LILIN

D/N ATR 700TVL VARI-FOCAL IR CAMERA

CMR7284X/7288X3.6 N/P
CMR7284X/7288X2.4 N/P

IMPORTANT SAFEGUARDS

1. Read Instructions

All the safety and operating instructions should be read before the unit is operated.

2. Retain Instructions

The safety and operating instructions should be retained for future reference.

3. Head Warnings

All warnings on the unit and in the operating instructions should be adhered to.

4. Follow Instructions

All operating and user instructions should be followed.

5. Electrical Connections

Only a qualified electrician should make electrical connections.

6. Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

7. Cable Runs

All cable runs must be within permissible distance.

8. Mounting

This unit must be properly and securely mounted to a supporting structure capable of sustaining the weight of the unit.

SAFETY PRECAUTIONS

CAUTION
RISK OF ELECTRIC SHOCK

CAUTION
TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT OPEN COVER.
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the unit.

UNPACKING

Unpack carefully. Electronic components can be damaged if improperly handled or dropped. If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper.

Be sure to save:

1. The shipping carton and packaging material. They are the safest material in which to make future shipments of the equipment.
2. This Installation and Operating Instruction.

SERVICE

If the unit ever needs repair service, the customer should contact our dealer or branch for authorization to return and shipping instructions.

Part Description & Dimension
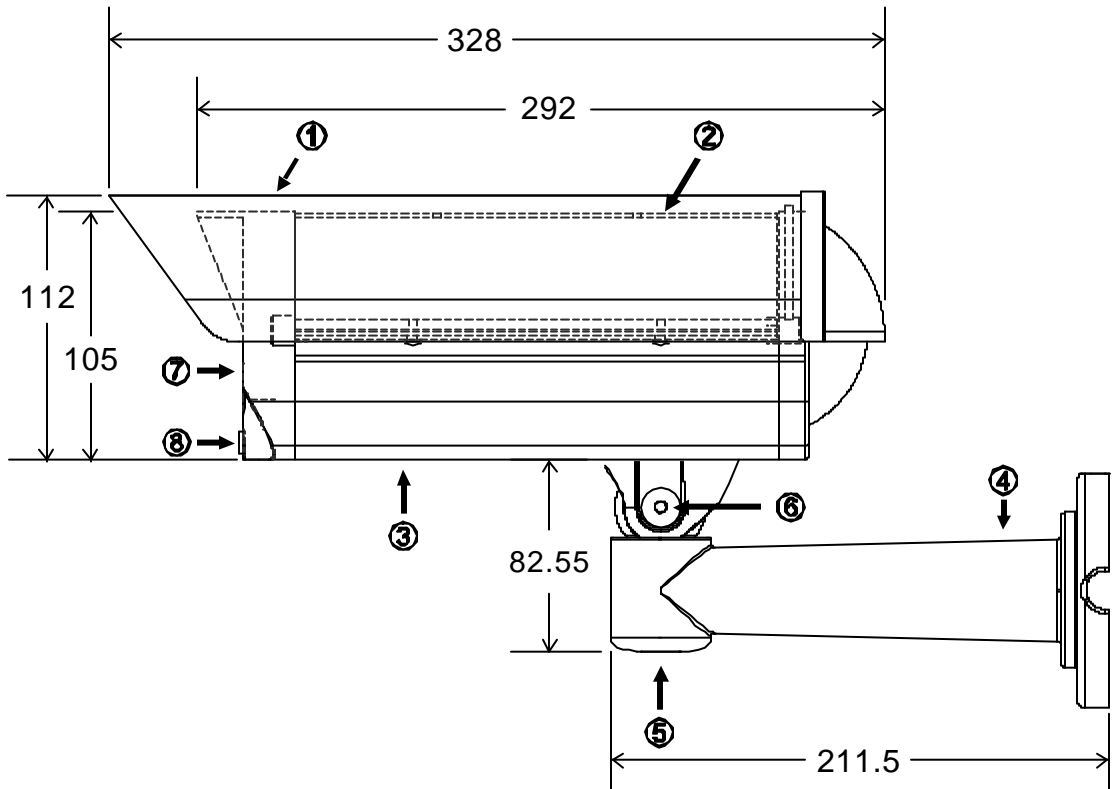
Unit : mm

① SUN SHIELD

② TOP COVER

③ BOTTOM CHASSIS

④ BRACKET

⑤ PAN ADJUSTMENT SCREW

⑥ TILT ADJUSTMENT SCREW

⑦ WINDOW

⑧ SENSOR CAP

INSTALLATION

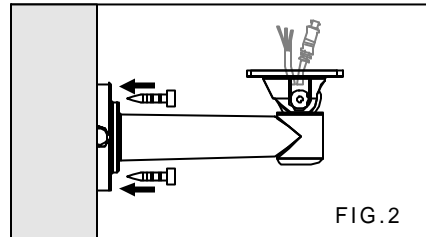1. Take out the bracket from the box first. Put the power cable and video cable through the bracket and then fix it to the wall (FIG.1 & FIG.2).

FIG.1

FIG.2
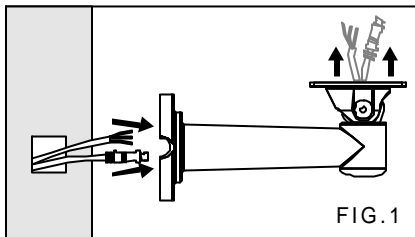
2. Secondly, take out the camera body and open the top cover with screw driver (FIG.3).

