OPERATION MANUAL

MFR-9SDIR
MFR-9SDOR

1st Edition

FOR-A COMPANY LIMITED

Upon Receipt

Optional cards for MFR-4000R and MFR-6000R 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.

◆ **Option**

ITEM	QTY	REMARKS
MFR-9SDIR MFR-9SDOR	1	
Installation Guide	1	This manual.

Prior to Starting

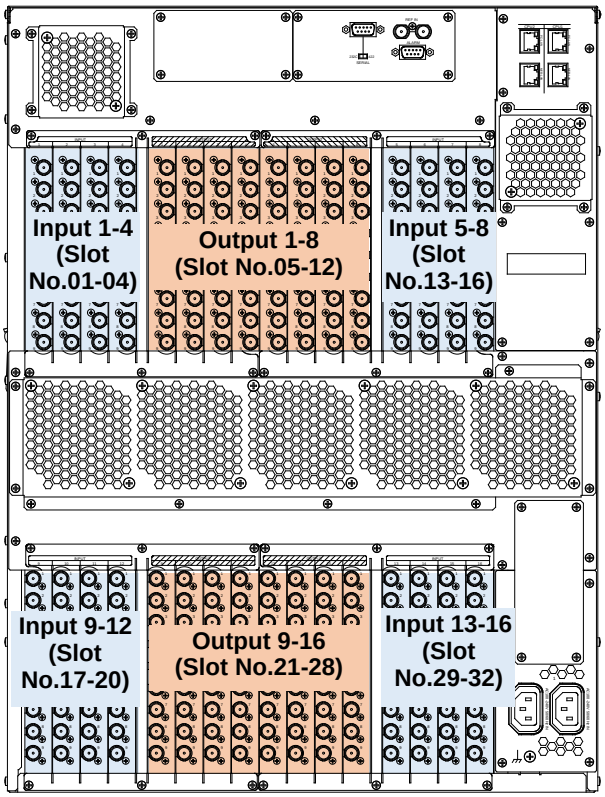
MFR-9SDIR is an input card for MFR-4000R/MFR-6000R units.
MFR-9SDOR is an output card for MFR-4000R/MFR-6000R units.

◆ **Available Slots and Number for MFR-4000R Input / Output Cards**

Slot	Slot number	Installable cards	Installable number of cards
Input slot	No.01-08 (INPUT1-8)	MFR-9SDIR	Up to 8 cards
Output slot	No.09-16 (OUTPUT1-8)	MFR-9SDOR	Up to 8 cards

◆ **Available Slots and Number for MFR-6000R Input / Output Cards**

Slot	Slot number	Installable cards	Installable number of cards
Input slot	No. 01-04 (INPUT1-4) No. 13-16 (INPUT5-8) No. 17-20 (INPUT9-12) No. 29-32 (INPUT13-16)	MFR-9SDIR	Up to 16 cards
Output slot	No. 05-12 (OUTPUT1-8) No. 21 -28 (OUTPUT9-16)	MFR-9SDOR	Up to 16 cards



1. Matrix Size Chart

1-1. MFR-4000R

◆ **Standard SDI Signal Routing**

Matrix size varies depending on the number of installed MFR-9SDIR and MFR-9SDOR cards as shown below. (72 x 72 to 9 x 9)

		Number of cards: MFR-9SDOR							
		8	7	6	5	4	3	2	1
Number of cards: MFR-9SDIR	8	72 x 72	72 x 63	72 x 54	72 x 45	72 x 36	72 x 27	72 x 18	72 x 9
	7	63 x 72	63 x 63	63 x 54	63 x 45	63 x 36	63 x 27	63 x 18	63 x 9
	6	54 x 72	54 x 63	54 x 54	54 x 45	54 x 36	54 x 27	54 x 18	54 x 9
	5	45 x 72	45 x 63	45 x 54	45 x 45	45 x 36	45 x 27	45 x 18	45 x 9
	4	36 x 72	36 x 63	36 x 54	36 x 45	36 x 36	36 x 27	36 x 18	36 x 9
	3	27 x 72	27 x 63	27 x 54	27 x 45	27 x 36	27 x 27	27 x 18	27 x 9
	2	18 x 72	18 x 63	18 x 54	18 x 45	18 x 36	18 x 27	18 x 18	18 x 9
	1	9 x 72	9 x 63	9 x 54	9 x 45	9 x 36	9 x 27	9 x 18	9 x 9

