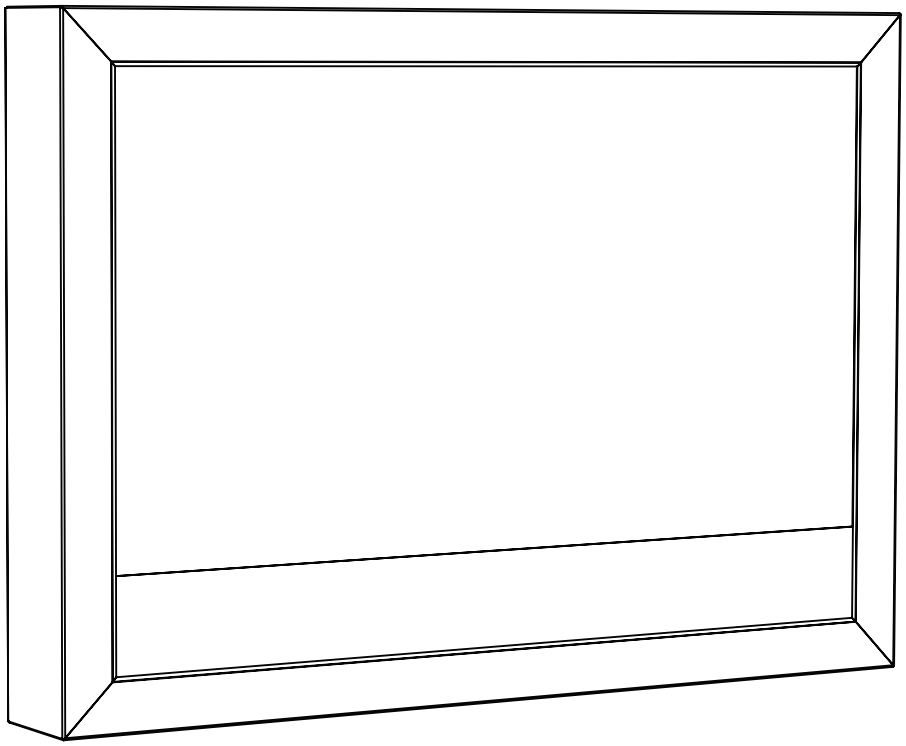
NEC

MD462OR

INSTALLATION & MAINTENANCE GUIDE



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Important Information

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED.

REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

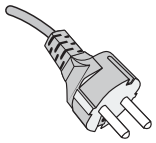
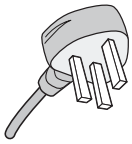
CAUTION

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET. DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

CAUTION: Please use the power cord provided with this monitor in accordance with the table below. If a power cord is not supplied with this equipment, please contact your supplier. For all other cases, please use a power cord that matches the AC voltage of the power outlet and has been approved by and complies with the safety standard of your particular country.

Plug Type	European Continental	U.K.
Plug Shape		
Country	EU (except U.K.)	U.K.
Voltage	230	230

NOTE: This product can only be serviced in the country where it was purchased.

Declaration

Declaration of the Manufacturer

Means of Conformity

Device Classification:	Class I, non-measuring function
Applicable Rules:	Annex IX, Rules 1.4 (Section 1) and 1.1 (Section 3)
Product Name:	MD462OR 46" Operating Room Solution
Model Number:	MD462OR
UMDNS Code:	16-603

NEC Display Solutions Europe GmbH declares that the product listed is in conformity with the essential requirements and provisions of the Council Directive 93/42/EEC, including the amendments of the Council Directive 2007/47/EC, and conforms to the applicable clauses of the following standards:

CE
– EN 60601-1
– EN 60601-1-2
– EN 61000-3-2
– EN 61000-3-3

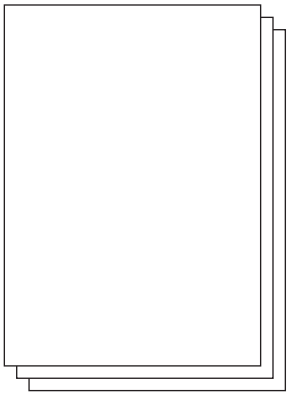
NEC Display Solutions Europe GmbH
Landshuter Allee 12-14. 80637 Muenchen, Germany

NOTE: The **MultiSync P463 User's Manual**, is an integral part of this product. For all items exceeding the scope of this Installation & Maintenance Guide, please refer to the **MultiSync P463 User's Manual**.

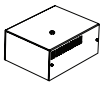
Contents

Your new MD462OR box* should contain the following main components:

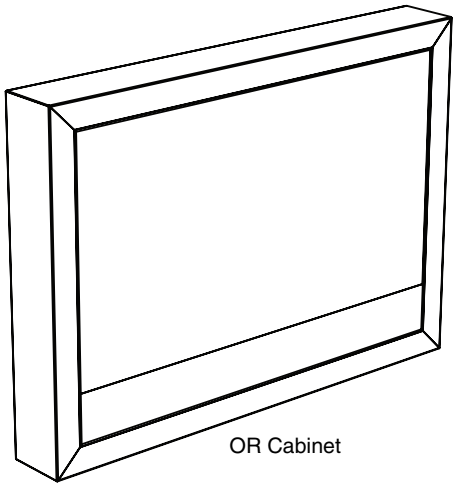
- OR Cabinet (incl. wall bracket x 1, display bracket x 2)
- LCD monitor MultiSync P463
- Power cord*[1]
- Wireless Remote Control and AA Batteries
- MD462OR Installation and Maintenance Guide
- MD462OR Quick Reference Guide
- MultiSync P463 User's Manual
- Medical Transformer (incl. jumper cable x 1)
- IR Sensor



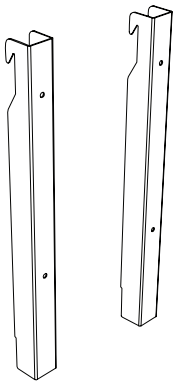
MD462OR Maintenance & Installation Guide
MD462OR Quick Reference Guide
P463 User's Manual



