

Marshall Electronics

CV620-WH & CV620-BK
Full HD Broadcast PTZ Camera

Installation Guide



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Safety Instructions

Always follow these safety instructions when setting up and using the Camera:

1. Use attachments only as recommended.
2. Use the type of power source indicated on the Camera. If you are not sure of the type of power available, consult your distributor or local electricity company for advice.
3. Always take the following precautions when handling the plug. Failure to do so may result in sparks or fire.
 - Ensure the plug is free of dust before inserting it into a socket.
 - Ensure that the plug is inserted into the socket securely.
4. Do not overload wall sockets, extensions leads or multi-way plug boards as this may cause fire or electric shock.
5. Do not place the Camera where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
6. Do not block the slots and openings in the case of Camera. They provide ventilation and prevent the Camera from overheating. Do not place the Camera on the soft surface of sofas, carpets or others.
7. Never push objects of any kind through cabinet slots. Never allow liquid of any kind to spill into the Camera.
8. Except as specifically instructed in this User Manual, do not attempt to operate this product by yourself. Opening or removing covers may expose you to dangerous voltages and other hazards. Refer all servicing to licensed service personnel.
9. Unplug the Camera during thunderstorms or if it is not going to be used for an extended period. Do not place the Camera or remote control on top of vibrating equipment or heated objects such as a car, etc.
10. Unplug the Camera from the wall outlet and refer servicing to licensed service personnel when the following situations happen:
 - If the power cable or plug becomes damaged or frayed.
 - If the camera is wet with liquid, rain or water.

* Note

Using an incorrect battery type in the remote control may result in breakdown. Follow local instructions on how to dispose of used batteries.

■ **Precautions**

Warning: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

If Camera will not be used for an extended time, unplug it from the power socket.

	<table><tr><td>Note</td></tr><tr><td>Risk of Electric Shock DO NOT OPEN</td></tr></table>	Note	Risk of Electric Shock DO NOT OPEN	
Note				
Risk of Electric Shock DO NOT OPEN				
Caution: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to licensed service personnel.				
	This symbol indicates that this equipment may contain dangerous voltage which could cause electric shock.		This symbol indicates that there are important operating and maintenance instructions in this User Manual with this unit.	

■ **FCC Warning**

This Camera has been tested and found to comply with the limits for a Class A digital device, pursuant to Article 15-J of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par l'Industrie.

■ **EN55022 (CE Radiation) Warning**

This product is intended for use in a commercial, industrial, or educational environment. It is not intended for residential use.

This is a Class A product. In a residential environment it may cause radio interference, in which case the user may be required to take adequate measures. The typical use is in a conference room, reception room or hall.

Package Contents

CV620



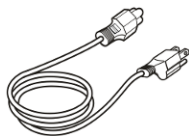
Instruction for
installation



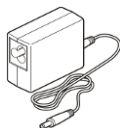
Remote Control



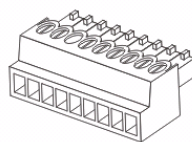
Power Cord



Power Adapter

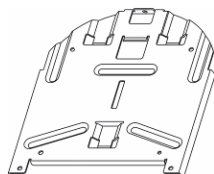


RS-422 Connector

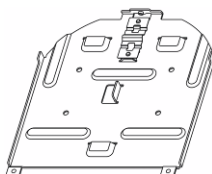


Appearance may vary
depending on
country/region

Metal Plate A



Metal Plate B

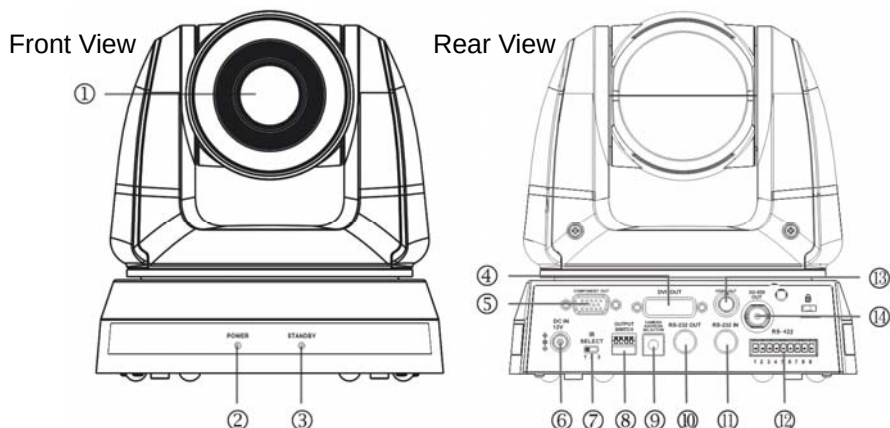


M3 Screws



Product Overview

3.1 Overview



1. Camera lens	2. Power LED indicator
3. Standby LED indicator	4. DVI output
5. Component output	6. Power input
7. IR SELECT	8. OUTPUT Switch
9. Camera Address Selectors	10.RS-232 output
11.RS-232 input	12.RS-422 connection
13.VIDEO output	14.3G-SDI output

3.2 Description of LED indicator

3.2.1 Power:

3.2.1.1 No light: Power off

3.2.1.2 Green light: In use

3.2.1.3 Flickering green: Signal from the remote control is received;
the indicator flickers every 0.5 second

3.2.2 Standby:

3.2.2.1 Orange: In standby mode

3.2.2.2 No light: Power on

Instruction for installation

4.1 Preparation before installation

Installation and connection of CV620 Camera requires special skills. To install by yourself, please follow necessary steps, ensure steady and tight installation of the device, and pay attention to your safety to avoid any accident.

4.1.1 Ensure the safety of the installation environment. Please do not install the device on unstable ceiling or in a place where the device is in danger of falling to avoid any accident.

4.1.2 Please check whether accessories in the box are complete or not. Please contact the supplier for any shortage, and make sure to keep the accessories in the box intact.

4.1.3 Please choose a proper place for installation of CV620 in advance. Please determine an installation place according to the following requirements:

4.1.3.1 Confirm the position for the object to be captured.

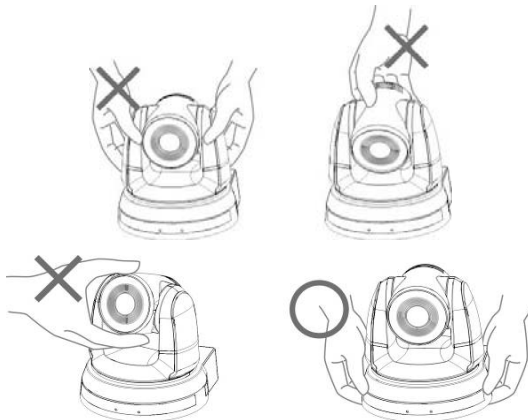
4.1.3.2 Confirm whether the CV620 is set at a proper distance from other light sources.

