445-5116

FOR-A Corporation of America Corporate Office/Service Center

11155 Knott Ave., Suite G, H & I, Cypress, CA 90630, U.S.A.
Tel: +1 714-894-3311 Fax: +1 714-894-5399

FOR-A Corporation of America Northeast Office

1360 Clifton Ave., Clifton, NJ 07012, U.S.A.
Tel: +1 973-220-8471 Fax: +1 714-894-5399

FOR-A Corporation of America Southeast Office

Tel: +1-305-773-7608

FOR-A Corporation of America Support Center

2400 N.E. Waldo Road, Gainesville, FL 32609, U.S.A.
Tel: +1 352-371-1505 Fax: +1 714-894-5399

FOR-A Latin America and the Caribbean Miami Office

Tel: +1 657-600-5759

FOR-A Latin America and the Caribbean Sao Paulo Office

Tel: +55 (0)11-99913-3751

FOR-A Europe S.r.l.

Via Volturno, 37, 20861, Brugherio MB, Italy
Tel: +39 (0)39-916-4811

FOR A UK Limited

Trident Court, 1 Oakcroft Road Chessington, KT9 1BD, U.K.
Tel: +44 (0)20-3044-2935 Fax: +44 (0)20-3044-2936

FOR-A Italia S.r.l.

Via Volturno, 37, 20861, Brugherio MB, Italy
Tel: +39 (0)39-881-086

FOR-A Corporation of Korea

1007, 57-5, Yangsan-ro, Yeongdeungpo-gu, Seoul 07271, Korea
Tel: +82 (0)2-2637-0761 Fax: +82 (0)2-2637-0760

FOR-A China Limited

1618 Huateng Building, No. 302, 3 District, Jinsong, Chaoyang, Beijing 100021, China
Tel: +86 (0)10-8721-6023 Fax: +86 (0)10-8721-6033

FOR-A Middle East Africa Office

Aurora Tower, Office 1407, Dubai Media City, P.O. Box 502688, Dubai, UAE
Tel: +971 (0)4 551 5830 Fax: +971 (0)4 551 5832

FOR-A India Private Limited. Mumbai Office

2nd Floor, Valecha Chambers, Link Road, Andheri (W), Mumbai 400053, India
Tel: +91-(0)22-2673-3623 Fax: +91-(0)22-2639-3415

FOR-A India Private Limited. Delhi Office

8th floor, World Trade Tower, Sector-16, Noida, Uttar Pradesh 201301, India
Tel: +91-(0)12-0423-8674

FOR-A South East Asia Office

Studio 09, Rm. A1, 3/F., Phase 1, Hang Fung Ind. Bldg., 2G Hok Yuen St., Hung Hom, Hong Kong
Tel: +852 2110-1352

You can download manuals and other documents by registering your email address.
http://www.for-a.com/