

G10 Specification

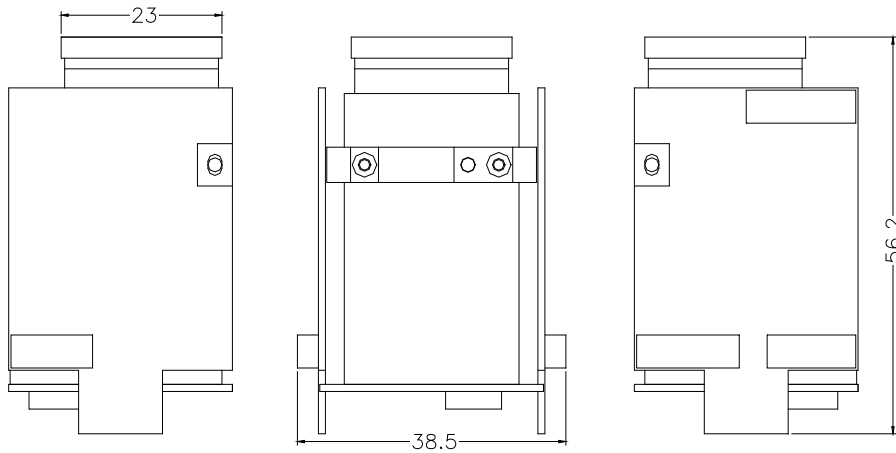
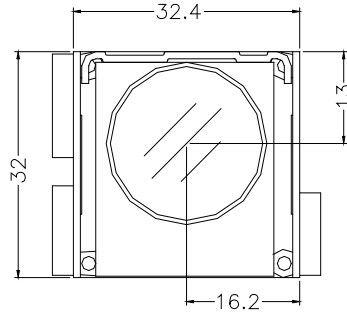
TV SYSTEM	NTSC	PAL
IMAGE SENSOR	1/4-INCH CCD IMAGE SENSOR	
CCD TOTAL PIXELS	~ 410K	~ 470K
SCANNING SYSTEM	525 LINES, 60 FIELDS/SEC	625 LINES, 50 FIELDS/SEC
SYNC SYSTEM	INTERNAL/VD-LOCK	
MINIMUM ILLUMINATION	0.05 LUX F1.6 AGC ON B/W	
RESOLUTION	520 TVL	
ICR-SET CONTROL	AUTO / MANUAL	
DNR (DIGITAL NOISE REDUCE)	S/N UP 4.5DB	
WHITE BALANCE RANGE	3200 ~ 9600 °K	
S / N RATIO	48DB (MIN) / 52DB (TYP) (AGC OFF , R=1 , APC OFF , Y-OUT)	
B.L.C. FUNCTION	SUPER BLC,48 ZONE BLC	
GAMMA CORRECTION	0.45 /1	
AGC	AUTO (24DB MAX)	
ALC	AUTO / FIX	
SENS UP	MAX. 32X SELECT BY OSD MENU	
IMAGE NEGATIVE	SELECT BY OSD MENU	
MONTION DETECT	48 ZONE (SELECT BY OSD)	
FREEZE FUNCTION	ALARM IN TRIGGER OR SELECT BY OSD	
CROSS LINE	ON/OFF SELECT BY OSD MENU (POSITION ADJ. BY SOFTWARE)	
ELECTRONIC SHUTTER	AES : 1/60(1/50) ~ 1/120,000 SEC. / MANUAL : 8 STEP	
LENS	22X OPTICAL ZOOM LENS ,F1.6~3.7,F=3.9~85.8MM	
ZOOM	220X (22X OPTICAL 10XDIGITAL)	
FOCUS	AUTO / MANUAL	
POSITION	64 POSITION (ZOOM,FOCUS)	
ICR (IR-CUT REMOVEABLE)	AUTO / MANUAL	
VIDEO OUTPUT	COMPOSITE & Y/C OUTPUT 1.0VP-P AT 75 OHM	
CONTROL FUNCTION	OSD CONTROL ,DRY SWITCH , RS-232	
OSD LANGUAGE SELECT	ENGLISH / CHINESS_SIMP / JAPANESE	
OPERATION TEMPERATURE	-10°C TO 50°C	
OPERATIONAL HUMIDITY	WITHIN 85%RH	
POWER SUPPLY	DC12V±1V / 4W(MAX)	
DIMENSIONS	56.2MM(W) X 35.8MM(H) X 32MM (L)	