Medical Transformer

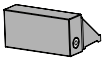


OR Cabinet

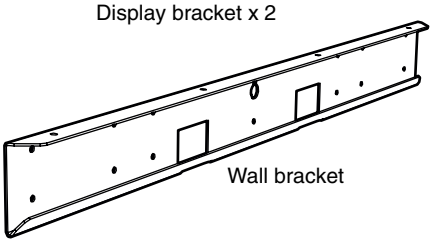


Display bracket x 2

Wireless Remote Control and AA Batteries



IR Sensor

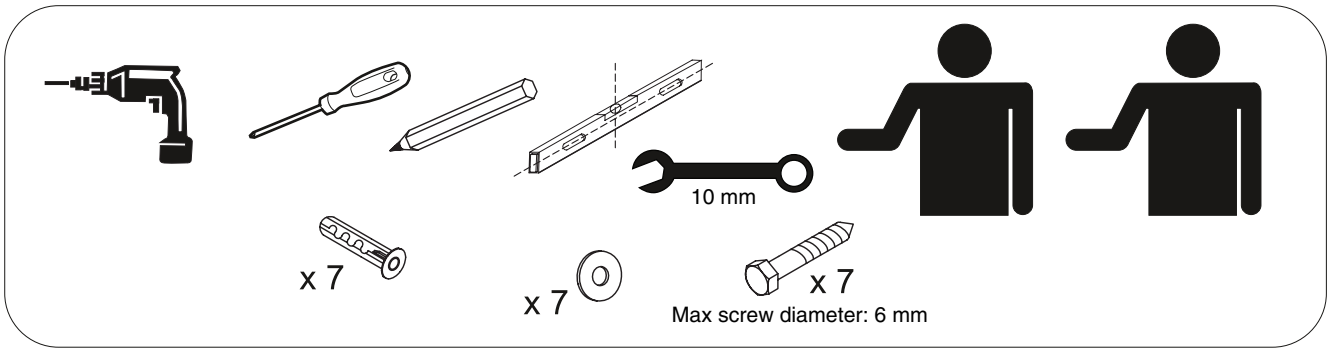


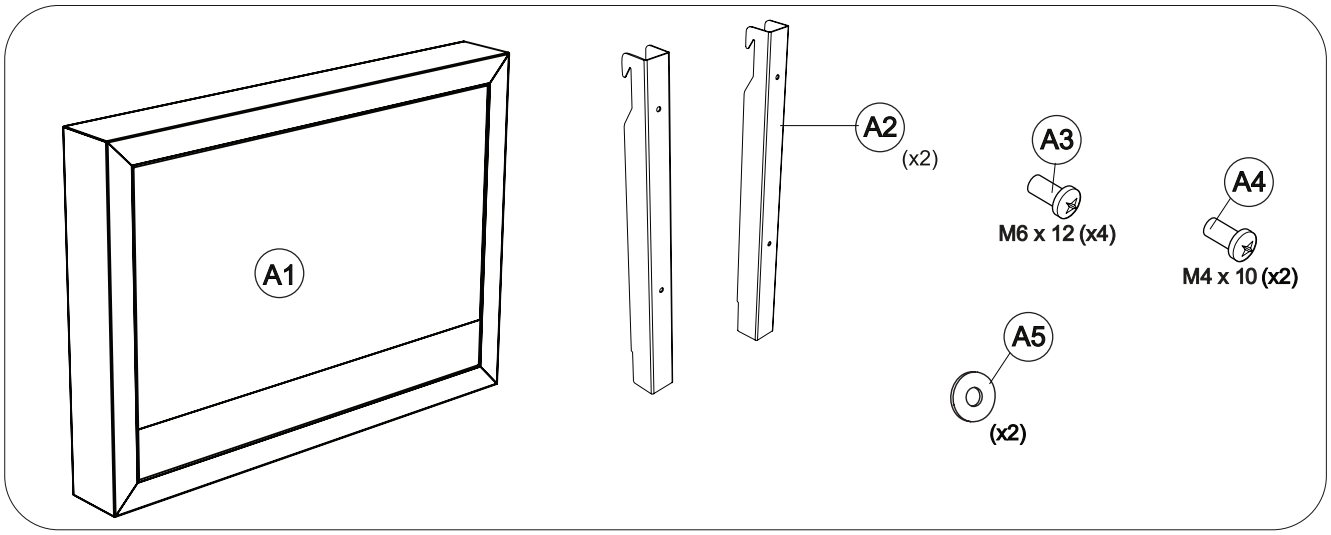
Wall bracket

* Remember to save your original box and packing material to transport or ship the monitor.

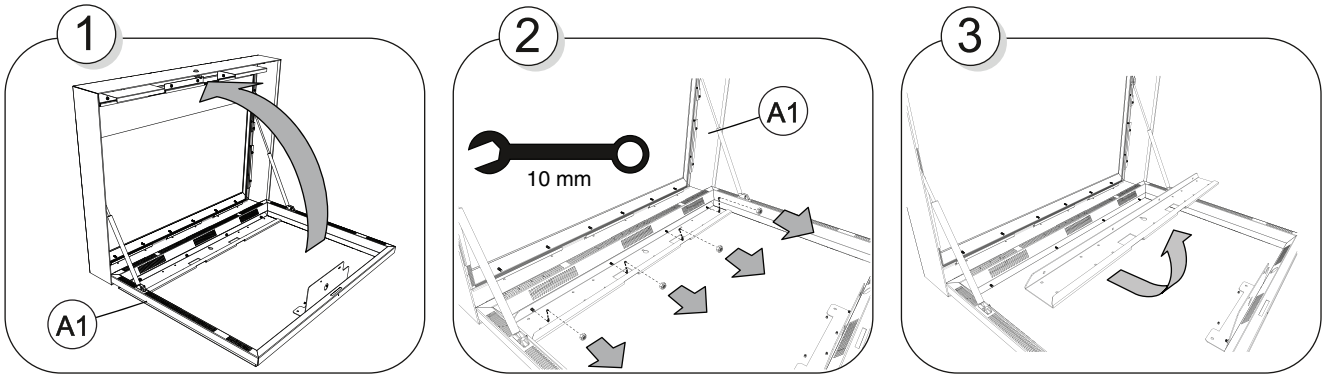
*[1] Type and number of power cords included will depend on the where the LCD monitor is to be shipped. When more than one power cord is included, please use a power cord that matches the AC voltage of the power outlet and has been approved by and complies with the safety standard of your particular country.

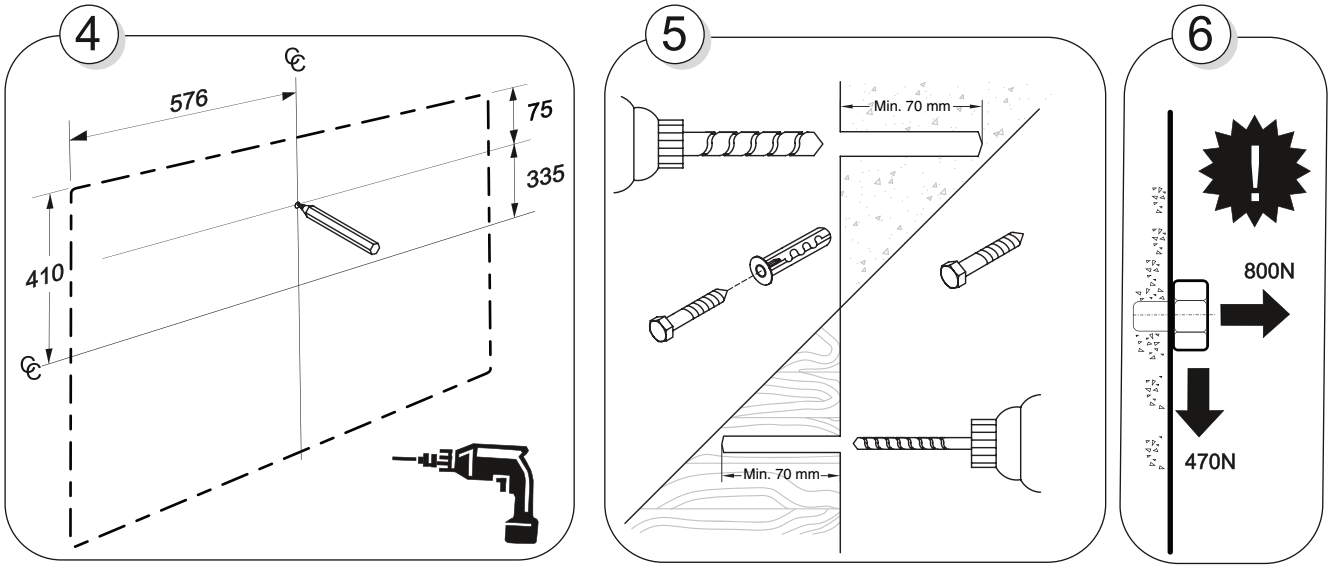
MD462OR Installation





Mounting





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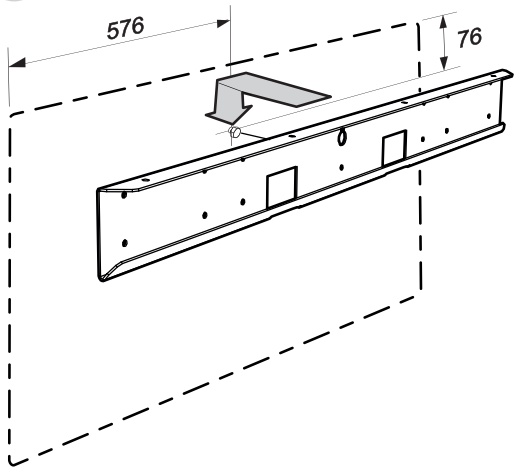

