

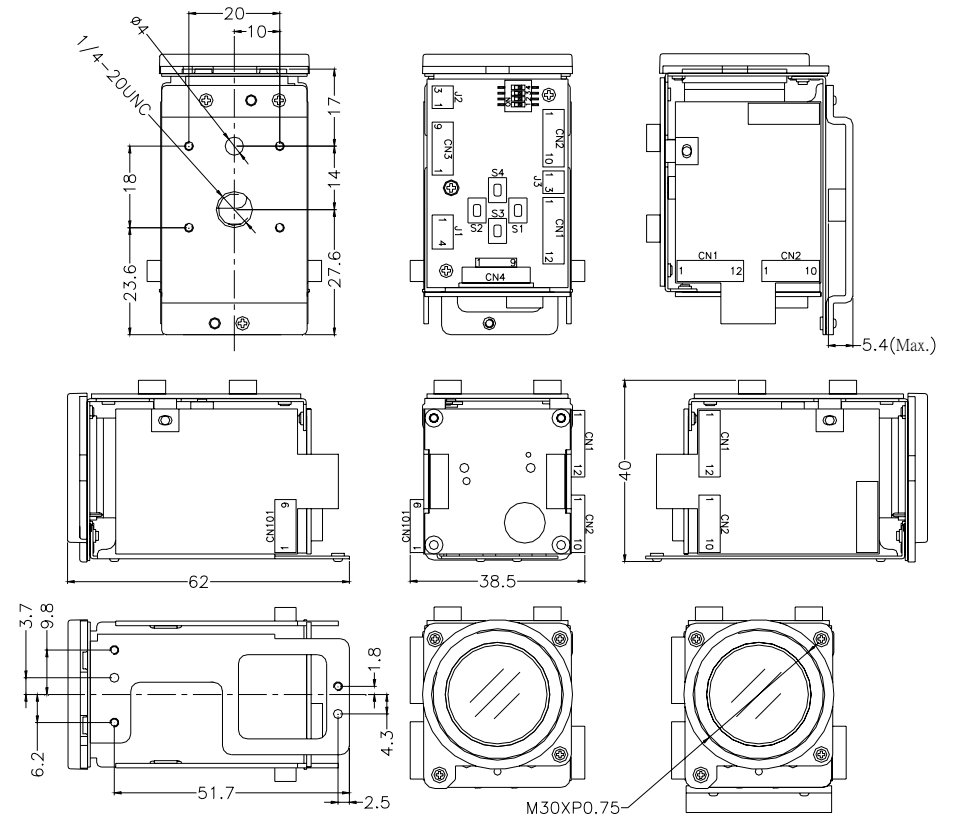
# MTV-54G10H POWER ZOOM CAMERA INSTRUCTION