4.2 Instruction for installation

4.2.1 I would like to install CV620 on the desk

4.2.1.1 Precautions for installation

- ◆ Please install the machine on a flat desk
- ◆ Do not grab the camera head by hand when handling the device
- ◆ Do not rotate the camera head by hand. Improper rotation may result in breakdown of the camera

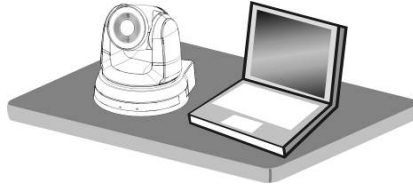


4.2.1.2 Installation steps

1. Please adjust DIP switch at first prior to installation.

*** Please refer to [Chapter 7 DIP Switch Setting](#) for the relevant descriptions on DIP switch.**

2. Place the camera on a flat desk directly to ensure the normal vertical and horizontal operation of the machine.



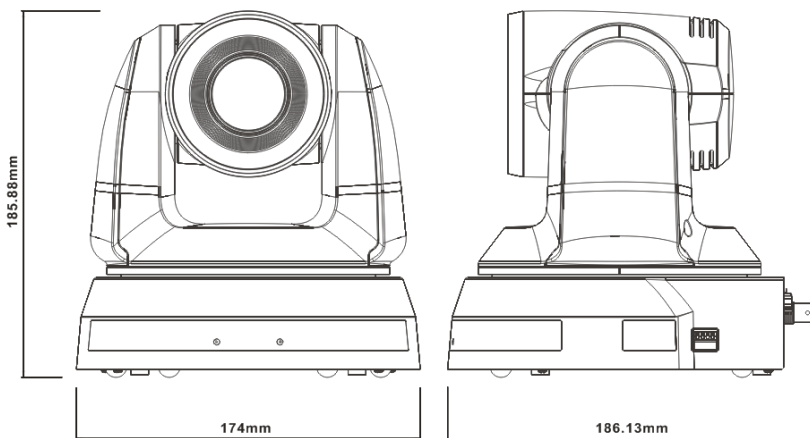
4.2.2 I would like to install CV620 on the ceiling

4.2.2.1 Prepare for the parts and equipment required during the installation

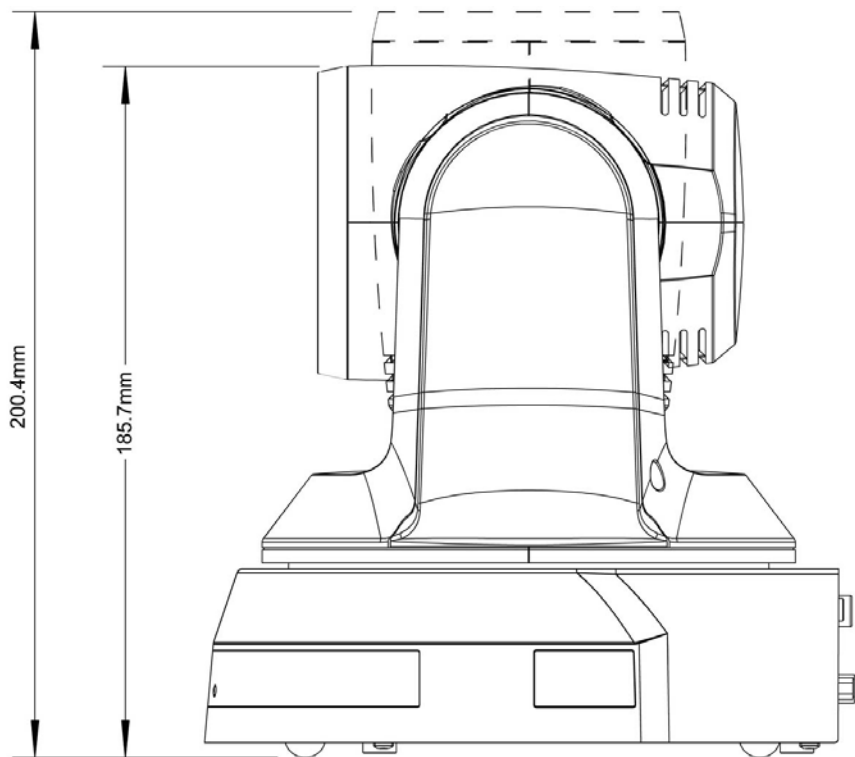
1. Accessories of CV620 in the box (metal plates A, B and M3 screw x 7)
2. Screw for locking on ceiling mounted hanger x 4
3. Drilling machine, screw driver, ladder