FIG.3
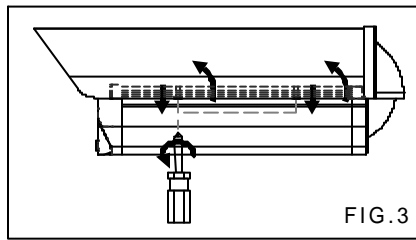
3. Put the power cable and video cable through the bracket rubble first and then go through the bottom of camera body (FIG.4). Plug and fix the power cable to the terminal and plug the video cable to video output of the camera (FIG.5).

FIG.4

FIG.5

L   N

Live   Earth   Neutral

Note :
When using two-cord power cable, please connect them to "Live" and "Neutral".
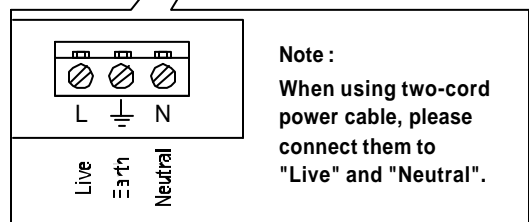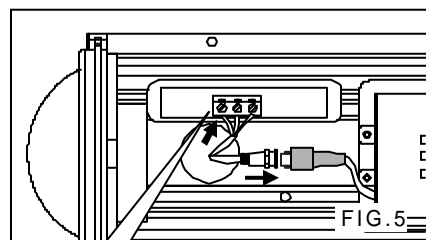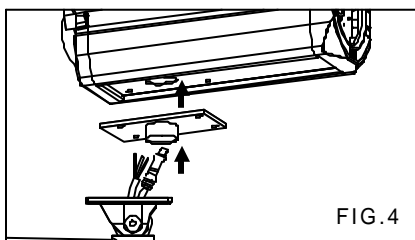
4. For safety reason, when plug video cable to video output please use the cable
   tubing to cover the bare part to avoid danger of electric shock or electric leakage
   (FIG.6 & FIG.7).

FIG.6   FIG.7
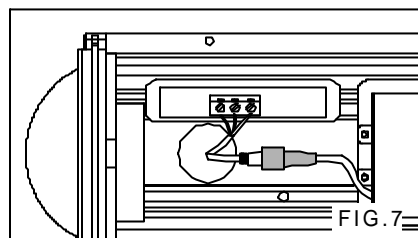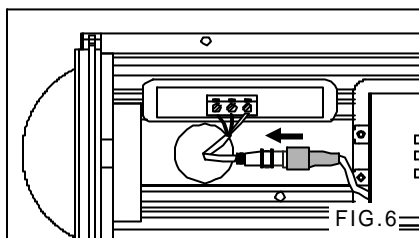
5. Next, use the provided 1/4"-20UNC screws (silver-4pcs) to fix the camera body on
   the bracket with hexagon screw driver (FIG.8).

FIG.8
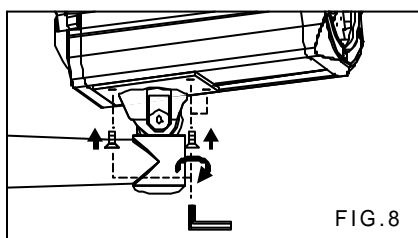
6. Loosen the pan and tilt adjustment screw on the bracket to turn the camera body to
   the desired angle and then tighten the screws (FIG.9).

FIG.9
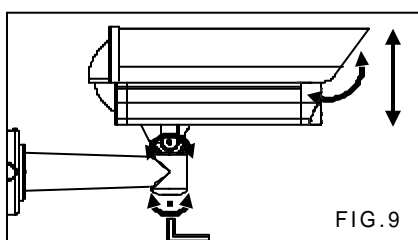
7. First, adjust the lens on focus and zoom to form the optimal video image after that
   tighten the screws(FIG.10). Then adjust the OSD menu to form the optimal image.
   Please refer to page5 ~page16.

UP

LEFT   RIGHT

SET

DOWN

FOCUS or ZOOM
ZOOM or FOUCS

FIG.10

3
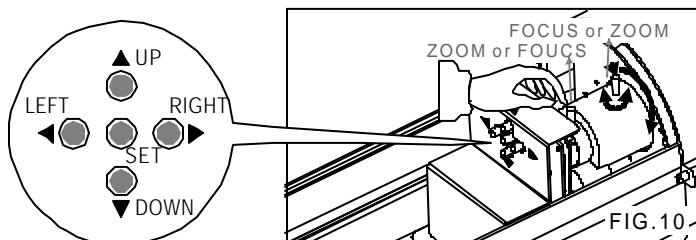
7-1. USER OSD SETTING

Setting switches and Functions.

A. ▲ (UP) : Press to move the cursor upwards or to select items.

B. ◀ (LEFT) : Press to move the cursor to the left and to select or adjust the parameters of the selected item. The parameters changes each time this button is pressed.

C. ▶ (RIGHT) : Press to move the cursor to the right and to select or adjust the parameters of the selected item. The parameters changes each time this button is pressed.

