# 54G2HN / 54G2HP   CAMERA  INSTRUCTION

## SPECIFICATION

| MODE NO. | | MTV-54G2HN | MTV-54G2HP |
|---|---|---|---|
| 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 | 1.5 Lux      ( F1.2, 5600ºK) | |
| | Start light Mode | 0.03 Lux      ( F1.2, 5600ºK ) | |
| 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 ºK | |
| B.L.C. FUNCTION | | Super BLC,48 zone BLC | |
| GAMMA CORRECTION | | 0.45 | |
| AGC | | AUTO (18dB max) | |
| ALC | | AUTO / FIX | |
| IMAGE NEGATIVE | | Select by OSD menu | |
| 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.    /    MANU : 8 step | |
| LENS | | Canon 22X optical ZOOM LENS ,F1.6~3.7,f=3.7~85.1mm | |
| MOTOR- ZOOM / FOCUS / IRIS | | 500,000 times life | |
| ZOOM | | 220X    (22X optical 10Xdigital) | |
| FOCUS | | Auto / Manual | |
| POSITION | | 64 Position    (Zoom   Focus) | |
| VIDEO OUTPUT | | Composite & Y/C output 1.0Vp-p at 75 ohm | |
| CONTRAL FUNCTION | | Dry Switch , RS-232C(Drive option) , OSD control | |
| COMMUNICATION BAUD RATE | | 9600 BPS | |
| OPERATION TEMPERATURE | | -10    TO 50 | |
| OPERATIONAL   HUMIDITY | | within 85   RH | |
| POWER   SUPPLY | | DC12V±1V / 3.6W(Max) | |
| DIMENSIONS | | | |

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

Dimension    (Unit : mm)
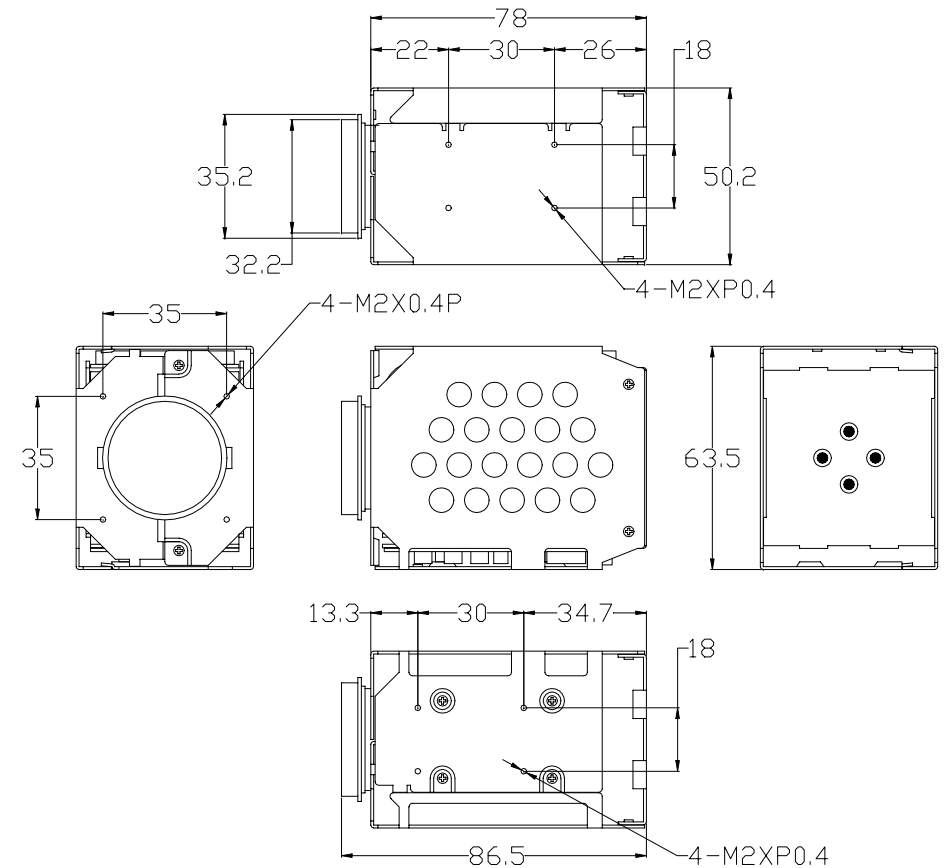
## CONNECTOR
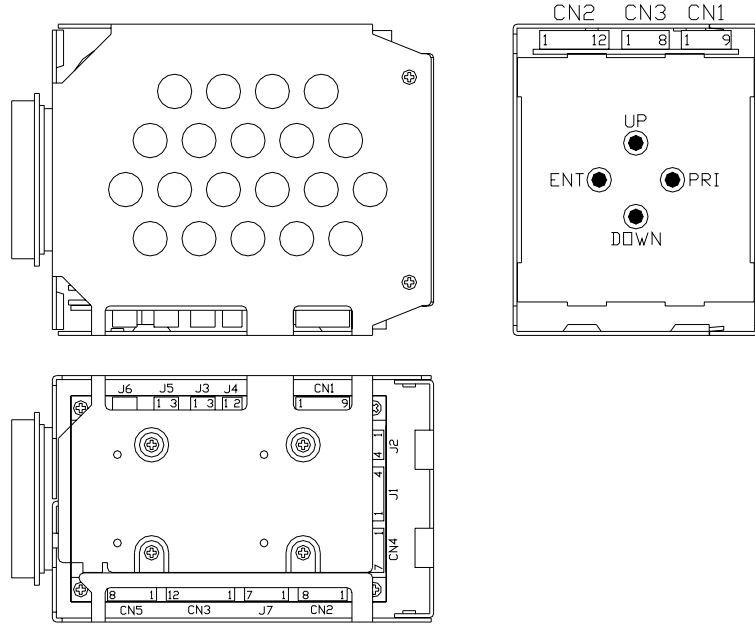


