

(Tentative)

# PHD-02XP Series

## Specification

Rev. 05

Approved	Examined	Issued

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## Revision History

Rev.	Date	Description
01	2012/04/19	Issued
02	2012/05/07	Modified a model name
03	2012/5/28	Revised Max/Manual Gain
04	2012/6/21	Revised Model name
05	2012/8/20	Mentioned “rhe description of VBS output

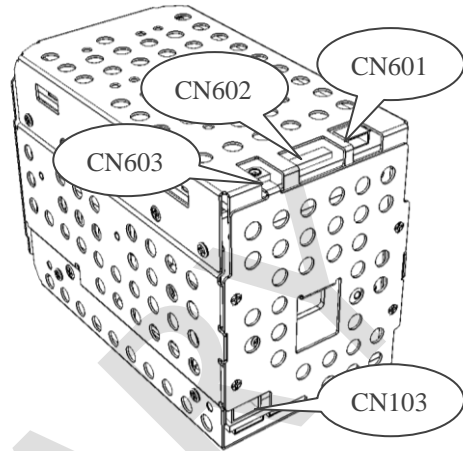
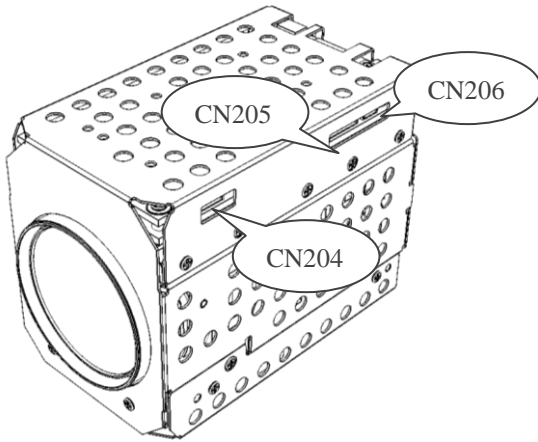
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PRELIMINARY

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# 1. Connector Arrangement



CN103 (S2B-PH-SM4 / JST)

NO.	POWER
1	DC +6.5V~+13.5V
2	GND

CN204 (SM06B-PH-SM4 / JST)

For maintenance.

CN205 (SM10B-SRSS / JST)

NO.	OSD KEY
1	KEY 0
2	KEY 1
3	KEY 2
4	KEY 3
5	KEY 4
6	KEY 5
7	KEY 6
8	KEY 7
9	GND
10	GND

CN102 (SM05B-SRSS / JST)

NO.	ALARM OUT PUT
1	GND
2	FLIP (Flip reverse a image when it will be connected GND)
3	ALARM (Alarm Output)
4	LED (LED blinks and camera status display it's status, in case that you arrange VCC between LED and the pin)
5	VCC (3.3V Out)

CN206 (SM03B-SRSS / JST)

NO.	RS232C
1	TX
2	RX
3	GND

CN601 (BM04B-SRSS / JST)

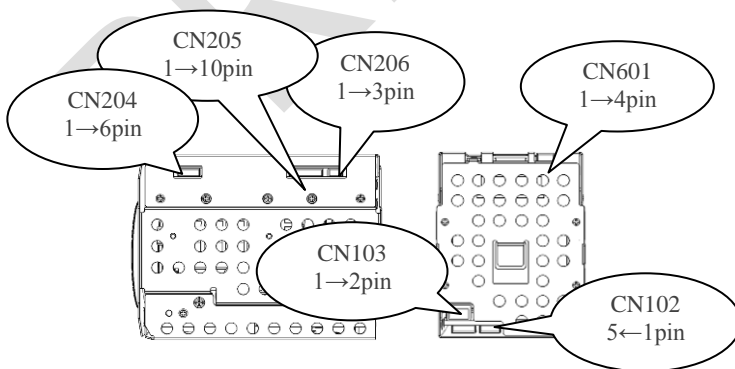
NO.	VEDEO IN/OUT
1	VIDEO IN
2	VIDEO IN GND
3	VIDEO OUT
4	VIDEO OUT GND

CN602 (SSL01-10L3 / KEL) < LVDS type only >

NO.	LVDS
1	TXOUT 0-
2	TXOUT 0+
3	TXOUT 1-
4	TXOUT 1+
5	TXOUT 2-
6	TXOUT 2+
7	TXCLK 0-
8	TXCLK 0+
9	TXOUT 3-
10	TXOUT 3+

CN603 (H.FL-R-SMT / HIROSE) <SDI type only >

NO.	SDI
1	SDI OUT
2	GND



Connector Pins Arrangement

## 2. Basic Specifications

### 2.1 Specifications

PHD-02XP-xxxx		
1	Model	PHD-02XP-xxxx
2	Image sensor	1/3"RGB bayer NMOS (Panasonic)
3	Effective pixels	2.1M pixels
4	Lens	Optical 20x AF lens f=4.7 to 94mm F1.6 (W) to F3.5 (T)
5	Horizontal resolution	Approx 750TVL (at 1080i60 format)
6	Digital zoom ratio	12x (240x. with Optical zoom)
7	Horizontal Angle of view	59.4° (Wide) to 3.0° (Tele)
8	Aspect ratio	[HD] 16:9 [SD] 4:3
9	Image format	[LVDS]: 1080p30 / 1080p25 / 1080p24 / 1080i60 / 1080i50 / 1080i30 / 1080i25 (59.94 / 29.97 / 23.97p available) 720p60 / 720p50 / 720p30 / 720p25 (59.94 / 29.97 / 23.97p available)  [SDI] Progressive : 1080p60, 1080p59.94, 1080p50,1080p 30, 1080p29.97. 1080p25, 1080p24, 720p  Interlaced: 1080i60, 1080i59.94, 1080i50
10	Synchronization	Internal External (CSYNC, HDTV-SYNC) <Option>
11	Min. Illumination	B&W: 0.01lx (1/2sec, Gain + 32dB) Color: 0.2lx (1/30 sec, Gain + 32dB) <1080p30, be measured at F1.6 (Wide end)>
12	Wide dynamic range	80dB (at WDR ON)
13	Max. Gain	+30dB
14	Gamma correction	0.3 / 0.45 / 0.6 / 0.8 / 1.0
15	White balance	Auto / ATW / Indoor / Outdoor / One push / Manual)
16	Exposure control	Auto / Manual / Shut-Priority / Iris-Priority
17	Day & Night	OFF / Pre-OFF / Pre-ON
18	Shutter	2sec to 1/10,000sec
19	Edge enhancer	16 steps
20	Operation temperature	0 to 60°C
21	Privacy masking	8 points
22	Effective image	Neg./Pos. , B/W
23	Communication protocol	VISCA / PELCO-D (setting by OSD)
24	Image out put	[HD] LVDS (YC20bit) <Option> [HD] HD-SDI/3G-SDI [SD] VBS (75ohm 1Vp-p)
25	Power requirement	DC +6.5V to +13.5V
26	Current consumption	Max 650mA (at DC+12V)
27	Dimention	50x65x88mm (WxHxD)
28	Weight	Approx. 290g

## 2.2 PHD-02XP Series type list

- PHD-02XP-GVFI CCTV standard type Video Surveillance applications.

1. Output	PHD-02XP-	GV	x	x	1.5G/3G Serial (Nearly Equal to HD-SDI/3G-SDI)
	PHD-02XP-	NL	x	x	LVDS
	PHD-02XP-	VL	x	x	1.5G/3G Serial +LVDS
	PHD-02XP-	NN	x	x	Without output board. (Only digital output, No mount frame.)
2. Camera flame	PHD-02XP-	x	F	x	Framed
	PHD-02XP-	x	N	x	Non-Framed
3. Synchronization	PHD-02XP-	x	x	G	External Sync( Gen-Lock) + CVBS
	PHD-02XP-	x	x	I	Internal sync +VBS
	PHD-02XP-	x	x	N	No VBS, Non External sync

## 2.3 Lens specification

### 2.2.1 Performance

#### Zooming speed

- OSD key: Wide end ↔ Tele end Approx 4 sec
- Command(Max): Wide end ↔ Tele end Approx 3 sec

#### Focusing speed

- Tele side: MOD ↔ ∞ Approx 10 sec or less
- Wide side: MOD ↔ ∞ Approx 10 sec or less

### 2.2.2 Internal dust or dirt standard

No dust or dirt stuck on the lens under all-white lighting with the setting  $f=4.7$ ,  $F8.0$  and gain 10dB.