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 Sensor device. 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. Be extra careful not to mistake plug in connect.
8. The camera are only operated with regulative adaptor DC 12V, AC to DC non-regulative adaptor may cause camera damaged.

G10 module

Dimension (Unit : mm / ±0.3mm)



MAIN BOARD (CONNECTOR TO OPTION BOARD)

CN101		CN1		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
* P1~P3 : H=3.3V±10% L=0V±10%		10	ENT (OSD ENTER)	10	MASK IN
		11	DW (OSD DOWN)	NOTE1	
		12	UP (OSD UP)		

NOTE

CN2 – P2 : OPEN IS OFF , 0V~0.7V=L(-) , 2.3V~3V=H (+)

CN2 – P3 : OPEN IS OFF , 0V~0.7V=L(INF) , 2.3V~3V=H (NEAR)

CN2 – P4 : OPEN IS OFF , 0V~0.7V=L(WIDE) , 2.3V~3V=H (TELE)

CN2-P4,P5,P6,P7,P8 & CN3-P6,P7,P8,P10 OPEN IS 3.3V

H=3.3V±10% / L=0V±10%

※The specifications and appearance of the product may change without notice.

Model No.AF X10 Zoom 企_VER 1.0

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 senc, 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	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	I

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	-	-	-	■	-	-	-			

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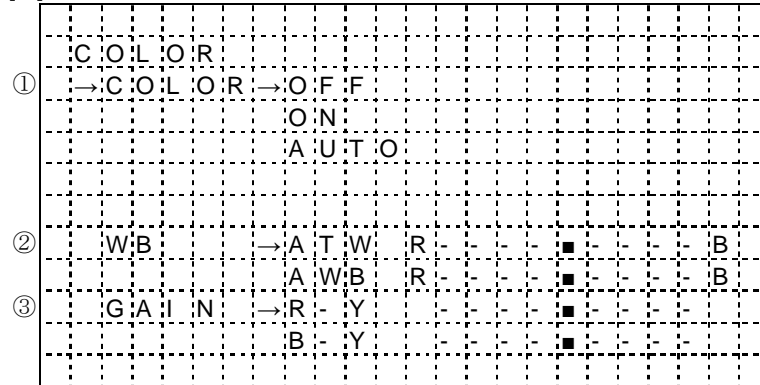
Model No.AF X10 Zoom 企_VER 1.0

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.

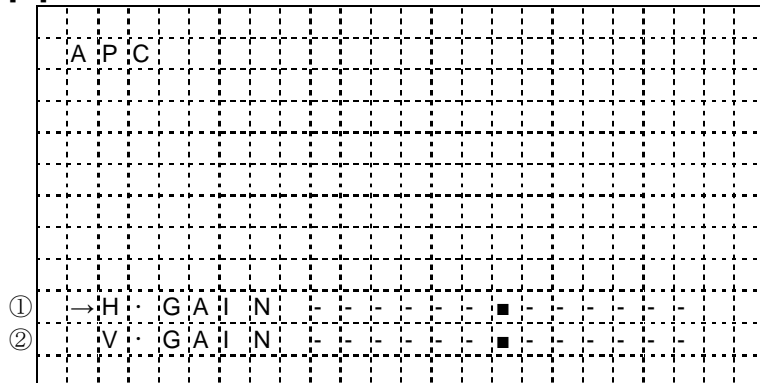
[04]. COLOR SELECT MENU



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.