D. ▼ (DOWN) : Press to move the cursor downwards or to select items.

E. SET : Executes selections and displays a submenu for an item with the ⏎ mark.
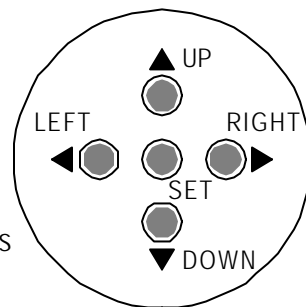
8. Replace the top cover and tighten the screws (FIG.11 & FIG.12).

FIG.11

FIG.12
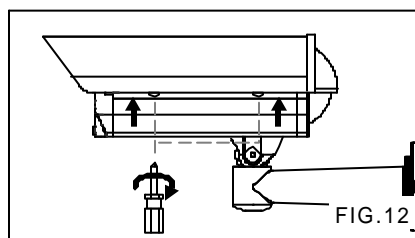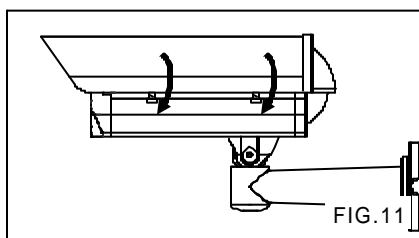
CONFIGURATION OF THE MENU

```
SETUP ─┬─ LENS ─┬─ AUTO ──────── TYPE   DC
MENU   │        └─ MANUAL  ─┬─ MODE   AUTO/ OPEN/ CLOSE
       │                    └─ SPEED(000~255)
       │
       ├─ SHUTTER/ ─┬─ AUTO ─┬─ HIGH LUMINANCE ─┬─ MODE ─┬─ AUTO IRIS/SHUT+AUTO IRIS
       │  AGC        │         │                  │        └─ SHUT(NOTES  2)   (NOTES  1)
       │             │         │                  └─ BRIGHTNESS(000~255)
       │             │         └─ LOW  LUMINANCE ─┬─ MODE   AGC/OFF
       │             │                            └─ BRIGHTNESS   x0.25/ x0.50/ x0.75/ x1.00
       │             └─ MANUAL ─┬─ MODE   SHUT+AGC
       │                        ├─ SHUTTER   1/60(1/50)/ 1/100(1/120)/ 1/250~1/10000
       │                        └─ AGC   6.00/ 12.00/ 18.00/ 24.00/ 30.00/ 36.00/ 42.00/ 44.80
       │
       ├─ WHITE BAL ─┬─ ATW ─┬─ SPEED(000~255)
       │             │       ├─ DELAY CNT(000~255)
       │             │       ├─ ATW  FRAME   x0.50/ x1.00/ x1.50/ x2.00
       │             │       └─ ENVIRONMENT   INDOOR/ OUTDOOR
       │             ├─ PUSH
       │             ├─ USER 1 ─┬─ B-GAIN(000~255)
       │             │          └─ R-GAIN(000~255)
       │             ├─ USER 2 ─┬─ B-GAIN(000~255)
       │             │          └─ R-GAIN(000~255)
       │             ├─ ANTI CR
       │             ├─ MANUAL   LEVEL(000~255)
       │             └─ PUSH  LOCK
       │
       ├─ BACKLIGHT   BLC/ HLC/ OFF
       │
       ├─ PICT ADJUST ─┬─ MIRROR   OFF/ON
       │               ├─ BRIGHTNESS(000~255)
       │               ├─ CONTRAST(000~255)
       │               ├─ SHARPNESS(000~255)
       │               ├─ HUE(000~255)
       │               └─ GAIN(000~255)
       │
       ├─ ATR ─┬─ OFF
       │       └─ ON ─┬─ LUMINANCE   LOW/ MID/ HIGH
       │              └─ CONTRAST   LOW/ MIDLOW/ MID/ MIDHIGH/ HIGH
       │
```

```
├ PRIVACY ┬ OFF
│         └ ON ┬ AREA  SEL   1/8~8/8
│              ├ TOP       [000~244(NTSC), 000~288(PAL)]
│              ├ BOTTOM [000~244(NTSC), 000~288(PAL)]
│              ├ LEFT    [000~474(NTSC), 000~468(PAL)]
│              ├ RIGHT [000~474(NTSC), 000~468(PAL)]
│              ├ COLOR(1~8)
│              ├ TRANSP   0.00/ 0.50/ 0.75/ 1.00
│              └ MOSAIC   OFF/ ON
├ NR ┬ NR  MODE   Y/C/ OFF/Y/C
│    ├ Y  LEVEL(000~015)
│    └ C  LEVEL(000~015)
├ CAMERA ID ┬ OFF
│           └ ON ↵
├ SYNC   INT
├ LANGUAGE   ENGLISH/         / DEUTSCH/ FRANCAIS/ PУCCКИЙ/ PORTUGUÊS/
│            ESPAÑOL/
└ CAMERA  RESET
```

```
┌ NOTES ┐
│  1: Set the LENS mode to AUTO on the SETUP MENU menu.
│  2: Set the LENS mode to MANUAL on the SETUP MENU menu.
```