## SPECIFICATION

MODE NO.		MTV-54G10HN	MTV-54G10HP
TV SYSTEM		NTSC	PAL
IMAGE SENSOR		1/4-inch CCD Image Sensor	
CCD TOTAL PIXELS		811(H) X 508(V)	795(H) X 596(V)
SCANNING SYSTEM		525 lines, 60 fields/sec	625 lines, 50 fields/sec
SYNC SYSTEM		Internal / VD-Lock	
MINIMUM ILLUMINATION	Typical	2.5 Lux (F1.8, 5600°K) 50IRE	
	Star light Mode	0.07 Lux (F1.8, 5600°K) 50IRE	
RESOLUTION		480 TVL	
S / N RATIO		48dB ( MIN ) / 52dB ( TYP ) (AGC OFF , r=1 , APC OFF , Y-OUT)	
WHITE BALANCE		ATW / AWB / FIX ( Zero color rolling)	
WHITE BALANCE RANGE		3200 ~ 9600 °K	
B.L.C. FUNCTION		Super BLC, 48 zone BLC	
GAMMA CORRECTION		0.45 / 1	
AGC		AUTO (18dB max)	
ALC		AUTO / FIX	
IMAGE NEGATIVE		Select by OSD menu	
MONTION DETECT		48 zone (select by OSD)	
CROSS LINE		ON/OFF Select by OSD menu (position adj. by software)	
FREEZE FUNCTION		Alarm in trigger or Select by OSD	
ELECTRONIC SHUTTER		AES : 1/60(1/50) ~ 1/120,000 sec. / MANUAL : 8 step	
LENS	10X Optical ZOOM LENS , F1.8(W)~2.9(T), f=4.2mm(W)~42mm(T)		
	Diagonal	W( 56.4° ) / T( 6.1° )	
	Hor.	W( 46.4° ) / T( 4.9° )	
	Ver.	W( 35.6° ) / T( 3.7° )	
ZOOM		100X (10X Optical 10X Digital)	
FOCUS		Auto / Manual	
POSITION		64 Position (Zoom , Focus)	
VIDEO OUTPUT		Composite & Y/C output 1.0Vp-p at 75 ohm	
CONTROL FUNCTION		RS-232C / RS-485(Drive option) , OSD control	
OSD LANGUAGE SELECT		ENGLISH / CHINESE_Simp / JAPANESE	
COMMUNICATION BAUD RATE		9600 BPS	
OPERATION TEMPERATURE		-10°C TO 50°C	
OPERATIONAL HUMIDITY		within 85% RH	
POWER SUPPLY		DC12V±1V / 3.6W(Max)	
DIMENSIONS		62 mm (L) X 38.5 mm (W) X 40 mm (H)	

\*The specifications and appearance of the product may changed without notice.

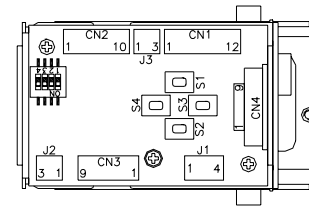
## Dimension (Unit : mm)



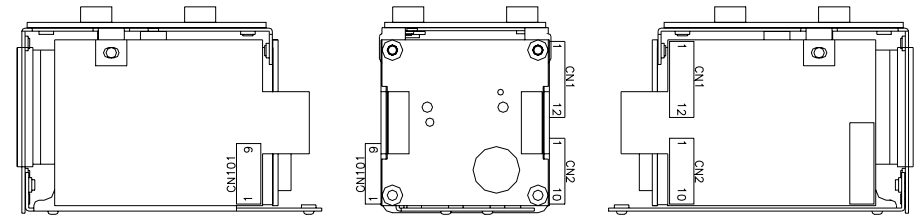
## Caution for Installation

1. Avoid places where there is direct sunlight. When using the camera outside.
2. Be careful, never let any water in this equipment.
3. Do not directly touch the CCD element. If necessary, use a soft cloth moistened with alcohol to wipe off the dust.
4. When the camera installs in dust or wet environment, please puts into the camera housing.
5. Be extra careful not to shake the camera.
6. Avoid places where temperatures exceed 50°C or more.
7. When any abnormalities occur, make sure to unplug the unit and contact your local dealer.
8. The camera are only operated with regulative adaptor DC 12V, AC to DC non-regulative adaptor may cause camera damaged.

## CONNECTOR



- CN4  
 P1 RXT (5V TTL LEVEL)  
 P2 TXD (5V TTL LEVEL)  
 P3 GND  
 P4 +12V POWER IN  
 P5 GND  
 P6 VIDEO OUT  
 P7 GND  
 P8 VD-IN  
 P9 GND



