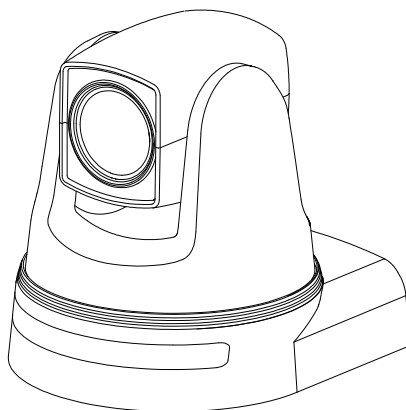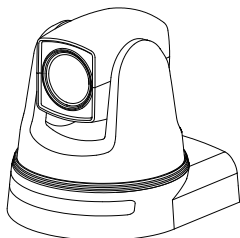# AIDA

PTZ3-X20L
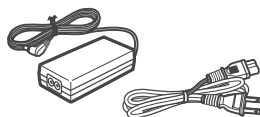
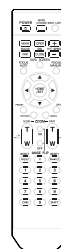## 3G-SDI/HDMI Full HD Broadcast PTZ Camera

Before attempting to connect or operate this product, Please read these instructions carefully and save this manual for future use.
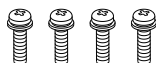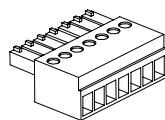
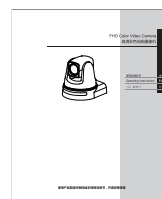Main Body (1)   DC Adaptor (1)   Remote Commander (1)
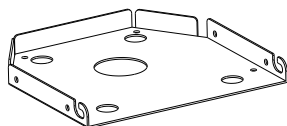
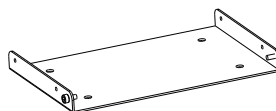Screws (4)   RS-422 Connector (1)   Operating Instructions (1)

Bracket

Main Body Bracket (1)   Ceiling Bracket (1)

☑ The 1/2.86 inch CMOS camera (utilizing approximately 2.3 million effective pixels) allows for high definition shooting with superior picture quality.

☑ The camera has a variety of HD video format choices and digital and analogue interface connectors. The YVC-H2060B camera has HD-SDI (High Definition Serial Digital Interface) output, suitable for long distance transmission, The YVC-H2060B has a DVI-I (VIDEO OUT) connector supporting both digital and analogue output, The YVC-H2060B has a HDMI (High Definition Multimedia Interface) output connector.

☑ The camera can be used for NTSC and PAL output.

☑ The camera is equipped with a bright, F1.6 zoom lens with 20x optical zoom.

☑ You can use the infrared remote commander to set the camera and also to select panning, tilting and zooming from the setting menu.

☑ Adapts the industry standard RS-232C interface of VISCA camera protocol in external communication. It is possible to operate from long distances by using both RS-232 and RS-422/485.

☑ You can store up to 128 kinds of camera direction and camera status into the camera.

☑ Max. 100°/sec Pan/Tilt Movement. Using Vector Driver technology.

☑ For jog operation using a controller, since ultra slow speed 0.05°/sec can be reached, it is very easy to location camera to desired target view, additionally it is easy to move camera to a desired position with zoom-proportional pan/tilt movement.