6

SETTING MENU AND FUNCTIONS

1. Press "SET" button.

   The Menu screen appears on the monitor. Check the current settings on the menu.
2. Push▲or▼button to select the options then use◄or►button to select a mode.
   - NEXT: To the next setup menu.
   - BACK: Return to the previous.
   - RETURN: Return to the previous.
   - SAVE ALL: Used to save the various setting of the internal OSD menu in the EEPROM together.
   - EXIT: Exit the setup menu.

```
┌─────────────────────────────┐   ┌─────────────────────────────┐
│  SETUP MENU                 │   │  SETUP MENU                 │
│                             │   │                             │
│  LENS          AUTO↵        │   │  NR               ↵         │
│  SHUTTER/AGC   AUTO↵        │   │  CAMERA ID        OFF       │
│  WHITE BAL     ATW ↵        │   │  SYNC             INT       │
│  BACKLIGHT     BLC          │   │  LANGUAGE         ENGLISH   │
│  PICT ADJUST    ↵           │   │  CAMERA RESET               │
│  ATR           OFF          │   │                             │
│  PRIVACY       OFF          │   │                             │
│                             │   │                             │
│  NEXT↵                      │   │  BACK↵                      │
│  EXIT ↵       SAVE ALL      │   │  EXIT ↵       SAVE ALL      │
└─────────────────────────────┘   └─────────────────────────────┘
```
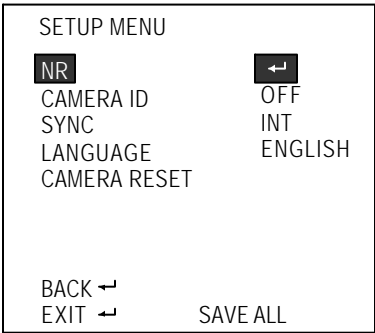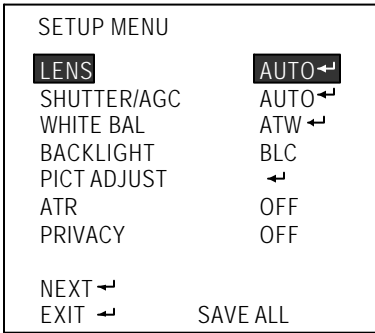
LENS

This function is used to set the mechanical iris of the lens.

1. Select [LENS] option.
2. Push◄or►button to select a mode.

   LENS mode changes as follows:

   ┌►AUTO   MANUAL ┐
   └──────────────────┘

   AUTO: Select the auto iris lens.

   MANUAL: Select the manual iris lens.
3. Select an AUTO then press "SET" button.

   The AUTO IRIS menu appears.

```
┌─────────────────────────────┐
│  AUTO IRIS                  │
│                             │
│  TYPE          DC           │
│  MODE          AUTO         │
│  SPEED    ▐▓▓▌▐▓▓▓▓▌ 080    │
│                             │
│                             │
│                             │
│  RETURN ↵                   │
└─────────────────────────────┘
```
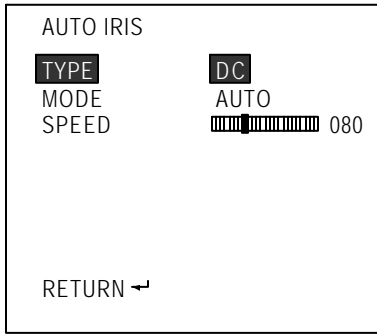
● AUTO (AUTO IRIS)

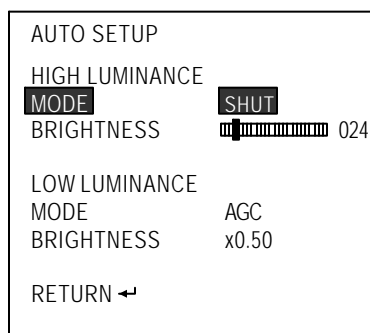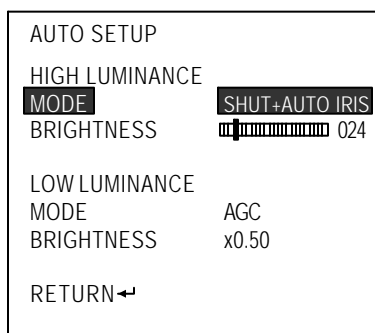| FUNCTION	OPTION	DESCRIPTION
TYPE	DC	Sets the type of mechanical iris. DC: Direct drive signal.
MODE	AUTO OPEN CLOSE	Sets the type of control to be exercised over the mechanical iris. AUTO: The mechanical iris is controlled automatically. OPEN: The mechanical iris is fixed to open. CLOSE: The mechanical iris is fixed to close.
SPEED	000~255	Sets the convergence speed of the mechanical iris.

NOTE

Only DC mode on the TYPE option. Because a DC auto iris lens is used with this camera.

SHUTTER/AGC

This function is used to set AE(Auto Exposure) or ME(Manual Exposure).

```
AUTO SETUP

HIGH LUMINANCE
MODE           SHUT+AUTO IRIS
BRIGHTNESS     ▭▭▭▭▭▭▭▭ 024

LOW LUMINANCE
MODE           AGC
BRIGHTNESS     x0.50

RETURN↵
```

```
AUTO SETUP

HIGH LUMINANCE
MODE           SHUT
BRIGHTNESS     ▭▭▭▭▭▭▭▭ 024

LOW LUMINANCE
MODE           AGC
BRIGHTNESS     x0.50

RETURN↵
```

1. Select [SHUTTER/AGC] option.
2. Push◄ or ►button to select an AUTO or MANUAL
   then press "SET" button. The AUTO SETUP or
   MANUAL SETUP menu appears.
   SHUTTER/AGC mode changes as follows:

   ┌►AUTO   MANUAL ┐

   AUTO: Select the AE control.
   MANUAL: Select the ME control.

