


INSTALLATION GUIDE FOR VM-3000 SERIES INTEGRATED VOICE EVACUATION SYSTEM

This manual describes works to be performed with the unit's case open.
Leave all these works to a qualified electrician.
Do not pass this manual to users.

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 WARNING

Be sure to switch off the system power before starting any work described herein.
Doing otherwise may cause electric shocks.
For switching off the system power, refer to [p. 2](#) in this manual.

CAUTION

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

ATTENTION

Ces instructions d'entretien sont uniquement destinées à un personnel qualifié.
Pour réduire le risque de choc électrique, ne procédez à aucune opération d'entretien en dehors de celles indiquées dans ce manuel, sauf si vous êtes suffisamment qualifié.

1. SWITCHING OFF THE SYSTEM POWER

When it is necessary to open the equipment's case for modification or change of setting, the system's power needs to be switched off.

If the DC power supply from the VM-3240VA and VM-3240E to the VX-2000DS stops, the VX-2000DS automatically switches the system's power supply over to the battery. The system power can be switched off without switching over to the battery by using the VX-2000DS' Setting switch.

Note

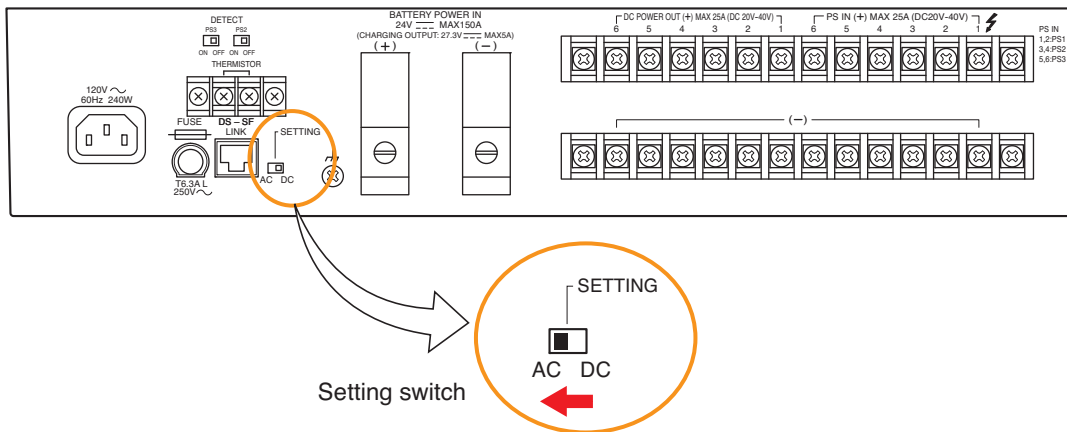
Stopping the AC power supply to the VX-2000DS automatically switches the power supply over to the battery. Take care not to stop the AC power supply to the VX-2000DS.

[To switch off the system power]

Step 1. Terminate all current broadcasts to stop system operation.

Step 2. Shift the Setting switch on the VX-2000DS's rear panel to the "AC" position.

VX-2000DS Rear



Step 3. Stop the AC power supply to the VM-3240VA and VM-3240E by disconnecting each unit's AC power cord.

This permits the system power to be switched off without switching over to battery operation if AC power is supplied to the VX-2000DS.

[To restore the power supply to the system]

Step 1. Restore the AC power supply to the VM-3240VA and VM-3240E. The DC power is supplied from these units to the VX-2000DS.

Step 2. Shift the Setting switch on the VX-2000DS rear panel back to the "DC" position.

Step 3. Operate the system normally.