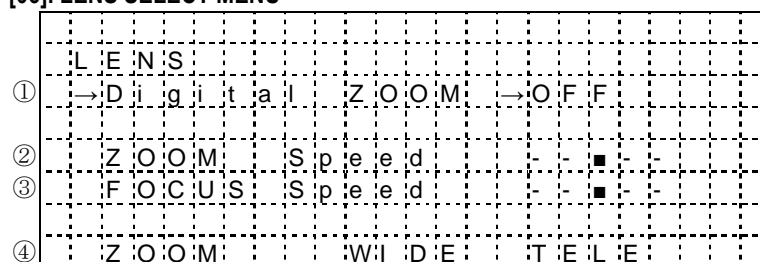
[05]. APC SELECT MENU



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

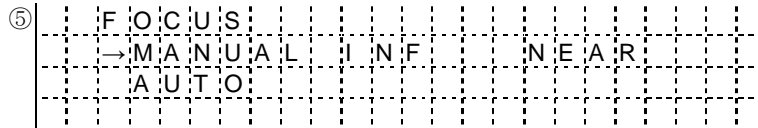
- ① 「H•GAIN」 : Horizontal Compensation
 - ② 「V•GAIN」 : Vertical Compensation
- After setting, push [PRI] key to go back to the main menu page.

[06]. LENS SELECT MENU



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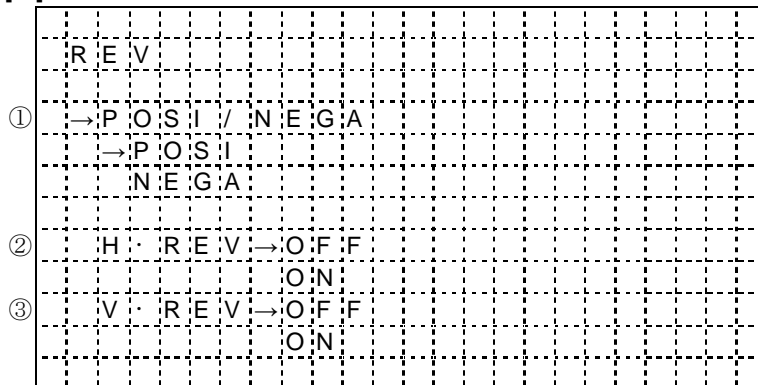


This is used to control the motion of the lens, included "Digital ZOOM" ON/OFF and times set function.

- 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

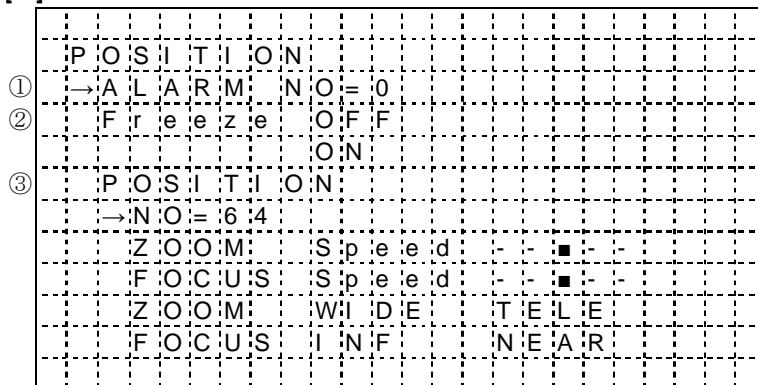


This is used to select image 「Positive」 and 「Negative」 & 「Horizontal Reverse」 and 「Vertical Reverse」 function.