● AUTO (AE)

FUNCTION		OPTION	DESCRIPTION
HIGH LUMINANCE	MODE	AUTO IRIS SHUT+AUTO IRIS	1. Set the LENS mode to AUTO on the SETUP MENU menu. 2. Specifies AE control on the medium and high brightness side. AUTO IRIS: Fixed electronic shutter. 　　　[1/60sec.(NTSC), 1/50sec.(PAL)] SHUT+AUTO IRIS: Auto electronic shutter. 　　　[1/60sec.(1/50sec.)~1/100,000sec.]
		SHUT	1. Set the LENS mode to MANUAL on the SETUP MENU menu. 2. Specifies AE control on the medium and high brightness side. SHUT: Auto electronic shutter. 　　　[1/60sec.(1/50sec.)~1/100,000sec.]
	BRIGHTNESS	000~255	Specifies the medium and high brightness side reference.
LOW LUMINANCE	MODE	AGC OFF	Specifies AE control on the low brightness side. AGC: AGC ON OFF: AGC OFF
	BRIGHTNESS	x0.25 x0.50 x0.75 x1.00	Specifies the low brightness side reference.

Setting of shutter speed of AUTO IRIS mode

Please set-up proper shutter speed for AUTO IRIS mode as below:
SHUTTER/AGC: AUTO[SETUP MENU]　　SET　　MODE: AUTO IRIS[AUTO SETUP]　　RETURN　　SHUTTER/AGC: MANUAL[SETUP MENU]　　SET　　SHUTTER: 1/60(1/50) or 1/100(1/120) or 1/250.....[MANUAL SETUP]　　RETURN　　SHUTTER/AGC: AUTO[SETUP MENU]　　SAVE ALL　　SET　　EXIT

● MANUAL (ME)

```
MANUAL SETUP

MODE          SHUT+AGC
SHUTTER       1/60
AGC           6.00




RETURN ↵
```

FUNCTION	OPTION	DESCRIPTION
MODE	SHUT+AGC	"SHUT+AGC" is the only option available for the ME operation mode. There are no other options.
SHUTTER	1/60(NTSC), 1/50(PAL) 1/100(NTSC), 1/120(PAL) 1/250 1/500 1/1000 1/2000 1/4000 1/10000	Sets the ME shutter speed(in fractions of a second).
AGC	6.00 12.00 18.00 24.00 30.00 36.00 42.00 44.80	Sets the AGC value(dB) for ME.

NOTE

Please select AUTO mode on the SHUTTER/AGC option. If you select MANUAL mode, the over exposure may occur.

WHITE BAL (WHITE BALANCE)

This function is used to set the white balance operation mode.

1. Select [WHITE BAL] option.
2. Push ◄ or ► button to select a mode.
   WHITE BAL mode changes as follows:

   ┌─► ATW   PUSH   USER1   USER2   ANTI CR ─┐
   └─ PUSH LOCK   MANUAL ◄───────────────────┘

```
┌─────────────────────────────────┐
│ ATW                             │
│                                 │
│ SPEED        ▥▥▥▥▥▥▥▥▥▥ 239     │
│ DELAY CNT    ▥▥▥▥▥▥▥▥▥▥ 016     │
│ ATW FRAME    x1.00             │
│ ENVIROMENT   INDOOR            │
│                                 │
│                                 │
│ RETURN ↵                        │
└─────────────────────────────────┘
```

- ● ATW (Auto Tracking White balance)
  This function automatically tracks the changes in the color temperature, and adjusts the white balance.
  The color temperatures ranging from 1800K to 10500K.

FUNCTION	OPTION	DESCRIPTION
SPEED	000~255	Adjusts the pull-in speed of ATW.
DELAY CNT	000~255	Sets the time-based hysteresis of ATW.
ATW FRAME	x0.50 x1.00 x1.50 x2.00	Sets the pull-in frame magnification.
ENVIROMENT	INDOOR OUTDOOR	Sets the pull-in frame(indoor/outdoor) of ATW. INDOOR: Select the indoor pull-in frame. OUTDOOR: Select the outdoor pull-in frame.

- ● PUSH (Full pull-in)
  This function adjusts the white balance regardless of the subject conditions.

```
┌─────────────────────────┐   ┌─────────────────────────┐
│ USER1 WB                │   │ USER2 WB                │
│                         │   │                         │
│ B-GAIN   ▥▥▥▥▥▥▥ 029    │   │ B-GAIN   ▥▥▥▥▥▥▥ 045    │
│ R-GAIN   ▥▥▥▥▥▥▥ 034    │   │ R-GAIN   ▥▥▥▥▥▥▥ 026    │
│                         │   │                         │
│                         │   │                         │
│                         │   │                         │
│ RETURN ↵                │   │ RETURN ↵                │
└─────────────────────────┘   └─────────────────────────┘
```

- USER1

  The gain values for the outdoor fixed mode are used as the adjustment items of USER1 on the internal OSD menu.