### MAIN BOARD (CONNECTOR TO OPTION BOARD)

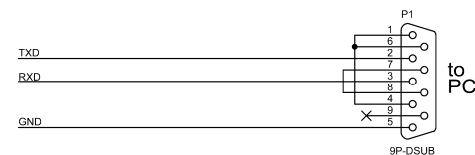
CN101 → (OPT. CN3)		CN1 → (OPT. CN1)		CN2 → (OPT. CN2)	
1	RS232C RXD (3.3V)	1	ALARM IN (L=Alarm)	1	GND
2	RS232C TXD (3.3V)	2	+7V (POWER OUT)	2	IRIS+/- (L=- · H=+)
3	VD-IN (3.3V)	3	GND	3	NEAR / INF (L=INF · H=NEAR)
4	+12V(10%) POWER IN	4	Position Bit-2	4	TELE / WIDE (L=WIDE · H=TELE)
5	GND	5	V-Rev. (L=ON / H=OFF)	5	RS-485_CS
6	C-out (Burst OUT)	6	H-Rev. (L=ON / H=OFF)	6	Position Bit-3
7	VBS (Video OUT)	7	Position Bit-1	7	Position Bit-4
8	Y-out (Y-signal OUT)	8	Position Bit-0	8	Position Bit-5
9	+3.3V (POWER OUT)	9	PRI (OSD BACK1)	9	MOTION OUT
		10	ENT (OSD ENTER)	10	MASK IN
		11	DW (OSD DOWN)		
		12	UP (OSD UP)		

### OPTION BOARD CONNECTOR

J1		J2		J3		OSD-SWITCH	
P1	+12V	P1	GND	P1	485+	S1	PRI
P2	GND	P2	TXD	P2	485-	S2	ENT
P3	VBS	P3	RXD	P3	GND	S3	DOWN
P4	GND					S4	UP

J2 & J3 & CN4 only one kind active at the same time, select by SW1

### J2 CONNECTOR TO PC



SW1	ON	
SW1-1	CN4 RS-232 Action	SW1-1 - SW1-3 only one can be set to ON at the same time, if not, communication interface may be mistake.
SW1-2	J2 RS-232 Action	
SW1-3	J3 RS-485 Action	
SW1-4	NC.	

## OSD FUNCTION SPECIFICATIO

[UP] : UP & RIGHT MOVE KEY  
[DOWN] : DOWN & LEFT MOVE KEY  
[ENTER] : ENTER KEY  
[PRI] : PRE CONFIRM KEY

Push [ENTER] key 2sec. to get into the MAIN menu.

Push [PRI] key 2sec. to leave menu.

If pushed [PRI] key, all set parameter data will be abandoned and return back to the previous menu page, this will occur while setting the parameter and without push [ENTER] key.

Push [UP], [DOWN] Two key at one time, screen will show COLOR BAR, want to recover normal display,

Push again [UP], [DOWN] Two key at one time, screen will recover normal display

### MAIN-PAGE

→	I	R	I	S	:					
	B	L	C	:						
	A	G	C	.	S	E	N	S	:	
	C	O	L	O	R	:				
	A	P	C	:						
	L	E	N	S	:					
	R	E	V	:						
	P	O	S	I	T	I	O	N	:	
	I	D	:							
	P	R	E	S	E	T	:			

### NEXT PAGE

→	M	A	R	K	:					
	G	A	M	M	A	:				
	P	O	W	E	R	.	O	N	:	
	M	O	T	I	O	N	:			
	M	A	S	K	:					
	O	S	D	:						
	Z	O	O	M	+	A	F	:		
	L	A	N	G	U	A	G	E	:	
	C	O	M	M	.	I	D	:		

Push [ENTER] 2 sec, get into the main menu

There are 19 items on the main menu, by up / down key to select item and push [ENTER] key to get into sub-item menu.

[01]. IRIS SELECT MEN

	I	R	I	S												
①	→	P	E	A	K	→	O	F	F							
							O	N	A	-	-	-	■	-	-	P
②		A	L	C		→	A	U	T	O			■	-	-	
								F	I	X			■	-	-	
③		A	E	S			A	U	T	O			■	-	-	
						→	F	I	X		1	/	1	0	0	0

This is used to control the iris & shutter speed of the lens. It included 3 items "PEAK", "ALC", "AES".

- ① 「PEAK」 is used to control the reaction of auto iris, which is based on the average light of picture signal or the light rate of the peak.
- ② 「ALC」 is used to select AUTO or FIX. Adjust IRIS level
- ③ 「AES」 is used to select electronic shutter be AUTO or FIX function, at AUTO mode can be adjust AES level, at FIX mode can be selector shutter speed at below, [OFF], [1/100sec], [1/250sec], [1/500sec], [1/1000sec], [1/2000sec], [1/4000sec], [1/10000sec]

After setting, push [PRI] key to go back to the main menu page.