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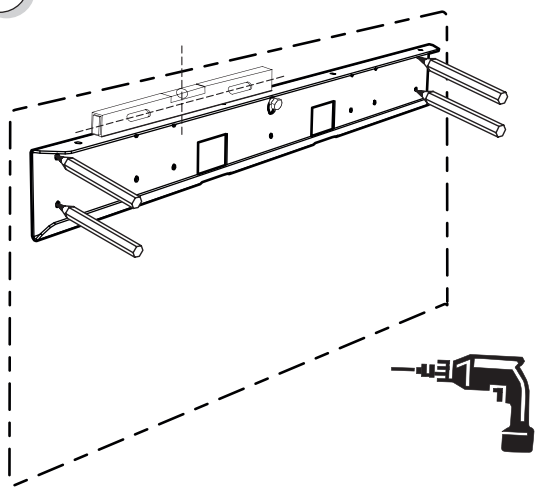

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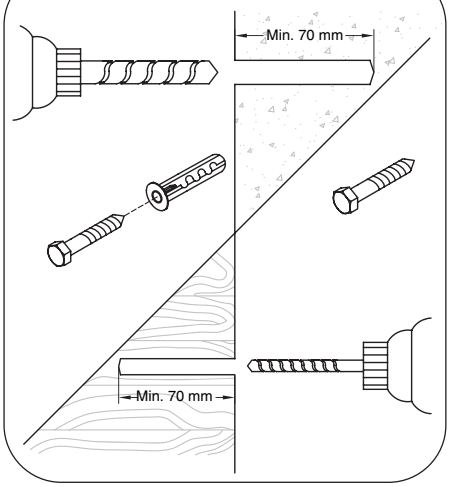

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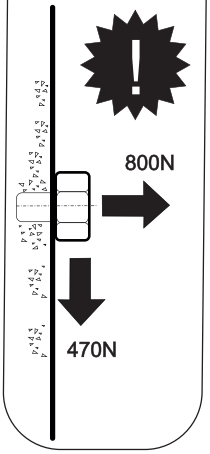

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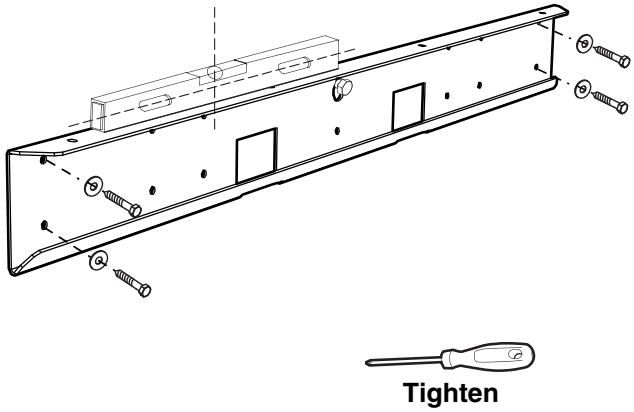

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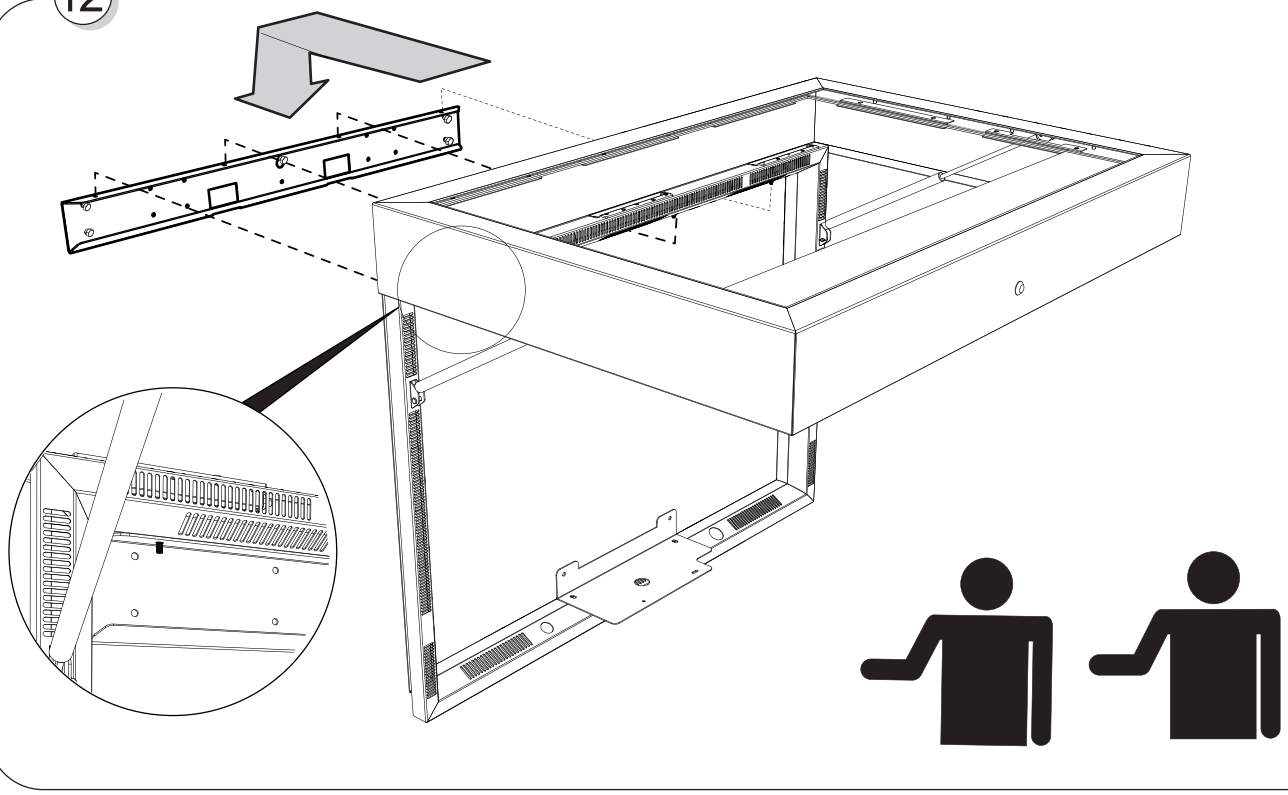

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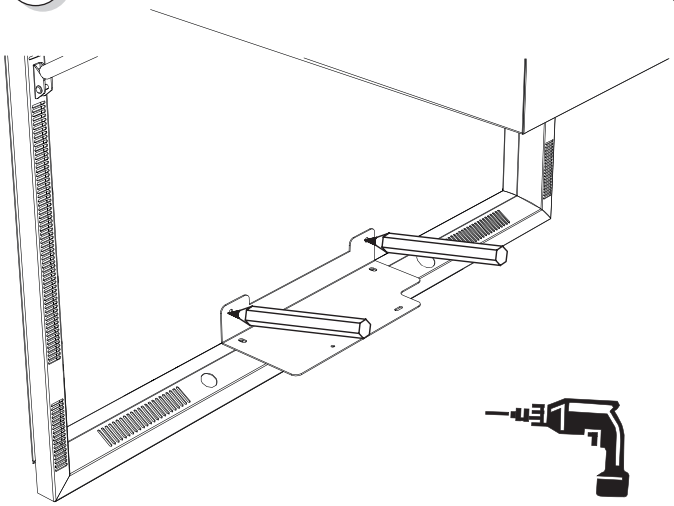