2. INPUT TRANSFORMER INSTALLATION AND MIC INPUT SENSITIVITY CHANGE

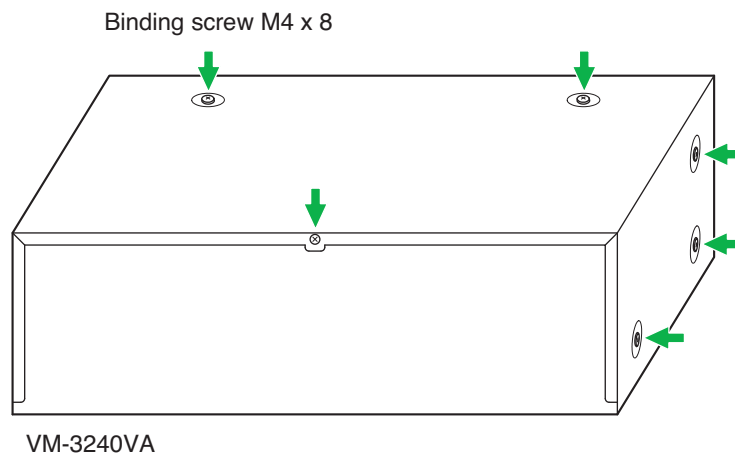
- Each of the MIC inputs 1 to 3 (electronically balanced) can be converted to a transformer-balanced input by installing an optional input transformer IT-450 on the PC board.
- Each sensitivity of the MIC inputs 1 to 3 can be changed from -50 dB (factory-preset) to -30 dB by cutting the corresponding jumper wire on the input PC board.



WARNING

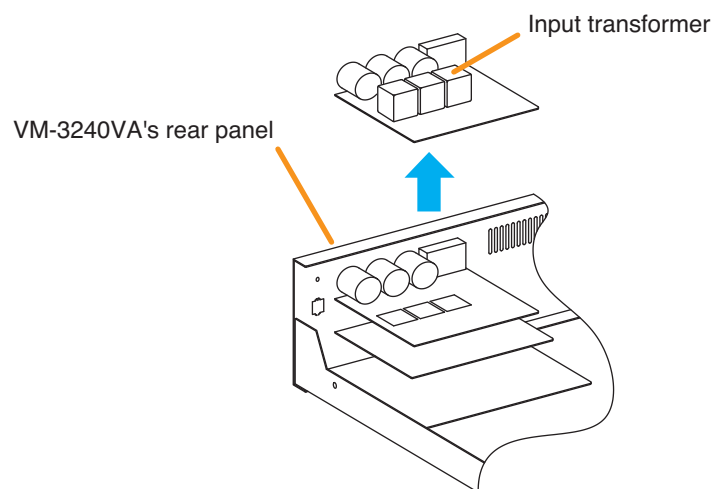
Be sure to switch off the system power before starting any work described herein.
Doing otherwise may cause electric shocks.
For switching off the system power, refer to [p. 2](#) in this manual.

- Step 1.** Remove the screws securing the VM-3240VA's cover (3 pieces on each side, 2 on the top, and 1 on the rear) to detach the cover.



- Step 2.** Remove the input PC board.
The input PC board is fixed to the unit's rear panel with 8 screws.
Unscrew the PC board to detach it.

- Step 3.** To convert the electronically balanced input to a transformer-balanced one, install and solder the IT-450 transformer at the corresponding location on the PC board.