Sensor	
Image Sensor	1/2.86" Progressive CMOS (Approx. 2.3 mega)
Scanning System	16:9 Progressive
Sync. System	Internal
Effective Pixel	1920(H) x 1080(V)
Min. Illumination	0.2Lux (Day), 0.1Lux (Night), 0.005Lux (Slow Shutter on)
Optics	
Lens	20x Optical Zoom, F=4.7~94mm, F1.6~F3.5
Zoom	20x Optical Zoom + 12x digital zoom = 240x
Angle of View(H)	57.4 degrees(WIDE), 3.2 degrees(TELE)
Function	
Exposure	Full Auto / Bright / Shutter Pri / Iris Pri / Manual
White Balance	Auto / Indoor / Outdoor / One Push / ATW / Manual
Focus	Auto / Manual
Shutter Speed	1 to 1/10,000 sec.
Wide-D	On/Off
Flickerless	On/Off
Pan/Tilt	
Pan/Tilt Angle	Horizontal:±170°, Vertical:+90, -20°.
Pan/Tilt Speed	Maximum panning/tilting speed : 100°/sec.
Preset	128
General	
Protocol	VISCA, PELCO-D, Panasonic, Samsung elec
Communication	8bits data, 1 stop bit, no parity, (2400,4800,9600,38400bps)
	RS232, RS422/RS485, Remote Commander
OSD	Menu
Signal System	1920x1080p/60, 1920x1080p/50, 1920x1080p/59.94, 1920x1080i/60
	1920x1080i/59.94, 1920x1080i/50, 1920x1080p/30, 1920x1080p/25
	1280x720p/60, 1280x720p/59.94, 1280x720p/50, 1280x720p/30, 1280x720p/25
Video Output	HD-SDI(HD), DVI-I(HD) HDMI, CVBS(SD)
Power Requirements	DC12V/1.0A
Power Consumption	12W
Weight	About 1.35Kg
Operation Temperature	0℃~40℃ (32℉~104℉)

to VIDEO — to VIDEO Input

to HD-SDI OUT — to HD-SDI Input connector

to HDMI OUT — to HDMI Input connector

to VISCA IN — to RS-232C

to VISCA OUT — to VISCA IN of other

to DVI OUT — to DVI Input Connector

to VISCA RS-422

AC power adaptor

Front   Rear   Bottom
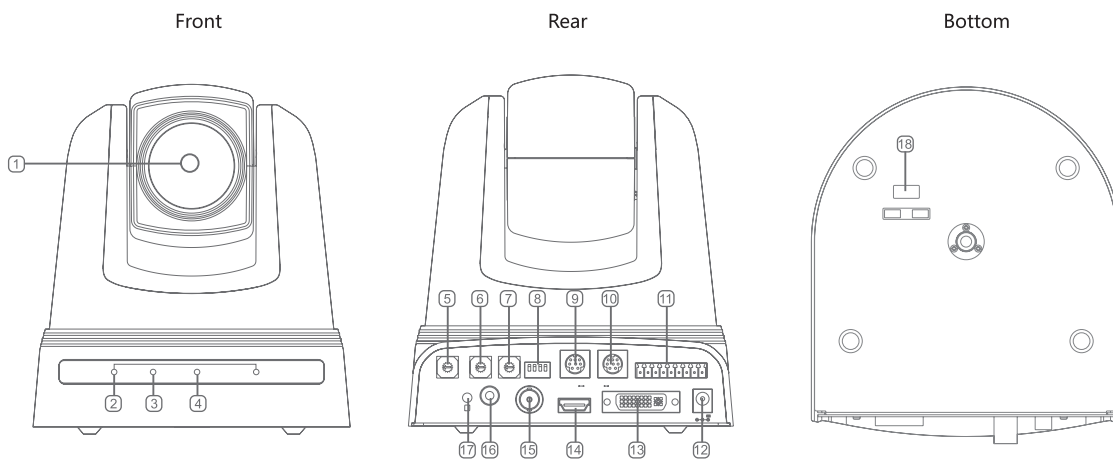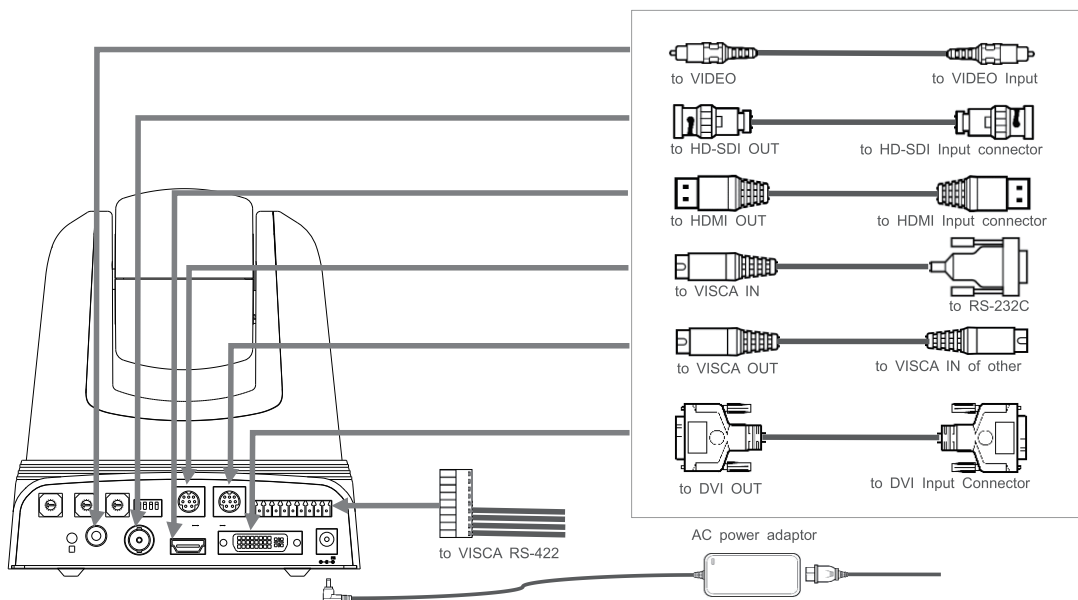
1.Lens