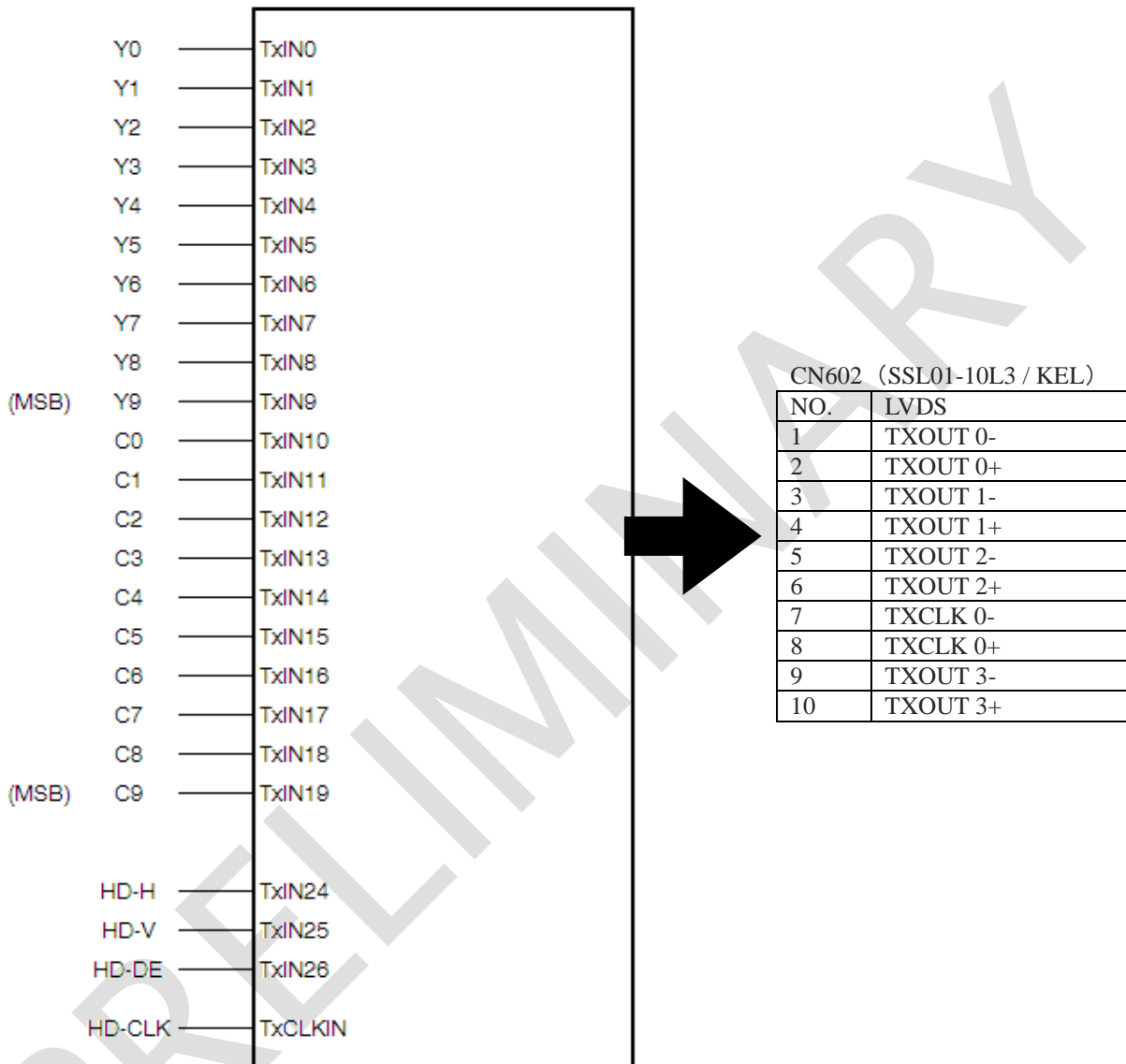
## 2.4 Sensor Specification (Dead pixel standard)

No linked pixels under all-white, all-black lighting condition with the setting gain 0dB

No dead pixels with luminance difference of 20% or more on the center-based 2/3 area out of the total screen

### 3. LVDS Signal

<Option: LVDS output type only>



DS90CR987MTD (National Semiconductor)

# 4. Ext. Sync Specification

<Option; Ext sync type only>

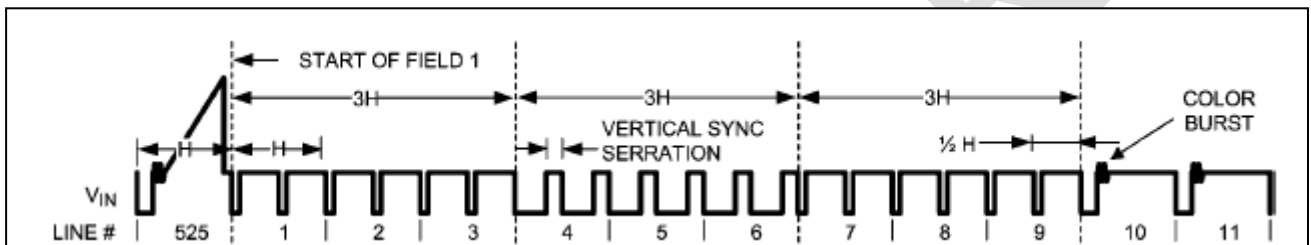
When using external sync mode, connect the external sync signal from the other camera into the specific signal connector. For settings, use OSD or Select "Sync Mode ON" by VISCA™

Connector for VBS Sync input: CN601-1 (GND=2)

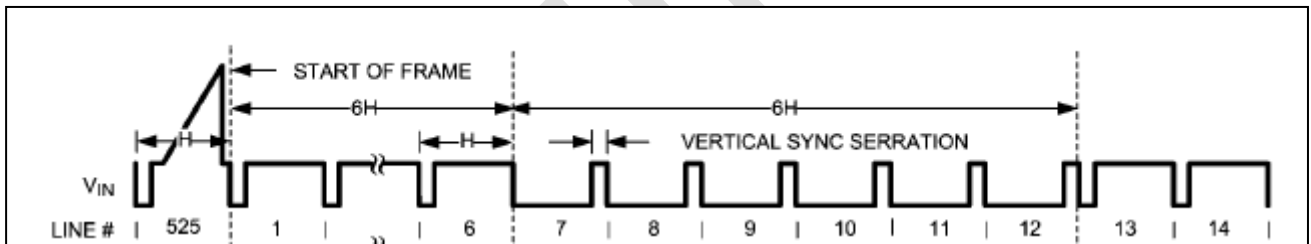
Signal format: TV composite signal (No Image signal)  
HDTV-Sync