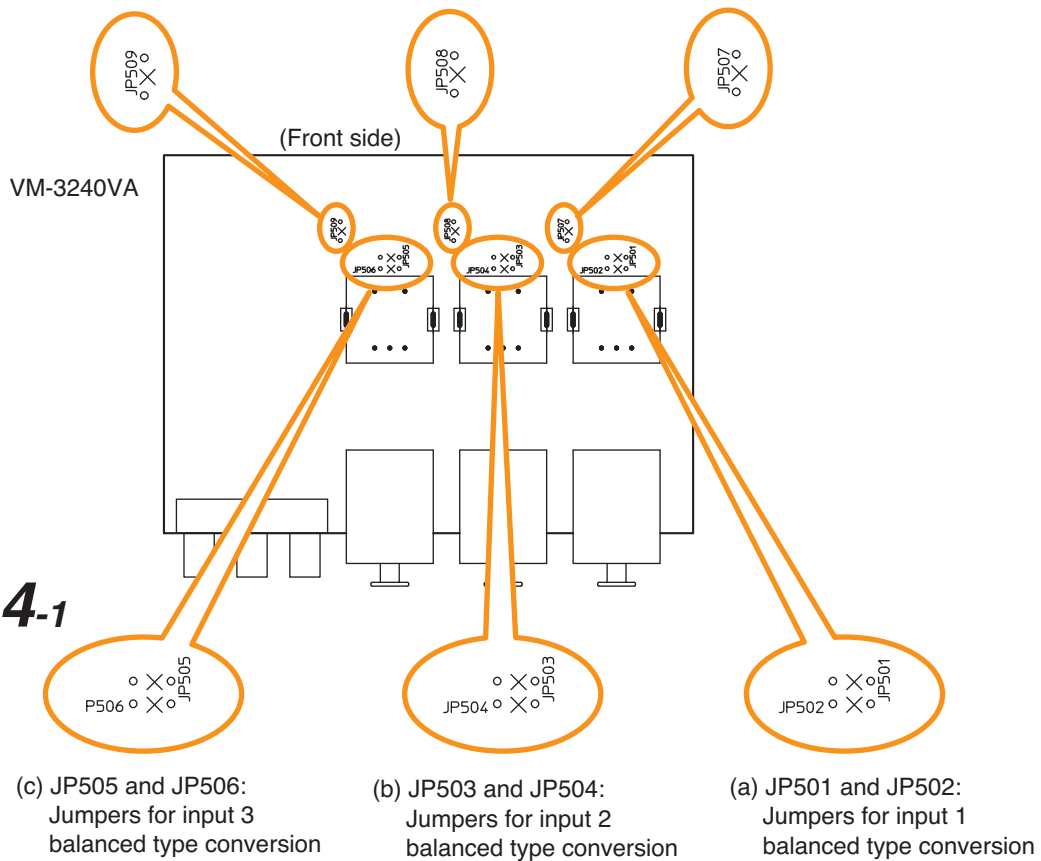


Step 4. Cut the jumper wires designated according to purposes referring to the PC board diagram showing the jumper wire locations below.

- 4-1. To convert the electronically balanced input to a transformer-balanced one
Cut the jumpers (a), (b), or (c) corresponding to the transformer-installed input on the pc board.
- 4.2. To change the microphone input sensitivity
Cut the jumper (d), (e), or (f) corresponding to the desired MIC input on the pc board.

4-2

- (f) JP509:
Jumper for MIC input 3 sensitivity change
- (e) JP508:
Jumper for MIC input 2 sensitivity change
- (d) JP507:
Jumper for MIC input 1 sensitivity change



Step 5. Replace the input PC board.

Step 6. Replace the cover.

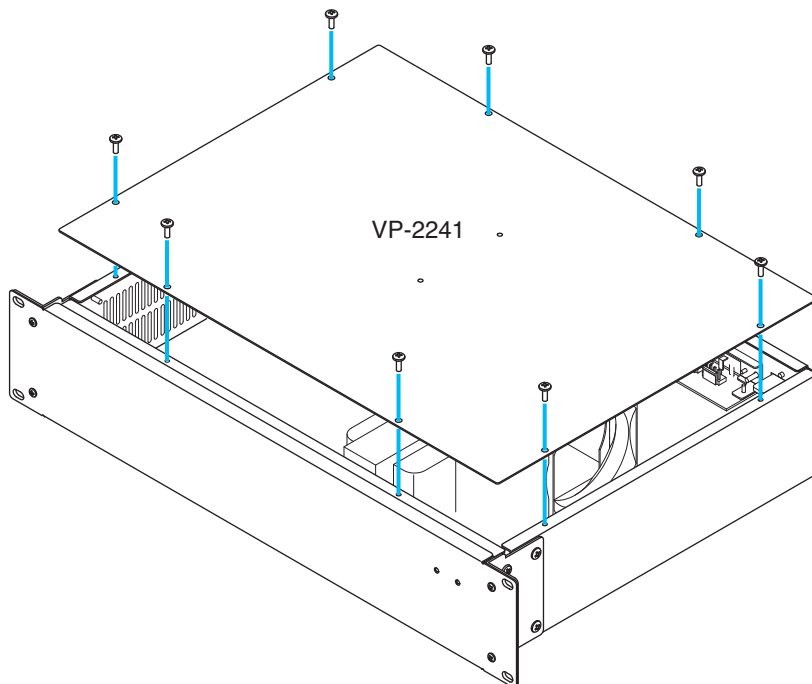
3. VP-200VX INSTALLATION IN THE VP-2241 AND GROUND LIFT SETTING

WARNING

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3.1. Installing the VP-200VX in the VP-2241

Step 1. Remove the VP-2241 power amplifier's top panel.