- 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 MEMU

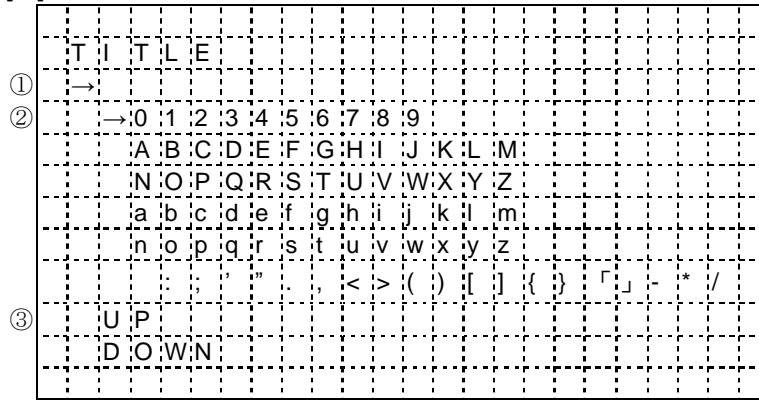


This is used to set 「ALARM-IN」 function, either 「ALARM POSITION」 or 「IMAGE FREEZE」.

- 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 programed.

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

[09]. TITLE SELECT MENU

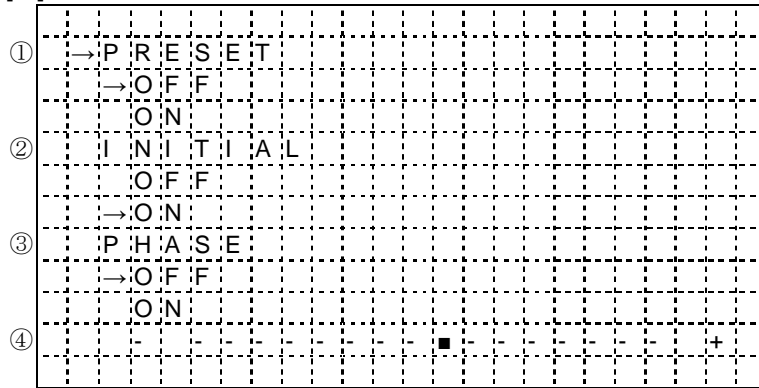


This is used to set up the ID figures & position on the screen. (Title setting)

- 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



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

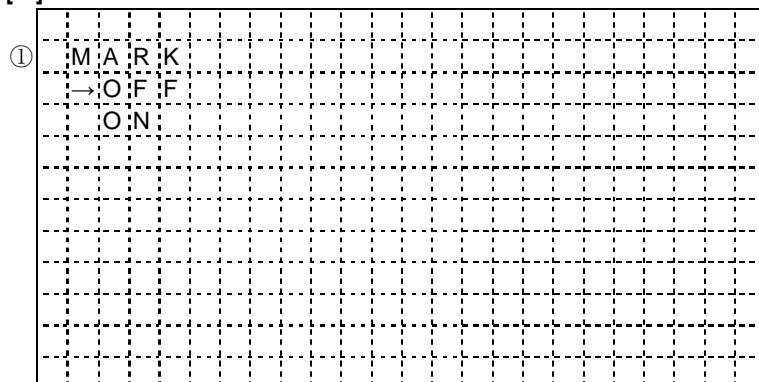
- ① 「PRESET」 : Set to ON camera will be reset and set to default data.
- ② 「INITIAL」 select : Set to ON lens is action,Set to OFF lens is do not action.
- ③ 「PHASE」 adj select : Set to OFF ext-sync is disable,Set to ON ext-VD sync is enable, (EXT-VD signal must be input)
- ④ PHASE set to ON sync-phase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

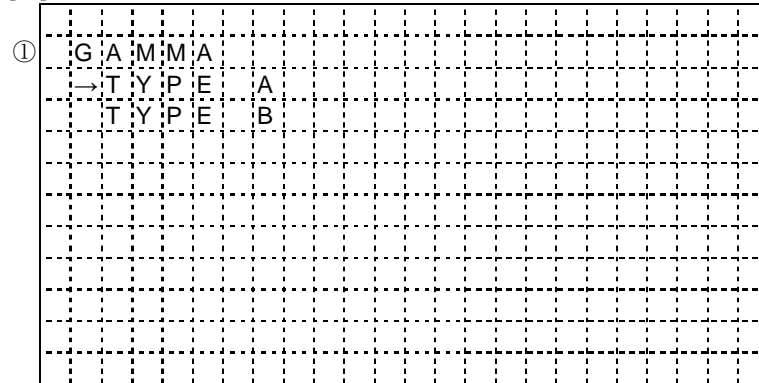


This is used to select the cross line display ON / FF.