- USER2

  The gain values for the fluorescent light fixed mode are used as the adjustment items of USER2 on the internal OSD menu.
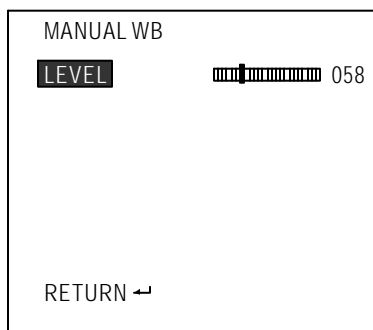
FUNCTION	OPTION	DESCRIPTION
B-GAIN	000~255	Used for the B gain operation in the WB fixed gain mode.
R-GAIN	000~255	Used for the R gain operation in the WB fixed gain mode.

- ANTI CR (Color Rolling suppression)

  This function minimizes the color changes(color rolling) over long periods caused by very small differences between the flicker frequency of non-inverter fluorescent lights and the drive frequency of the image sensor devices.

- MANUAL (Manual WB)

  The B and R gain values for manual WB are set on this screen.

```
MANUAL WB

LEVEL          ▭▭▮▭▭▭▭▭▭ 058




RETURN ↵
```

FUNCTION	OPTION	DESCRIPTION
LEVEL	000~255	Sets the B and R gain values for manual WB. By incrementing or decrementing the B gain value, the R gain value is also adjusted in tandem.

- PUSH LOCK (Hold)

  The WB gain level established when operation has transferred to the PUSH LOCK mode is held.

  1. Push◄ or ►button to select [PUSH LOCK] Mode then press "SET" button.

BACKLIGHT (BACKLIGHT Compensation)

This function is used to set the backlight compensation operation.

1. Select [BACKLIGHT] option.
2. Push ◄ or ► button to select a mode.
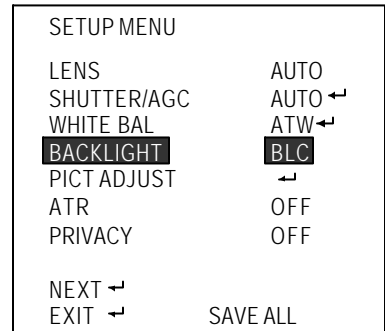   BACKLGIHT mode changes as follows:

   ► BLC   HLC   OFF ┐

   BLC: Backlight compensation ON.
   HLC: HLC(High Light Compensation) function ON
   High Light Compensation(HLC) is a function
   that improves the visual recognition of
   license plates and other such objects by suppressing or masking strong
   hight sources(such as the headlights of automobiles) in dark places.
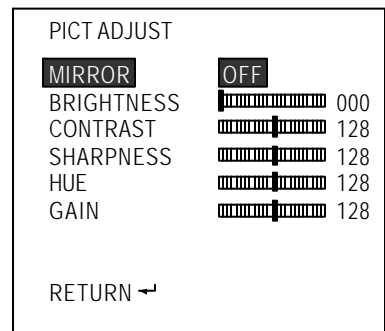   OFF: Backlight Compensation OFF.

```
SETUP MENU

LENS              AUTO
SHUTTER/AGC       AUTO ↵
WHITE BAL         ATW ↵
BACKLIGHT         BLC
PICT ADJUST         ↵
ATR               OFF
PRIVACY           OFF

NEXT ↵
EXIT ↵      SAVE ALL
```

PICT ADJUST (PICTURE ADJUST)

1. Select [PICT ADJUST] option and press "SET"
   button. The PICT ADJUST menu appears.
2. Push ◄ or ► button to select a mode or set the
   function level(000~255).
   PICT ADJUST mode changes as follows:

   ► MIRROR   BRIGHTNESS   CONTRAST ┐
   └ GAIN   HUE   SHARPNESS ◄

```
PICT ADJUST

MIRROR          OFF
BRIGHTNESS      ▮▯▯▯▯▯▯▯▯▯▯▯  000
CONTRAST        ▮▮▮▮▮▯▮▯▮▯▮▯  128
SHARPNESS       ▮▮▮▮▮▯▮▯▮▯▮▯  128
HUE             ▮▮▮▮▮▯▮▯▮▯▮▯  128
GAIN            ▮▮▮▮▮▮▮▯▮▯▮▯  128

RETURN ↵
```

FUNCTION	OPTION	DESCRIPTION
MIRROR	OFF ON	Sets the horizontal flip for the display output. OFF: Normal output. ON: Horizontal flipped output
BRIGHTNESS	000~255	Sets the screen brightness.
CONTRAST	000~255	Sets the screen contrast.
SHARPNESS	000~255	Sets the screen sharpness.
HUE	000~255	Adjusts the hue.
GAIN	000~255	Adjusts the gain.

ATR (Adaptive Tone Reproduction)

The ATR(Adaptive Tone Reproduction) function provides gradation compensation to improve the contrast of subjects whose gradation has been lost in cases where, for instance, both low-louminance areas and high-luminance areas exist in the same picture.
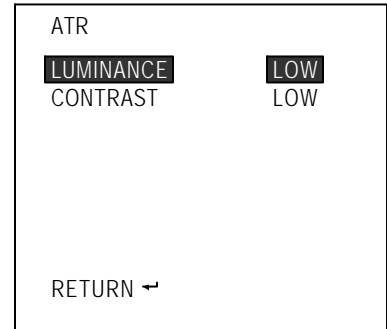
1. Select [ATR] option.
2. Push ◄ or ► button to select a ON and press "SET" button. The ATR menu appears.
3. Push ◄ or ► button to set the luminance level and contrast level.