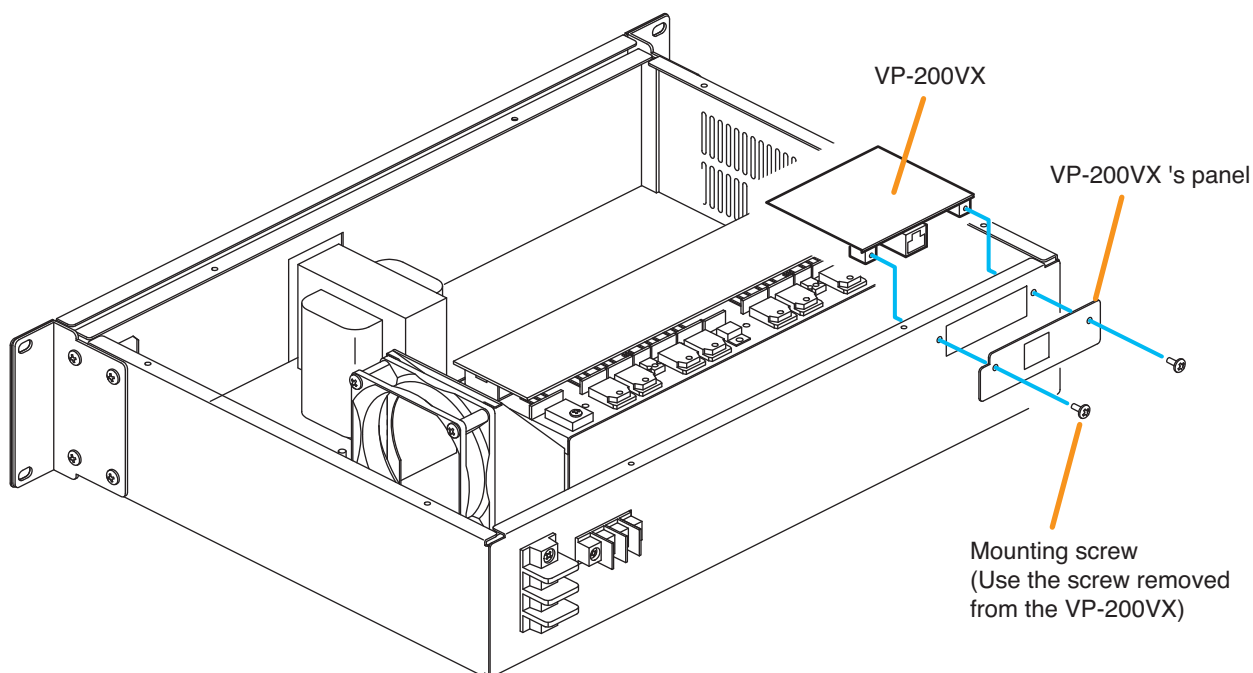


Step 2. Unscrew the VP-200VX's panel to detach it.

Step 3. Mount the VP-200VX module.

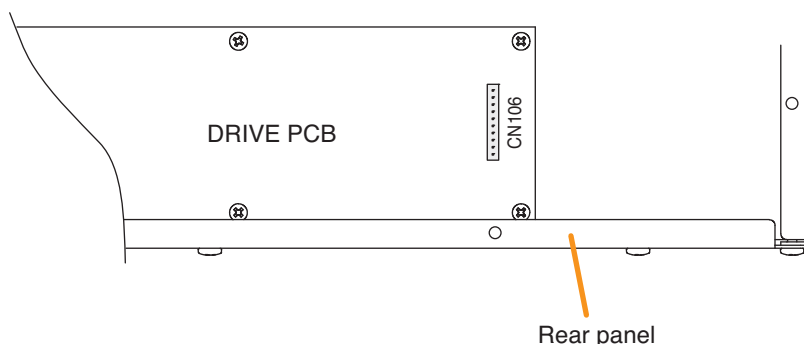
Attach the VP-200VX's panel to the mounting location and the VP-200VX unit to the back of the mounting location, then secure them to the amplifier using the screws removed in **step 2**.

Note: Mount the VP-200VX with its circuit board components faced down.