[02]. BLC SELECT MENU

	B	L	C												
①	→	O	F	F											
							O	N							
②		→	A	R	E	A									
③		S	E	N	S	L	O	W	-	-	-	■	-	-	H

This is used to control "BLC" (Back Light Compensation),

- ① 「BLC」 ON / OFF selector.  
Selector 「ON」 has 2 sub-items : 「AREA」, 「SENS」.
- ② 「AREA」 : 48 BLC zones can be set separately. According to the mask area (BLC zone) signal to decide the iris and shutter speed.
- ③ 「SENS」 : Is used to enhance the BLC effect.

After setting, push [PRI] key to go back to the main menu page.

[03]. AGC, SENS SELECT MENU

	A G C · S E N S		
①	→ F r e e z e	→ F i e l d	F r a m e
②	F r e e z e	→ O F F	O N
③	P r i o r i t y	→ A G C	S E N S
④	A G C	A U T O	- - - - ■ - - - -
⑤	S E N S	A U T O	- - - - ■ - - - -

This is used to select 「FREEZE」 and 「Priority」 & 「AGC」 and 「SENS」 function.

- ① 「FREEZE」 type : can be select freeze image is 「Field」 or 「Frame」 display mode.
- ② 「FREEZE」 ON / OFF : ON (Freeze) / OFF(Unfreeze).
- ③ 「Priority」 : Select priority is AGC or SENS
- ④ 「AGC」 : To adjust auto gain control, 0dB, 2.25dB, 4.5dB, 6.75dB, 9dB, 11.25dB, 13.5dB, 15.75dB, 18dB, 9 steps adjustable.
- ⑤ 「SENS」 : For low light application: 0 Frame, 6 Frame, 12 Frame, 16 Frame, 18 Frame, 22 Frame, 24 Frame, 30 Frame, 36 Frame, 9 steps adjustable.

After setting, push [PRI] key to go back to the main menu page.

[04]. COLOR SELECT MENU

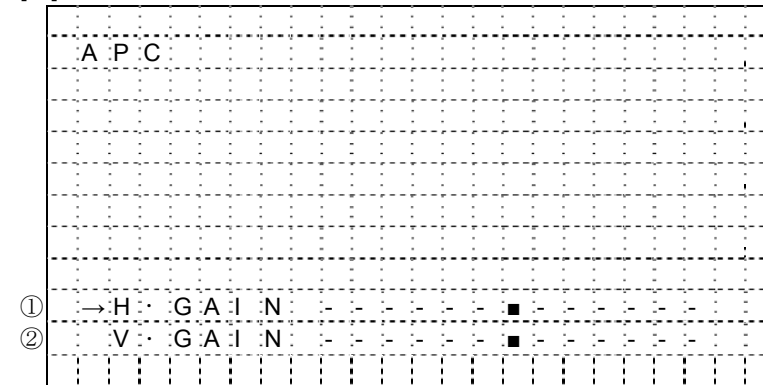
	C O L O R		
①	→ C O L O R	→ O F F	O N
			A U T O
②	W B	→ A T W	R - - - - ■ - - - - B
		A W B	R - - - - ■ - - - - B
③	G A I N	→ R - Y	- - - - ■ - - - -
		B - Y	- - - - ■ - - - -

This is used to control the color ON/OFF and white balance and the gain rate of RED & BLUE color.

- ① 「COLOR」 selector : OFF is monochrome image, ON is normal color image, AUTO is at low light AGC up, display image will be auto change to monochrome image.
- ② 「WB」 White balance control : ATW is Auto trace white balance, can be adjust offset level. AWB is One push white balance. Push [ENTER] key 「AWB」 will start flicker, until flicker stop it will lock the current color temperature at the same time.

- ③ 「GAIN」: The gain rate of R-Y & B-Y can be adjusted separately.  
After setting, push [PRI] key to go back to the main menu page.