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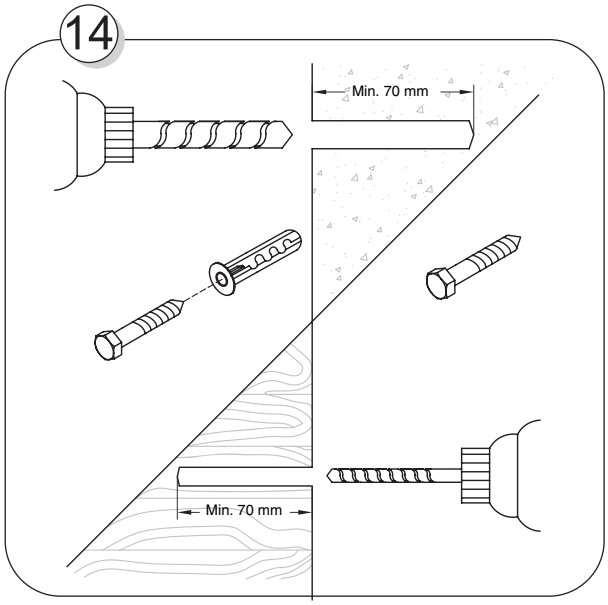

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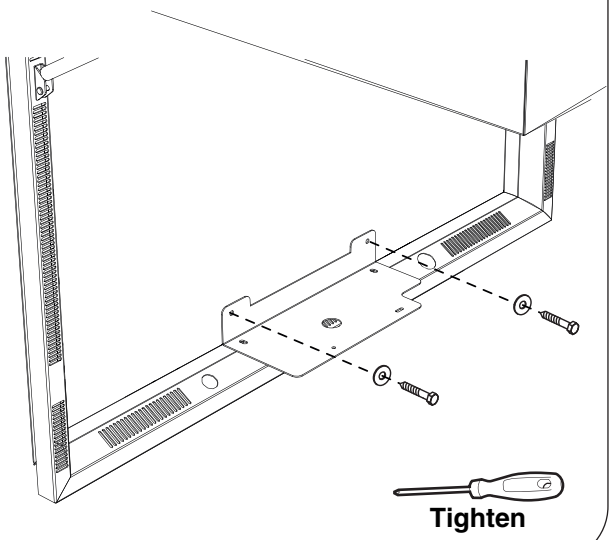

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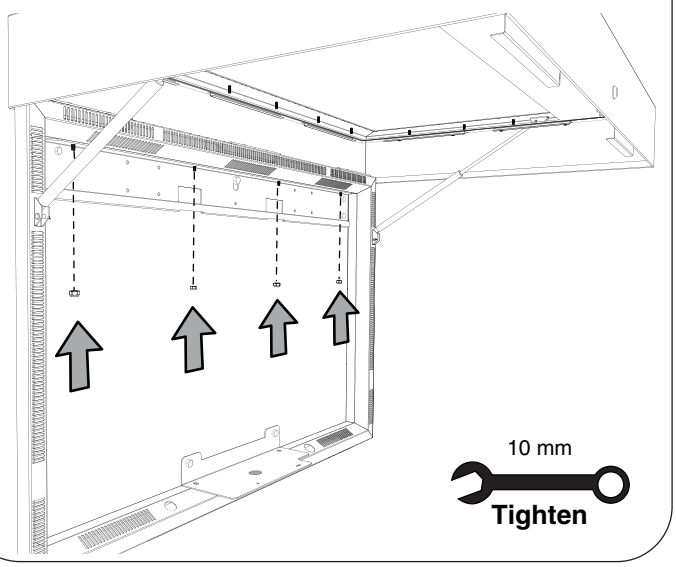

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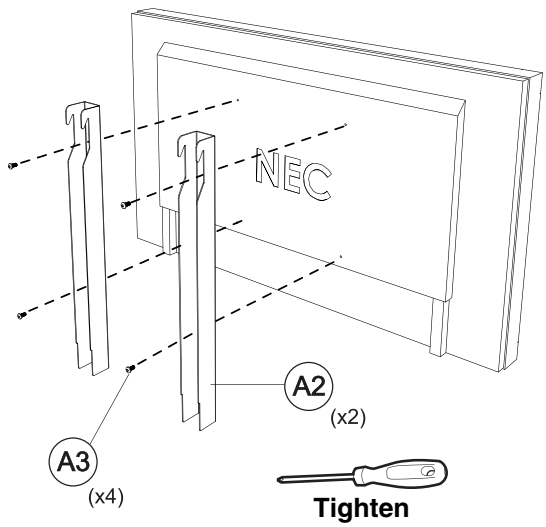

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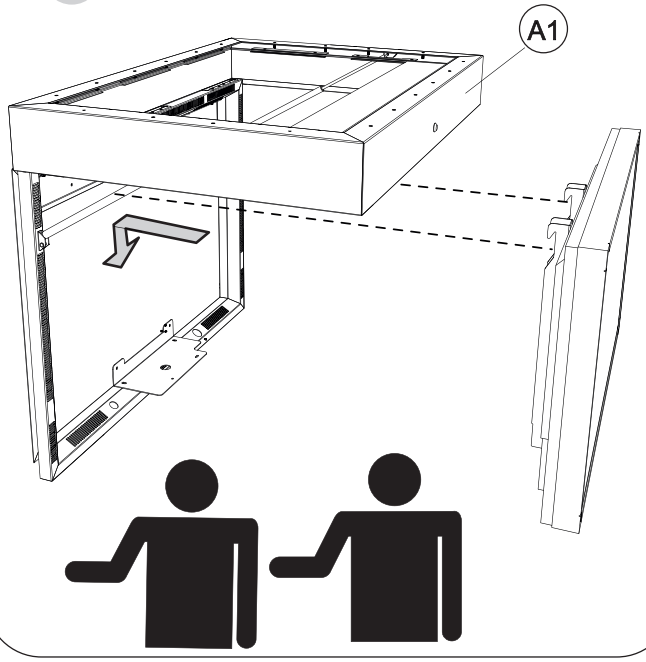

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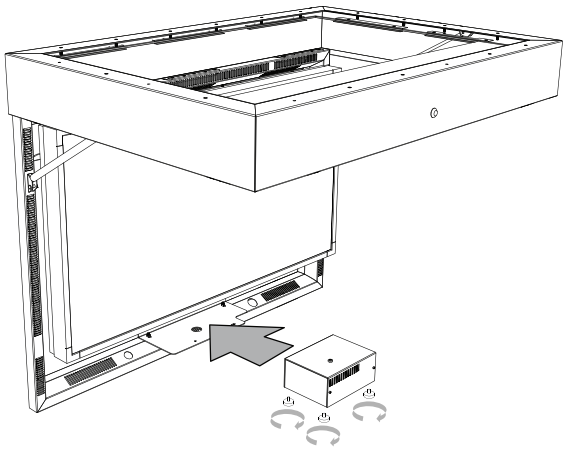