1-2. MFR-6000R

◆ **Standard SDI Signal Routing**

Matrix size varies depending on the number of installed MFR-9SDIR and MFR-9SDOR cards as shown below. (144 x 144 to 9 x 9)

		Number of cards: MFR-9SDOR															
		16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Number of cards: MFR-9SDIR	16	144 x 144	144 x 135	144 x 126	144 x 117	144 x 108	144 x 99	144 x 90	144 x 81	144 x 72	144 x 63	144 x 54	144 x 45	144 x 36	144 x 27	144 x 18	144 x 9
	15	135 x 144	135 x 135	135 x 126	135 x 117	135 x 108	135 x 99	135 x 90	135 x 81	135 x 72	135 x 63	135 x 54	135 x 45	135 x 36	135 x 27	135 x 18	135 x 9
	14	126 x 144	126 x 135	126 x 126	126 x 117	126 x 108	126 x 99	126 x 90	126 x 81	126 x 72	126 x 63	126 x 54	126 x 45	126 x 36	126 x 27	126 x 18	126 x 9
	13	117 x 144	117 x 135	117 x 126	117 x 117	117 x 108	117 x 99	117 x 90	117 x 81	117 x 72	117 x 63	117 x 54	117 x 45	117 x 36	117 x 27	117 x 18	117 x 9
	12	108 x 144	108 x 135	108 x 126	108 x 117	108 x 108	108 x 99	108 x 90	108 x 81	108 x 72	108 x 63	108 x 54	108 x 45	108 x 36	108 x 27	108 x 18	108 x 9
	11	99 x 144	99 x 135	99 x 126	99 x 117	99 x 108	99 x 99	99 x 90	99 x 81	99 x 72	99 x 63	99 x 54	99 x 45	99 x 36	99 x 27	99 x 18	99 x 9
	10	90 x 144	90 x 135	90 x 126	90 x 117	90 x 108	90 x 99	90 x 90	90 x 81	90 x 72	90 x 63	90 x 54	90 x 45	90 x 36	90 x 27	90 x 18	90 x 9
	9	81 x 144	81 x 135	81 x 126	81 x 117	81 x 108	81 x 99	81 x 90	81 x 81	81 x 72	81 x 63	81 x 54	81 x 45	81 x 36	81 x 27	81 x 18	81 x 9
	8	72 x 144	72 x 135	72 x 126	72 x 117	72 x 108	72 x 99	72 x 90	72 x 81	72 x 72	72 x 63	72 x 54	72 x 45	72 x 36	72 x 27	72 x 18	72 x 9
	7	63 x 144	63 x 135	63 x 126	63 x 117	63 x 108	63 x 99	63 x 90	63 x 81	63 x 72	63 x 63	63 x 54	63 x 45	63 x 36	63 x 27	63 x 18	63 x 9
	6	54 x 144	54 x 135	54 x 126	54 x 117	54 x 108	54 x 99	54 x 90	54 x 81	54 x 72	54 x 63	54 x 54	54 x 45	54 x 36	54 x 27	54 x 18	54 x 9
	5	45 x 144	45 x 135	45 x 126	45 x 117	45 x 108	45 x 99	45 x 90	45 x 81	45 x 72	45 x 63	45 x 54	45 x 45	45 x 36	45 x 27	45 x 18	45 x 9
	4	36 x 144	36 x 135	36 x 126	36 x 117	36 x 108	36 x 99	36 x 90	36 x 81	36 x 72	36 x 63	36 x 54	36 x 45	36 x 36	36 x 27	36 x 18	36 x 9
	3	27 x 144	27 x 135	27 x 126	27 x 117	27 x 108	27 x 99	27 x 90	27 x 81	27 x 72	27 x 63	27 x 54	27 x 45	27 x 36	27 x 27	27 x 18	27 x 9
	2	18 x 144	18 x 135	18 x 126	18 x 117	18 x 108	18 x 99	18 x 90	18 x 81	18 x 72	18 x 63	18 x 54	18 x 45	18 x 36	18 x 27	18 x 18	18 x 9
	1	9 x 144	9 x 135	9 x 126	9 x 117	9 x 108	9 x 99	9 x 90	9 x 81	9 x 72	9 x 63	9 x 54	9 x 45	9 x 36	9 x 27	9 x 18	9 x 9

