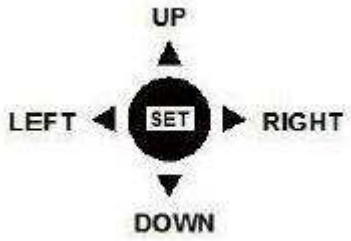
Model:650 Series OSD Manual



To enter into the cameras menu, simply push the middle button on the joystick that is located on the pigtail cable. You can then navigate the menu by pushing the directional arrows on the joystick. For your convenience, we made general recommended settings colored in green.

Exposure

- **LENS options**
  - **DC**(This camera does not utilize a DC Iris Lens, please do not choose this option)
    - **E. Shutter**: (1/60, 1/100FLK, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000, 1/100,000)This sets the value of the electronic shutter in the camera.
    - **Brightness:** (1-100) This option allows you to set the brightness of the camera video. (Default is 50)
    - **DC REF:** (001-020)
  - **ELC**(Please choose this option when using this camera, this camera utilizes an electronic iris)
    - **E. Shutter:** (1/60, 1/100FLK, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10,000, 1/100,000)This sets the value of the electronic shutter in the camera, we recommend leaving this at "Auto".The faster the shutter speed, the darker the image gets but you get less motion blur with a faster shutter. However, even at the lowest setting on this camera, motion blur is rarely a problem. Just keep the setting at auto for most scenarios.
    - **Brightness:**(1-100) This option allows you to set the brightness of the shutter. Default value is 50 and is a recommended setting, however, you may feel you need to brighten or dim the picture according to your scenario.

- **HBLC/D-WDR**– (BLC, HLI, D-WDR, Off) This section deals with how the camera reacts to adverse lighting scenario's. Most of the time you would leave this setting off.However, if you have an adverse lighting scenario, you may want to take advantage of the features that this camera has. Each one is explained below
  - **BLC (Back Light Compensation)**This is a good feature to have if you have a person or object standing in front of a bright doorway or window and they appear to be washed out. What this will do is brighten the object up in the

foreground and dim everything down in the background allowing you to see the object better in the foreground

- **BLC Mode:**(Manual, Auto) This option allow you to adjust your camera's backlight compensation. Manual allows you to select a part of the screen that you want to have BLC affected by, but please note that it generally affects the entire picture once the BLC kicks in. Please switch between manual and auto to see what best suits your scenario best.
  Manual Options:
  - Top
  - Bottom
  - Left
  - Right.
- **BLC Weight:**(Off, Low, Mid, High) – This is the intensity of how the BLC will react

- **HLI (HighLight Inverse)**This is a cool feature that will digitally black out very bright objects out of the picture, such as headlights, allowing you to see details around the areas of the bright light better. Only in very particular scenarios would you need this
  - **HBLC:**This is an extra feature of HLI. It is Highlight Backlight Compensation. And what this will do is intensify the area around the bright light to help you see the object better. If you leave this off, regular HLI will do its work and will only black out the bright lights but will not intensify the objects that are directly around the bright light. You can select the intensity of the BLC as well as the area.
    - HBLC Level: (Low, Mid, High)
    - Top (1-15): Up adjustment
    - Bottom (1-16): Down adjustment
    - Left (1-15): Left adjustment
    - Right (1-16) Right adjustment
  - **Mode:**(All Day, Night)All Day: HLI is always operating. Night: HLI will switch on during night, during the day it will be off. Very handy if you are just trying to block out headlights at night.

- **Set Level:** (001-100) (Default-10)This tells the camera how big of a “blackout” that you want when a bright light appears in the picture. The lower the number, the more blackout
- **Gray Mode:** (Gray, D. Gray, Black) Changes the color of the “blackout”
- **Mask Select:** (Mask1, Mask2, Mask3, Mask4)Set each Mask window. This allows you to select which areas of the picture you want to have this feature to be used on.
    - Mode: (On, Off)
    - Top: Adjust the window mask up.
    - Bottom: Adjust the window mask down.
    - Left: Adjust the window mask left.
    - Right: Adjust the window mask right.