#### [05]. APC SELECT MENU

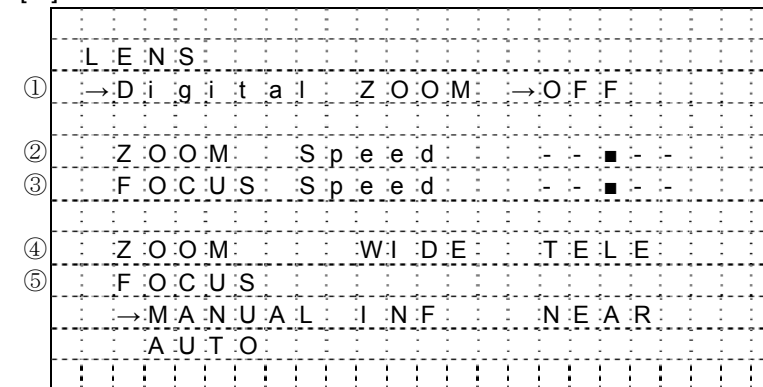


This is used to enhance the compensation of the picture quality.

- ① 「H · GAIN」: Horizontal Compensation  
② 「V · GAIN」: Vertical Compensation

After setting, push [PRI] key to go back to the main menu page.

#### [06]. LENS SELECT MENU



This is used to control the motion of the lens, included "Digital ZOOM" ON/OFF and times set function.

- ① 「Digital ZOOM」 selector: OFF、X2、X4、X6、X8、X10.  
② 「ZOOM Speed」: Set the speed of the zoom.  
③ 「FOCUS Speed」: Set the speed of focus.  
④ 「ZOOM」: Lens ZOOM adjust WIDE / TELE  
⑤ 「FOCUS」: AUTO / MANUAL setting

After setting, push [PRI] key to go back to the main menu page.

[07]. REV. SELECT MENU

	R E V
①	→ P O S I / N E G A → P O S I N E G A
②	H · R E V → O F F O N
③	V · R E V → O F F O N

This is used to select image 「Positive」 and 「Negative」 & 「Horizontal Reverse」 and 「Vertical Reverse」 function.

- ① 「POS/NEGA」 : Image positive & negative select.
- ② 「H.REV」 : Horizontal Reverse (Mirror) ON/OFF
- ③ 「V.REV」 : Vertical Reverse (Up-side down) ON/OFF

After setting, push [PRI] key to go back to the main menu page.

[08]. POSITION SELECT MENU

	P O S I T I O N
①	→ A L A R M N O = 0
②	F r e e z e : O F F O N
③	P O S I T I O N → N O = 6 4 Z O O M : S p e e d - - ■ - - F O C U S : S p e e d - - ■ - - Z O O M : W I D E T E L E F O C U S : I N F N E A R

This is used to set 「ALARM-IN」 function, either 「ALARM POSITION」 or 「IMAGE FREEZE」.

- ① 「ALARM NO.」 : Set alarm position(1~64), if set to (0) alarm position is not enable.
- ② 「Freeze」 : Set ON mode, 「ALARM-IN」 is freeze trigger input.
- ③ 「POSITION」 : The alarm position have 64 steps (position) can be programmed.

By this program, the zoom & focus may go to the exactly position where is programmed.  
After setting, push [PRI] key to go back to the main menu page.



### [09]. TITLE SELECT MENU

	T I T L E
①	→
②	→ 0 1 2 3 4 5 6 7 8 9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z a b c d e f g h i j k l m n o p q r s t u v w x y z : ; ' " . , < > ( ) [ ] { } 「 」 - * /
③	U P D O W N

This is used to set up the ID figures & position on the screen. (Title setting)

- ① TITLE start position selector.
- ② TITLE Character selector.
- ③ TITLE display position UP or DOWN selector.

After setting, push [PRI] key to go back to the main menu page.