2.Remote sensors

3.POWER lamp

4.STANDBY lamp

5.Camera ID switch

VISCA protocol not supported.

6.Protocol/Baud rate select switch

Switch position	Protocol/Baud rate	Switch position	Protocol/Baud rate
0	VISCA 9600 bps	4	PELCO-D 38400 bps
1	VISCA 38400 bps	5	Panasonic 9600 bps
2	PELCO-D 2400 bps	6	Samsung elec 4800 bps
3	PELCO-D 9600 bps	others	

To change the mode, turn off the camera first, set the switch and than turn on the camera again. Mode switching is not possible while the camera is turned on.

7.SYSTEM SELECT switch

Switch position	Video format	
0	1080p/60	60Hz system
1	1080p/59.94	
2	1080i/60	
3	1080i/59.94	
4	1080p/30	
5	720p/60	
6	720p/59.94	
7	720p/30	
8	1080p/50	50Hz system
9	1080i/50	
A	1080p/25	
B	720p/50	
C	720p/25	
D	1080p/50	
E	1080p/50	
F	VISCA Control	

- ☑ Be sure to set this switch before you turn on the power of the camera. You can also set this switch in the standby mode of the camera. After completing the setting, turn on the power of the camera by connecting it to an AC outlet using the supplied AC power adaptor and AC power cord, by using the VISCA command or remote commander.

- ☑ The VISCA CONTROL switch position allows you to configure the video format via external communication. Note that your configured video format will be activated only after restarting the camera.

8.RS232/RS422/RS485 select switch

NO 1 2 3 4

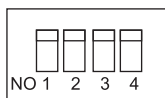| Switch Position	Rs232	Rs422	Rs485	Termination
1	On	Off	Off	--
2	Off	Off	On	--
3	--	--		On
4	--	--		On

- ☑ To change the mode, turn off the camera first, set the switch and than turn on the camera again. Mode switching is not possible while the camera is turned on. (RS-485 is not supported for VISCA Protocol)

9.VISCA IN connector

10.VISCA OUT connector

11.VISCA RS-422/485 connector

12.DC 12V connector

13.DVI-I VIDEO OUT connector

Pin No.	Function
1	Data 2-
2	Data 2+
3	Shield (2,4)
4	No connection
5	No connection
6	No connection
7	No connection
8	Analog Vertical Sync
9	Data 1-
10	Data 1+
11	Shield (1,3)
12	No connection
13	No connection
14	Power +5V
15	GND
16	Hot Plug
17	Data 0-
18	Data 0+
19	Shield (0,5)
20	No connection
21	No connection
22	Shield Clock
23	Clock +
24	Clock -
C1	Analog Red
C2	Analog Green
C3	Analog Blue
C4	Analog Horizontal Sync
C5	Analog GND