### MAIN BOARD (CONNECTOR TO OPTION BOARD)

| CN1 | | | CN2 | | | CN3 | |
|---|---|---|---|---|---|---|---|
| 1 | RS232C RXD (3.3V) | 1 | ALARM IN (L=Alarm) | | 1 | GND | |
| 2 | RS232C TXD (3.3V) | 2 | +5V (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 | 3.3V (POWER OUT) | |
| 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) | | | | |
| P1~P3 H=3.3V± 10% L=0V± 10% | | 10 | ENT (OSD ENTER) | | NOTE1 | | |
| | | 11 | DW (OSD DOWN) | | | | |
| | | 12 | UP (OSD UP) | | | | |

NOTE1
CN3 – P2   OPEN IS OFF    0V~0.7V=L( )    2.3V~3V=H ( )
CN3 – P3   OPEN IS OFF    0V~0.7V=L(INF)    2.3V~3V=H (NEAR)
CN3 – P4   OPEN IS OFF    0V~0.7V=L(WIDE)    2.3V~3V=H (TELE)

CN2-P4,P5,P6,P7,P8 & CN3-P6,P7,P8 OPEN IS 3.3V
**H=3.3V± 10% / L=0V± 10%**

### OPTIOM BORARD

| | J1 | | J2 | | CN4 |
|---|---|---|---|---|---|
| 1 | +12V (POWER IN) | 1 | GND | 1 | ZOOM+ |
| 2 | GND | 2 | GND | 2 | ZOOM- |
| 3 | VIDEO - OUT | 3 | Y - OUT | 3 | FOCUS+ |
| 4 | GND | 4 | C - OUT | 4 | FOCUS- |
| | | | | 5 | IRIS+ |
| | | | | 6 | IRIS- |
| | | | | 7 | ------ |
| | | | | CONNECTOR TO LENS CONTROL BOX USE ±6V~±12V | |

| CN1 | | CN2 | | CN3 | |
|---|---|---|---|---|---|
| P1~P9 | MAIN – CN1 | P1~P8 | MAIN – CN3 | P1~P12 | MAIN – CN2 |
| CONNECTOR TO MAIN BOARD | | | | | |

| | CN5 | | J7 | | J5 | | J3 | | J4 | J6 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | PRI – (OSD) | 1 | GND | 1 | GND | 1 | GND | 1 | AC-IN | |
| 2 | ENTER – (OSD) | 2 | Position-Bit5 | 2 | RXD | 2 | TXD | 2 | AC-IN | |
| 3 | DOWN – (OSD) | 3 | Position-Bit4 | 3 | TXD | 3 | RXD | | | |
| 4 | UP – (OSD) | 4 | Position-Bit3 | RS-232C TTL Level Not Driver | | RS-232C Include Driver | | AC Signal Input for LINE-LOCK | | NOT RELEASE |
| 5 | H-REV | 5 | Position-Bit2 | | | | | | | |
| 6 | V-REV | 6 | Position-Bit1 | | | | | | | |
| 7 | ALARM - IN | 7 | Position-Bit0 | | | | | | | |
| 8 | GND | | | | | | | | | |

[ALARM-IN] trigger input can be select two function either "image-freeze" or "focut to set position" , by OSD-menu
[CN5] Input-PIN connect to GND the function is active



9P-DSUB
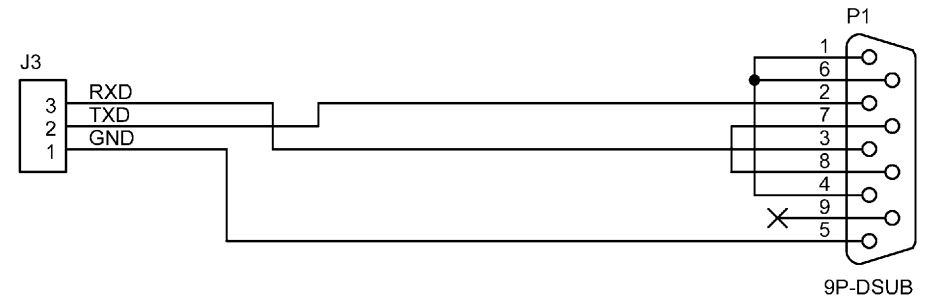
# OSD FUNCTION SPECIFICATIO

[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.**

[01]. MAIN MENU
[02]. IRIS SELECT MENU
[03]. BLC SELECT MENU
[04]. AGC, SENS SELECT MENU
[05]. COLOR SELECT MENU
[06]. APC SELECT MENU
[07]. LENS SELECT MENU
[08]. REV. SELECT MENU
[09]. POSITION SELECT MEMU
[10]. TITLE SELECT MENU
[11]. PRESET SELECT MENU
----- NEXT PAGE -----
[12]. MARK MENU

[01]. MAIN MENU



Push [ENTER] 2 senc, get into the main menu
There are 10 items on the main menu, by up / down key to select item and push [ENTER] key to get into sub-item menu.