4.2.2.2 Dimension

Length x Width x Height: 174x186.13x185.88. Weight: 2.0Kg

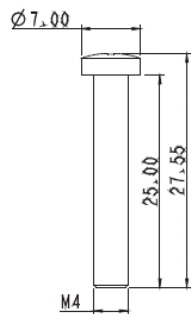


4.2.2.3 Max. rotation dimension of camera

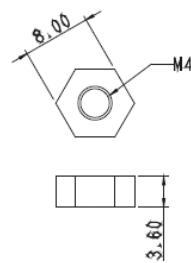


4.2.2.4 Size Diagram

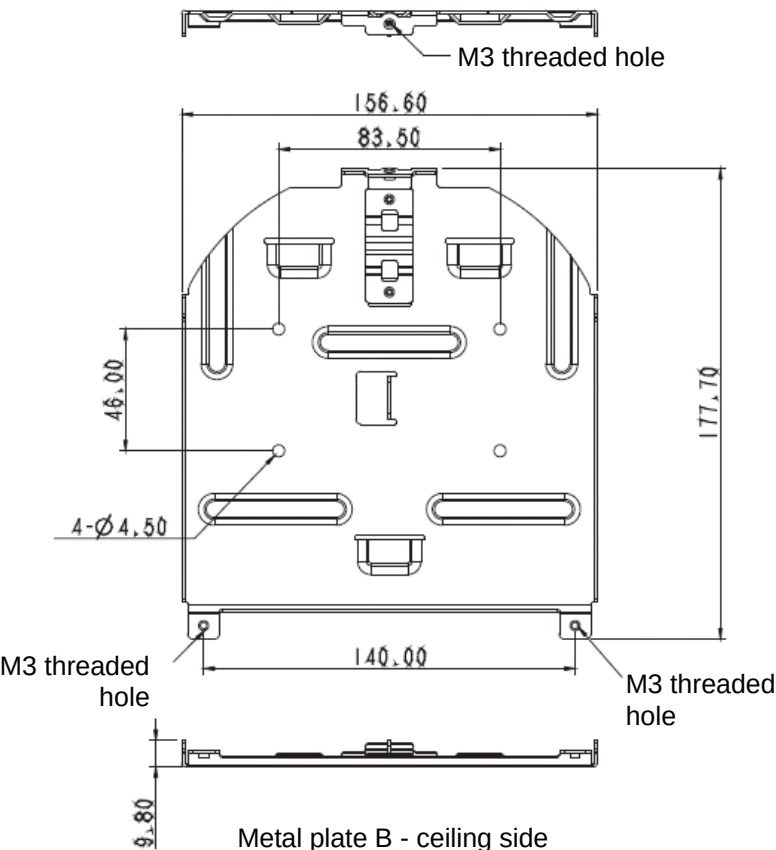
1. Metal plate B - ceiling side



Metal plate B locking screw

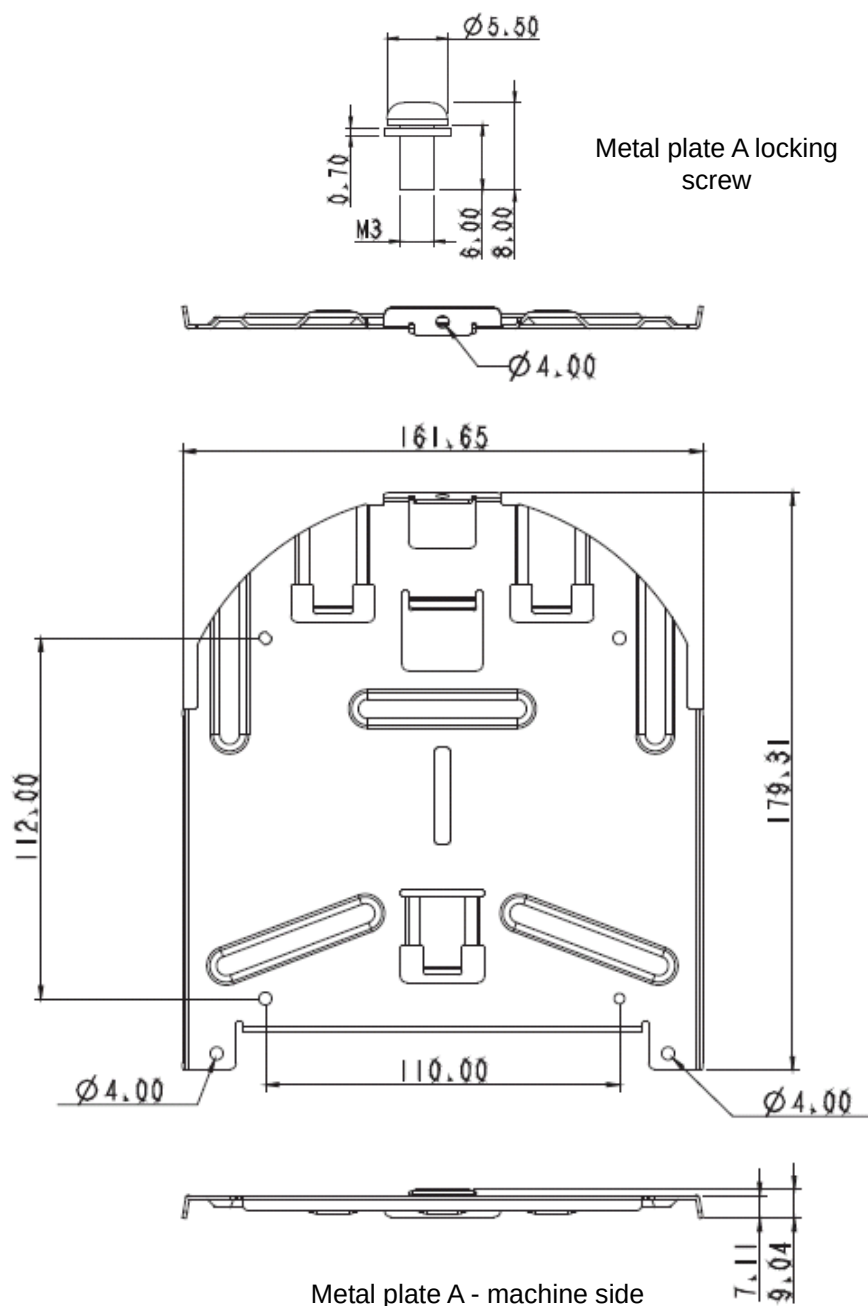


Metal plate B locking bolt

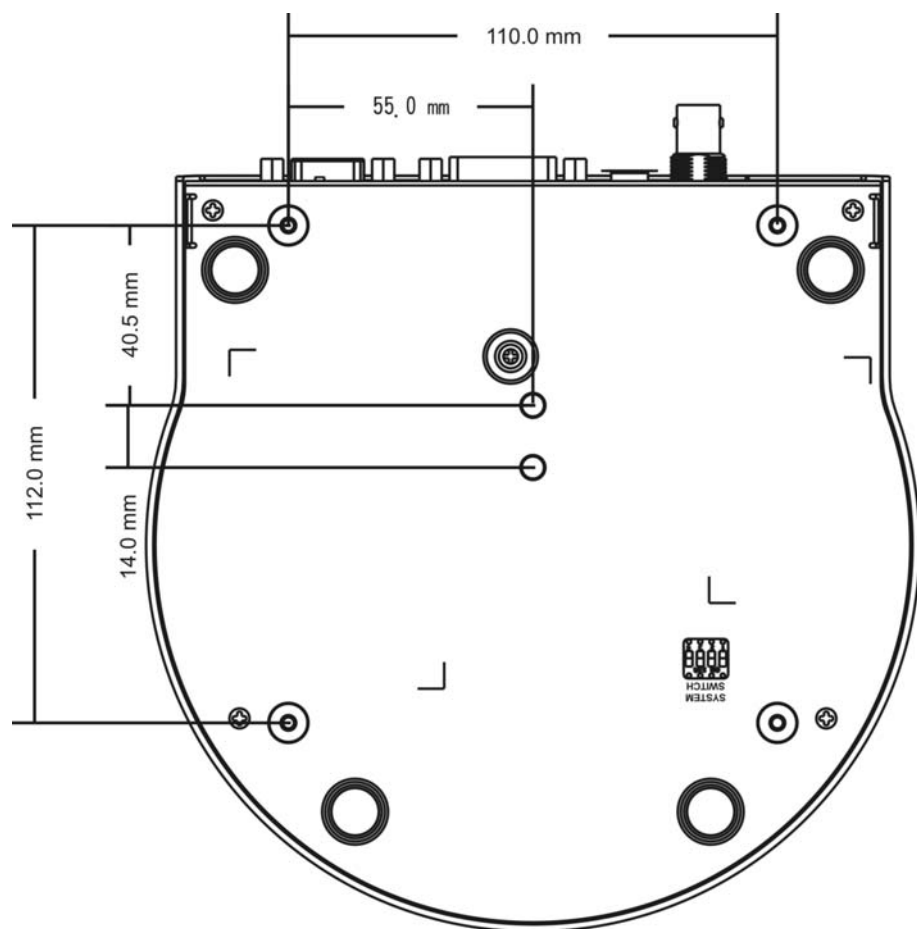


Metal plate B - ceiling side

2. Metal plate A - machine side

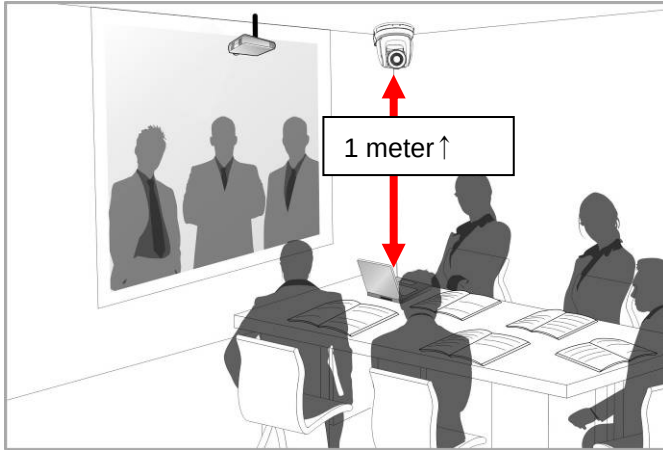


3. Bottom of machine



4.2.2.5 Precautions for installation

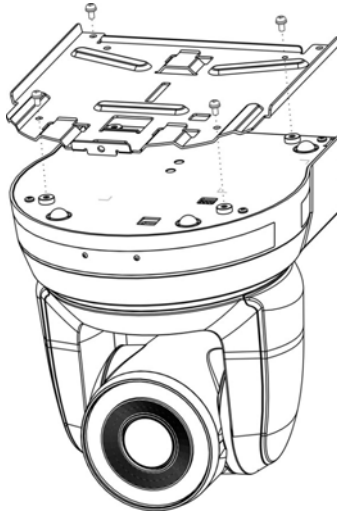
1. Before installation, please confirm the orientation of the machine relative to the object to be captured.
2. It is recommended that the machine should be set at a distance of more than 1 meter away from the object to be captured.
Please adjust for a best distance according to the magnification of the lens.



3. The machine (including metal plates) is weighed at about 2.5 kg.