## SDTV Vertical sync signal (NTSC/PAL/480i/576i)

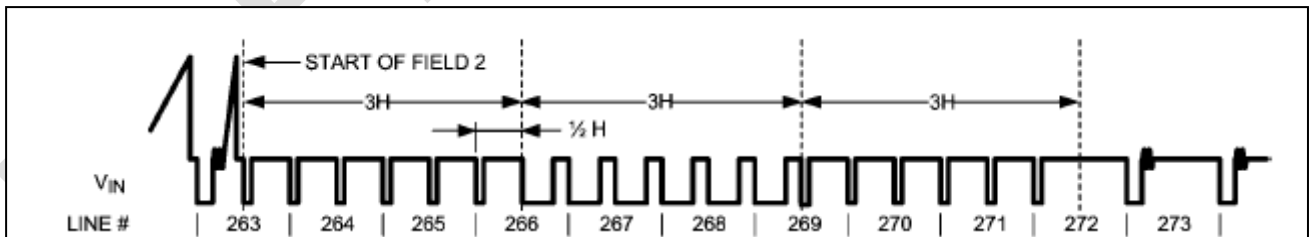
Odd field



Even field

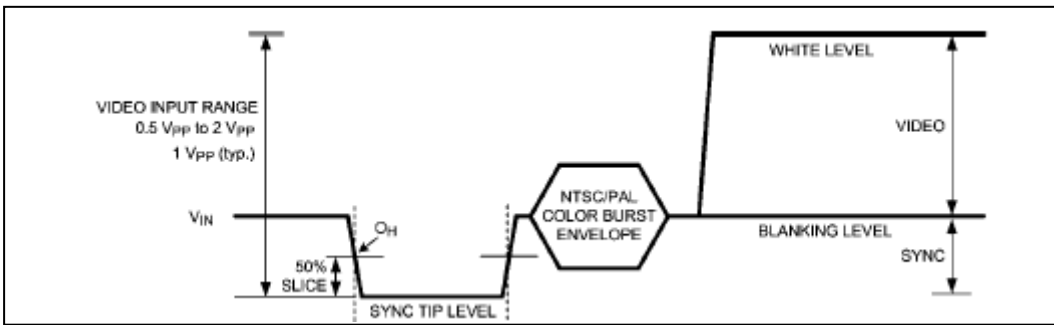


## EDTV Vertical sync signal (480p/576p)

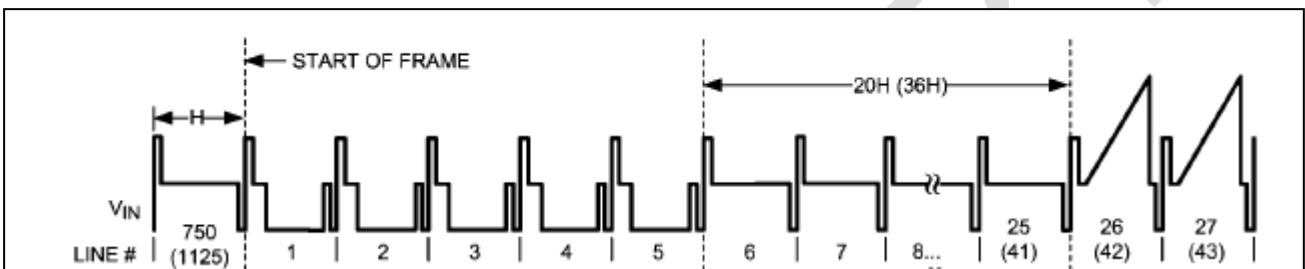




**SD/EDTV Horizontal sync signal**

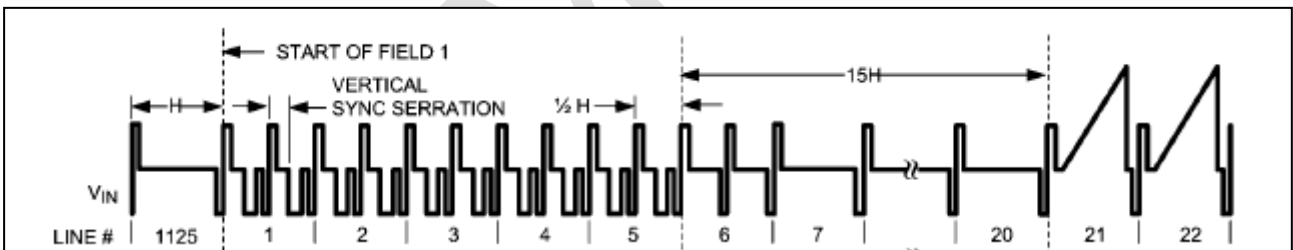


**HDTV Vertical sync signal (720p/1080p)**

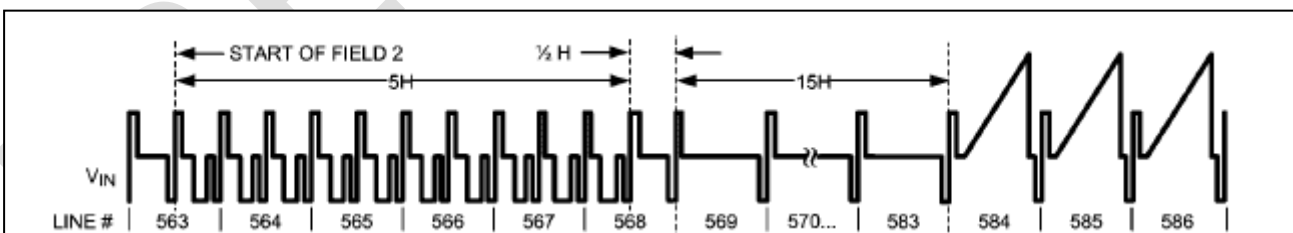


**HDTV Vertical sync signal (1080i)**

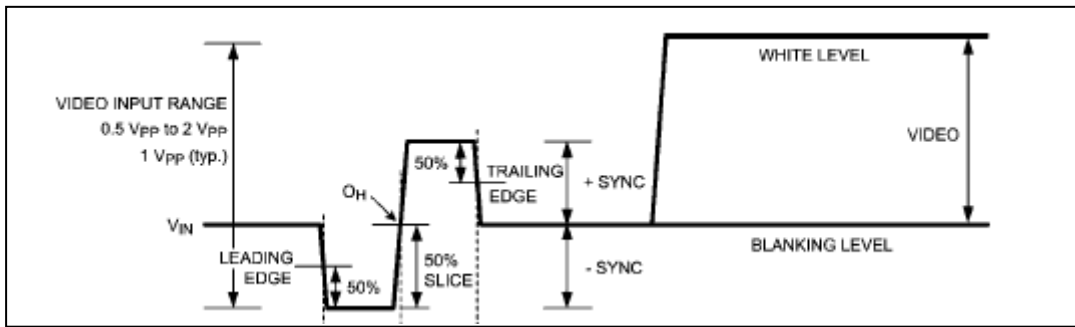
1080i Field1



1080i Field2



**HDTV Horizontal sync signal**



PRELIMINARY

## 5. OSD Menu & Key function

### 5.1 Key Pad Operation

#### 5.1.1 Key Pad/SW Allocation

Key pad matrix:

CN205	Key3	Key2	Key1	Key0
Key4	Reset		Lum. UP	Menu
Key5	IR Filter ON/OFF	Zoom DOWN	Enter	Zoom UP
Key6			Lum. DOWN	
Key7	Manual Focus Far	Manual Focus Near		One Push AF

#### 5.1.2 RESET key

Press and hold approx 2 sec to return to the default setting (Refer to[ 5.4: Default Setting])  
Initialize for Focus and Zoom motor

#### 5.1.3 UP and DOWN key

- At OSD Menu display: Parameter selection
- Others: Luminance level UP/DOWN

#### 5.1.4 RIGHT and LEFT key

- At OSD Menu display: Parameter selection
- Others: Zoom ratio UP/DOWN

Move to Digital zoom automatically after optical when [DZ ENABLE] and [DZ COMBINE] are ON on OSD.

#### 5.1.5 MENU Key

- At OSD Menu display: Escape from the Menu(Settings stored in the memory)
- Others: Move to OSD Menu

### **5.1.6 ONE-PUSH AF key**

Focus once. Then, depend on the camera setting, the Focus mode switches to Manual or Auto focus mode.

### **5.1.7 MANUAL FOCUS NEAR key**

Enable to adjust FOCUS manually toward NEAR in case that [MODE] in FOCUS MENU is set to MANUAL.

### **5.1.8 MANUAL FOCUS FAR key**

Enable to adjust FOCUS manually toward FAR in case that [MODE] in FOCUS MENU is set to MANUAL.

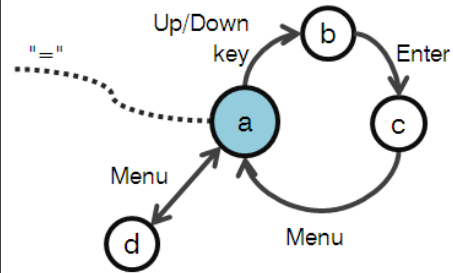
### **5.1.9 IR FILTER ON/OFF key**

Enable to switch ON/OFF of IR cut filter. However, AUTO ICR setting is prioritized when [MODE] in AUTO ICR MENU is ON.