- **D-WDR (Digital Wide Dynamic Range)** WDR is a very similar feature to BLC but instead of brightening the picture in the foreground, WDR simply tries to make the entire picture readable, both foreground and background
    - **D-WDR Level:** (1-20)Sets the intensity of the D-WDR

- **AGC**

  Auto Gain Control basically tells your camera when to electronically brighten up the video when light levels begin to diminish. (Off, Low, Mid, High) There is no recommended setting for this as everyone’s scenario is different, however, the default value is high.

- **3D DNR**

  3 Dimensional Digital NoiseReduction. This is a handy feature which can reduce a “noisy” picture at night or during very low light levels. On "High" mode the picture will be very clear but keep in mind this could increase "ghosting" on your screen. Please toggle this setting at night time. If you notice a nice clear picture at night with this setting as being off, then please leave it like that. However, if you notice a great deal of noise you can toggle between the strength settings to see what best suits your scenario.(Off, Low, Mid, High) (Default: Off)

- **Sense-Up**

Sense-Up is a feature that will reduce the shutter speed whenever light levels drop below a certain level to improve the night time image. Sense this camera has infrared built in, this feature does not need to be utilized and we recommend leaving this on off.(Off, Auto, x2, x4, x8, x16, x32, x64, x128, x256, x512)(Default-Auto)

COLOR

- **WB (White Balance) Mode**

  This tells the camera how to react to different color temperatures.

  - **ATW:**Auto Tracking White Balance, This feature automatically adjusts to various color temperature settings. We recommend this setting for most scenarios.
  - **Manual:** Manually set the white balance mode by letting you select individual colors to adjust to a fixed setting.
    - M. WB B (001-128)
    - M. WB R (001-128)
  - **AWC>Push:** This particular setting will adjust to the current picture and adjust accordingly. To control this, be sure to push the middle button while this feature is selected. Very rarely will anyone ever use this
  - **AWC:** Auto White Balance. This is a feature that is very similar to ATW but tracks all color temperatures as opposed to just white like ATW. We still recommend ATW as opposed to AWC

- **R-Y Gain**

  Lets you define the Red Gain starting point.
  (1-255)We recommend leaving at default value of 128

- **B-Y Gain**

  Lets you define the Red Gain starting point.
  (1-255)We recommend leaving at default value of 128

Day & Night

- **D&N Mode**

  (Color, B&W, Auto, EXT) Day and Night mode allows your camera to adjust from color in the daytime to a black and white picture at night time. Normally you will want a B/W picture at night time because the camera can give a more clear picture without having to process the colors. We recommend leaving this on "Auto"

  - **Auto**
    - **Burst:** (On, Off)This setting, when left off, will maintain the color burst signal when switching to B/W mode and ultimately create a clearer picture. This usually is set to OFF, the only reason for it to be ON is if you have an extra long cable runs and you notice a poor quality of video when the camera changes to B/W mode.
    - **Day>Night**: (1-30) This setting tells the camera when to switch over from Day Mode to Night Mode. The lower the setting, the less light it takes to switch over to Night Mode.
    - **Night>Day:** (1-30) This setting tells the camera when to switch over from Night Mode to Day Mode. The lower the setting, the less light is required for it to switch over.

      Note about Day/Night settings: Please make sure that you have your Day>Night and your Night>Day values to be spread apart enough to prevent constant switching from day/night settings during evening and morning times
    - **Dwell Time:** (1-15)Tells the camera how long to switch over whenever it senses enough light levels to do the switch. The lower the setting, the less time it will take. If you have areas that have constant rapid light level changes, you may want to increase this value.

- **EXT -** This requires the use of an external mechanism and cannot be used on this camera.
- **Color** - Keeps the camera in Daytime Color Mode
- **B&W -** Keeps the camera in B&W Night Time Mode.

- **C_Sup**

  (1-100)This setting allows you to set the color noise suppression for Night Mode. Changing this value normally has no effect on this camera.
- **A_Sup**

  (1-100)This setting allows you to change the Aperture Suppression levels for Night Mode.Changing this value normally has no effect on this camera.

Function

- **Mirror**(Off, Mirror)This option allow you to reverse or "Mirror" the current video displayed.
- **Sharpness** (1-30)This allows you to control the sharpness of your video. (Default-20)
- **LSC**(Off, On)Lens Shading Compensation can increase gain of screen angle. This is a form of AGC in which will automatically increase the light of the picture if part of the lens gets temporarily shaded by an object. We normally recommend leaving this off.
  - **(On) Set Level**: (1-30) Set LSC level.