   LUMINANCE level changes as follows:

   ┌► LOW   MID   HIGH ┐

   CONTRAST level changes as follows:
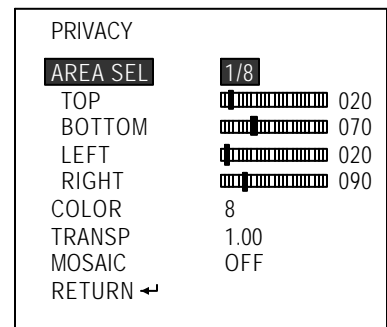
   ┌► LOW   MIDLOW   MID   MIDHIGH   HIGH ┐

```
ATR

LUMINANCE            LOW
CONTRAST             LOW




RETURN ↵
```

FUNCTION	OPTION	DESCRIPTION
LUMINANCE	LOW MID HIGH	Sets the extent of the luminance compression.
CONTRAST	LOW MIDLOW MID MIDHIGH HIGH	Sets the extent of the contrast enhancement.

PRIVACY

This function is used to set up to eight privacy masks.
1. Select [PRIVACY] option.
2. Push ◄ or ► button to select a ON and press "SET" button. The PRIVACY menu appears.
3. Push ◄ or ► button to select a mode or set the mask frame position.

```
PRIVACY

AREA SEL         1/8
 TOP        ▮▯▯▯▯▯▯▯▯  020
 BOTTOM     ▯▯▯▮▯▯▯▯▯  070
 LEFT       ▮▯▯▯▯▯▯▯▯  020
 RIGHT      ▯▯▯▯▮▯▯▯▯  090
COLOR           8
TRANSP          1.00
MOSAIC          OFF
RETURN ↵
```

FUNCTION	OPTION	DESCRIPTION
AREA SEL	1/8, 2/8, 3/8, 4/8, 5/8, 6/8, 7/8, 8/8	Selects the mask frame to be adjusted.
TOP	000~244(NTSC) 000~288(PAL)	Sets the top side of the mask frame selected by the AREA SEL parameter.
BOTTOM	000~244(NTSC) 000~288(PAL)	Sets the bottom side of the mask frame selected by the AREA SEL parameter.
LEFT	000~474(NTSC) 000~468(PAL)	Sets the left side of the mask frame selected by the AREA SEL parameter.
RIGHT	000~474(NTSC) 000~468(PAL)	Sets the right side of the mask frame selected by the AREA SEL parameter.
COLOR	1~8	Sets the colors of the mask frames.
TRANSP	0.00 0.50 0.75 1.00	Sets the transparency ratio of the mask frames. The same transparency ratio value is set for all the mask frames.
MOSAIC	OFF ON	Sets the mask frame mosaic function to ON or OFF. OFF: Mosaic function OFF. ON: Mosaic function ON.

NR (Noise Reduction)

This function is used to set the noise reduction.
1. Select [NR] option and press "SET" button.
   The NR menu appears.
2. Push ◄ or ► button to select one of four modes for NR or set the different filter strength.
   NR mode changes as follows:
   ►Y/C   OFF   Y   C ┐

```
NR

NR MODE        Y/C
Y LEVEL     ▭▭▭▮▭▭▭▭▭ 004
C LEVEL     ▭▭▭▮▭▭▭▭▭ 004




RETURN ↵
```
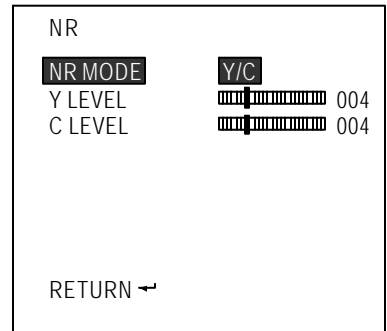
FUNCTION	OPTION	DESCRIPTION
NR MODE	Y/C OFF Y C	Sets the 2D NR filter mode. Y/C: Y and C filters ON. OFF: Through Y: Y filter ON. C: C filter ON.
Y LEVEL	000~015	Sets the Y filter strength.
C LEVEL	000~015	Sets the C filter strength.

CAMERA ID

This function is used to set the camera ID.

1. Select [CAMERA ID] option.
2. Use◄ or► button to select a ON and press "SET" button. The CAMERA ID menu appears.

```
CAMERA ID


ABCDEFGHIJKLMNOPQRSTUV
WXYZ0123456789-!"#$%&'
( )_  ,¥   <=>?@¥^    x+/□......①
     CHR1    CHR2
       ←→↑↓  CLR  POS↵
RETURN↵
```

```
CAMERA ID




             CHR1    CHR2
               ←→↑↓  CLR  POS↵
RETURN↵
```

3. Use▲,▼,◄ or► button to select a letter, numeral or symbol.

    ① (Blank): Inserts a space at the cursor position.

    CHR1: Letters A to Z, numerals 0 to 9, symbols.

    CHR2: 40 traditional Chinese.

    ←→↑↓: Moves cursor to left, right, up or down.

    CLR: If you enter the wrong code, select CLR then press "SET" button.

    POS: Use▲,▼,◄ or► button to move position of CAMERA ID on the screen.