14.HDMI VIDEO OUT connector

Pin No.	Function
1	Data 2+
2	Shield (2)
3	Data 2-
4	Data 1+
5	Shield (1)
6	Data 1-
7	Data 0+
8	Shield (0)
9	Data 0-
10	Clock+
11	Shield Clock
12	Clock-
13	CEC
14	Reserved
15	SCL
16	SDA
17	DDC/CEC GND
18	+5V
19	Hot Plug

15.HD-SDI OUT connector

16.SD VIDEO OUT connector

17.Remote sensor

18.IMAGE FLIP/ Remote Commander select switch
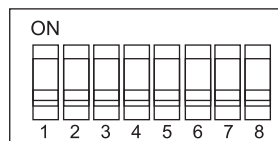
☑ Remote Commander select switch (s/w 6)
   When set to ON, use the Sony Remote Commander, and when set to OFF, use the manufacturer's Remote Commander.

☑ D70 Mode select switch (s/w 7)
   You can switch the D70 mode ON or OFF by switching the BOTTOM switch at the bottom of the YVC-H2060B. To change the D70 mode setting, move the BOTTOM switch to ON or OFF while the camera's power is off or the camera is in standby mode. Then, turn the power on by connecting the camera to an AC outlet or by using the VISCA commands or the Remote Commander. The mode will not change if you change the switch setting of the BOTTOM switch after the power has been turned on. After you change the mode, previously saved position preset data will be lost. (Zoom, Pan/Tilt positions, etc. will be reset to their initial settings.)

☑ IMAGE FLIP switch (s/w 8)
   Normally set this to OFF when you use the camera. When the camera is attached to the ceiling, set this to ON. Before you set the IMAGE FLIP switch, turn off the camera(or set to standby mode) and then, turn the power on by connecting the power adaptor, by VISCA control or the remote commander. When you switch this, the preset setting is returned to the initial setting.

☑ Others
   Reserved.

1.POWER switch
  Press this button to turn on/off the camear when the camera is
  connected to ac AC outlet.
2.BACKLIGHT button
  Press this button to enable the backlight compensation. Press it
  again to disable the backlight compensation.
3.FOCUS buttons
  Used for focus adjustment. Press the AUTO button to adjust the
  focus automatically. To adjust the focus manually, press the
  MANUAL button, and adjust it with the FAR and NEAR buttons.
4.PAN/TILT Speed Control buttons
  Press this button to adjust the pan/tilt speed.
5.DATA SCREEN button
  Press this button to display the main menu. Press it again to turn
  off the menu. If you press the button when a sub-menu is selectd,
  the display goes back to a upper-menu.
6.PAN-TILT buttons
  Press the arrow buttons the perform panning and tilting. Press the
  HOME button to face the camera back to the front. When the menu
  is displayed, use or to select the menu items and or to change
  the set values. The selected setting menu is displayed, by pressing
  the HOME button when the main menu is displayed. The Pan/tilt
  speed will slow down when the camera is zoom.
7.Function Buttons
  Not used the PATTERN, SWING, GROUP buttons.
8.ZOOM buttons
  Use the SLOW button to zoom slowly, and the FAST button to zoom
   quickly. Press the 'T' side of the button to zoom in, and the 'W' side
   to zoom out.
9.RESET PRESET
  To erase the memory contents, Press button 1 to 128 and hold down
  the SHIFT button and RESET PRESET button.
11.PAN-TILT RESET button
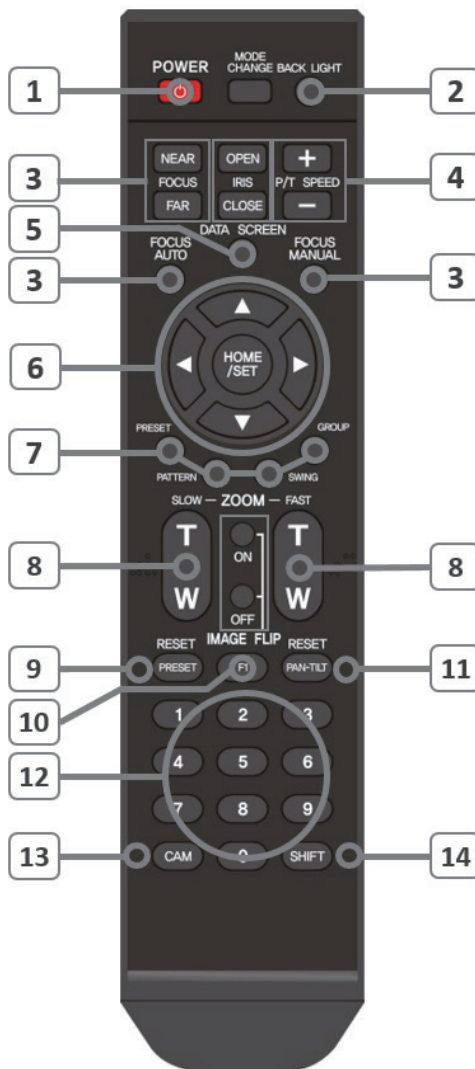   Press this button to reset the pan/tilt position.
12.NUMBER Buttons
   Numeric keypoads(0~9)
13.CAM Button
   Camera ID select. Number + CAM button.
14.SHIFT Button
   Press button 1 to 128 and hold down the SHIFT button and PRESET
   button to store the current camera condition.