[02]. IRIS SELECT MENU
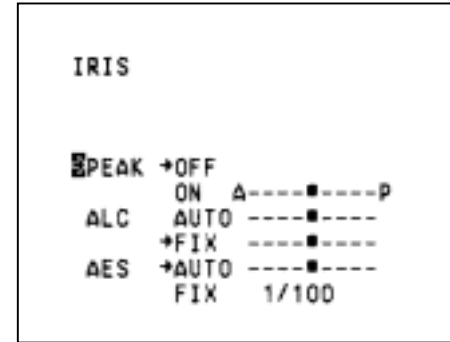


This is used to control the iris & shutter speed of the lens. It included 3 items "PEAK", "ALC", "AES".
"PEAK" is used to control the reaction of auto iris, which is based on the average light of picture signal or the light rate of the peak.
Please refer to [Fig 2-1] chart.
"ALC" is used to select AUTO or MANUAL function. Please refer to [Fig 2-1] chart.
"AES" is used to select electronic shutter be AUTO or MANUAL function. Please refer to [Fig 2-1] chart.
(MANUAL: [OFF]   [1/100(1/120)sec]   [1/250sec]
[1/500sec]   [1/1000sec]   [1/2000sec]   [1/4000sec]
[1/10000sec]   )

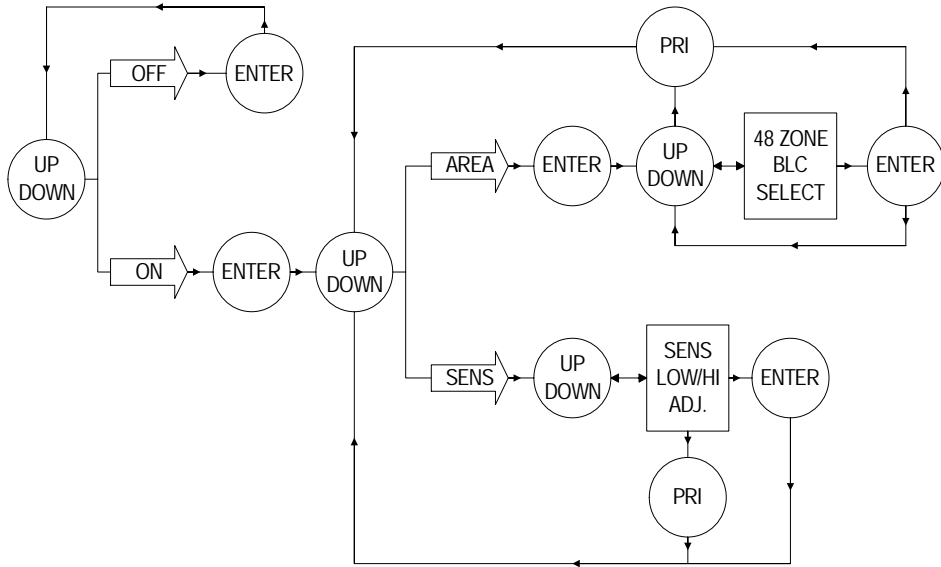After setting, push [PRI] key to go back to the main menu page.
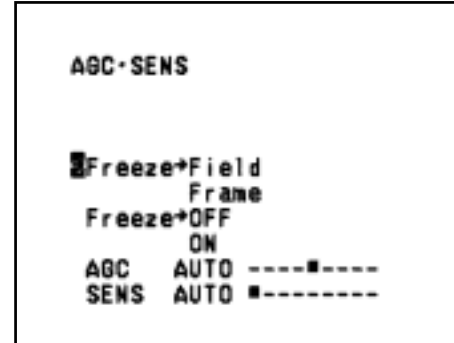
Fig 2-1