SYNC

This function is used to display the current synchronization mode. The SYNC mode is fixed to the INT(Internal synchronization).

```
SETUP MENU

NR                    ↵
CAMERA ID        OFF
SYNC             INT
LANGUAGE         ENGLISH
CAMERA RESET



BACK ↵
EXIT ↵      SAVE ALL
```

LANGUAGE

This function is used to select the language in which to display the internal OSD menu.

1. Select [LANGUAGE] option.
2. Push ◄ or ► button to select a language.

```
SETUP MENU

NR                        ↵
CAMERA ID           OFF
SYNC                    INT
LANGUAGE           ENGLISH
CAMERA RESET



BACK ↵
EXIT ↵          SAVE ALL
```
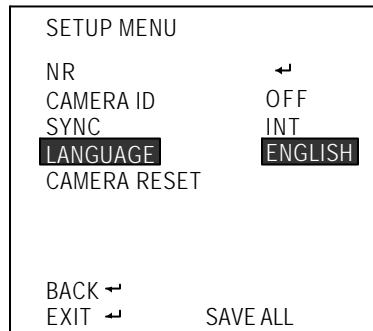
CAMERA RESET

This function is initializes all the internal OSD menu setting together.

1. Select [CAMERA RESET] option.
2. Press "SET" button to reset the camera setting to initial setting.
3. Select [SAVE ALL] option on the [SETUP MENU] menu. Press "SET" button.

```
SETUP MENU

NR                        ↵
CAMERA ID           OFF
SYNC                    INT
LANGUAGE           ENGLISH
CAMERA RESET



BACK ↵
EXIT ↵          SAVE ALL
```
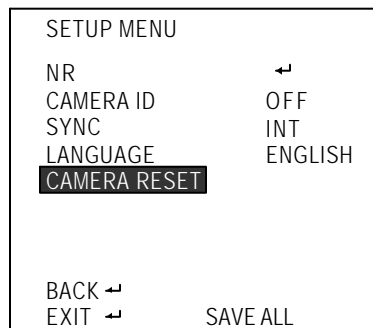
SPECIFICATIONS

D/N ATR 700TVL VARI-FOCAL IR CAMERA						
Model No.			CMR7284X3.6N/P	CMR7284X2.4N/P	CMR7288X3.6N/P	CMR7288X2.4N/P
Lens	Focal Length		3.3 ~ 12mm	9 ~ 22mm	3.3 ~ 12mm	9 ~ 22mm
	Iris		F1.4			
	Angle of view	H	89.8°~ 23.9°	32.1° ~ 13.1°	89.8°~ 23.9°	32.1° ~ 13.1°
		V	63.6°~ 17.9°	23.3°~ 9.8°	63.6°~ 17.9°	23.3°~ 9.8°
		D	125.7°~ 29.9°	41.9°~ 16.3°	125.7°~ 29.9°	41.9°~ 16.3°
Power Input Voltage			AC24V (±10%)		AC100~240V	
System			NTSC or PAL			
Pick Up Element			1/3" Exview HAD CCD Sensor			
Effective Pixels			976(H) x 494(V) [NTSC] 976(H) x 582(V) [PAL]			
Chip Size			5.58mm(H) x 4.67mm(V)			
Horizontal & Vertical Sync. Frequency			15.734 KHz / 59.94Hz [NTSC] 15.625 KHz / 50Hz [PAL]			
Scanning System			2:1 Interlace			
Menu Control			OSD Control			
Sync. Mode			Internal			
Infrared Cut Filter			Auto Selectable, Automatic Switch From Color Mode to Monochrome			
Resolution			Color: 700TV Lines, Mono: 750TV Lines			
Minimum Illumination	Color		0.045Lux / F1.4			
	Mono		0.009Lux / F1.4			
	IR On		0Lux			
S/N Ratio			More Then 50dB (AGC-OFF)			
Auto Gain Control			AUTO / MANUAL			
White Balance			ATW / PUSH / USER1 / USER2 / ANTI CR / MANUAL / PUSH LOCK			
Shutter	Auto		1/60(1/50)S ~ 1/100,000S			
	Manual		1/60(1/50)S, 1/100(1/120)S, 1/250S, 1/500S, 1/1,000S, 1/2,000S, 1/4,000S, 1/10,000S			
Adaptive Tone Reproduction	Luminance		LOW / MID / HIGH			
	Contrast		LOW / MIDLOW / MID / MIDHIGH / HIGH			
Back Light Compensation			BLC / HLC(High Light Compensation) / OFF			
Noise Reduction			Y / C /Y/C /OFF			
Picture Adjust			MIRROR / BRIGHTNESS / CONTRAST / SHARPNESS / HUE / GAIN			
Privacy Masking			ON / OFF			
Privacy Masking Zone			8 Zones			
OSD Language			ENGLISH/JAPANESE/GERMANS/FRENCH/RUSSIAN/PORTUGUESE/SPANISH/SIMPLY CHINESE			
Video Output			CVBS 1.0Vp-p, 75ohm			
Gamma Characteristic			=0.45			
Power Consumption			14W			
Operating Temperature			-10 ~ +50 (14 ~ 122)			
IP Rating			IP66			
Window			78 Heat Resistant Glass			
Infrared LED	Peak Wavelength		850nm			
	Beam Spread		30°			
	Radiant Distance		70M			
Dimension			Body:120mm(W) x 112mm(H) x 328mm(D), Bracket: 211.5mm(L)			
Weight			2000g			

Design and specifications are subject to change without notice.