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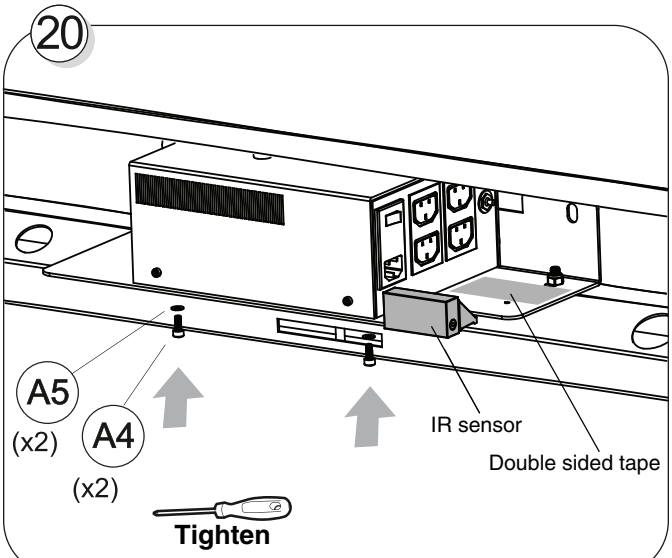
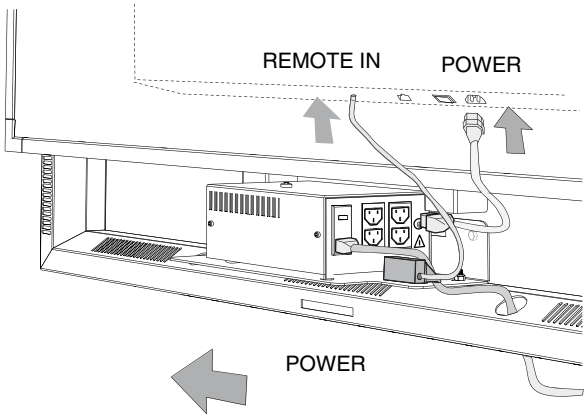
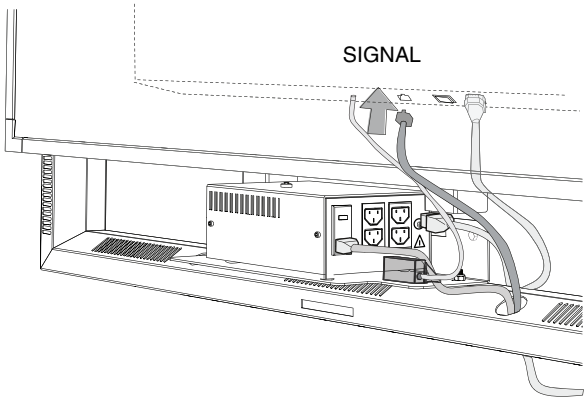

A5
(x2)
A4
(x2)
IR sensor
Double sided tape
Tighten

21


REMOTE IN
POWER
POWER

22


SIGNAL

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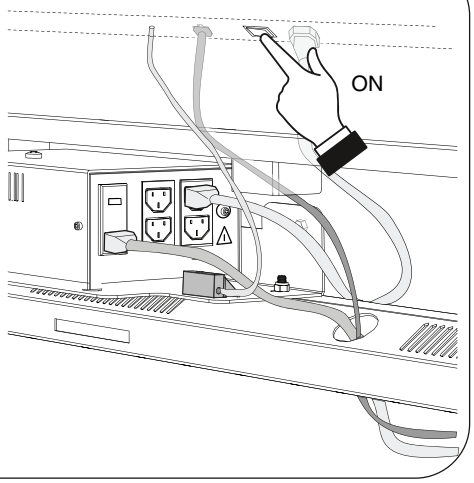
ON

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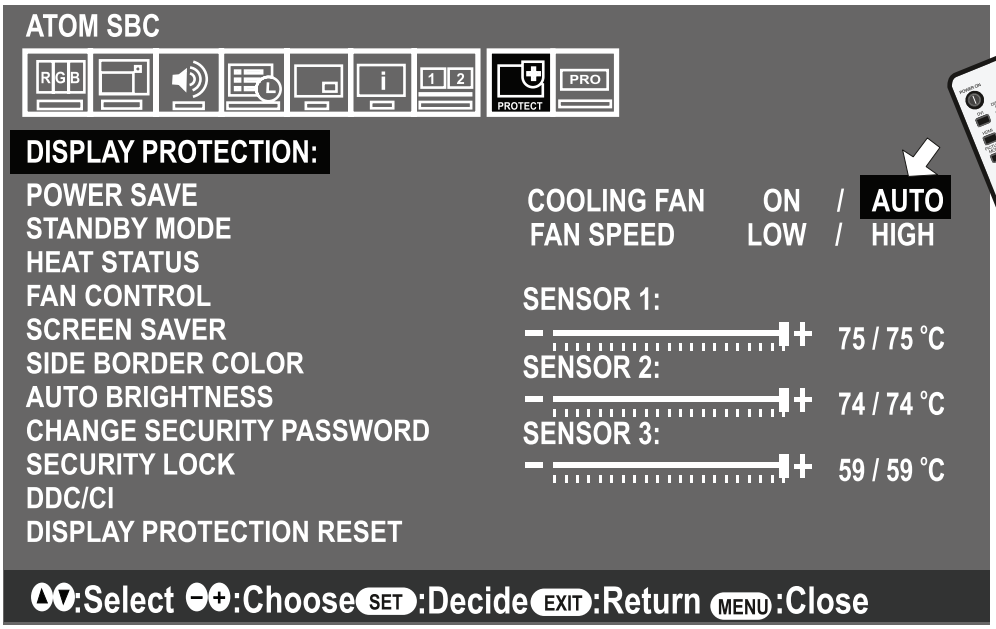
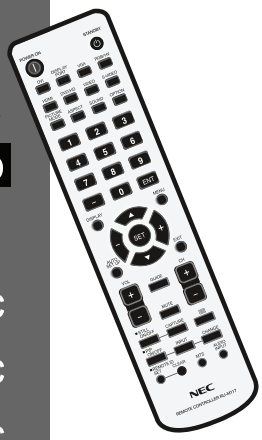
Fan Settings





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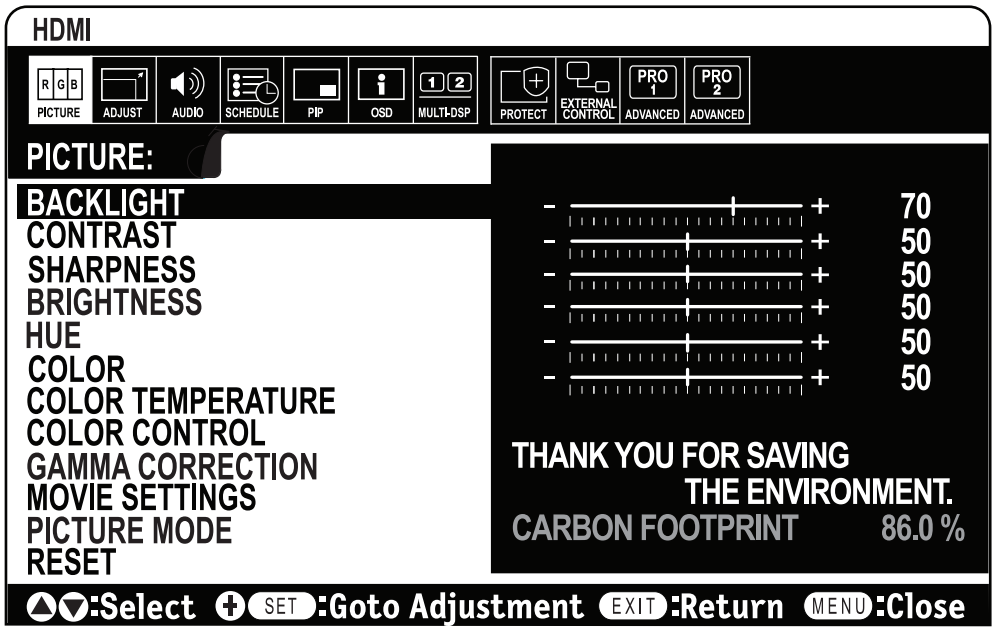
Backlight settings, max 70%
Gamma Correction Settings, DICOM SIM.