## [03]. BLC SELECT MENU

```
BLC


   OFF
    ON
   →AREA←
     SENS LOW ■------- HI
```
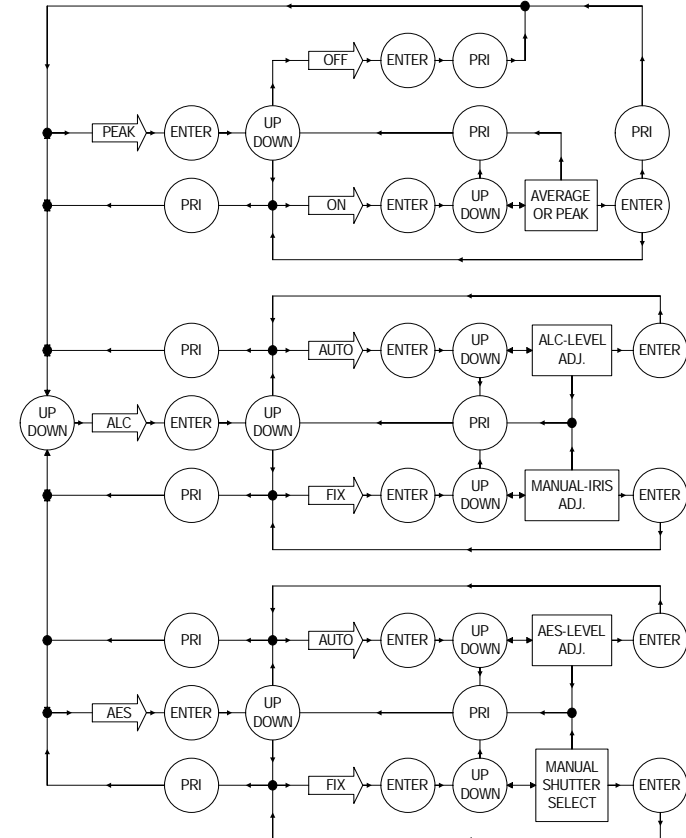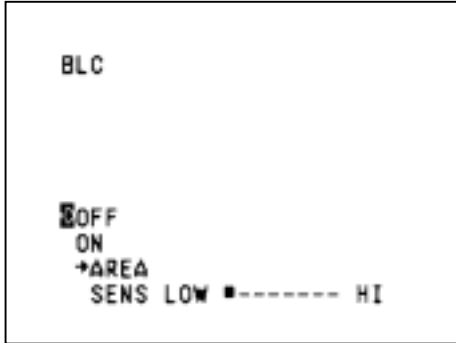
This is used to control "BLC" (Back Light Compensation), **"ON" / "OFF"**
**"ON"** has 2 sub-items: "AREA", "SENS"
  "AREA" : 48 BLC zones can be set separatly.
    According to the mask area (BLC zone) signal
    to decide the iris and shutter speed.
  "SENS": Is used to enhance the BLC effect.
Please refer to [Fig 3-1] chart.
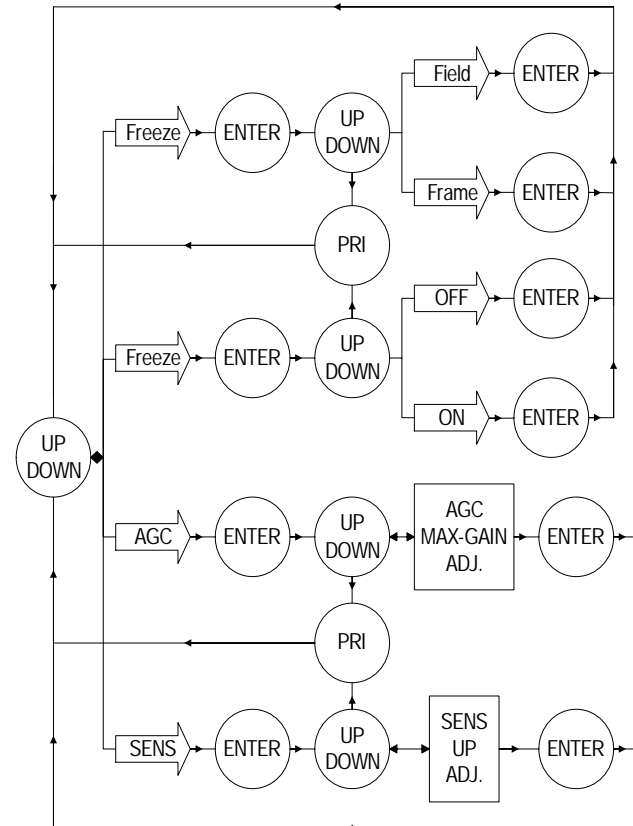After setting, push [PRI] key to go back to the main menu page.

Fig 3-1



## [04]. AGC, SENS SELECT MENU

```
AGC·SENS


 ■Freeze→Field
          Frame
  Freeze→OFF
          ON
  AGC    AUTO ----■----
  SENS   AUTO ■---------
```

This is used to select **"FREEZE"** and **"AGC"**, **"SENS"**, function.
"FREEZE": can be select "Field" or "Frame" two mode,and ON (Freeze)/OFF(Unfreezef)
"AGC": To adjust auto gain control: 0dB，2.25dB，4.5dB，6.75dB，9dB  11.25dB  13.5dB  15.75dB  18dB, 9 steps adjustable.
"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.
Please refer to [Fig 4-1] chart.

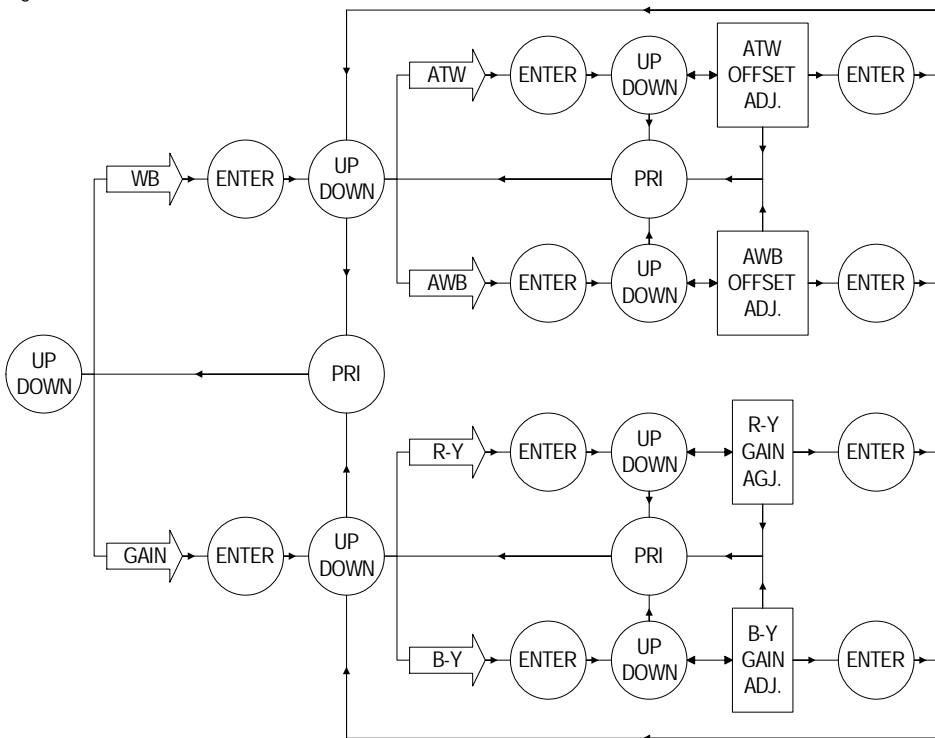After setting, push [PRI] key to go back to the main menu page.