setup menu	function	sub function	default	Preserved Item
exposure	mode		full auto	X
	full auto	slow shutter	off	
		gain limit	22db	
		ex-comp	off	
		ex-comp level	0	
	bright	level	--	
	shutter pri	speed	--	
		gain limit	22db	
		ex-comp	off	
		ex-comp level	0	
	iris pri	iris	--	
		gain limit	22db	
		ex-comp	off	
		ex-comp level	0	
	manual	gain	--	
		speed	--	
		iris	--	
white balance	mode		auto	X
	auto			
	indoor			
	outdoor			
	one push			
	atw			
	manual	r/b gain	--	
picture	aperture		8	X
	picture effect		off (only)	
	high resolution	--		
	noise reduction		1	
	wide-d		off	
function	d-zoom		on	X
	flickerless		off	o
	gamma		0	
system	ir-receive		on	X
	display info	camera id	off	o
		action title	auto	
	system mode		1080p/60	o
	language		english	o
	system init			
status				

VISCA IN/OUT
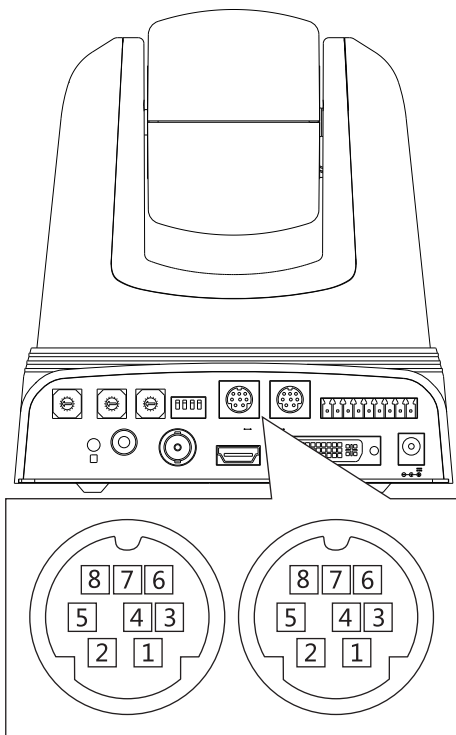
☑ VISCA IN/OUT

No	PINS
1	DTR IN
2	DSR IN
3	TXD IN
4	GND
5	RXD IN
6	GND
7	Not used
8	Not used

•	Windows D-sub 9 pin
1.DTR	1.CD
2.DSR	2.RXD
3.TXD	3.TXD
4.GND	4.DTR
5.RXD	5.GND
6.GND	6.DSR
7.Not used	7.RTS
8.Not used	8.CTS
	9.RI

•	Mini DIN 8 pin serial
1.DTR	1.DTR
2.DSR	2.DSR
3.TXD	3.TXD
4.GND	4.GND
5.RXD	5.RXD
6.GND	6.GND
7.Not used	7.Not used
8.Not used	8.Not used