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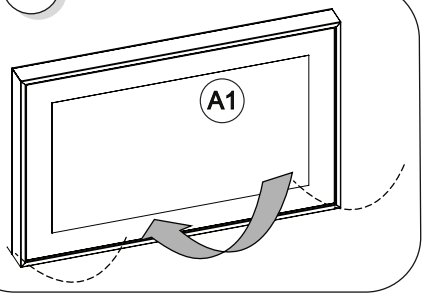

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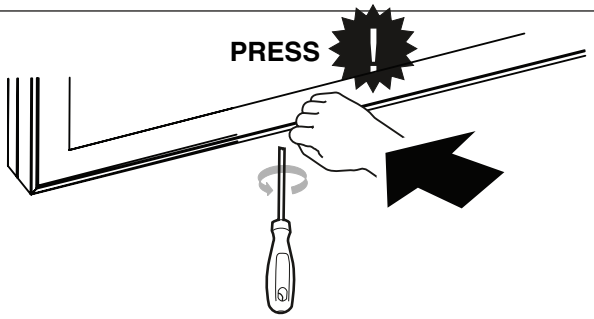
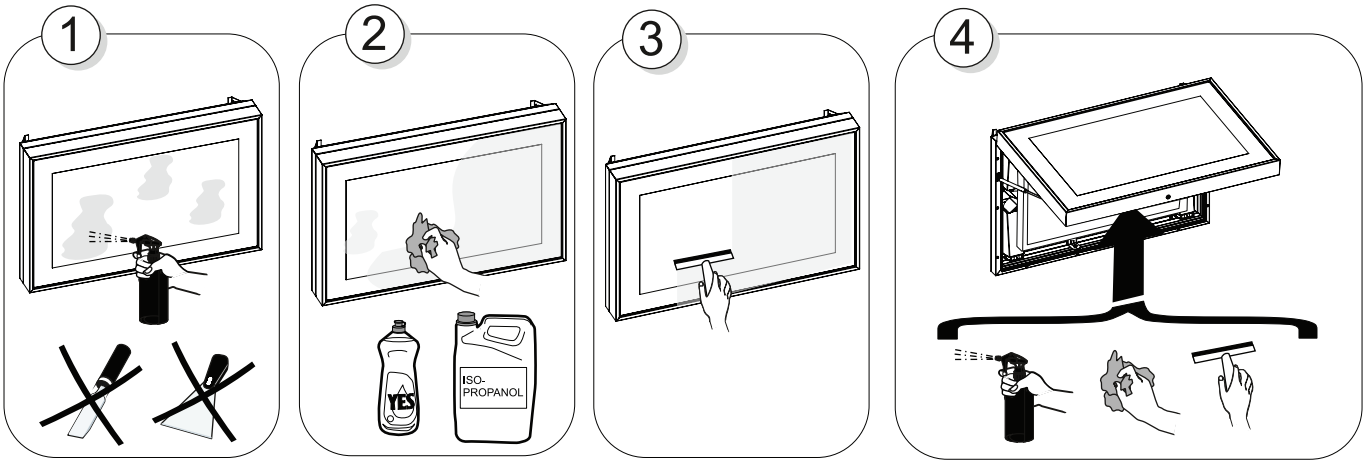
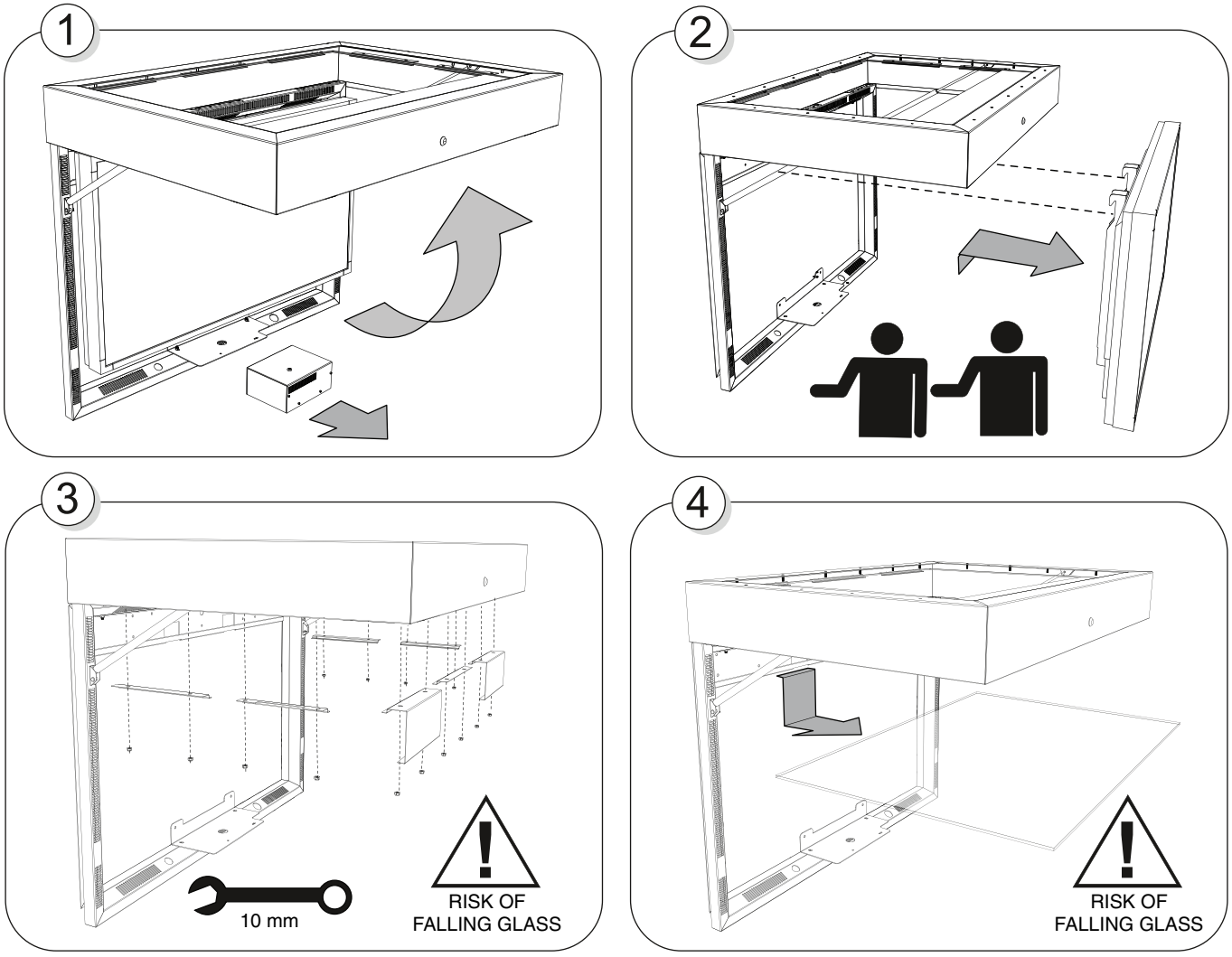