### [10]. PRESET SELECT MENU

①	→ P R E S E T → O F F O N
②	I N I T I A L O F F → O N
③	P H A S E → O F F O N
④	- - - - - ■ - - - - - +

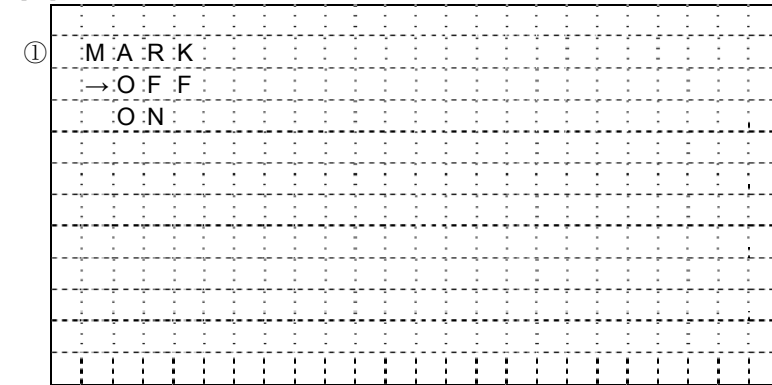
This is used to select the camera go back to "PRESET", "INITIAL", "PHASE" condition

- ① 「PRESET」 : Set to ON camera will be reset and set to default data.
- ② 「INITIAL」 select : Set to ON lens is action, Set to OFF lens is do not action.
- ③ 「PHASE」 adj select : Set to OFF ext-sync is disable, Set to ON ext-VD sync is enable, (EXT-VD signal must be input)
- ④ PHASE set to ON sync-phase adjustment.

After setting, push [PRI] key to go back to the main menu page.

The menu at next page  
at "PRESET" position push [DOWN] key can into this menu.

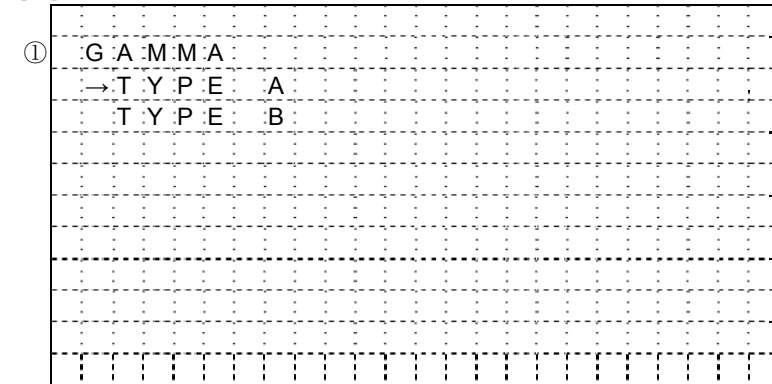
### [11]. MARK MENU



This is used to select the cross line display ON / FF.

① 「MARK」 : Cross line ON/OFF select, set ON cross line display, set OFF cross line is hidden.

### [12]. GAMMA MENU



This is used to select the camera gamma correction.

① 「GAMMA」 select : TYPE-A gamma is 0.45, TYPE-B gamma is 1.0

[13]. POWER ON MENU

	P O W E R O N
①	→ B L U E B A C K
	→ O F F
	O N
	P O S I T I O N
②	→ O F F
③	O N N O = 6 : 4

This is used to select the camera power on state.

- ① 「BLUE BACK」 : Set to OFF camera power on initial is normal display, Set to ON camera power on initial is display blue back.
- ② 「POSITION OFF」 : Camera power on lens position is current position.
- ③ 「POSITION ON」 : Camera power on lens position is go to the designation position(1~64).

[14]. MOTION MENU

	M O T I O N
①	→ O F F
	O N
②	→ A R E A
③	T I M E → 1 : 0 S E C
	3 : 0 S E C
	6 : 0 S E C
④	S E N S L O W : - - - ■ - - - H I

This is used to select the motion detect function.

- ① Motion detect ON / OFF select.
- ② Motion detect area select.
- ③ Motion detect output time select.
- ④ Motion detect sensitive adjust.