Fig 4-1

[05]. COLOR SELECT MENU

```
COLOR


■WB      →ATW R----■----B
          AWB R----■----B
   GAIN →R-Y  ----■----
          B-Y  ----■----
```
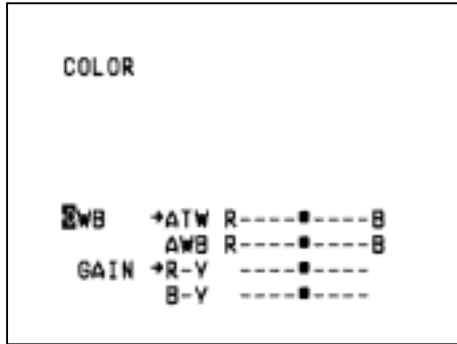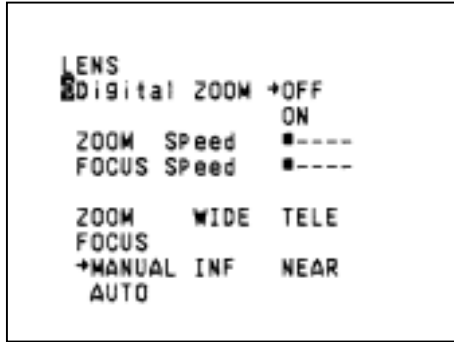
This is used to control the white balance and the gain rate of "RED" & "BLUE" color.
"WB": White balance control: "ATW" / "AWB"
ATW: Auto trace white balance
AWB: One push white balance. Push "ENTER"
          key "AWB" will start flicker, until flicker stop
          it will lock the current color temperature at the
          same time.
"GAIN":The gain rate of "RED" & "BLUE" can be
          adjusted separately.
Please refer to [Fig 5-1] chart.

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

Fig 5-1



[06]. APC SELECT MENU

```
APC




■H·GAIN ------■-------
  V·GAIN ------■-------
```
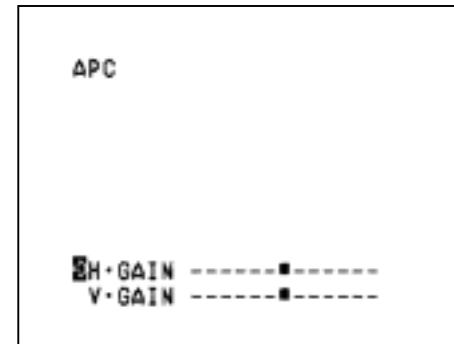
This is used to enhance the compensation of the picture quality.
"H · GAIN": Horizontal Compensation
"V · GAIN": Vertical Compensation

Please refer to [Fig 6-1] chart.
After setting, push [PRI] key to go back to the main menu page.

Fig 6-1

[07]. LENS SELECT MENU

```
LENS
◙Digital ZOOM  →OFF
                ON

   ZOOM  SPeed   ■----
   FOCUS SPeed   ■----

   ZOOM      WIDE  TELE
   FOCUS
  →MANUAL INF  NEAR
   AUTO
```
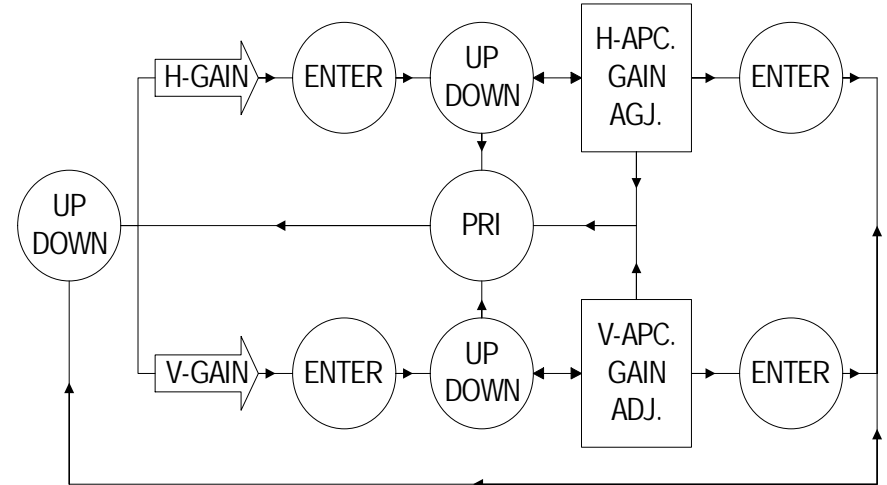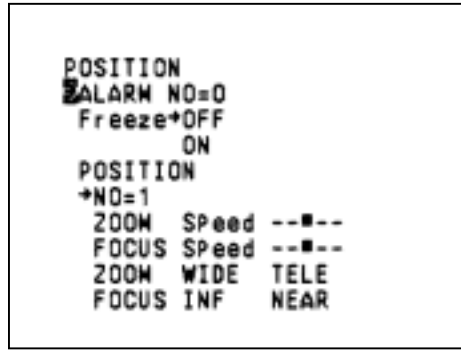
This is used to control the montion of the lens, included "Digital ZOOM" ON/OFF function.
"ZOOM Speed": Set the speed of the zoom
"FOCUS Speed" : Set the speed of auto-focus
"ZOOM": WIDE / TELE
"FOCUS": AUTO / MANUAL setting

Please refer to [Fig 7-1] chart.
After setting, push [PRI] key to go back to the main menu page.