2. [MFR-4000R] I/ O Card Installation / Replacement

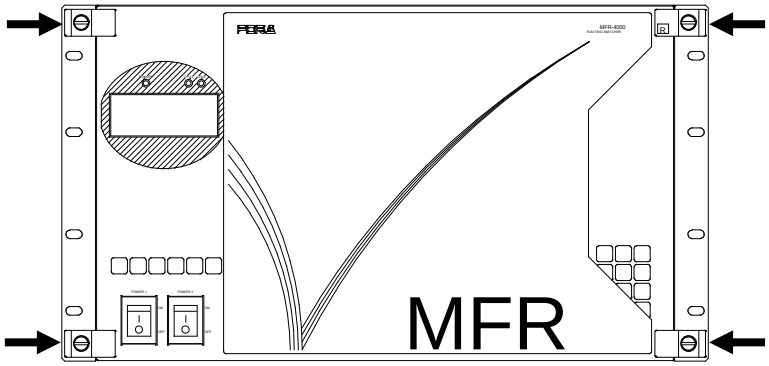
IMPORTANT

Contact FOR-A agent or service center for I/O Card installation and replacement work since such work should only be conducted by qualified technical personnel.

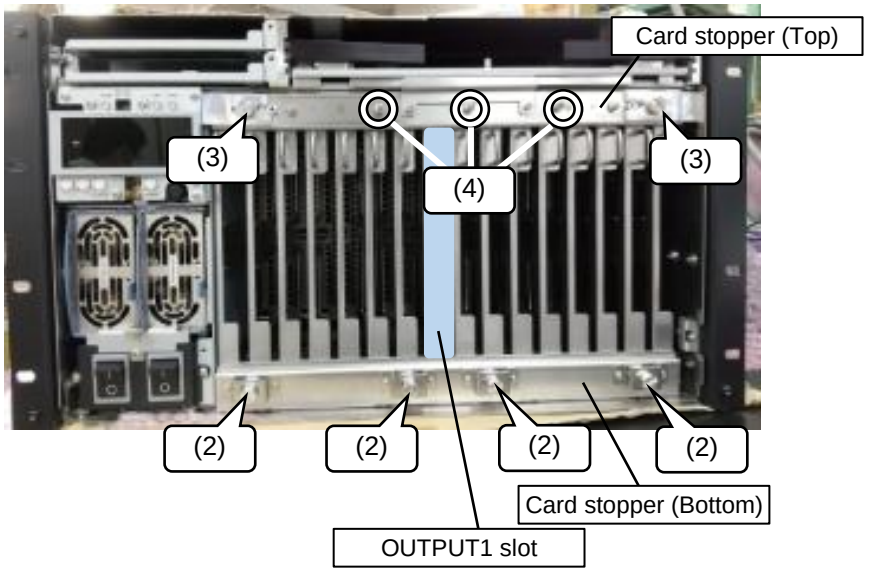
2-1. How to Install a New Card

The following procedure shows how to install an output card into OUTPUT1 slot.

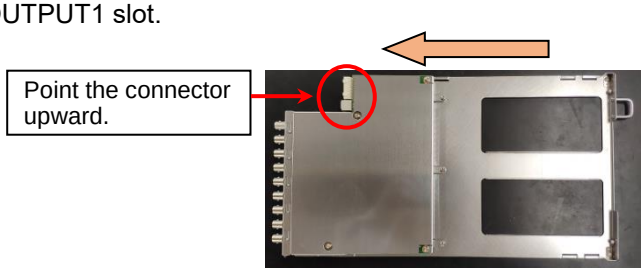
1. Unfasten to remove four fixing screws along the front panel as shown and detach the front panel.