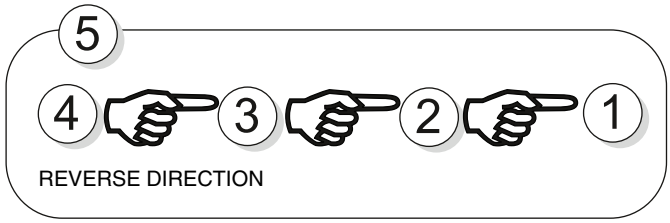
MD462OR Maintenance

Protection glass cleaning



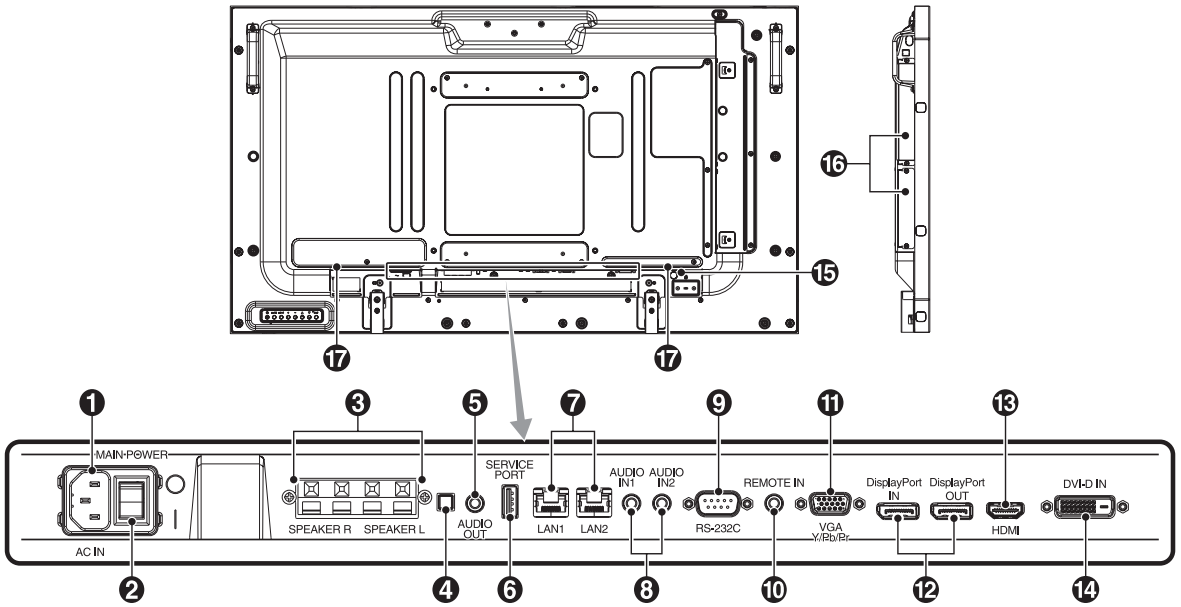
Protection glass replacement





Control and Interface (see attached display manual for details)

Terminal Panel



❶ AC IN connector

Connects with the supplied power cord.

❷ Main Power Switch

On/Off switch to turn main power ON/OFF.

❸ EXTERNAL SPEAKER TERMINAL

To output the audio signal from AUDIO 1, DPORT and HDMI.
Red terminal is plus (+).
Black terminal is minus (-).
Note: This speaker terminal is for 15 W + 15 W (8 ohm) speaker.

❹ Internal/External speaker switch

⊓: Internal speaker ⊓: External speaker.
NOTE: Please power off the monitor when you use the Internal/External speaker switch.

❺ AUDIO OUT

To output the audio signal from the AUDIO IN 1, 2, DPORT and HDMI to an external device (stereo receiver, amplifier, etc.).

❻ Service port

This USB slot is for future software upgrades.

❼ LAN port (RJ-45)

LAN connection.
NOTE: Please give priority for use to LAN1.

❽ AUDIO IN 1, 2

To input audio signal from external equipment such as a computer or DVD player.

❾ RS-232C (D-Sub 9 pin)

Connect RS-232C input from external equipment such as a PC in order to control RS-232C functions.

❿ REMOTE IN

Use the optional wired remote control by connecting it to your monitor.
NOTE: Do not use this connector unless specified.

⓫ VGA IN (mini D-Sub 15 pin)

To input analog RGB signals from a personal computer or from other RGB equipment. This input can be used with an RGB or COMPONENT source. Please select signal type in TERMINAL SETTING.
NOTE: When you use this connector for COMPONENT, please use a suitable signal cable. If you have any questions, please ask your dealer.

⓬ DisplayPort connectors

IN connector: To input DisplayPort signals.
OUT connector: To output signal which is displayed.
To output signal which is displayed as a main picture when selected PIP mode.

⓭ HDMI IN

To input digital HDMI signals.

⓮ DVI IN (DVI-D)

To input digital RGB signals from a computer or HDTV device having a digital RGB output.
* This connector does not support analog input.

⓯ Kensington Lock

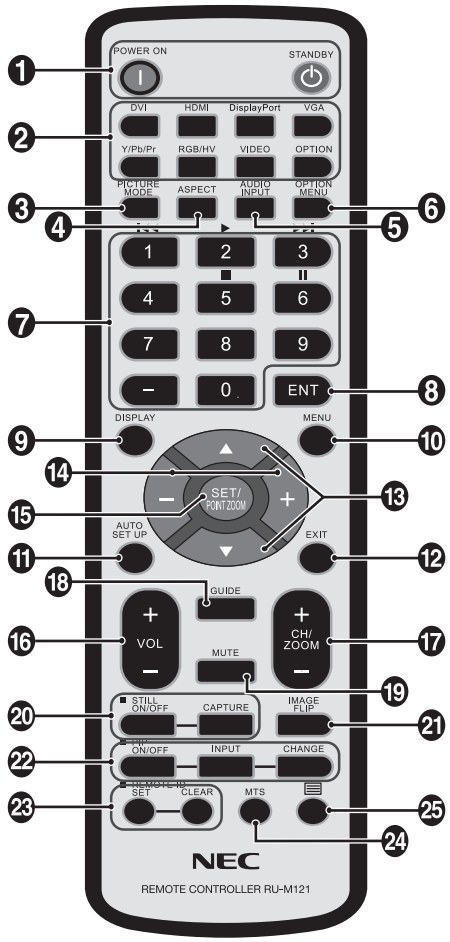
For security and theft prevention.

⓰ Option board slot

Slot 2 and slot 3 type accessories are available.
Please contact your supplier for detailed information.
NOTE: Please contact your supplier for available option board.

⓱ Internal speaker

Wireless Remote Control



❶ POWER button

Switches the power on/standby.

❷ INPUT button

Selects input signal.

DVI: DVI
HDMI: HDMI, HDMI2*2
DisplayPort: DPORT, DPORT2*2, DPORT3*2
VGA: VGA
Y/Pb/Pr: Y/Pb/Pr, SCART*2, Y/Pb/Pr2*2
RGB/HV*2: RGB/HV
VIDEO*2: VIDEO, S-VIDEO
OPTION: Depends on your connection

❸ PICTURE MODE button

Selects picture mode, [HIGHBRIGHT], [STANDARD], [sRGB], [CINEMA], [CUSTOM1], [CUSTOM2].