Step 4. Plug the VP-200VX's connector into the CN106 connector on the circuit board inside the amplifier.

[VP-2241 Connector position]



Step 5. After mounting is completed for all required channels, replace the top panel.

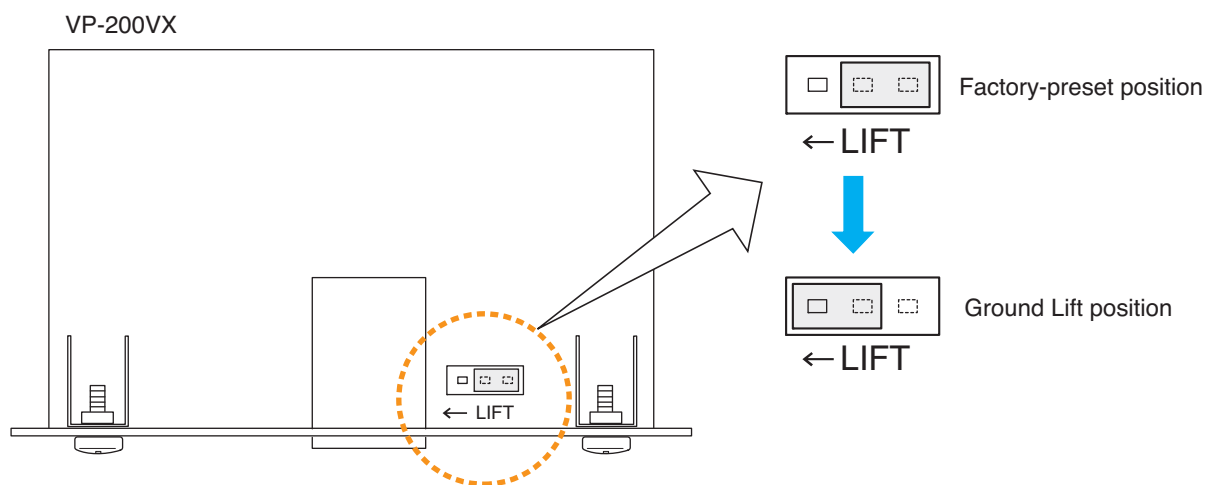
3.2. Ground Lifting Using the VP-200VX

When operating the system, hum noise may be generated by a ground loop accidentally created in the system. The ground loop can be cut off with the Ground Lift jumper connector setting on the VP-200VX board.

Step 1. Remove the VP-2241 unit's top panel referring to p. 5, step 1.

Step 2. Take out the VP-200VX.

Step 3. Unplug the jumper socket and plug it to the LIFT position on the VP-200VX board as shown below.



Step 4. Fit the VP-200VX back into place.

Step 5. Replace the top panel.

4. SPEAKER LINE VOLTAGE CHANGE



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For switching off the system power, refer to [p. 2](#) in this manual.

4.1. VM-3240VA and VM-3240E

The VM amplifier's speaker line voltage is set for 70 V line output. For 50 V line application, change internal connector wiring as shown below.

Note

The speaker line failure detection functions are designed to perform on a 70-volt line of speaker. Set these functions to OFF if the amplifier's speaker line voltage is set to 50 V.

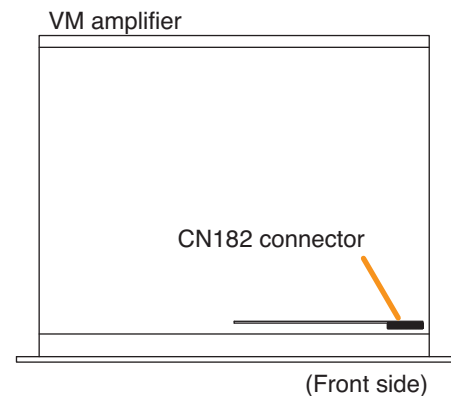
Step 1. Remove the top cover referring to [p. 3, step 1](#).

Step 2. Pull the cable connector (9-pin) connected to CN182 connector on the circuit board with the output attenuators.

Step 3. Change wires inserted into the cable connector for different wires according to color-coding shown in the table below to switch to the desired line voltage.

Step 4. Connect the cable connector to the circuit board.

Step 5. Replace the top cover.