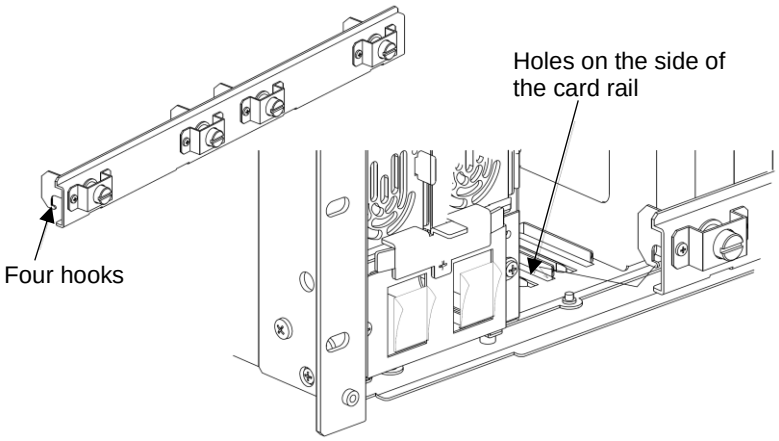
2. Loosen the four thumbscrews and detach the **card stopper (Bottom)**.
3. Loosen the two thumbscrews on the **card stopper (Top)**.
4. Loosen the three binding screws and detach the **card stopper (Top)**.



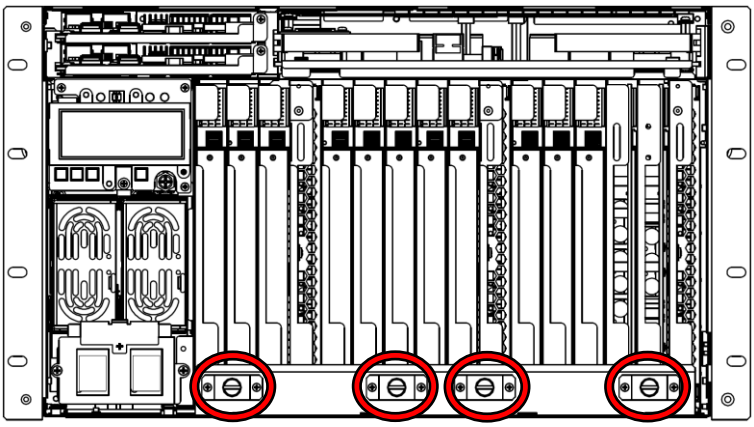
5. Detach the OUTPUT1 slot blank panel.
6. Insert a new card firmly into the OUTPUT1 slot.
   * Confirm the slot number and direction before card insertion.



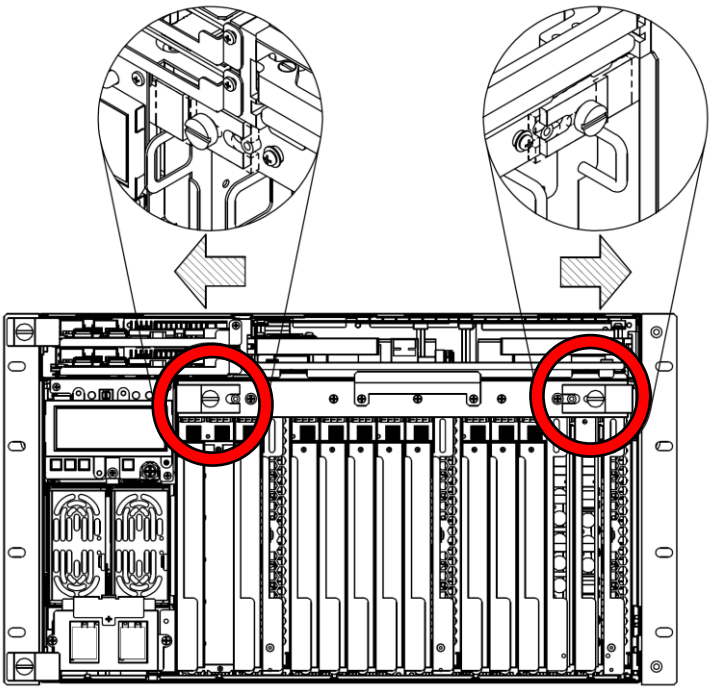
7. Re-install the **card stopper (Bottom)** removed in Step 2.
   Hook the four hooks into the holes on the side of the card rail.