☑ Using the VISCA RS-422/485 connector pin assignments

The VISCA RS-422/485 connector pin assignment
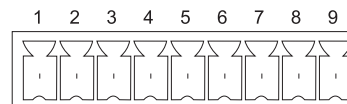
Pin No.	Function(RS422)	Function(RS485)
1	TXD IN+	TRX+
2	TXD IN-	TRX-
3	RXD IN+	
4	RXD IN-	
5	GND	
6	TXD OUT+	
7	TXD OUT-	
8	RXD OUT+	
9	RXD OUT-	

☑ RS-485 is not supported for VISCA protocol.

■Zoom
  The camera employs a 20x optical zoom lens combined with a 12x digital zoom function. This camera allows you to zoom up to 240x.
· Optical 20x, f=4.7 mm to 94.0 mm (F1.6 to F3.5)
· Digital Zoom 12x, enlarges of the subject.
  Horizontal angle of view is 57.4 degrees (wide) to 3.2 degrees (Tele).
  You can activate the zoom in the following ways with a VISCA Commands.
· Standard/Variable/Direct Mode
  There are seven levels of zoom speed.
■Focus
  Focus has the following modes, all of which can be set using VISCA Commands.
· Auto Focus Mode
 The Auto Focus Mode automatically adjusts the focus position to maximise the high frequency content of the picture in a center
  measurement area, taking into consideration the high luminance and strong contrast components.
· Manual Focus Mode
Manual Focus Mode adjusts the focus position by manual and when zoom is changed.
· One Push Trigger Mode
  When One Push Trigger Command is sent, camera becomes Auto Focus mode to adjust focus position for a while. After it stops,
  mode becomes that for Manual Focus Mode.
· Focus Near Limit
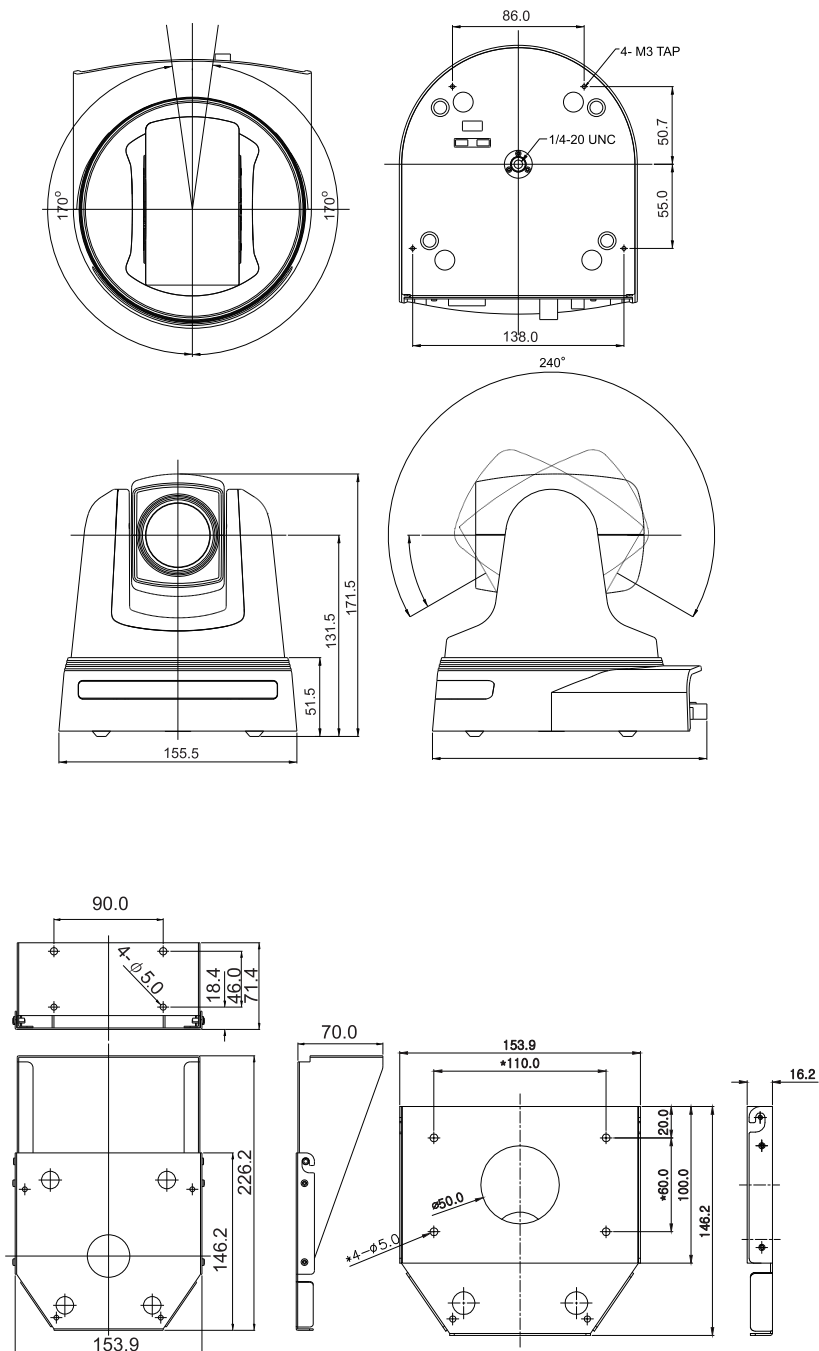 Near limit for the focusing range. Can be set in a range from 0x1000 to 0xC000
■ Exposure
· Full Auto
  Exposure is adjusted automatically by gain, iris and electronic shutter setting.