Fig 7-1



[08]. REV. SELECT MENU

```
REV

◙POSI/NEGA
 →POSI
  NEGA

 H·REV→OFF
       ON
 V·REV→OFF
       ON
```
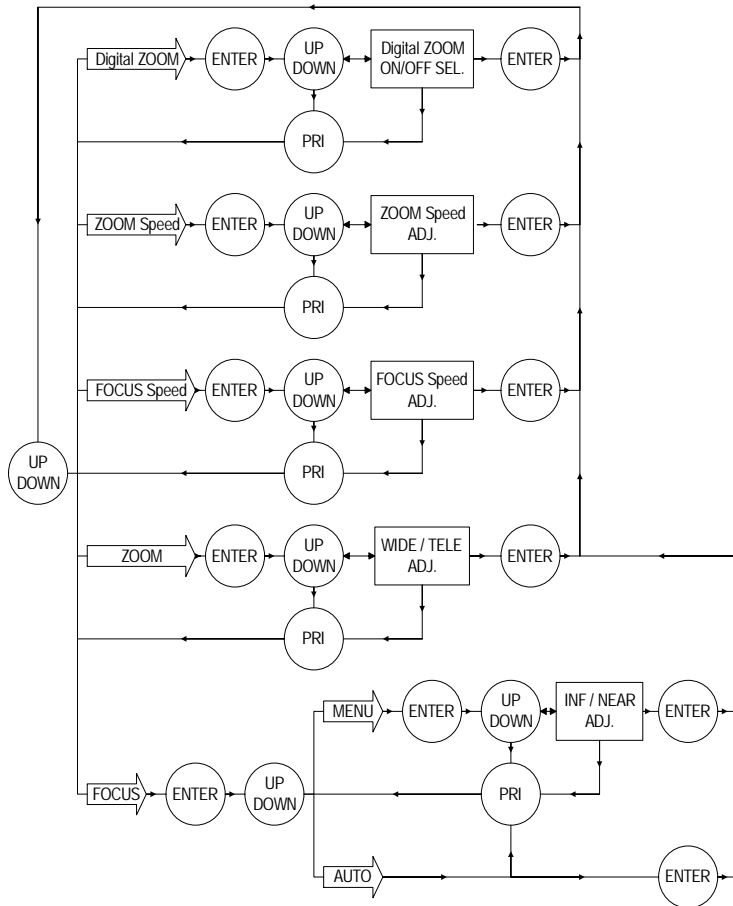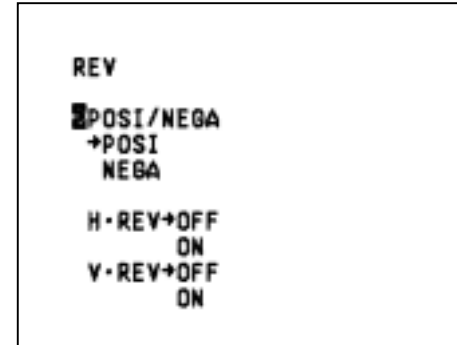
This is used to select image "Positive"and"Negative" "Horizontal Reverse"and"Vertical Reverse" function.
**POSI/NEGA**: Image positive & negative select.
**H.REV**: Horizontal Reverse (Mirror) ON/OFF
**V.REV**: Vertical Reverse (Up-side down) ON/OFF

Please refer to [Fig 8-1] chart.
After setting, push [PRI] key to go back to the main menu page.
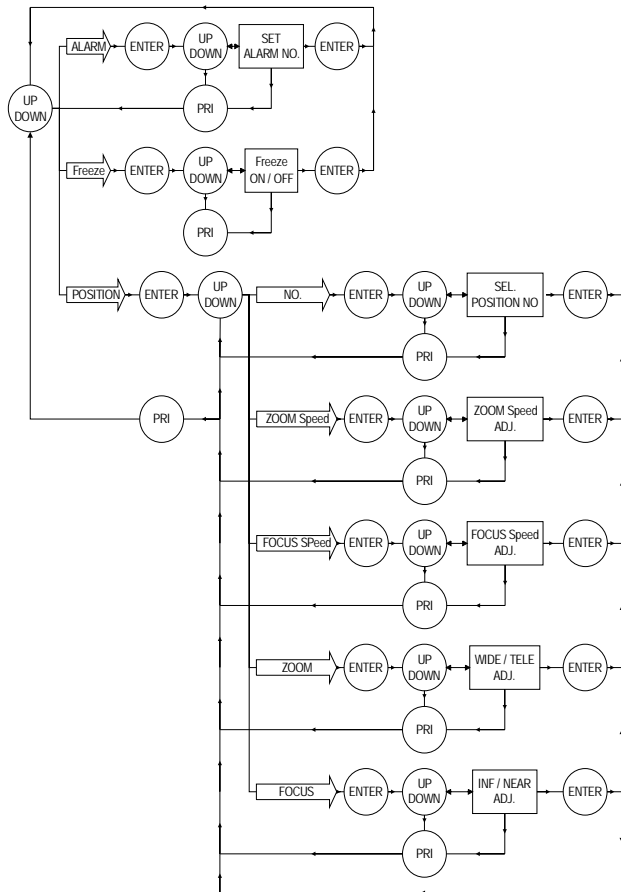
Fig 8-1