[Connector pin assignment]

Speaker line voltage	CN182 Connector Pin Number								
	1	2	3	4	5	6	7	8	9
70 V	Gray	Violet	Blue	Green	Black	Brown	Red	Orange	Yellow
50 V	Blue	Green	Yellow	Orange	Red	Brown	Gray	Violet	Black

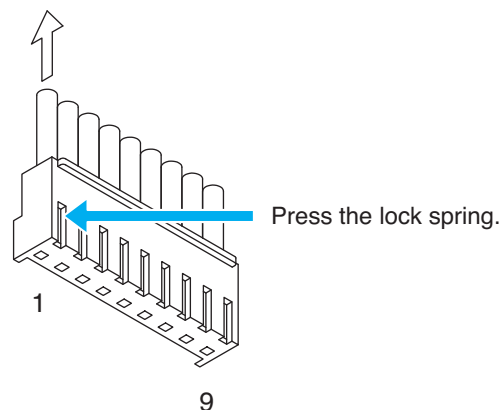
[Speaker line voltage/impedance]

Speaker line voltage	VM-3240
70 V	21 Ω
50 V	10 Ω

[How to remove cables from connector]

Pull out the cable pressing the lock spring with a pointed object like tweezers as shown below.

Pull out the cable.



4.2. VP-2241

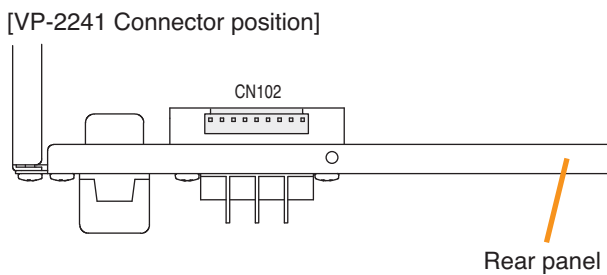
The speaker line voltage of the VP-2241 is factory-preset to 100 V. This must be changed to the same line voltage (50 V or 70 V) of the combined VM-3240VA or VM-3240E by following the procedures below.

Note

The speaker line failure detection functions are designed to perform on a 70-volt line of speaker. Set these functions to OFF if the amplifier's speaker line voltage is set to 50 V.

Step 1. Remove the top panel referring to [p. 5, step 1](#).

Step 2. Remove the CN-102 connector.



Step 3. Change the wiring in the CN102.

To change to 50 V line: Exchange Pin 1's cable (white) with Pin 3's cable (blue).

To change to 70 V line: Exchange Pin 1's cable (white) with Pin 2's cable (purple).

Step 4. Reconnect the CN102 to the original position on the circuit board.

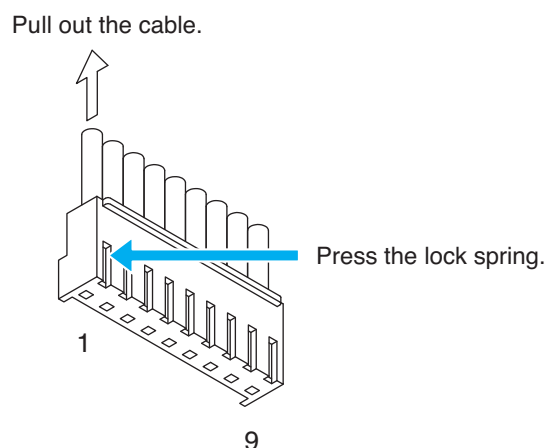
Step 5. Replace the top panel.

[Speaker line voltage/impedance]

Pin 1	Speaker line voltage	VP-2241
White	100 V	41 Ω
Purple	70 V	21 Ω
Blue	50 V	10 Ω

[How to remove cables from connector]

Pull out the cable pressing the lock spring with a pointed object like tweezers as shown below.



5. DC FUSE REPLACEMENT

When the DC fuse inside the unit has blown, replace it with a new one following the procedure below.

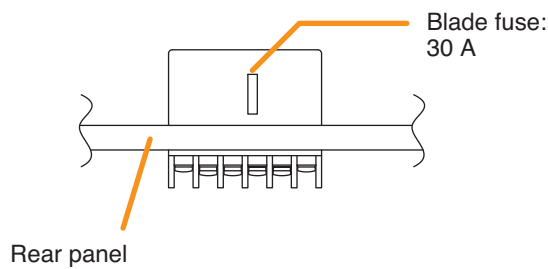
WARNING

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5.1. VM-3240VA and VM-3240E

Step 1. Remove the top cover referring to [p. 3, step 1](#).