· AE Gain Limit
  The gain limit can be set at the Full Auto, Shutter Priority and Iris Priority in the AE mode.
· Bright
  The bright control function adjusts gain and iris, to keep a brightness level.
  (Close to F1.6, 17 Steps, 0 to +28dB, 15 steps)
· Shutter Priority
  Shutter speed value can be set by manually.
· Iris Priority
  Iris is fixed, and give the exposure control priority to other resources.
· Manual
  Variable Shutter, Iris and Gain.
· Exposure Compensation
  Exposure compensation is a function which offsets the internal reference brightness level used in the AE mode.
· Backlight
  When background is too bright behind the object, the BLC make clearer object.
· Wide Dynamic Range
  When background is too bright behind the object, the WDR make clearer images of the background as well as the object.
  Wide dynamic range produce images that combining long-exposure signals (normal shutter) with the signals of the high-intensity
  portions obtained with a short exposure (high-speed shutter).
· 3DNR
  3DNR reduces video noises ant low ambient light.
· Slow shutter (Auto/Manual)
  When set to "Auto", activates slow shutter when luminance of image is too dark.
· Flickerless
 This function used only for specific country to remove light flickering when light appears to flutter.
■White Balance
  White Balance has the following modes, all of which can be set using VISCA Commands and OSD Menu.
· Auto White Balance
  Color temperature is automatically adjusted to 3,000˚K ~ 8,000˚K.
  This mode is the default setting.
· Indoor
· Outdoor
· One Push WB