## 5.2 MENU

### 5.2.1 MAIN MENU (Hierarchy 1<sup>st</sup>)

MAIN MENU	
1.	MODE
2.	PICTURE
3.	ALARM
4.	PRIVACY MASK
6.	OTHERS
7.	MEMORY

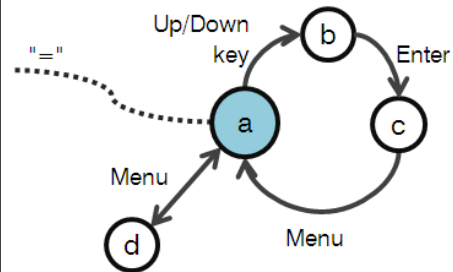


- a. MAIN MENU
- b. Select the item on MAIN MENU screen
- c. Selected menu screen (1 - 7)
- d. Standby (Selected item nothing)

To select an item, press UP/DOWN (▲▼) key to move a cursor on the screen. Press ENTER key on the item to move to the hierarchy 2nd menu.

### 5.2.2 MODE MENU (Hierarchy 2<sup>nd</sup>)

MODE MENU	
1.	ZOOM
2.	FOCUS
3.	COLOR
4.	AUTO EXPOSURE
5.	AUTO ICR
6.	HD FORMAT



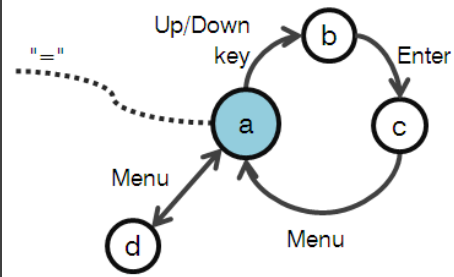
- a. MODE MENU items
- b. Select the item on MODE MENU screen
- c. MENU screen
- d. MAIN MENU (Hierarchy 1<sup>st</sup>)

To select an item, press UP/DOWN (▲▼) key to move a cursor on the screen. Press ENTER key on the item to move to the hierarchy 3rd menu

### 5.2.3 MODE MENU – ZOOM MENU (Hierarchy 3<sup>rd</sup>)

**ZOOM MENU**

1. **DZ ENABLE:** ON/OFF
2. **DZ COMBINE:** ON/OFF
3. **DZ EXPAND:** x1.0 - x12.0



- a. ZOOM MENU
- b. Select the item ZOOM MENU screen
- c. MENU screen
- d. MODE MENU(Hierarchy 2<sup>nd</sup>)

#### 1. DZ ENABLE

- ON: Allow Digital-zoom
- OFF: Prohibit Digital zoom

#### 2. DZ COMBINE

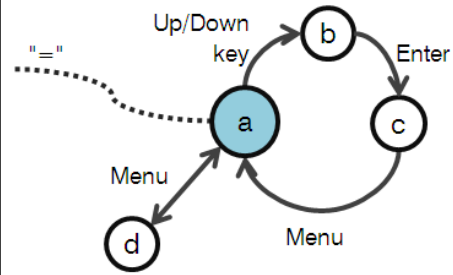
- ON: Digital zoom available after optical zoom
- OFF: Prohibit Digital zoom combined with optical zoom.

#### 3. DZ EXPAND

x1.0 - x12.0: Scaling current digital zoom position (Available when [DZ COMBINE] is OFF)

## 5.2.4 MODE MENU – FOCUS MENU (Hierarchy 3<sup>rd</sup>)

FOCUS MENU	
1.	<b>MODE:</b> AUTO / MANUAL / INF.
2.	<b>AUTO TYPE:</b> NORM / INTV / ZOOM
3.	<b>SENSITIVITY:</b> NORM / LOW
4.	<b>INTV TIME:</b> 5/10/30 sec
5.	<b>MANUAL TYPE:</b> NONE / ZOOM
6.	<b>AF-DET AREA:</b> NARROW / NORM / WIDE / AREA1 - AREA9



- a. FOCUS MENU
- b. Select the item on FOCUS MENU screen
- c. MENU screen
- d. MODE MENU(Hierarchy 2<sup>nd</sup>)

### 1. MODE

**AUTO:** AF is activated in case of luminance change

**MANUAL:** Stop the position of current auto focus. Focus tracking operation by zoom works

**INFINITY:** Set the distance to the targeted object at “Infinity”

### 2. AUTO TYPE

**NORMAL:** Continuous auto focus.

**INTV:** AF is activated after the time set in INTV TIME.

**ZOOM:** AF is activated after zoom operation.

### 3. SENSITIVITY

**NORMAL:** Normal detection sensitivity for AF

**LOW:** Low detection sensitivity for AF

### 4. INTV TIME

5 / 10 / 30sec: Interval time setting when [AUTO TYPE] is INTV.

### 5. MANUAL TYPE (Operation setting at manual operation)

**NONE:** Focus operation isn't activated.

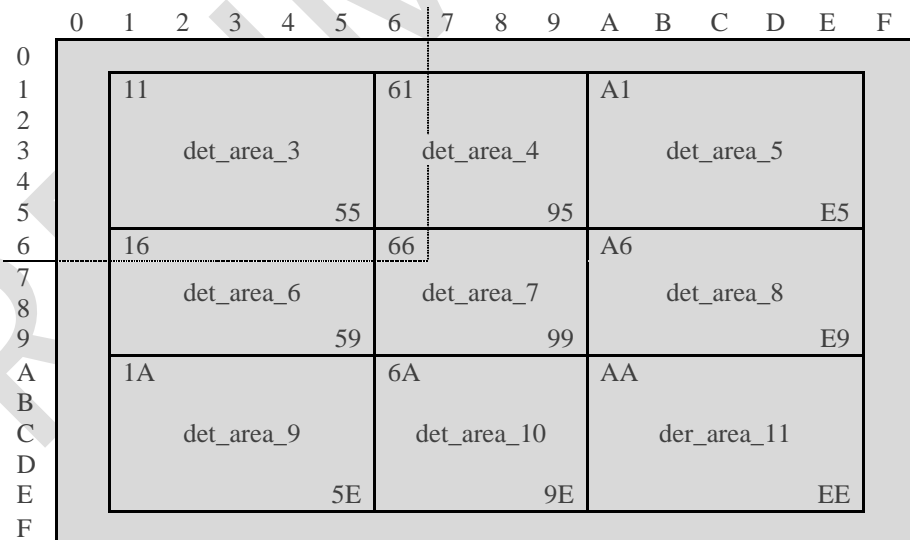
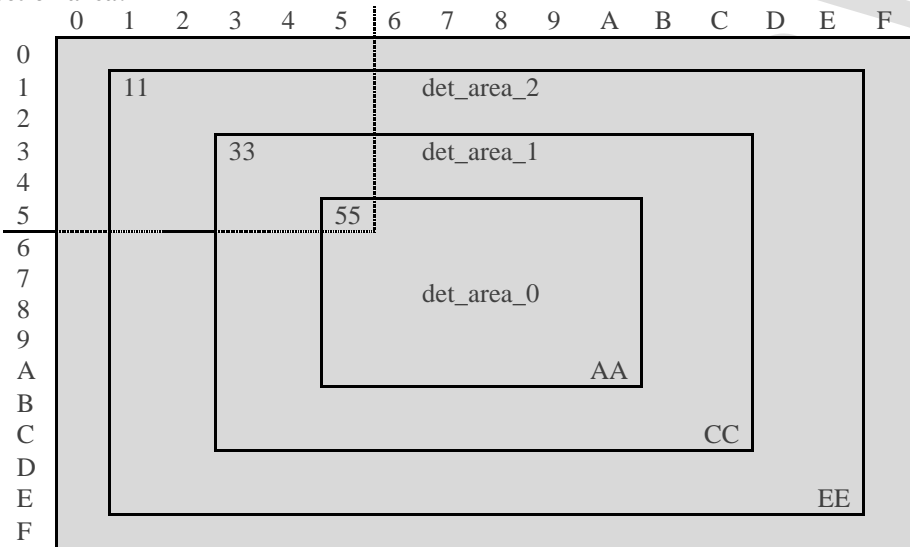
**ZOOM:** AF is activated after zoom operation.