If it is to be installed on the ceiling, please use the hanger that has obtained UL security approval to prevent the machine from falling down.
4. Please check whether the camera is installed securely on a regular basis

4.2.2.6 Installation steps

1. Please adjust resolution on DIP switch at first
*** Please refer to [Chapter 7 DIP Switch Setting](#) for the relevant descriptions on DIP switch.**
2. Fix the metal plate A on the machine base with 4 M3 screws.



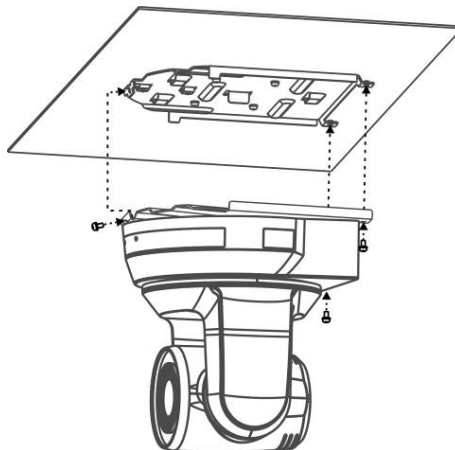
3. Lock the metal plate B on ceiling mounted hanger.

※Caution:

- (1) Please use the hanger that has obtained UL security approval
- (2) Please reserve the hole for the connecting wires of the camera

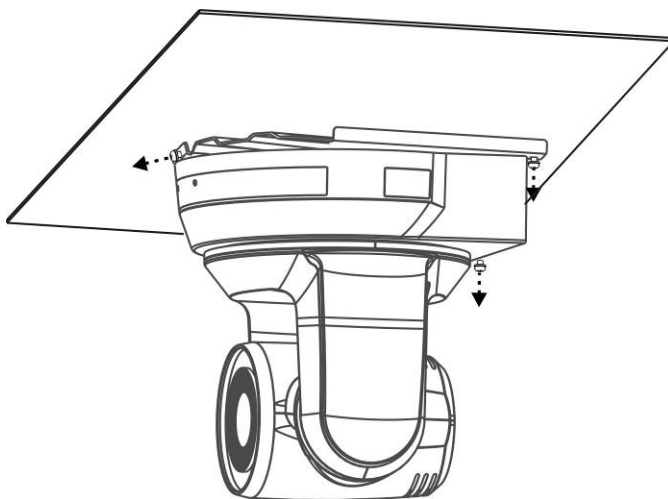
4. Combine the metal plate A and the metal plate B

- (1) Push the metal plate A up to the ceiling and then to the right to latch the metal plate B
- (2) Fix with 3 M3 screws



4.2.2.7 How to remove

1. Remove the connecting wires from the camera
2. Uninstall the camera together with the ceiling, loosen the three screws that fix the metal plates A and B and push to the left to remove the machine