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

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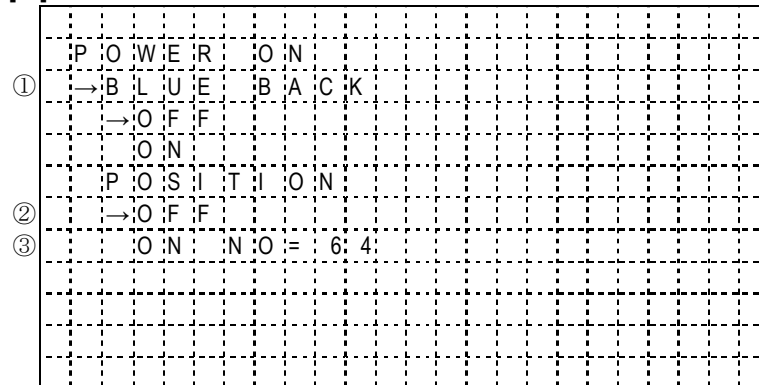
[12]. GAMMA MENU



This is used to select the camera gamma correction.

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

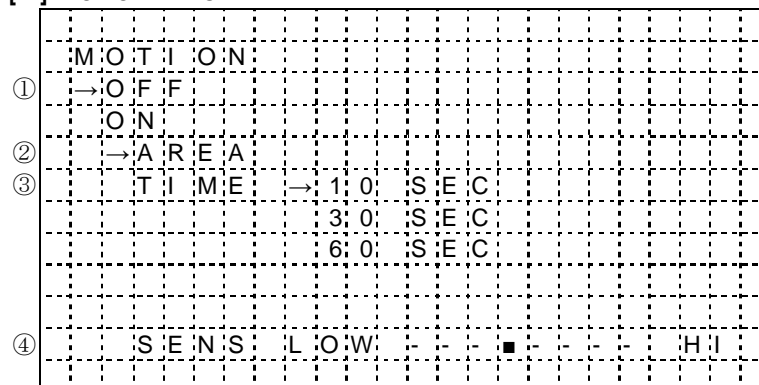
[13]. POWER ON MENU



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



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	:
⑥					V	S T A R T =	2	:	0
⑦					V	E N D	=	2	:
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 settable lens position.

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

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

[17]. ZOOM+AF MENU

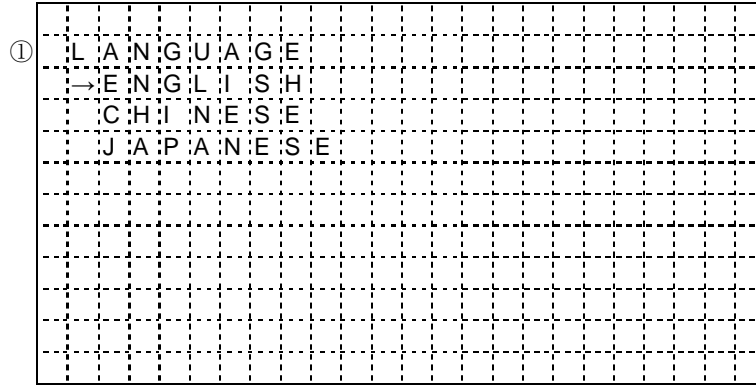
	Z O O M + A F								
①	Z O O M + A F	→O F F							
		O N							
②	A F S l e e p	→O F F							
		O N							

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

- ①ZOOM stops time execute lens focus once, action OFF / ON select.
- ②AF 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.)