**6. AF-DETECTION AREA:**

AF Detection area setting. Press ENTER at selected position and detection area shows up

Item	Detection area	Item	Detection area
NARROW	det_area_0	AREA4	det_area_6
NORMAL	det_area_1	AREA5	det_area_7
WIDE	det_area_2	AREA6	det_area_8
AREA1	det_area_3	AREA7	det_area_9
AREA2	det_area_4	AREA8	det_area_10
AREA3	det_area_5	AREA9	det_area_11

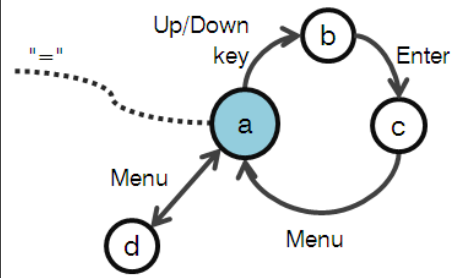
**AF detection area:**





## 5.2.5 MODE MENU – COLOR MENU (Hierarchy 3<sup>rd</sup>)

COLOR MENU	
1.	<b>AWB:</b> AUTO / INDOOR / OUTDOOR / MANUAL / ATW
2.	<b>AWB SHIFT:</b> NORM / R-LO / R-MD / R-HI / B-HI / B-MD / B-LO
3.	<b>MANUAL RG:</b> -10 - 0 - +10
4.	<b>MANUAL BG:</b> -10 - 0 - +10
5.	<b>CR GAIN:</b> -10 - 0 - +10
6.	<b>CB GAIN:</b> -10 - 0 - +10



- a. COLOR MENU
- b. Select the item on COLOR MENU screen
- c. MENU screen
- d. MODE MENU(Hierarchy 2<sup>nd</sup>)

### 1. AWB

AUTO: Automatic (3000K - 5000K)

INDOOR: (Factory setting 3,200K)

OUTDOOR: (Factory setting 5,800K)

MANUAL: AWB is activated after ENTER KEY being pressed for approx 2sec.

Set R/B Gain level. Setting changeable by MANUAL-R/B gain

ATW: Under 2,600K to over 8,000K

### 2. AWB SHIFT

R-LOW / R-MIDDLE / R-HIGH: Shift the color image to RED side

B-LOW / B-MIDDLE / B-HIGH: Shift the color image to BLUE side

NORMAL: Standard AWB

### 3. MANUAL R-GAIN

-10 - +10: Changeable  $\pm 10$  at MANUAL operation

### 4. MANUAL-B-GAIN

-10 - +10: Changeable  $\pm 10$  at MANUAL operation

### 5. CR GAIN

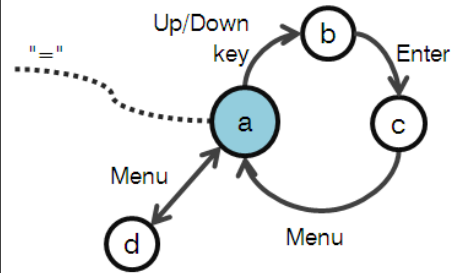
-10 - +10:  $\pm 10$  settings of Chroma Red Gain

### 6. CB GAIN

-10 - +10:  $\pm 10$  settings of Chroma Blue Gain

## 5.2.6 MODE MENU – AE MENU (Hierarchy 3<sup>rd</sup>)

- | AUTO EXPOSURE MENU |   |
|--------------------|---|
| 1.                 | <b>MODE:</b> AUTO / MANUAL / SHT-P / IRIS-P                                   |
| 2.                 | <b>COMPENSATION:</b> -3.5dB - +3.5dB  |
| 3.                 | <b>MAX GAIN:</b> 0 - 30dB   |
| 4.                 | <b>MANUAL GAIN:</b> 0 - 30dB  |
| 5.                 | <b>MANUAL SPEED:</b> 2/1 - 1/10,000   |
| 6.                 | <b>MANUAL IRIS:</b> CLOSE - F1.6  |
| 7.                 | <b>RESPONSE:</b> NORM / SLOW / FAST   |
| 8.                 | <b>AE-DET AREA:</b> NARROW / NORMAL / WIDE / AREA1 - AREA9                    |
| 9.                 | <b>AUTO SLOW:</b> OFF, 1/30(1/25), 1/15(1/12), 1/8(1/6), 1/4(1/3), 1/2(1/1.5) |
| 10.                | <b>PRE GAIN:</b> 0dB / 6dB  |



- a. AUTO EXPOSURE MENU
- b. Select the item on AUTO EXPOSURE MENU screen
- c. MENU screen
- d. MODE MENU(Hierarchy 2<sup>nd</sup>)

### 1. MODE

- AUTO:** Auto exposure.
- MANUAL:** Stop with current AE condition and specify each setting for IRIS / GAIN / SHUTTER.
- SHUTTER-P:** Shutter priority AE. Slower shutter mode becomes OFF
- IRIS-P:** Iris priority AE

### 2. COMPENSATION

- 3.5dB - +3.5dB:** Setting to brightness level at AUTO operation.  
(- side:0.5dB steps / + side: 0.5dB steps)(15 steps)

### 3. MAX GAIN

- 0dB – 30dB:** Max Gain setting at AUTO operation (8 steps)

### 4. MANUAL GAIN

- 0dB - 30dB:** Gain setting at MANUAL operation (31steps)

### 5. MANUAL SPEED

- 2/1 - 1/10000sec:** Electric shutter speed setting at MANUAL operation (23 steps)

### 6. MANUAL IRIS

- CLOSE - F1.6:** Effective at IRIS-P and MANUAL operation (21 steps)

### 7. RESPONSE

- NORMAL/SLOW/FAST:** Response speed for AE (3 steps)

**8. AE-DETECTION AREA**

AE Detection area setting. Press ENTER at selected position and detection area shows up

Item	Detection area	Item	Detection area
NARROW	det_area_0	AREA4	det_area_6
NORMAL	det_area_1	AREA5	det_area_7
WIDE	det_area_2	AREA6	det_area_8
AREA1	det_area_3	AREA7	det_area_9
AREA2	det_area_4	AREA8	det_area_10
AREA3	det_area_5	AREA9	det_area_11

**9. AUTO SLOW**

Auto slow shutter settings. Set to be automatic slow shutter mode after the gain reaches to the MAX GAIN value at AUTO and IRIS-P mode

NTSC	OFF	Not effective
	1/30	Automatically activated up to 1/30sec
	1/15	Automatically activated up to 1/15sec
	1/8	Automatically activated up to 1/8sec
	1/4	Automatically activated up to 1/4sec
	1/2	Automatically activated up to 1/2sec
PAL	OFF	Not effective
	1/25	Automatically activated up to 1/25sec
	1/12	Automatically activated up to 1/12sec
	1/6	Automatically activated up to 1/6sec
	1/3	Automatically activated up to 1/3sec
	1/1.5	Automatically activated up to 1/1.5sec

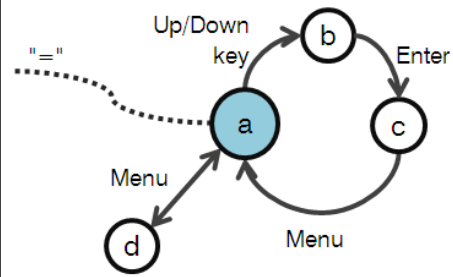
**10. PRE GAIN**

0dB, 6dB: Pre gain setting.

## 5.2.7 MODE MENU - AUTO ICRMENU (Hierarchy 3<sup>rd</sup>)

- AUTO ICR MENU**

  1. **MODE:** OFF/ON
  2. **IR STATUS:** IN/OUT(Display only)
  3. **DELAY:** 0 - 255
  4. **D→N:** 0 - 64
  5. **N→D:** 0 - 64



- a. AUTO ICR MENU
- b. Select the item on AUTO ICR MENU screen
- c. MENU screen
- d. MODE MENU(Hierarchy 2<sup>nd</sup>)

### 1. MODE

OFF: Not activated

ON: IR Cut filter can be removed at the following condition. When the status beyond [D→N] setting value continues over [DELAY] setting value

IR Cut filter can be inserted at the following condition. When the status under [N→D] setting value continues over [DELAY] setting value

### 2. IR STATUS

IN/OUT: Display only

### 3. DELAY

0 – 255: Set the delay time between IR cut filter-IN/OUT at 0.1sec steps.

### 4. D→N

Setting for IR cut filter removal automatically.

### 5. N→D

Setting for IR cut filter inserted automatically.

- **D→N: Setting for IR cult filter-OUT gain**

The gain value is calculated as follows when camera is configured with slow shutter mode. However, if gain was over the result, the camera removes IR cut filter automatically.