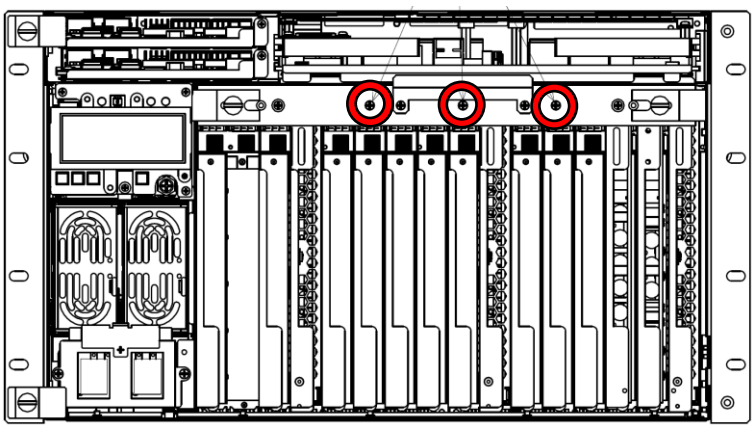
8. Make sure that the four hooks are hooked on the rail bracket of the unit and fasten the four thumbscrews.



9. Re-install the **card stopper (Top)** removed in Step 4. Hook the latches into the spaces on either side, and fasten the two thumbscrews.



10. Fasten the three binding screws.



11. Turn the OUTPUT1 slot **ON** using [SETTING > SLOT SHUTDOWN] menu in Menu display. See MFR-4000R Operation Manual Sec. 4-2-2. “Turning ON/OFF an Input/ Output Card” for details.
12. Verify that LEDs on the card installed into OUTPUT1 light up.
13. Re-install the front panel.

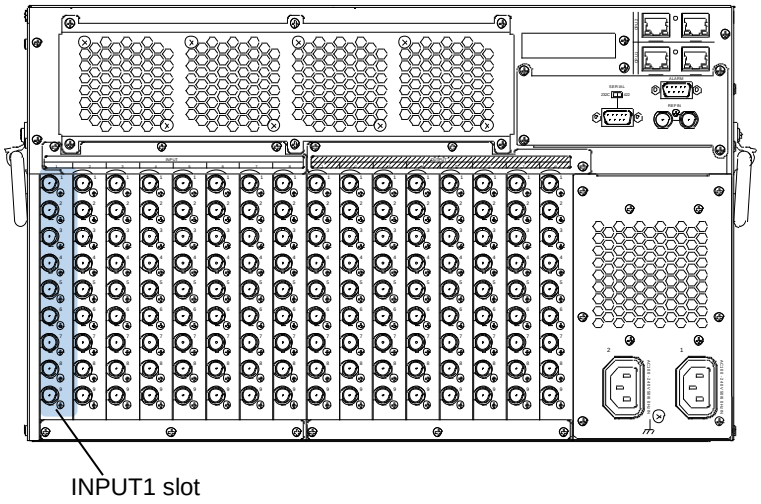
A new card installation is now complete.

To use the input/ output of the installed card, add assignment settings in the Source Assignment screen and Destination Assignment screen in the Web GUI.