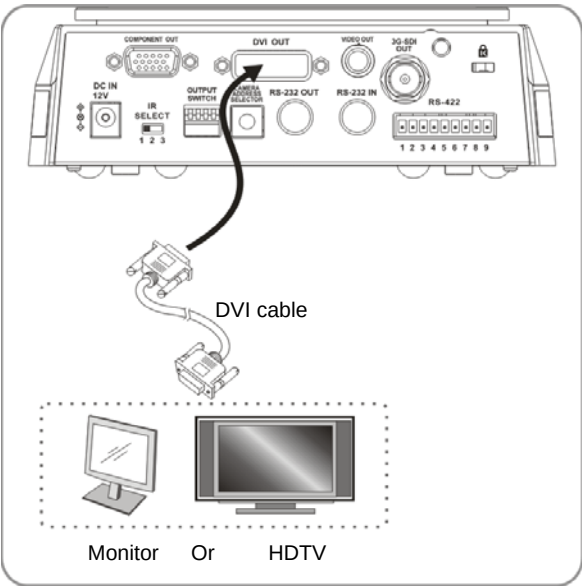


3. Then remove the screws on the hanger and the machine

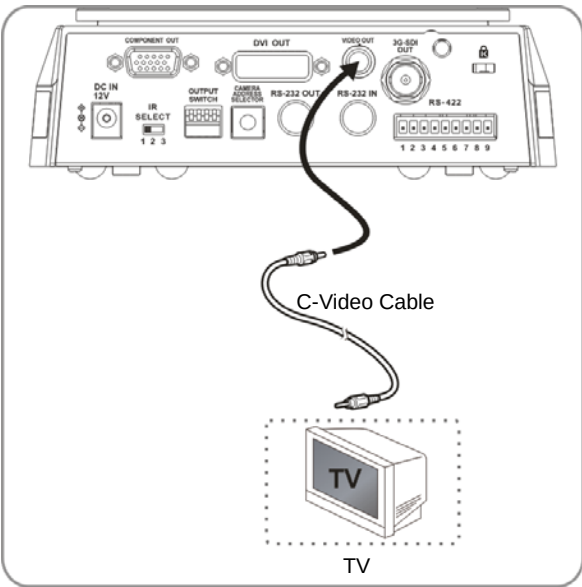
4.3 Connecting the device

4.3.1 Image output

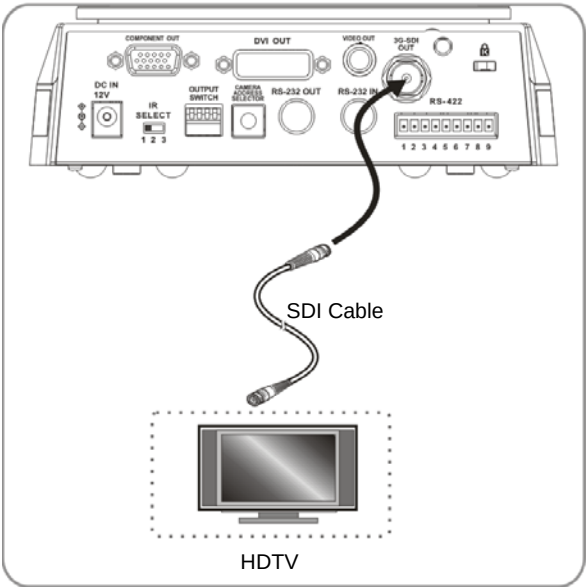
4.3.1.1 Connecting to a HDTV/computer monitor (DVI)



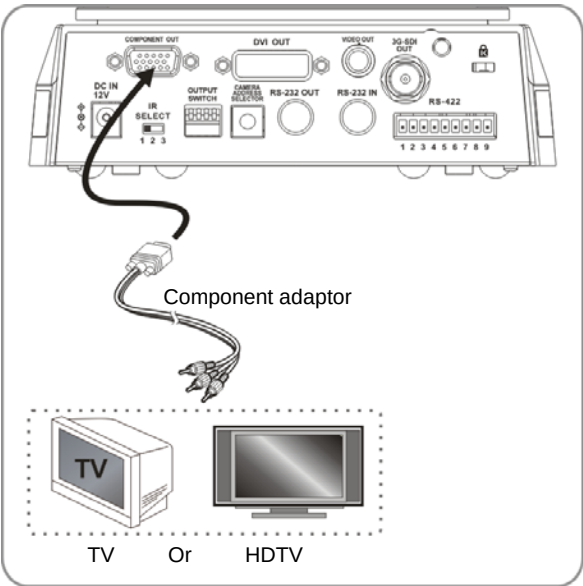
4.3.1.2 Connecting to a TV (C-Video)