Gain generated by Slow Shutter : **SGain**

Sum gain = (gain at 1/30 sec) + 6dB  
 (gain at 1/15sec) + 12dB  
 (gain at 1/8sec) + 18dB  
 (gain at 1/4sec) + 24dB

AE Max gain: **MGain**

Gain setting for IR cut filter OUT = SGain + MGain + intermediate gain (0 to 5)

● **N→D: Setting for IR cut filter IN gain**

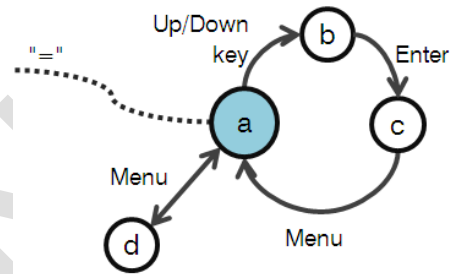
IR cut filter will insert to a camera, in case that the gain becomes lower than the AE max gain

Gain setting for IR cut filter IN = SGain + MGain + intermediate gain(0 ~5)

### 5.2.8 MODE MENU - HD FORMAT MENU (Hierarchy 3<sup>rd</sup>)

HD FORMAT MENU	
1.	<b>FORMAT:</b> 1080p60 - 1080p24
2.	<b>NTSC:</b> ENABLE / DISABLE
3.	<b>GEN LOCK:</b> OFF/ON
4.	<b>OFFSET-X:</b> 0000 - 2639*
5.	<b>OFFSET-Y:</b> 0000 - 0015

\*) OFFSET-X values vary depending on HD format setting.  
 1080i60: 0 - 2199  
 1080i50: 0 - 2639  
 720p60: 0 - 1649  
 720p50: 0 - 1979



a. HD FORMAT MENU  
 b. Select the item on HD FORMAT MENU screen  
 c. MENU screen  
 d. MODE MENU(Hierarchy 2<sup>nd</sup>)

#### 1. FORMAT

1080p60	p60 (NTSC Disable) / p59.94 (NTSC Enable) *p60 isn't activated through LVDS output
1080i60	i60 (NTSC Disable) / i59.94 (NTSC Enable)
1080p30	p30 (NTSC Disable) / p29.97 (NTSC Enable)
1080p50	*p50 isn't activated through LVDS output
1080i50	
1080p25	
720p60	p60 (NTSC Disable) / p59.94 (NTSC Enable)
720p30	p30 (NTSC Disable) / p29.97 (NTSC Enable)
720p50	
720p25	
1080p24	p24 (NTSC Disable) / p23.97 (NTSC Enable)

All modes are 11 modes. In this menu, pressing ENTER Key makes the operation activate. (Even if pressing MENU Key, it is not activated) At 1080p30, p29.97 and p24, VBS output can't be done

#### 2. NTSC

ENABLE (p59.94, i59.94, p29.97, p23.97) / DISABLE (p60, i60, p30, p24)

**3. GENLOCK:** Enable to select Eternal Sync mode

External sync inputs TV Sync signal (VBS) into a camera and has VBS synchronized. There are BBS for NTSC/PAL and three-value level sync signal (in case of HD, the operation mode should be fitted)

OFF: Free-run operation (ignoring external sync signal)

ON: Detected external VBS and synchronized if the signal is effective. It will be free-run operation if the sync signal isn't input

*Note:* A few sec are needed to be synchronized after the camera recognizes "effective"

**4. OFFSET-X:** Setting for horizontal Sync position

0000 - 2639: Set the setting position using RIGHT and LEFT key (Use RIGHT and LEFT key holding ENTER key to set. Setting steps are 20 each). OFFSET-X values vary depending on HD format setting.

**5. OFFSET-Y:** Setting for vertical Sync position

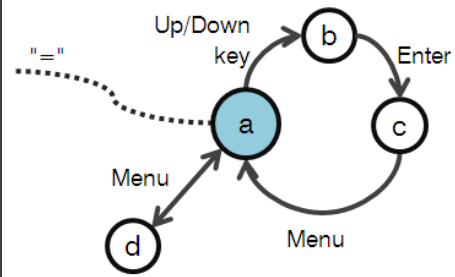
0000-0015: Set the setting position using RIGHT and LEFT key. (Use RIGHT and LEFT key holding ENTER key to set. Setting steps are 10 each)

*\*Note 1:* The image will be black-out once the sync position is changed.

*\*Note 2:* The image will be black-out at Power-On as the reset is done after detection of external Sync

### 5.2.9 PICTURE MENU (Hierarchy 2<sup>nd</sup>)

PICTURE MENU	
1.	<b>ENHANCER:</b> 0 - 15
2.	<b>GAMMA:</b> 0.3/0.45/0.6/0.8/1.0
3.	<b>MIRROR:</b> OFF/ON
4.	<b>UP-DOWN FLIP:</b> OFF/ON
5.	<b>EFFECT:</b> OFF/NEG./B&W



- a. PICTURE MENU
- b. Select the item on PICTURE MENU screen
- c. MENU screen
- d. MAIN MENU(Hierarchy 1<sup>st</sup>)

#### 1. ENHANCER

0 - 15: Edge Enhancement.

#### 2. GAMMA

0.3/0.45/0.6/0.8/1.0: Gamma level setting.

#### 3. MIRROR

OFF/ON: Image right/left mirror

#### 4. UP-DOWN FLIP

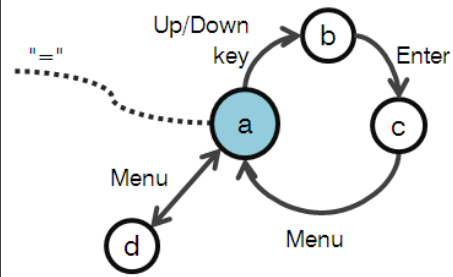
OFF/ON: Image Flip. (\*Flip from external input is prioritized)

#### 5. EFFECT

OFF/NEG/B&W: Selection of image effect. (\*B/W at Auto ICR operation is prioritized)

## 5.2.10 ALARM MENU (Hierarchy 2<sup>nd</sup>)

ALARM MENU	
1. <b>MODE:</b>	AF TYPE1 / AF TYPE2 / AE TYPE1 / AE TYPE2 / AEAF TYPE / DAY NIGHT
2. <b>START:</b>	OFF/ON
3. <b>DAY LEVEL:</b>	0 - 255
4. <b>NIGHT LEVEL:</b>	0 - 255



- a. ALARM MENU
- b. Select the item on ALARM MENU screen
- c. MENU screen
- d. MAIN MENU(Hierarchy 1<sup>st</sup>)

### 1. MODE: Selection of ALARM mode (5 modes)

Mode	Remarks
AF TYPE 1	Detection at Focus movement (Hysteresis is fixed). Detection center is fixed at start
AF TYPE 2	Detection at Focus movement (Hysteresis is fixed). Detection center is changed to be followed by time from the start
AE TYPE 1	Detection at luminance level (Hysteresis is fixed). Detection center is fixed at start.
AE TYPE 2	Detection at luminance level (Hysteresis is fixed). Detection center is changed to be followed by time from the start.
AEAF TYPE	Combination of Mode 0 & Mode 2
DAY NIGHT	Detection at luminance level (Day-Night Mode). Alarm when exceeding the level of DAY-NIGHT

### 2. START

OFF/ON: Selection of ALARM start

### 3. DAY LEVEL

0 – 255 Selection of DAY level alarm. \*Pixel level (represented at 8 bits)

### 4. NIGHT LEVEL

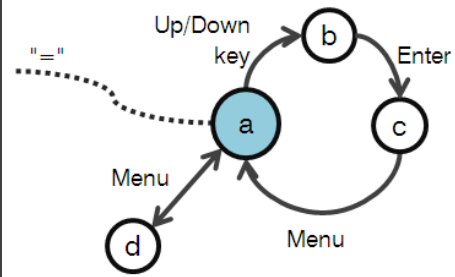
0 - 255 Selection of NIGHT level alarm. \*Pixel level (represented at 8 bits)



### 5.2.11 PRIVACY MASK MENU (Hierarchy 2<sup>nd</sup>)

**PRIVACY MASK**

1. **MASK SELECT: MASK A - MASK H**
2. **MASK ONOFF: OFF/ON**



- a. PRIVACY MENU
- b. Select the item on PRIVACY MENU screen
- c. MENU screen
- d. MAIN MENU(Hierarchy 1<sup>st</sup>)