HIGHBRIGHT: for moving images such as DVD.
STANDARD: for images.
sRGB: for text based images.
CINEMA: for movies.
CUSTOM1 and CUSTOM2: activate auto dimming function.

❹ ASPECT button

Selects picture aspect, [FULL], [WIDE], [DYNAMIC], [1:1], [ZOOM] and [NORMAL].

❺ AUDIO INPUT button

Selects audio input source [IN1], [IN2], [IN3]*2, [OPTION]*2, [HDMI], [DPORT], [HDMI2]*2, [DPORT2]*2, [DPORT3]*2.

❻ OPTION MENU button*1

❼ KEYPAD

Press buttons to set and change passwords, change channel and set REMOTE ID.

❽ ENT button*1

❾ DISPLAY button

Turns on/off the information OSD.

❿ MENU button

Turns on/off the menu mode.

⓫ AUTO SET UP button

Enters auto setup menu.

⓬ EXIT button

Returns to previous menu within OSD menu.

⓭ UP/DOWN button (▲/▼)

Acts as ▲ ▼ button to move the highlighted area up or down to select adjustment items within OSD menu.
Small screen which adjusted “PIP” mode moves up or down.

⓮ MINUS/PLUS (-/+) button

Increases or decreases the adjustment level within OSD menu settings.
Small screen which adjusted “PIP” mode moves left or right and increases or decreases the size.

⓯ SET/POINT ZOOM button

Makes selection. Activates POINT ZOOM function when OSD menu is not shown.

⓰ VOLUME UP/DOWN button (VOL +/-)

Increases or decreases audio output level.

⓱ CH/ZOOM UP/DOWN button (CH/ZOOM +/-)*1

Increases or decreases POINT ZOOM level.

⓲ GUIDE button*1

⓳ MUTE button

Turns on/off mute function.

⓴ STILL button

ON/OFF button: Activates/deactivates still picture mode.
STILL CAPTURE button: Captures still picture.
NOTE: This function is released when activating IMAGE FLIP.

㉑ IMAGE FLIP button

Toggle switches between H FLIP, V FLIP, 180° ROTATE and NONE.

㉒ PIP (Picture In Picture) button

ON/OFF button: Toggle switches between PIP, POP, PICTURE BY PICTURE-ASPECT and PICTURE BY PICTURE-FULL.
INPUT button: Selects the “picture in picture” input signal.
CHANGE button: Replaces to the main picture and sub picture.
Note: Enable to change the sub picture size by pressing SET/POINT ZOOM button during PIP mode.

Main picture	Connector	Sub picture						DP Out*5
		DPORT*3	DVI	HDMI	VGA	Y/Pb/Pr	OPTION	
DPORT	DisplayPort	No	Yes	Yes	Yes	Yes	Yes	DPORT
DVI	DVI-D	Yes	No	Yes	Yes	Yes	Yes	DVI
HDMI	HDMI	Yes	Yes	No	Yes	Yes	Yes	HDMI 1
VGA	D-Sub*4	Yes	Yes	Yes	No	No	Yes	-
Y/Pb/Pr		Yes	Yes	Yes	No	No	Yes	-
OPTION	Option	Yes	Yes	Yes	Yes	Yes	No	OPTION

*3: When VIDEO OUT SETTING is ON, DPORT cannot be selected as the sub picture.
*4: If VGA or Y/Pb/Pr is selected as the main picture, DP out is disabled even when VIDEO OUT SETTING is ON.
*5: DP out can output signal only when VIDEO OUT SETTING is ON.

㉓ REMOTE ID button

Activates REMOTE ID function.

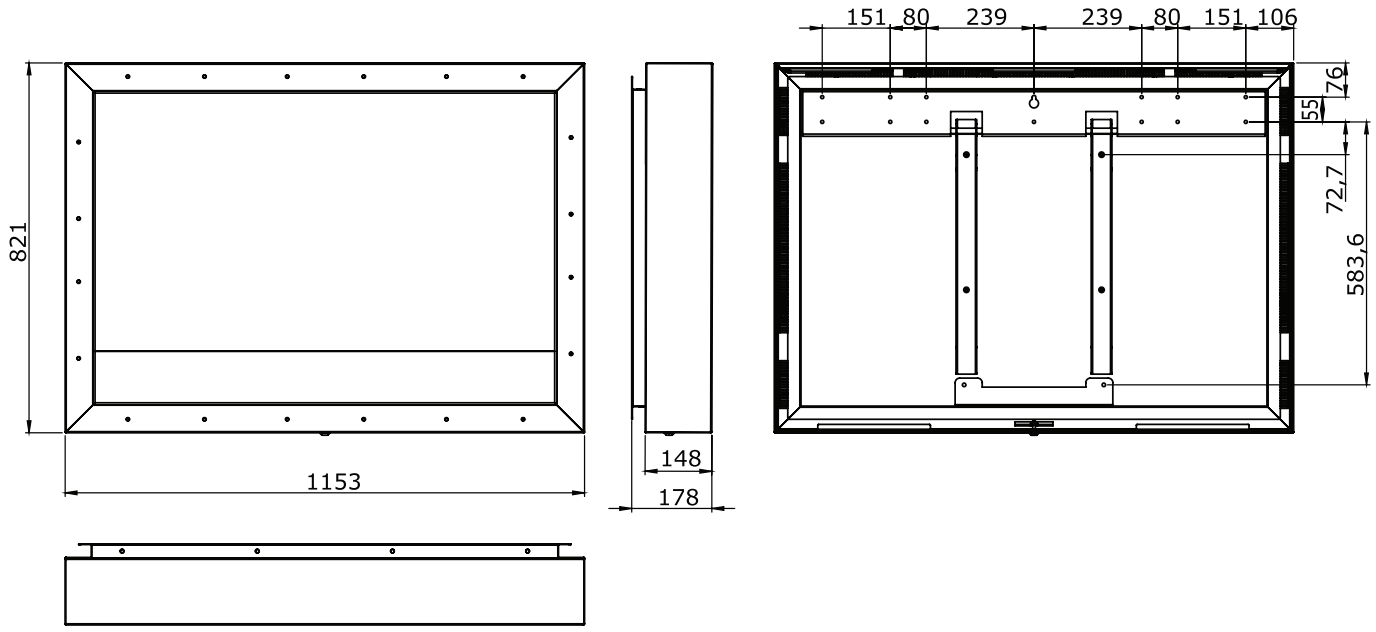
㉔ MTS button*1

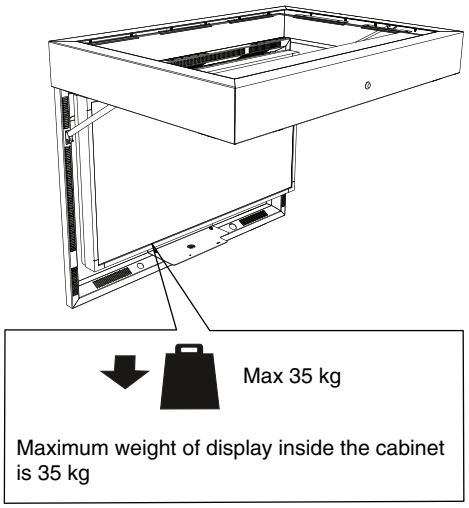
㉕ ☰ button*1

Activates closed captioning.
Note: VIDEO*2, S-VIDEO*2 inputs only.

*1: This button’s action depends on which option board you use. Refer to the option board’s manual for further information.

*2: This function depends on which option board you use.





Dimension	Tightening torque
M6	11.1 Nm
M8	26.6 Nm

	+5°- +30°

* Specifications and design are subject to change without prior notice.

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