## [09]. POSITION SELECT MEMU

```
POSITION
ALARM NO=0
 Freeze+OFF
       ON
POSITION
+NO=1
 ZOOM  SPeed --■--
 FOCUS SPeed --■--
 ZOOM  WIDE  TELE
 FOCUS INF   NEAR
```
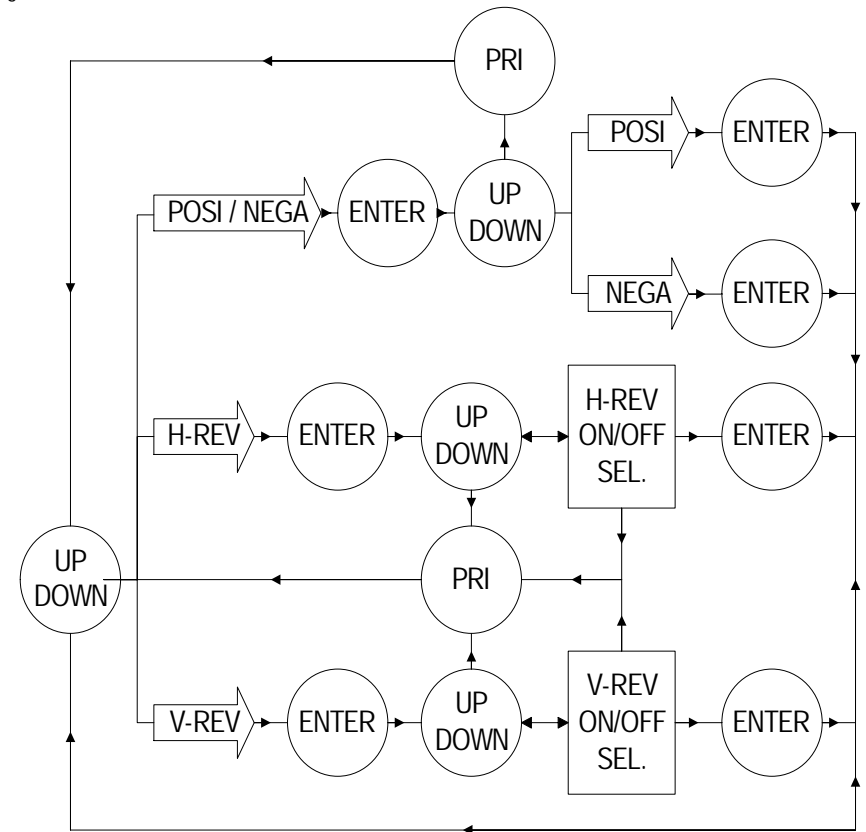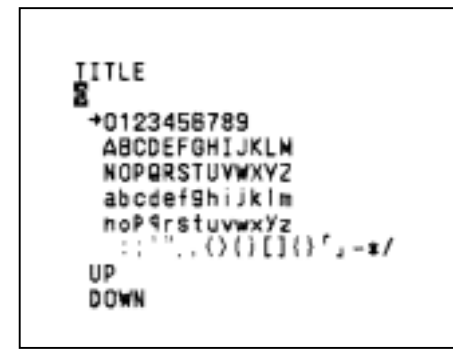
This is used to set "Alarm-in" function,either "alarm position" or "Image freeze"
Freeze is set on mode,"ALARM-IN" is freeze trigger input.
The alarm position have 64 steps (position) can be programed.
By this program,the zoom & focus may go to the exactly position where is programed.

Please refer to [Fig 9-1] chart.
After setting, push [PRI] key to go back to the main menu page.
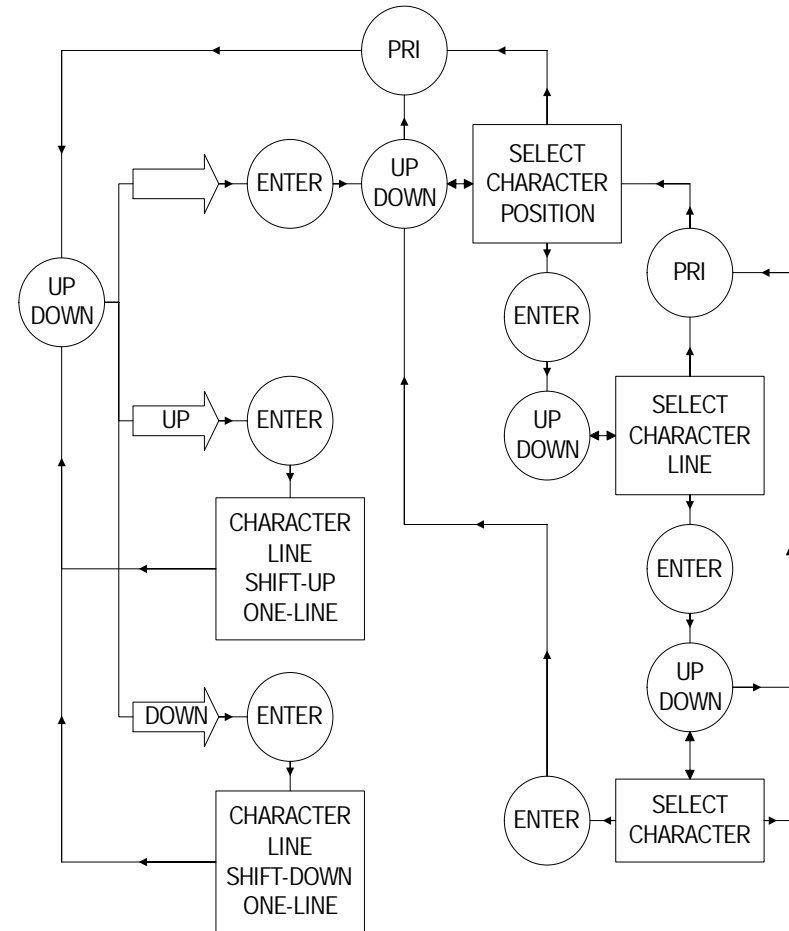
Fig 9-1