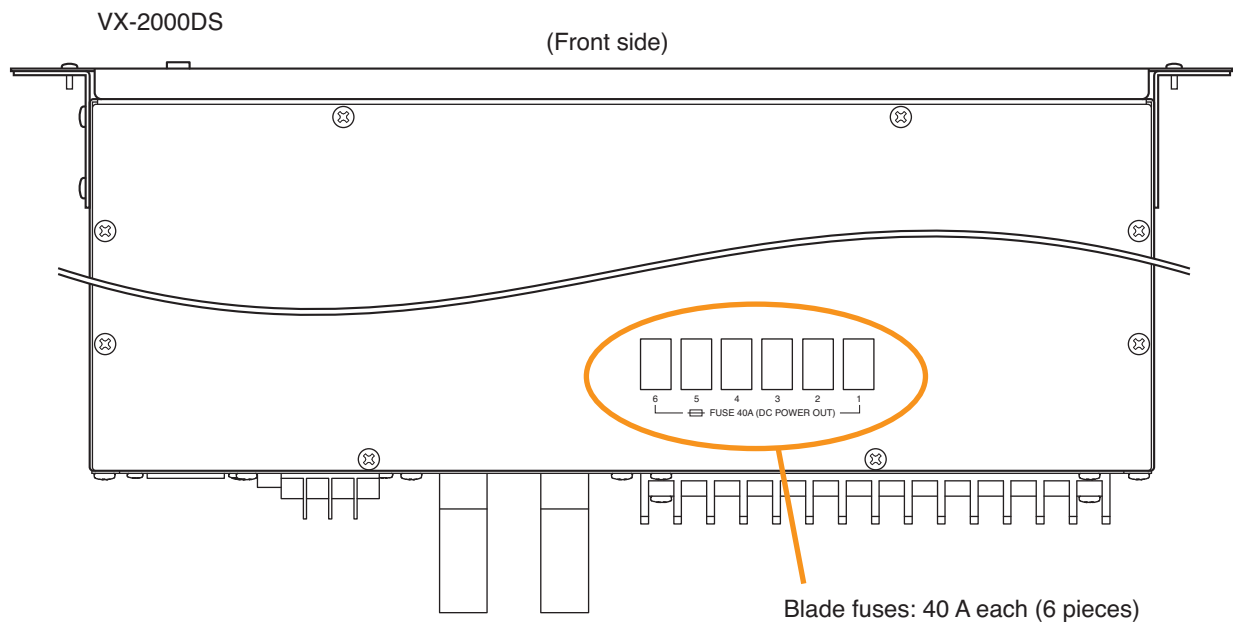
Step 2. Confirm the blown fuse, then replace the fuse with the new one.



Step 3. Replace the top cover.

5.2. VX-2000DS

Fuses can be accessed from the top of the VX-2000DS.
Confirm the blown fuse, then replace it with the supplied one.

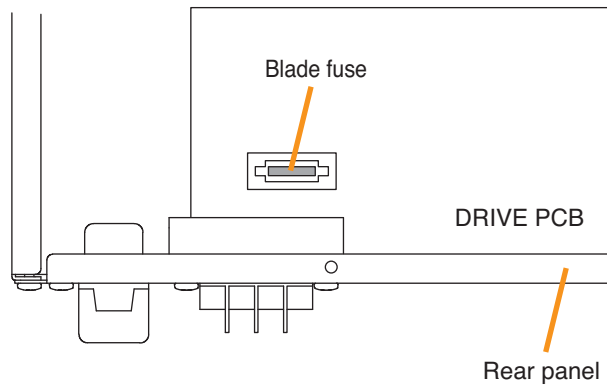


5.3. VP-2241

Step 1. Remove the top cover referring to [p. 5, step 1](#).

Step 2. Replace the blown fuse with the new "Blade fuse 25 A."

[VP-2241 Blade fuse position]



Step 3. Replace the top panel.