4.3.1.3 Connecting to a HDTV (3G-SDI)

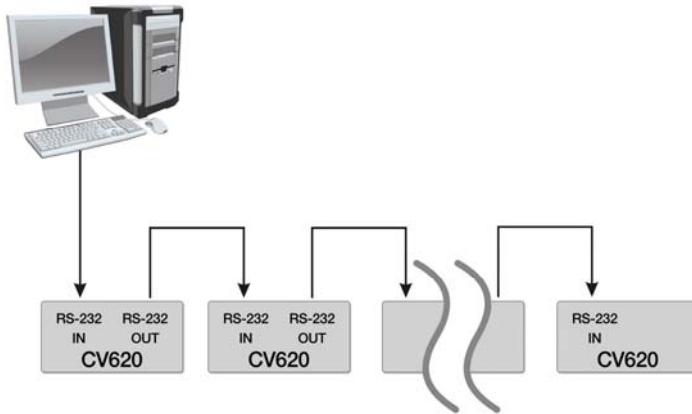


4.3.1.4 Connection to the device for image output



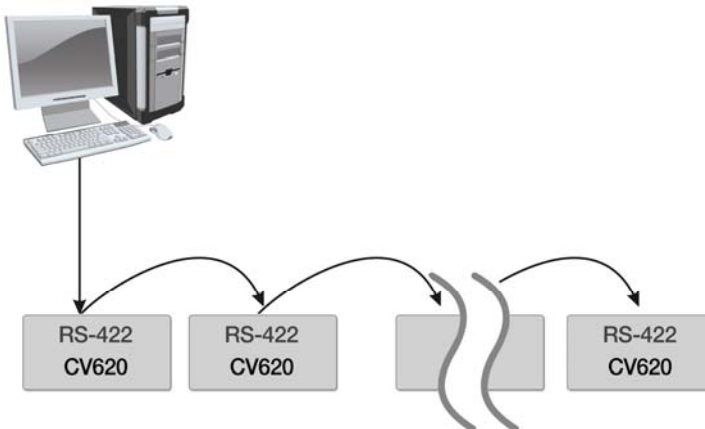
4.3.2 Controlling VCs with the computer

4.3.2.1 Connecting to one computer for connection between CVs (RS-232 in/out)



*** With RS-232 in/out, at most 7 CVs can be connected.**

4.3.2.2 Connecting several CV620s to one computer via RS-422/232



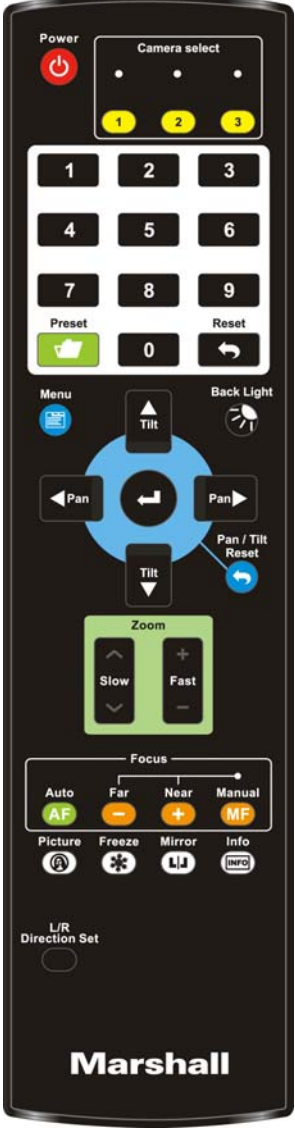
*** Please refer to [7.2 RS-422 connection](#) for the RS-422 connection instructions.**

*** With RS-422, at most 7 CVs can be connected.**

Remote Control and Setting Menu

5.1 Functions of remote control

* The below functions are listed alphabetically.

 The image shows a black Marshall remote control with various buttons. At the top is a red power button and a 'Camera select' section with three yellow buttons labeled 1, 2, and 3. Below these are numeric buttons 1-9, a 'Preset' button with a house icon, and a 'Reset' button with a circular arrow icon. The center features a blue circular directional pad with 'Tilt' (up/down) and 'Pan' (left/right) labels, and a 'Pan / Tilt Reset' button. Below the pad is a green 'Zoom' section with 'Slow' and 'Fast' buttons. At the bottom is a 'Focus' section with 'Auto AF', 'Far', 'Near', and 'Manual MF' buttons, and a row of icons for 'Picture', 'Freeze', 'Mirror', and 'Info'. The 'L/R Direction Set' button is at the very bottom.	Item	Description
	◀, ▶, ▲, ▼	Move the lens
	Back Light	Turn on/off back light compensation
	Camera select	Select 1~3 CV620
	Focus-Manual / Far/Near	Turn on manual focus to adjust the focal length
	Focus-Auto	Auto focus
	Freeze	Freeze the screen
	Home-Enter	Go back to the main page/Execute
	Info	Status information
	L/R Direction Set	L/R Direction / Off / Normal
	Menu	Display OSD menu
	Mirror	Rotate the image (Off/ Mirror/ Flip/ Mirror+Flip))
	Pan/Tilt Reset	Clear the Pan/Tilt setting
	Picture	Switch image effect (Off / Neg / B&W)
	Power	Power switch
	Preset	Appoint an ID (0 ~ 9) to save the current position data
	Reset	Appoint an ID (0 ~ 9) to delete the current position data
	Zoom-Fast	Adjust image size
	Zoom-Slow	Fine-tune image size

5.2 Setting menu

* Press **[Menu]** on the **remote control** to enter the setting menu; the **bold underlined** values in the following table are defaults.

1 st Level Major Items	2 nd Level Minor Items	3 rd Level Adjustment Values		Function Descriptions
Exposure	Mode	1. <u>Full Auto</u> 2. Bright 3. Shutter Pri 4. Iris Pri 5. Manual		Exposure mode setting
	Exposure Comp.	On/ <u>Off</u>		AE Level
	Exposure_ Comp. Level	-7~ <u>0</u> ~7		The value can be adjusted only after Exposure_ Comp. is activated
	Spot Light	On/ <u>Off</u>		The value can be adjusted when the mode is set to Full Auto or Shutter Pri.
	Spot Light Position	X(0~15)Y(0~15)		The value can be adjusted only after Spot Light is activated
	Shutter Priority	60/30 mode	50/25 mode	Shutter priority setting
		1/10000	1/10000	
		1/6000	1/5000	
		1/4000	1/3500	
		1/3000	1/2500	
		1/2000	1/1750	
		1/1500	1/1250	
		1/1000	1/1000	
		1/725	1/600	
		1/500	1/425	
		1/350	1/300	

		1/250	1/215			
		1/180	1/150			
		1/125	1/120			
		1/100	1/100			
		1/90	1/75			
		<u>1/60</u>	<u>1/50</u>			
		1/30	1/25			
		1/15	1/12			
		1/8	1/6			
		1/4	1/3			
		1/2	1/2			
		1/1	1/1			
		Iris Priority	1. <u>F1.6</u>		IRIS priority setting	
			2. F2			
3. F2.4						
4. F2.8						
5. F3.4						
6. F4						
7. F4.8						
8. F5.6						
9. F6.8						
10. F8						
11. F9.6						
12. F11						
13. F14						
14. Close						

	Manual Gain	1. <u>0dB</u> 2. 3.4 dB 3. 6.8 dB 4. 10.2 dB 5. 13.7 dB 6. 17.1 dB 7. 20.5 dB 8. 23.9 dB 9. 27.3 dB 10. 30.7 dB 11. 34.1 dB 12. 37.5dB 13. 41dB 14. 44.4 dB 15. 47.8 dB		Manually set the gain
	Manual Speed	60/30 mode	50/25 mode	Manually set the shutter
		1/10000	1/10000	
		1/6000	1/5000	
		1/4000	1/3500	
		1/3000	1/2500	
		1/2000	1/1750	
		1/1500	1/1250	
		1/1000	1/1000	
		1/725	1/600	
		1/500	1/425	
		1/350	1/300	
		1/250	1/215	
		1/180	1/150	
		1/125	1/120	
		1/100	1/100	
		1/90	1/75	
		<u>1/60</u>	<u>1/50</u>	

		1/30	1/25	
		1/15	1/12	
		1/8	1/6	
		1/4	1/3	
		1/2	1/2	
		1/1	1/1	
	Manual Iris	1. <u>F1.6</u> 2. F2 3. F2.4 4. F2.8 5. F3.4 6. F4 7. F4.8 8. F5.6 9. F6.8 10. F8 11. F9.6 12. F11 13. F14 14. Close		Manually set the IRIS
	Bright	1~ <u>C</u> ~28		