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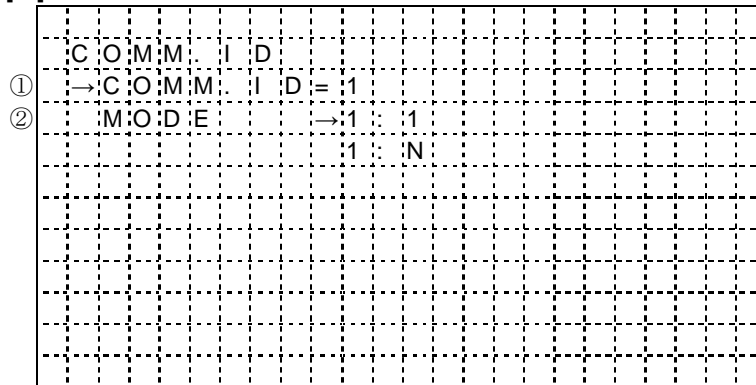
[18]. LANGUAGE MENU



This is used to select OSD manu display language.

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

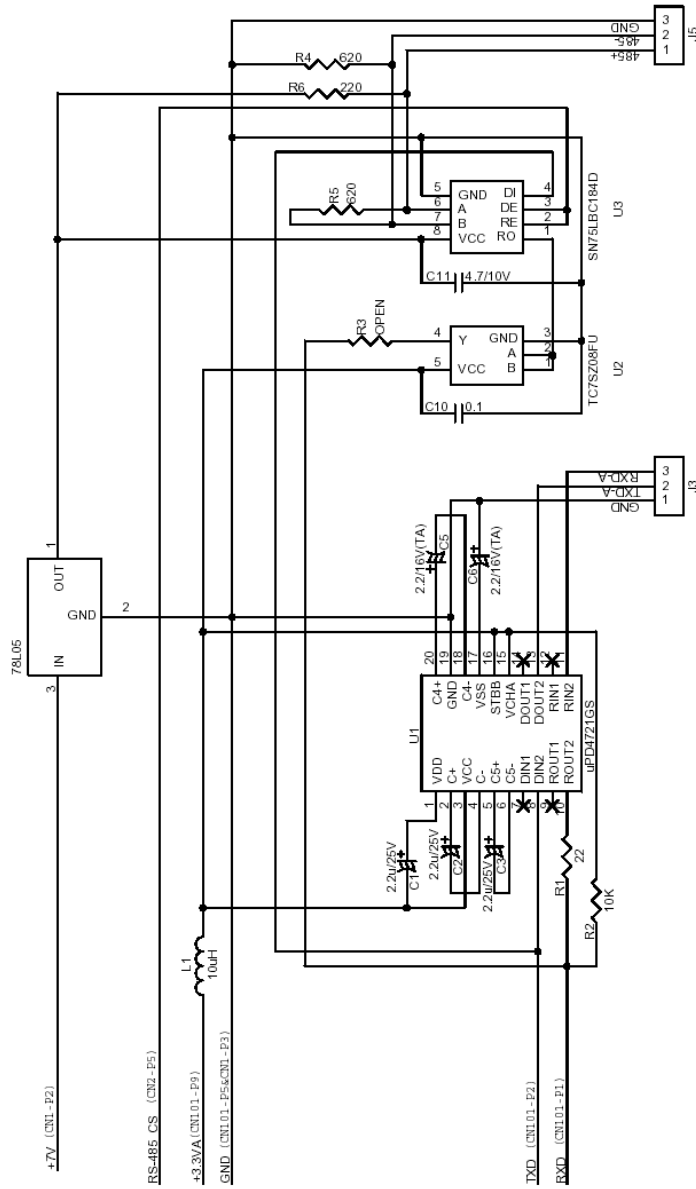
[19]. COMMUNICATION ID MENU



This is used to select communication ID and mode.

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

Model No.AF X10 Zoom 企_VER 1.0
 RS-232&485 DRIVER REFERENCE CIRCUIT
 RS-232 : R1=22 / R3=OPEN
 RS-485 : R1=OPEN / R3=22



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