Dimensions

170° 170°

86.0
4- M3 TAP
1/4-20 UNC
50.7
55.0
138.0

240°

131.5
171.5
51.5
155.5

90.0
4-∅5.0
18.4
46.0
71.4

70.0
153.9
*110.0
20.0
*60.0
100.0
146.2
∅50.0
*4-∅5.0
16.2

226.2
146.2
153.9

Color temperature is manually adjustable to adjusting value. One Push WB mode is a fixed white balance mode that may be automatically readjusted only at One Push Trigger, while the camera is directed at a piece of white paper to obtain the optimum state under current illumination. One Push WB data is lost when the power is turned off. If the power is turned off, reset One Push WB.

· ATW

Color temperature is automatically adjusted to 1,900˚K ~ 11,000˚K.

· Manual WB

Color temperature is manually adjustable to adjusting value. Manual control of R and B gain, 256 steps each.

■Auto ICR Mode

Auto ICR Mode automatically switches the settings needed for attaching or removing the IR Cut Filter. With a set level of darkness, the IR Cut Filter is automatically disabled (ICR On), and the infrared sensitivity is increased. With a set level of brightness, the IR Cut Filter is automatically enabled (ICR Off). Also, on systems equipped with an IR light, the internal data of the camera is used to make the proper decisions to avoid malfunctions.

■ICR (IR Cut-Removable) Mode

An infrared (IR) Cut-Filter can be disengaged from the image path for increased sensitivity in low light environments. The ICR will automatically engage depending on the ambient light, allowing the camera to be effective in day/night environments. When the auto ICR mode is set to ON, the image becomes black and white.

■Custom Color Gain

You can configure the color gain. Use this setting when bright color is particularly important.   The initial setting 100% (4h) can be set to range from approx. 60%(0h) to 200%(Eh) with 15 stages.

■Custom Color Phase

You can configure the color phase. The initial setting 0 degrees (7h) is adjustable between approx. -14 degrees (0h) to +14 degrees (Eh), in 15 increments.

■Picture Effect

It consists of the following functions.

•Neg. Art : Negative/Positive Reversal

•Black & White : Monochrome Image

■Position Preset

Using the position preset function, 128 sets of camera conditions can be stored and recalled.

Mode/Position	Initial settings	Position Preset 1 to 128
Pan/Tilt Position	Home Position	O
Zoom Position	Wide end	O
D-Zoom On/Off	On	O
Focus Position	-	O
Focus Auto/Manual	Auto	O
Near Limit Setting	C000h	O
AF Mode	Normal(Only)	O
WB Mode	Auto	O
WB Data (Rgain, Bgain)	-	O
AE Mode	Full Auto	O
WD On/Off	Off	O
Slow Shutter Mode	Manual	O
Shutter Position	--	O
Iris Position	-	O
Gain Position	-	O
Bright Position	-	O
Exposure Compensation On/Off	Off	O
Exposure Compensation Amount	±0	O
BackLight On/Off	Off	O
Aperture Level	08h	O
Picture Effect	Off	O
ICR On/Off	Off	O
Auto ICR On/Off	Off	O
Auto ICR Threshold Level	0Ah	O
NR Level	1	O
AE Gain Limit	-	O
Chroma Suppress	2	O
Color Hue	7h	O
Color Gain	07h	O
IR_Receive On/Off	On	O
IR_ReceiveReturn On/Off	Off	O

A circle "O" in this column signifies that the data is preserved.

Before bringing in your camera for service,check the following as a guide to troubleshooting the problem. If the problem cannot b
corrected, consult with your Manufacturer.

Symptom	Cause	Remedy
The power of the camera is not turned on	The AC power adaptor is not connected to the DC IN 12V jack firmly	Insert the power cord firmly as far as it will go
	The AC power cord is not inserted firmly into the AC power adaptor or the AC outlet.	Insert the power cord firmly as far as it will go.
The picture is not displayed on the video monitor connected to the camera.	The video cable is not connected properly.	Check the connection between the camera and video monitor.
	The exposure is not set correctly on the camera .	Set the exposure correctly on the EXPOSURE menu.
	The SYSTEM SELECT switch on the rear of the camera is not set correctly.	Check the selected output signal format of the camera and the input signal format of the connected monitor.
Pan,tilt,or zoom cannot be operated .	A menu is displayed on the monitor screen.	Press the DATA SCREEN button on the supplied Commander to remove the menu from the monitor screen.
	The panning or tilting range is limited.	Change the PAN/TILT LIMIT setting on the PAN TILT ZOOM MENU
The Remote Commander does not work.	The CAMERA SELECT button you pressed on the Remote. Commander does not match the number set with IR SELECT switch on camera .	Press the CAMERA SELECT button corresponding to the IR SELECT switch setting on the camera
The VISCA control is not available with a computer connected to the camera .	The computer is not correctly connected to the camera .	Make sure the connection between the computer and camera is made correctly.
		Check that the baud rate setting(9600bpsor38,400bps) is properly made with the switch on the bottom of the camera
The camera cannot be operated at all.		Pull out the plug of the power cord form the AC outlet ,then reinsert it into the AC outlet after waiting a while.