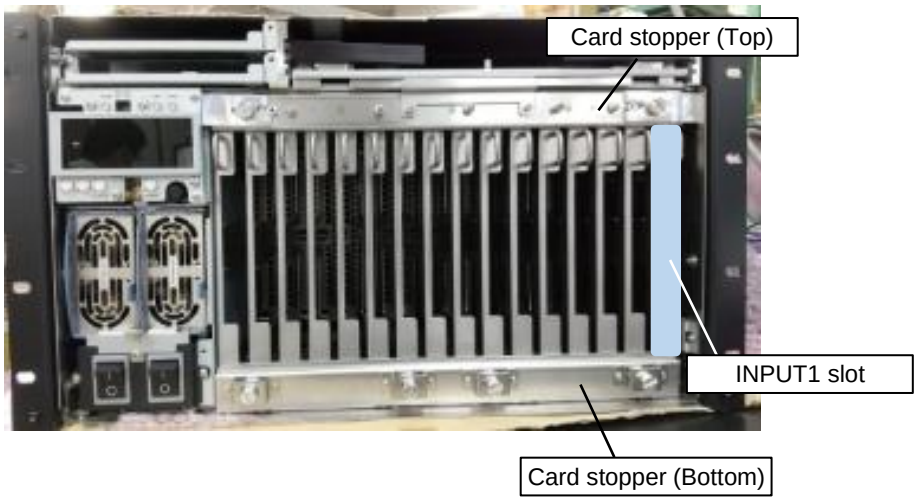
2-2. How to Replace a Card

The following procedure shows how to replace a card in INPUT1 slot to a new input card.

1. Detach all the BNC cables connected to the INPUT1 connector ports.



2. Unfasten to remove four fixing screws along the front panel and detach the front panel.
3. Shutdown the INPUT1 slot in [SETTING > SLOT SHUTDOWN] menu of Menu Display. See Sec. 4-2-2. “Turning ON/OFF an Input/ Output Card” for details.
4. Remove the **card stoppers (Top) and (Bottom)**. (See Sec. 2-1. “How to Install a New Card” for details.)
5. Grab the INPUT1 slot card handle and slowly remove (pull out) the card.



6. Insert a new card firmly into the INPUT1 slot.

* Confirm the slot number and direction before card insertion. (See Step 4. in Sec. 2-1. “How to Install a New Card.”)

7. Re-install the **card stoppers (Top) and (Bottom)** removed in Step 4.
8. Turn the INPUT1 slot **ON** using [SETTING > SLOT SHUTDOWN] menu in Menu display. (See MFR-4000R Operation Manual Sec. 4-2-2. “Turning ON/OFF an Input/ Output Card” for details.)
9. Verify that LEDs on the card installed into INPUT1 light up.
10. Re-install the front panel.

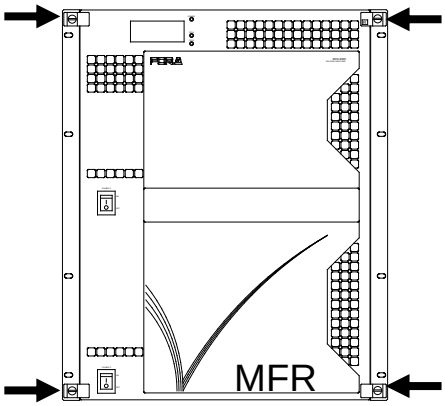
The card replacement is now complete.

3. [MFR-6000R] I/ O Card Installation / Replacement

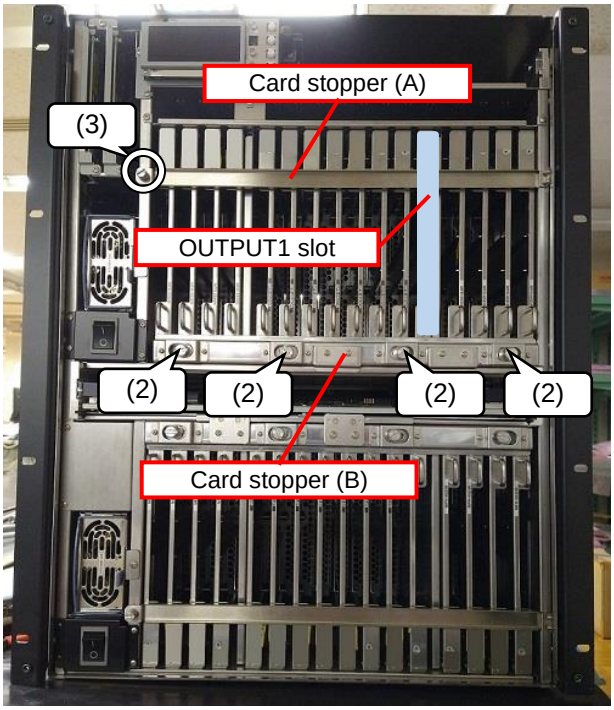
3-1. How to Install a New Card

The following procedure shows how to install an output card into OUTPUT1 slot.