## [10]. TITLE SELECT MENU

```
TITLE
+0123456789
 ABCDEFGHIJKLM
 NOPQRSTUVWXYZ
 abcdefghijklm
 noP9rstuvwxYz
 ::'".,()(}[]{}'.-*/
UP
DOWN
```
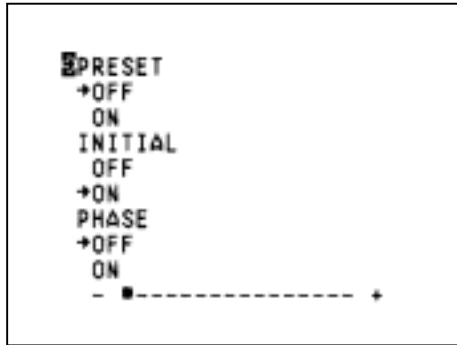
This is used to set up the ID figures & position on the screen. (Title setting)

Please refer to [Fig 10-1] chart.
After setting, push [PRI] key to go back to the main menu page.
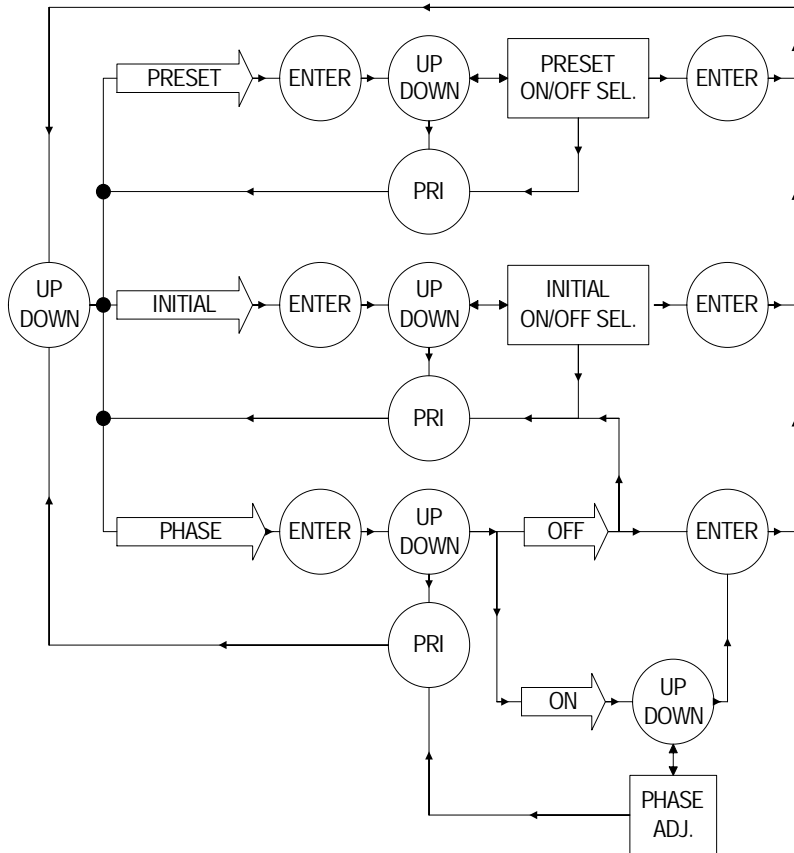
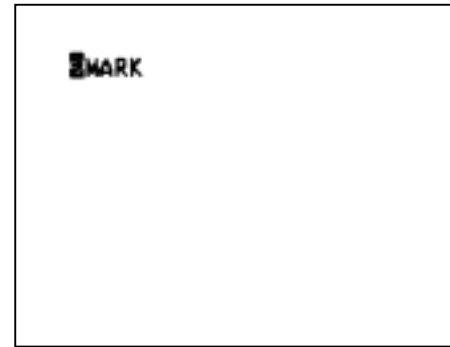Fig 10-1

[11]. PRESET SELECT MENU

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

Please refer to [Fig 11-1] chart.
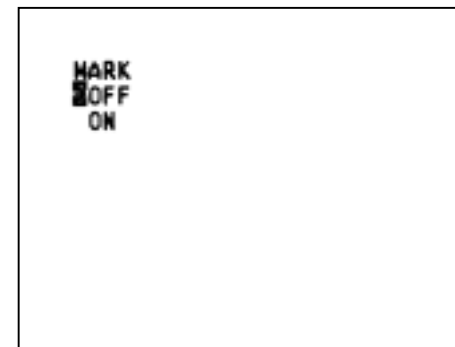After setting, push [PRI] key to go back to the main menu page.

Fig 11-1



[11]. MARK MENU

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

Push [ENTER] key into ON/OFF select menu

Please refer to [Fig 12-1] chart.

Fig 12-1