	Gain Limit	1. <u>0dB</u> 2. 3.4 dB 3. 6.8 dB 4. 10.2 dB 5. 13.7 dB 6. 17.1 dB 7. 20.5 dB 8. 23.9 dB 9. 27.3 dB 10. 30.7 dB 11. 34.1 dB 12. 37.5dB 13. 41dB 14. 44.4 dB 15. 47.8 dB	The maximum electric gain limit
	WDR	1. <u>Off</u> 2. 1 3. 2 4. 3	Set WDR
White Balance	Mode	1. <u>Auto</u> 2. Indoor 3. Outdoor 4. One Push WB 5. ATW 6. Manual 7. Outdoor Auto 8. Sodium Lamp Auto 9. Sodium Lamp 10. Sodium Lamp Outdoor Auto	Select the color temperature mode
	One Push Trigger	<u>ENTER</u>	One push trigger
	R-Gain	0~ <u>C</u> ~255	Adjustable when the white balance mode is set to Manual

	B-Gain	0~ <u>C</u> ~255	Adjustable when the white balance mode is set to Manual
Picture	Picture effect	1. <u>Off</u> 2. Neg 3. B&W	Set the picture effect
	Sharpness	1~ <u>A</u> ~16	Adjust the sharpness of the image
	NR	1. Off 2. 1 3. 2 4. <u>3</u> 5. 4 6. 5 7. 6 8. 7	Set 2D noise reduction
	3D NR	1. Off 2. 1 3. 2 4. <u>3</u> 5. 4 6. 5	Set 3D dynamic noise reduction
	Saturation	0~ <u>A</u> ~14	Adjustable when Image Mode is set to Custom .
	Hue	0~ <u>A</u> ~14	Adjustable when Image Mode is set to Custom .
	Gamma	1. Off 2. <u>Standard</u>	Adjustable when Image Mode is set to Custom .
	Brightness	0~ <u>A</u> ~31	Adjustable when Image Mode is set to Custom .
	Contrast	0~ <u>A</u> ~31	Adjust the contrast of the screen, Adjustable when Image Mode is set to Custom .
	Black Level	1. <u>Off</u> 2. Type1 3. Type2 4. Type3	Adjust the shadow detail and transparency of the screen, Adjustable when Image Mode is set to Custom .

Pan Tilt Zoom	Pan/Tilt Limit	ON/ <u>Off</u>	Turn on/off the angle limit setting
	Pan Right Limit	0~ <u>170</u>	Limit the right angle
	Pan Left Limit	<u>-170</u> ~0	Limit the left angle
	Tilt UP Limit	0~ <u>90</u>	Limit the upward angle
	Tilt Down Limit	<u>-30</u> ~0	Limit the downward angle
	Preset Speed	1. <u>150 deg/sec</u> 2. 250 deg/sec 3. 350 deg/sec	Set the rotation speed of the cradle head when Preset is executed
D-effect	Mirror	1. <u>Off</u> 2. Mirror 3. Flip 4. Mirror + Flip	Set the mode at which the image is turned
Auto Focus	AF Sensitivity	1. Low 2. <u>Normal</u>	Select the AF triggering speed. The higher the speed is, the faster AF is triggered.
	AF speed	1. <u>Normal</u> 2. 1 3. 2 4. 3 5. 4 6. 5	Focus speed upon triggering AF
System	C-Video	NTSC LB	Image mode
		NTSC CP	
		<u>NTSC SQ</u>	
		PAL LB	
		PAL CP	
		PAL SQ	
	Video Type	<u>DVI/SDI</u> YPbPr	Select output video type
	Prompt	ON/ <u>Off</u>	Turn on/off the prompt information on the display
	IR Receive	<u>ON</u> /Off	Turn on/off the infrared reception
	Language	<u>English</u> /Chinese	Language

	Control Device	<u>Encoder</u> / Controller	Set control device
	Protocol	<u>Protocol V</u> / Protocol PD	Protocol V: VISCA Protocol PD: PELCO D
	PD Address	<u>1</u>~255	The Protocol set to PD allows the camera ID address to be assigned
	Output Mode	1. <u>1920x1080/60p</u> 2. 1920x1080/50p 3. 1920x1080/30p 4. 1920x1080/25p 5. 1920x1080/60i 6. 1920x1080/50i 7. 1280x720/60p 8. 1280x720/50p 9. 1280x720/30p 10. 1280x720/25p 11. 1080/59.94p 12. 1080/59.94i 13. 1080/29.97p 14. 720/59.94p 15. 720/29.97p	
	Factory Reset	ON/<u>Off</u>	Reset all configurations to factory default settings.
Status			Display the current setting status

Descriptions of Major Functions

6.1 I would like to switch to CV620

1. Press **[Camera 1 ~ 3]** on the **remote control** to select CV620.
- **Camera 1 ~ 3** is selected with **IR SELECT**.

6.2 I would like to save the current lens position data

1. Hold **[Preset + ID]** on the **remote control** to save the current position data.
- **ID** shall be a digit **[0 ~ 9]**.
 - Use **VISCA Command** to save the position data to **[0~127]**

6.3 I would like to clear the saved position data

1. Hold **[Reset + ID]** on the **remote control** to clear the given position data.
- **ID** shall be a digit **[0 ~ 9]**.
 - Use **VISCA Command** to clear the position data of **[0~127]**

6.4 I would like to turn on the back light compensation function

1. Press **[Back Light]** on the **remote control** to turn on or turn off the back light compensation

6.5 I would like to adjust the shooting angle of the lens

1. Press **[Tilt ▲]** or **[Tilt ▼]** on the **remote control** to adjust the angle upward or downward.
2. Press **[Pan ►]** or **[Pan ◄]** on the **remote control** to adjust the angle to right or left.
3. Press **[Pan - Tilt Reset]** on the **remote control** to reset the angle to the center point.

6.6 I would like to zoom in/out images

6.6.1 Adjust image size

1. Press **[Fast +]** on the **remote control** to zoom in images.
2. Press **[Fast -]** on the **remote control** to zoom out images.

6.6.2 Fine-tune image size

1. Press **[Slow +]** on the **remote control** to zoom in images.
2. Press **[Slow -]** on the **remote control** to zoom out images.

6.7 I would like to adjust the focal length

6.7.1 Auto tune

1. Press **[AF]** on the **remote control** to adjust automatically.

6.7.2 Manual focus

1. Press **[MF]** on the **remote control** to turn on the manual focus function.
2. Press **Focus - [+]** or **Focus - [-]** to adjust.

6.8 I would like to adjust the focus speed

6.8.1 Adjust the AF sensitivity

AF triggering speed. The higher the speed is, the faster AF is triggered.

To shoot fast-moving objects, AF can be set to **[High]** or **[Middle]**, which is applicable to quick focus.

When the environment is too dark to enable auto focus or fixed objects have to be shot in different brightness, AF can be set to **[Low]**.