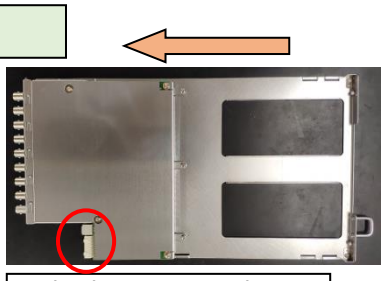
1. Unfasten to remove four fixing screws along the front panel as shown and detach the front panel.



2. Loosen the four thumbscrews and detach the **card stopper (B)**.
3. Loosen the screw on the left side of the **card stopper (A)** and detach the **card stopper (A)**.
4. Detach the OUTPUT1 slot blank panel.
5. Insert a new card firmly into the OUTPUT1 slot.
   * Confirm the slot number (See the figure on page 3) and direction before card insertion.



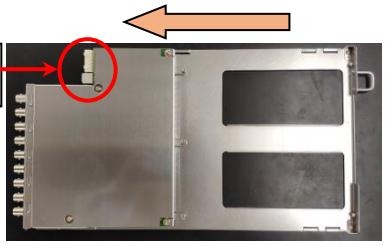
Slot 1-16



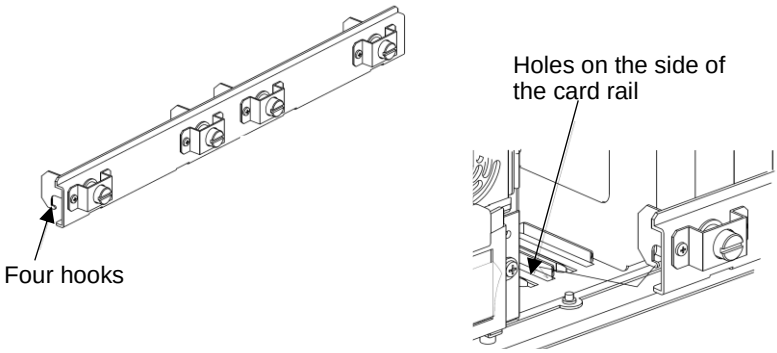
Point the connector down.

Slot 17-32

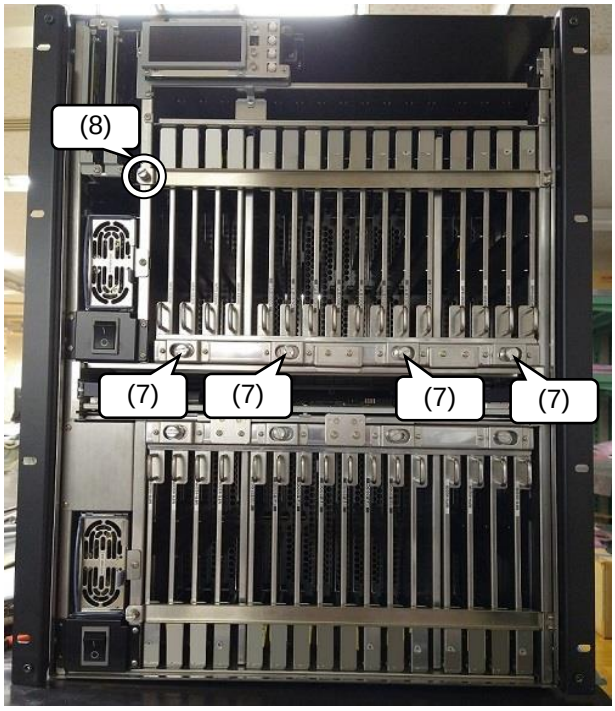
Point the connector up.



6 Re-install the **card stopper (B)** removed in Step 2.
Hook the four hooks into the holes on the side of the card rail.



7. Make sure that the four hooks are hooked on the rail bracket of the unit and fasten the four thumbscrews.
8. Re-install the **card stopper (A)** removed in Step 3.