Motion

- **Motion** (On, Off) This function will display a signal up on the screen if the camera senses motion.Please note that this is not the same thing as motion detection recording. Motion detection recording is done at your DVR, not at your camera. This is just a notification signal that shows that the camera is sensing motion. In most scenario's, people would not use this, but it's a pretty cool feature nonetheless..

- **Area Select**

  Adjust each square to cover movement exactly where you want. There are 4 area selections that you can choose from. You will notice that each area will be displayed with a pink box, the area within pink box is where the motion will be activated.

  - **Mask Mode:** (On, Off)
  - **Top**
  - **Bottom**
  - **Left**
  - **Right**

- **Sensitivity**

  (1-30)This setting controls the cameras motion sensitivity for movement. The higher the setting, the more movement it will catch.

- **Display**

  (Off, Icon, Trace)

  - **Icon:** The motion icon is displayed on the screen, showing you that the camera is detecting movement. This will simply show an icon of a running man in the upper right hand part of the screen
  - **Trace:**If you choose this, this will actually light up the whole mask area that you selected in a red transparent background whenever the motion is detected.

- **Hold Time**

  (001-015)This controls how much time the camera should wait before it tells you that there is motion. For example if you have the setting at 4, the camera will not

signal motion until 4 seconds later as long as that object is still moving within the selected mask area. If you want instant motion detection notification, then please set this at 0.

- **Alarm** – This camera does not have external alarm outputs so this feature is not utilized on this camera.

Privacy

- **Mask 1-Mask 8**– This allows you to setup blocked out privacy masks within the picture. Normally you would not need this but if you do have a private area within the cameras field of view that needs to be blocked out, you can use this feature. There are 8 selectable areas.
  (On, Off)

Setup

- **Title**
  (Off, On) If you choose to have a User Title, change this option to On, then select it. This will allow you to manually insert a title by selecting each individual character. This simply displays the title of the camera title up on the screen. Please note that you can usually do the same thing on most DVR's.
- **Manual DPC (Dead Pixel Compensation)**This feature tells the camera to compensate for any dead pixels by filling that dead pixel in with a nearby pixels color. Normally this should not ever be a problem and you can leave this off, but if it is, we recommend using the Auto Method below as opposed to this manual setting.
  (Off, Manual)
  - **White THR:** (1-255)AdjustWhite Threshold
  - **Black THR**: (1- 255)Adjust Black Threshold
  - **DPC Level:**(1-255)Controls the DPC levels.
- **Auto DPC** – Instead of using the manual method, the camera will automatically fill in dead pixels. Unless you have dead pixels, please leave this off.
  (Off, Auto)

- **DPC Level**: (1-30) Tells the camera how intense to compensate for the dead pixels
- **DPC Run:** This is how the camera automatically compensates for the dead pixels. To operate this, simply put your hand over the lens and push the enter button here to do the Dead Pixel Run.

- **OLPF**

  Optical Low Pass Filter(650, 850) – This feature is used if you choose to use different filters over the lens. Since this lens is fixed, changing this value will have no effect on the picture.

- **Monitor**

  (CRT, LCD)This option should be set to correspond with your monitor. If you have a "Bulky" monitor that looks like an old TV you should select CRT. If you have a new TV (LCD or Plasma), select LCD here.

- **Gamma -** Gamma is an electronic correction carried out by the camera circuitry to balance the brightness seen by the camera to that of the monitor. Normally .45 is the best value to set this on but please adjust to your desired level.
  (0.45, 0.60, 1.00, User)
  - **User > Levels**: (0.20-1.00) Adjust the gamma levels to your specific needs.

System

- **Camera ID** – This feature cannot be utilized on this camera since it has no RS-485 controls
- **Communication** – This feature cannot be utilized on this camera since it has no RS-485 controls

- **Language**

  (English, Chinese)

Exit

- **Factory Set**

  (Off, On) This option restores the default factory settings for you camera.

- **Save & Exit**

  Save your changes and exit the On Screen Display.

- **Exit**

  Exit without saving your changes