#### 1. MASK SELECT

Select the Mask No through Cursor key and press ENTER to edit the mask location and size

- 1) Potion movement using UP and DOWN and RIGHT and LEFT key
- 2) ENTER Key
- 3) Size setting using at UP and DOWN and RIGHT and LEFT key
- 4) ENTER Key
- 5) Return to PRIVACY MASK menu after the completion

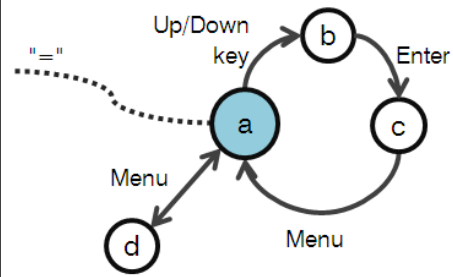
#### 2. MASK ONOFF

ON/OFF setting of the Mask No selected in [MASK SELECT]

*\*Note: The location and size is memorized even if the power turns off.*

## 5.2.12 OTHERS MENU (Hierarchy 2<sup>nd</sup>)

OTHERS MENU	
1.	<b>WDR MODE:</b> OFF/ON
2.	<b>COLOR BAR:</b> OFF/ON
3.	<b>COMM. MENU:</b> OFF/ON
4.	<b>FIRM VERSION:</b> Ver. 2xxxx
5.	<b>DATA VERSION:</b> 000x
6.	<b>TV SETUP:</b> OFF/ON



- a. OTHER MENU
- b. Select the item on OTHER MENU screen
- c. MENU screen
- d. MAIN MENU(Hierarchy 1<sup>st</sup>)

### 1. **WDR MODE:** Selection of Wide Dynamic Range function

OFF: WDR function OFF

ON: WDR function ON

### 2. **COLOR BAR:** Display the color bar (for test)

OFF: Display-OFF

ON: Display-ON

### 3. **COMM. MENU:** Setting for command communication

Select ON and ENTER for communication menu

### 4. **FIRM VERSION**

Firmware version for micro-computer

### 5. **DATA VERSION**

Version for DEFAULT setting

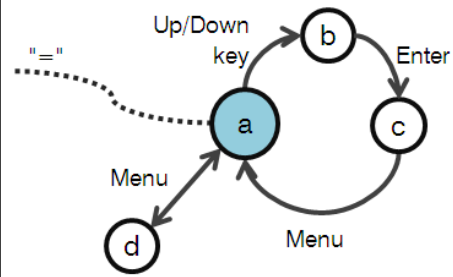
### 6. **TV SETUP:** Setup of TV output

OFF: No SETUP

ON: SETUP

### 5.2.13 OTHERS MENU – COMM MENU (Hierarchy 3<sup>rd</sup>)

COMM MENU	
1.	<b>COMM. SPEED:</b> 9600/19200/ 38400
2.	<b>CMD TYPE:</b> NONE/VISCA/PELCO-D



- a. ZOOM MENU
- b. Select the item on ZOOM MENU screen
- c. MENU screen
- d. OTHERS MENU(Hierarchy 2<sup>nd</sup>)

**1. COMM. SPEED:** Communication Speed Setting  
9600/19200/38400 bps

**2. CMD TYPE:** Communication command type setting

NONE: No command

VISCA: VISCA communication (\* Parameters are original)

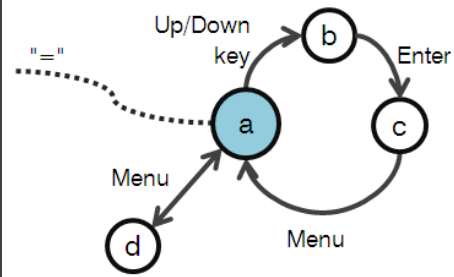
PELCO-D: PELCO-D communication (\* Parameters are original)

PRELIMINARY

### 5.2.14 MEMORY MENU (Hierarchy 2<sup>nd</sup>)

**MEMORY MENU**

1. **SELECT:** NONE / MEM 1 / MEM 2 / MEM 3 / MEM4
3. **ACTION:** RECALL / SAVE



- a. MEMORY MENU
- b. Select the item on MEMORY MENU screen
- c. MENU screen
- d. MAIN MENU(Hierarchy 1<sup>st</sup>)

**1. SELECT**

Store the current setting status in user memory

*\*Note: RECALL/SAVE is not activated in case that [SELECT] is set to NONE*

**2. ACTION**

RECALL (readout) or SAVE (Store) for user memory is activated

*\*Note: In case of executing RECALL or SAVE operation, the selected memory is stored as current memory number. At power-restart, it will be readout as current memory*

**\*Caution**

**At operational condition of the selected and readout memory setting, the current condition is changed based on Menu setting in case of changing operation setting by Menu. In case of not storing the selected memory by this Menu, the content in the memory isn't changed. However, the memory number is kept. In this case, the current kept memory and selected memory contents are not correlated as follows**

**Contents of current status memory :**

When changing the setting using Menu, store the current status in the memory. At power ON, camera starts working based on the setting stored in the memory

**Store the setting in user setting memory :**

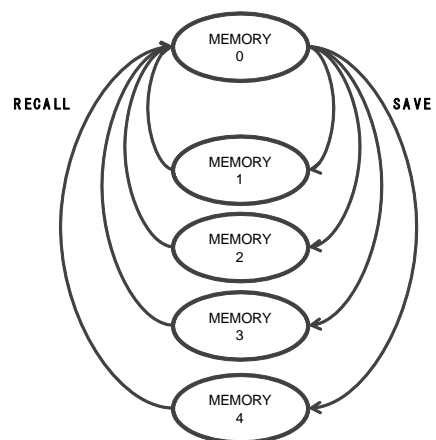
Store the contents of the current status memory