9. Turn the OUTPUT1 slot **ON** using [SETTING > SLOT SHUTDOWN] menu in Menu display. See MFR-6000R Operation Manual Sec. 4-2-2. “Turning ON/OFF an Input/ Output Card” for details.
10. Verify that LEDs on the card installed into OUTPUT1 light up.
11. Re-install the front panel.

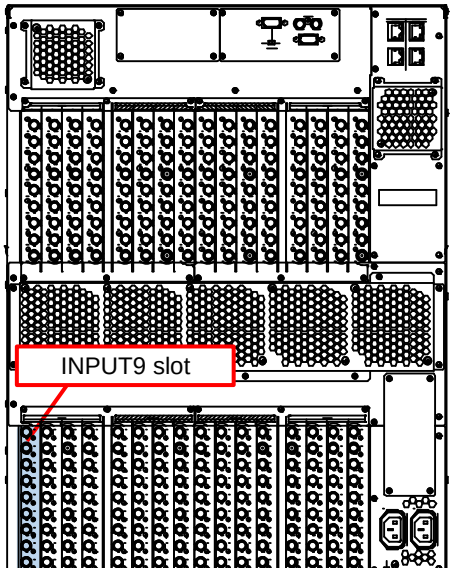
A new card installation is now complete.

To use the input/ output of the installed card, add assignment settings in the Source Assignment screen and Destination Assignment screen in the Web GUI.

3-2. How to Replace a Card

The following procedure shows how to replace a card in INPUT9 slot to a new input card.

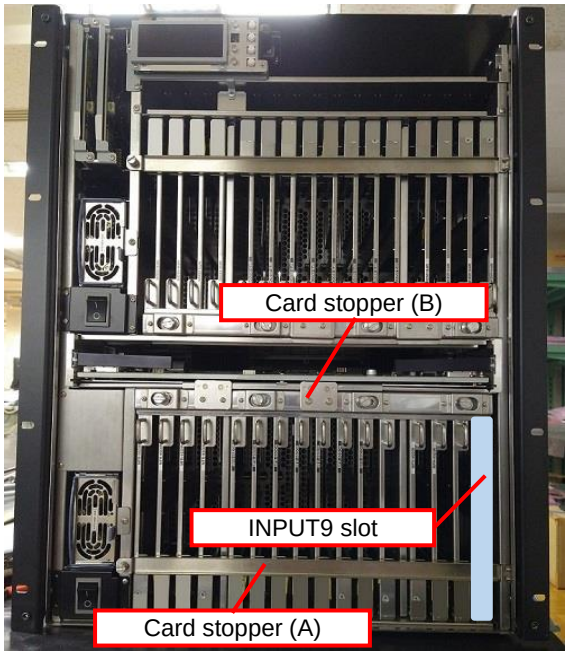
1. Detach all the BNC cables connected to the INPUT9 connector ports.
2. Unfasten to remove four fixing screws along the front panel and detach the front panel.
3. Shutdown the INPUT9 slot in [SETTING > SLOT SHUTDOWN] menu of Menu Display.
   See MFR-6000R Operation Manual Sec. 4-2-2. “Turning ON/OFF an Input/ Output Card” for details.
4. Remove the **card stoppers (A) and (B)**.
   (See Sec. 3-1. “How to Install a New Card” for details.)
5. Grab the INPUT9 slot card handle and slowly remove (pull out) the card.



6. Insert a new card firmly into the INPUT9 slot.

* Confirm the slot number (See page 3) and direction before card insertion.
(See Step 5. in Sec. 3-1. “How to Install a New Card.”)

7. Re-install the **card stoppers (A) and (B)** removed in Step 4.
   (See Steps 6. to 8. in Sec. 3-1. “How to Install a New Card.”)
8. Turn the INPUT9 slot **ON** using [SETTING > SLOT SHUTDOWN] menu in Menu display.
   (See MFR-6000R Operation Manual Sec. 4-2-2. “Turning ON/OFF an Input/ Output Card” for details.)
9. Verify that LEDs on the card installed into INPUT9 light up.
10. Re-install the front panel.



The card replacement is now complete.

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