[15]. MASK MENU

	M A S K
①	→ P O S I T I O N N O = 6 4
②	M A S K N O = 1
③	→ O F F
④	O N → H - S T A R T = 2 0
⑤	H - E N D = 2 0
⑥	V - S T A R T = 2 0
⑦	V - E N D = 2 0
⑧	C O N N E C T → O F F
	O N

This is used to select mask area size and position for each setable lens position.

- ① Lens position no. select(1~64)
- ② MASK NO. select(1~4)
- ③ MASK area display ON / OFF select.
- ④ Hor. direction start position.
- ⑤ Hor. direction end position.
- ⑥ Ver. direction start position.
- ⑦ Ver. direction end position.
- ⑧ ZOOM action to link mask area, ON / OFF select..

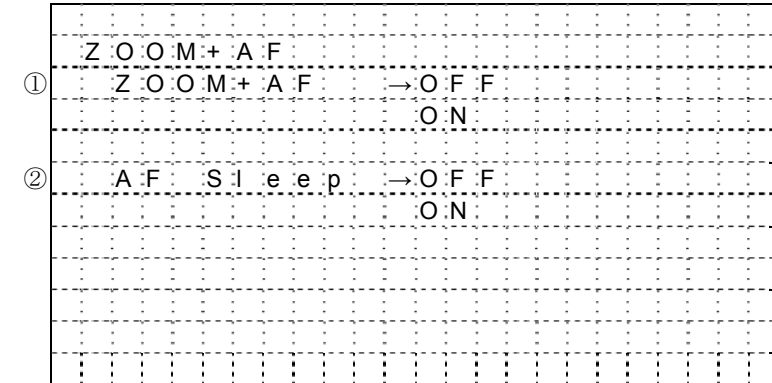
[16]. OSD MENU

	O S D
①	→ P O S I T I O N → O F F
	O N
②	M O T I O N → O F F
	O N
③	Z O O M M A G → O F F
	O N

This is used to select on screen display ON / OFF select.

- ① POSITION NO. display ON / OFF select.
- ② MONTION action display ON / OFF select.
- ③ ZOOM times display ON / OFF select.

[17]. ZOOM+AF MENU



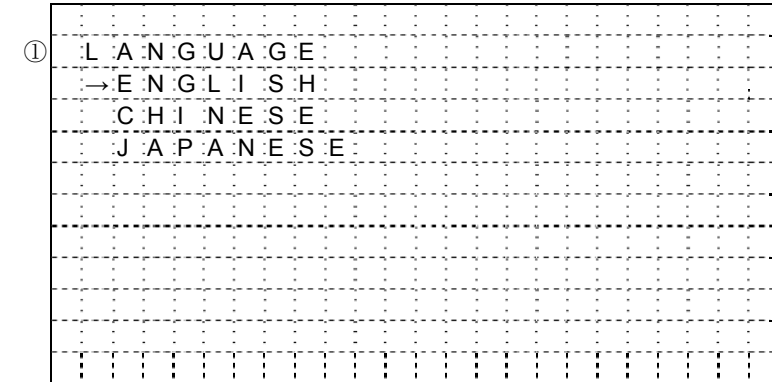
This is used to select an occasion for auto focus action.

① ZOOM stops time execute lens focus once, action OFF / ON select.

② AF Sleep function ON / OFF select.

(As show screen stillness about 5 minutes cameras come into AF Sleep mode namely, as screen has bigger change time come back again act for normal mode namely.)

[18]. LANGUAGE MENU



This is used to select OSD manu display language.

① OSD display language select, ENGLISH / CHINESE(Simp.) / JAPANESE

[19]. COMMUNICATION ID MENU

	C	O	M	M	:	I	D	:	
①	→	C	O	M	M	:	I	D	= 1
②		M	O	D	E	:		→	1 : 1
									1 : N

This is used to select communication ID and mode.

- ①Communication ID number's set.(Enactment supply controller identification camera uses ID number.)
- ②MODE choice
  - 1:1 : One controller to control one Camera.
  - 1:N : One controller to control many Camera.