**Readout from user setting memory :**

Readout the setting in user memory to the current status memory

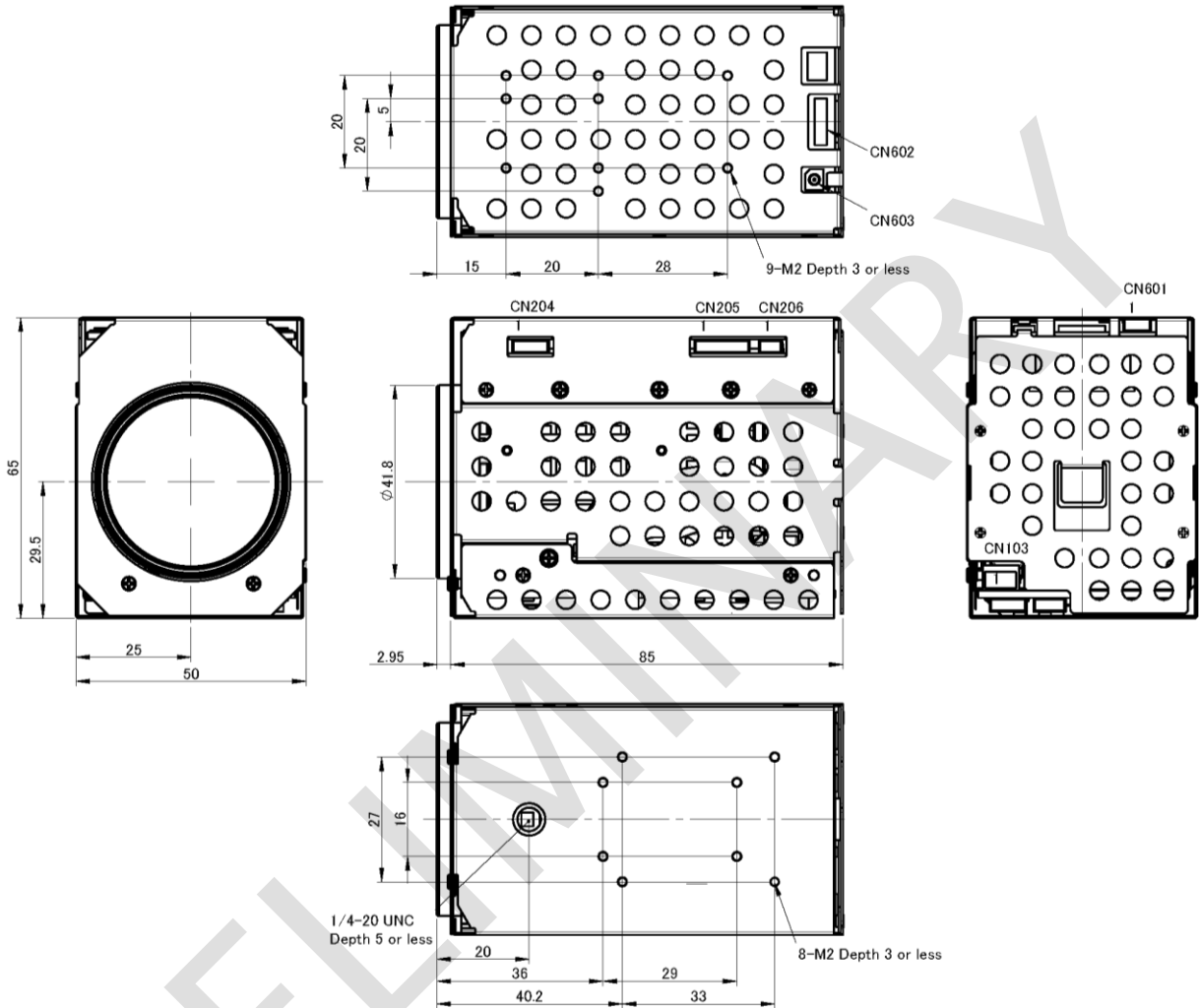
**Reset operation :**

Reset the current status memory. The setting in user setting memory is not reset. However, the status of user memory selection is changed to NONE

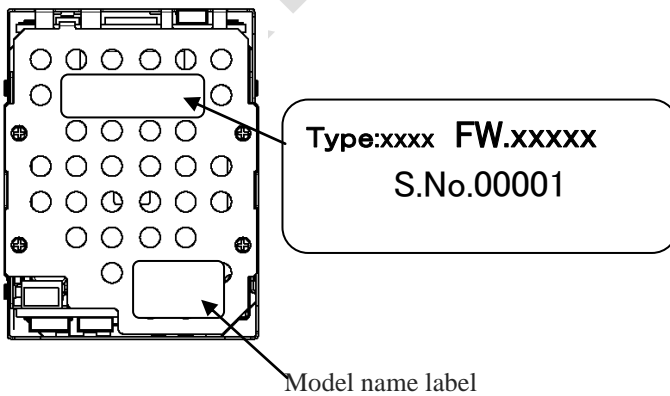


## 6. Other

### 6.1 Dimension



### 6.2 Serial Label



The serial labels shown on left are labeled on PHD-02XP

Description of serial labels

TYPE: Camera specification

FW.xxxxxx: Firmware version

S. No. xxxxx: Serial No.(5 digits)

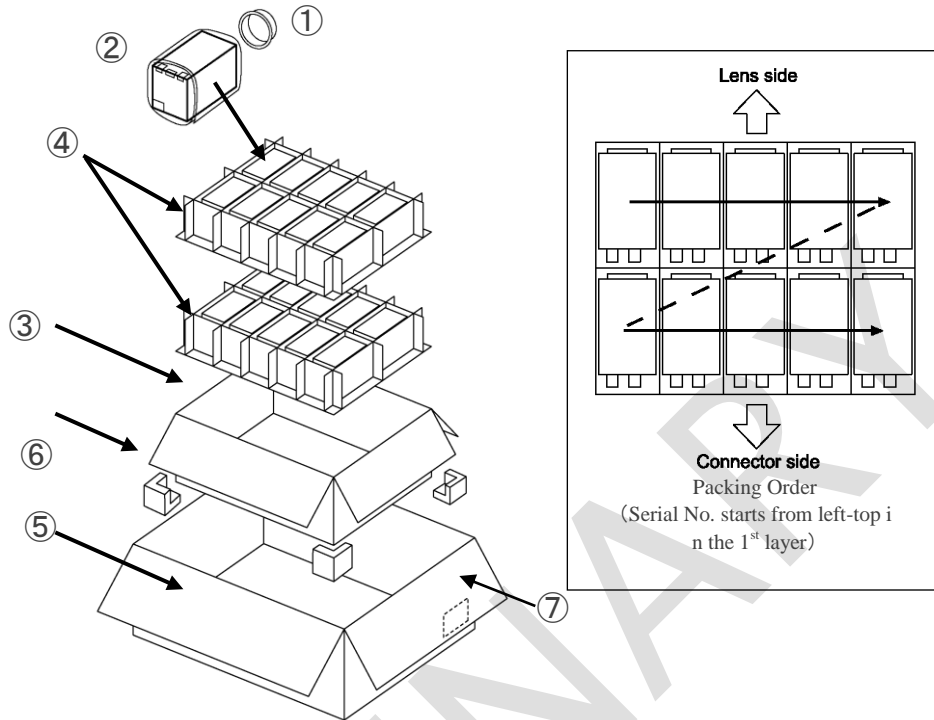
Description of model name label

Model name : PHD-02XP

CE mark (Class A)

Made in Japan

### 6.3 Packing Specification



PHD-02X Packing 20pcs

No	Parts	Name	Parts codes	Qty	Remarks
①	Lens cap	Lens cap		1	Attached to lens unit
②	Air cap	Air cap 450x130	960-040-00	1	
③	A set of inner packaging	PHD-01X 20pcs set (Upper, middle and bottom)	900-119-00	1/20	Size: W380xD320xH195
④		PHD-01X 20pcs set (Divider)	(900-119-00)	2/20	
⑤	A set of outer packaging	PHD-01X box set for carrying (Upper, middle and bottom)	900-118-00	1/20	Size: W440xD370xH250
⑥		PHD-01X box set for carrying (Cushioning)	(900-118-00)	4/20	Each corners
⑦	Product label for mass packaging	Model label	990-029-00	2/20	Lower right of both ends.

*\*The specifications are subject to change without notice*

## 6.4 Default Setting Value (Factory Setting)

Current settings are initialized to “Default setting when pressing and holding RESET button for approx 2 seconds. Stored user settings memory (MEM1 to 4) are not initialized as well as the items shown as \* below.

MODE	ZOOM	DZ ENABLE	ON	
		DZ COMBINE	ON	
		DZ EXPAND	x1.0	
	FOCUS	MODE	AUTO	
		AUTO TYPE	NORM	
		SENSITIVITY	NORM	
		INTV TIME	30sec	
		MANUAL TYPE	NONE	
		AF-DET AREA	NORM	
	COLOR	AWB	AUTO	
		AWB SHIFT	NORM	
		MANUAL-RG	0	
		MANUAL-BG	0	
		CR GAIN	0	
		CB GAIN	0	
	AUTO EXPOSURE	MODE	AUTO	
		COMPENSATION	0dB	
		MAX GAIN	21dB	
		MANUAL GAIN	Variable on AUTO operation	
		MANUAL SPEED	Variable on AUTO operation	
		MANUAL IRIS	Variable on AUTO operation	
		RESPONSE	NORM	
		AE-DET AREA	NORM	
		AUTO SLOW	OFF	
		PRE GAIN	0dB	
	AUTO ICR	MODE	OFF	
		DELAY	50	
		D→N	32	
		N→D	21	
	HD FORMAT	FORMAT	1080i60	
		NTSC	ENABLE	
		GEN LOCK	OFF	
		OFFSET-X	0000 *	
		OFFSET-Y	0007 *	
	PICTURE	ENHANCER	→	7
		GAMMA	→	0.6
		MIRROR	→	OFF
		UP-DOWN FRIP	→	OFF
		EFFECT	→	OFF
	ALARM	MODE	→	AF-TYPE1
START		→	OFF	
DAY LEVEL		→	180	
NIGHT LEVEL		→	80	
PRIVACY MASK	MASK ON/OFF	MASK-A	OFF	
		MASK-B	OFF	
		MASK-C	OFF	
		MASK-D	OFF	
		MASK-E	OFF	

		MASK-F	OFF
		MASK-G	OFF
		MASK-H	OFF
OTHERS	WDR MODE	→	OFF
	COLOR BAR	→	OFF *
	COMM MENU	→	VISCA 38400 *
	TV SETUP	→	OFF
MEMORY	SELECT	→	NONE
	ACTION	→	RECALL

\*) Factory setting. Keeps this value irrespective of reset operation.

PRELIMINARY