1. Press **[MENU]** to activate the setting menu.
2. Press **[▶]** or **[◀]** to select **[Auto Focus]**.
3. Press **[ENTER]** to activate.
4. Press **[▲]** or **[▼]** to select **[AF Sensitivity]**.
5. Press **[ENTER]** to activate.
6. Press **[▶]** or **[◀]** to select **[High/Middle/Low]**.
7. Press **[MENU]** to exit.

6.8.2 Adjust the focus speed

The focus speed upon triggering AF

- **[Normal]** (default): Image flickering may not occur
- **[Fast]**: The focus speed is fast, but image flickering is more likely to occur

1. Press [MENU] to activate the setting menu.
2. Press [▶] or [◀] to select [Auto Focus].
3. Press [ENTER] to activate.
4. Press [▲] or [▼] to select [AF Speed].
5. Press [ENTER] to activate.
6. Press [▶] or [◀] to select [Normal/Fast].
7. Press [MENU] to exit.

6.9 I would like to set the image mode

1. Press [Picture] on the **remote control** to switch [Off/Neg/B&W].

6.10 I would like to freeze images

1. Press [Freeze] on the **remote control** to freeze the current image on the display.

6.11 I would like to rotate the image

1. Press [Mirror] on the **remote control** to switch [Off/Mirror/Flip/Mirror + Flip].

6.12 I would like to change the camera direction

1. Press [L/R Direction Set] on the **remote control** to switch [L/R Direction / Off / Normal].

6.13 I would like to display the current status

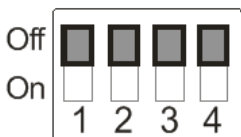
1. Press [Info] on the **remote control** to display the current status information.

DIP Switch Setting

<Note> Please turn off the machine before changing DIP switch setting.

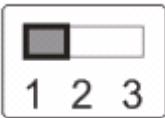
7.1 DIP SWITCH

7.1.1 OUTPUT Switch



Output Mode	Setting	Output Mode	Setting
1920x1080/60p		1920x1080/50p	
1920x1080/30p		1920x1080/25p	
1920x1080/60i		1920x1080/50i	
1280x720/60p		1280x720/50p	
1280x720/30p		1280x720/25p	
1920x1080/59.94p		1920x1080/59.94i	
1920x1080/29.97p		1280x720/59.94p	
1280x720/29.97p			

7.1.2 IR SELECT



ID	Setting
1	
2	
3	

7.1.3 Camera Address Selector



Setting	Function Descriptions
0~7	ID 0~7
8~9	Reserved

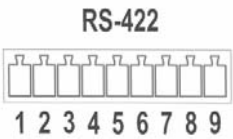
7.1.4 System Switch



Setting	Function Descriptions
DIP 1	RS-232C/RS-422 selector OFF : RS-232C / ON : RS-422
DIP 2	Infrared signal output switch OFF : Off / ON : On
DIP 3	Communication baud rate selector OFF : 9600 / ON : 38400
DIP 4	Reserved

7.2 RS-422 Connection

7.2.1 RS-422 Pin Description



Pin NO.	Function
1	RXD OUT -
2	RXD OUT +
3	TXD OUT -
4	TXD OUT +
5	GND
6	RXD IN -
7	RXD IN +
8	TXD IN -
9	TXD IN +

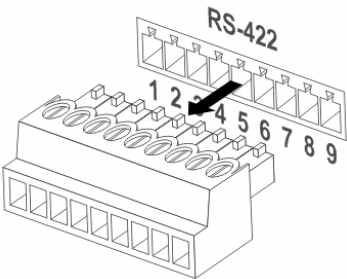
<Note>

For SONY products, please connect IN+ to OUT+

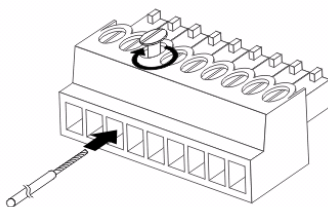
For non-SONY products, it may be necessary to connect IN+ to OUT-

7.2.2 Use RS-422 Connection

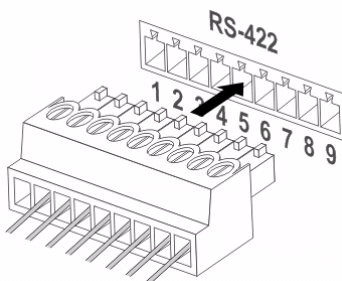
1. Hold the two sides of RS-422 connector and pull out in the direction shown by the arrow in the figure below



2. Peel off a section of copper wire (AWG Nos.28 to18) and insert it into



3. Insert the wired RS-422 connector back to the camera. Now the connection is completed



- * When RS-422 connection is being used, do not use RS-232C connection.

Troubleshooting

This chapter describes problems you may encounter while using CV620. If you have questions, please refer to related chapters and follow all the suggested solutions. If the problem still occurred, please contact your distributor or the service center.

No.	Problems	Solutions
1.	Boot without power signal	1. Make sure you have plugged in the power cord. 2. Make sure the Service DIP switch is Off.
2.	No image output from the CV620	1. Check the power. 2. Check if DIP switch is properly set. Refer to Chapter 7 DIP Switch Setting for related settings. 3. Make sure the display supports the output resolution; in general, the resolution is 1080p60/1080i60/720p60. 4. Replace the cables and make sure they are not faulty.
3.	CV620 image is severely delayed	Please use 1080i, 1080p, or 720p at 60/59.94/50fps rather than 30/29.97/25fps.
4.	Not working after changes to DIP Switch setting	After completing DIP Switch setting, unplug and reconnect the power cord and turn on the machine to change the setting.
5.	CV620 cannot be operated by remote control	1. Please confirm if the Camera Select on the remote control can be used together with the IR Select on CV620. 2. Please prevent CV620 from direct sunshine. 3. Make sure the energy-saving bulb and the IR touch screen are as far as possible in order to avoid interference. 4. When several CV620s are connected in the same area, the operation of two remote controls at the same time may result in signal interference. It is recommended to use one remote control only.
6.	The device cannot be controlled with Codec	1. Please consult the distributor to make sure the firmware version is the latest one. The steps to check version is as follows: 1.1 Press [MENU] on the remote control 1.2 Select [Status] 1.3 Go to Page 5 of [System] 1.4 Make sure the firmware version is correct

		2. Make sure the connection is correct (RS-232/422 Input). 3. Make sure System Switch DIP1 and DIP3 are correct.
7.	The device cannot be controlled with RS-232/RS422	1. Make sure the connection is correct (RS-232/422 Input). 2. Make sure System Switch DIP1 and DIP3 are correct.

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