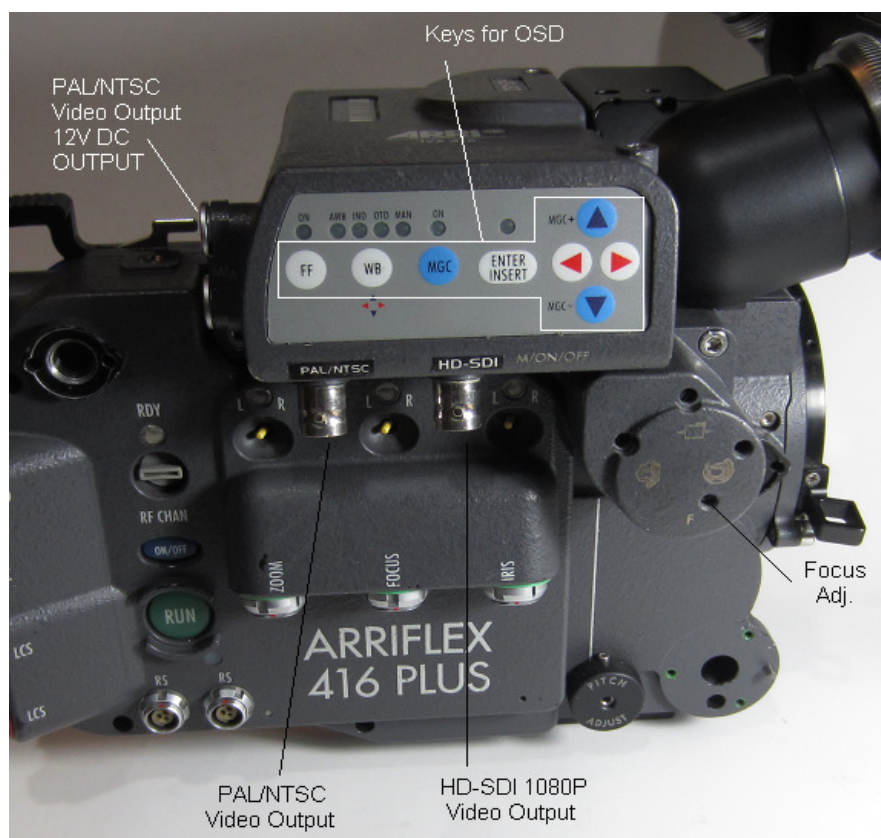


## HD-SDI 1080P conversion for the Arriflex 416 IVS

After the conversion, the IVS has a digital HD-SDI video output and analog SD/HD video outputs. It produces a near flicker-free image for a camera speed of 24fps, and a flicker-free image for camera speeds of 25fps, 29.97fps, 30fps.

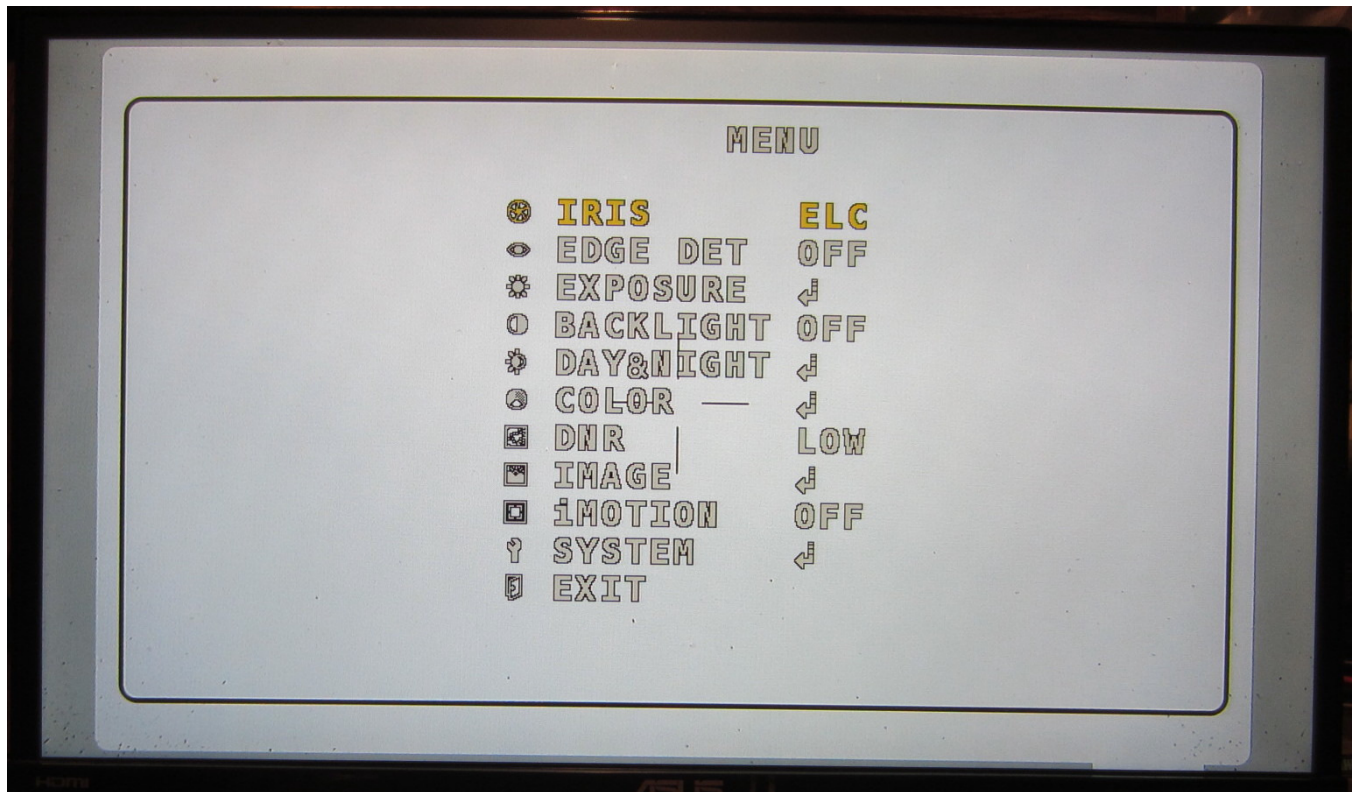
### Specifications:


- HD Sony image sensor - active picture elements: 1920 (H) x 1080 (V)
- HD SDI formats: 1080P 60/50, 1080i 60/50, 1080P 30/25, 720P 60/50
- HD EX-SDI formats: 135M, 135M+, 270M
- Analog formats: PAL/NTSC, HD analog 1080P 30/25: AHD, TVI, CVI
- Minimum illumination: 0.1 Lux at F1.2 and 1080P 25
- Sync. system: internal
- Mode: color or b&w
- Electronic shutter: auto or manual
- White balance: auto or manual
- Auto gain control (10 levels) on/off
- Sharpness selectable from 0 to 10
- Dynamic noise reduction - DNR
- The image enhancement for low contrast
- Lines/shading box/polygons generator
- Digital zoom
- Gamma: selectable 0.45, 0.55, 0.65, 0.75
- Patterns to calibrate an HD monitor
- Power consumption: 3W



- The right BNC connector is SDI digital video output.
- The left BNC and upper 4-pin Fischer connectors are analog video outputs. You can get HD analog video signal in AHD, TVI or CVI formats by setting these formats on ANALOG MODE from SYSTEM/OUTPUT. For a regular SD analog PAL/NTSC monitor only analog CVBS format will work.
- The lower 4-pin Fischer connector is 12V DC output only.

After pressing the ENTER/INSERT key you can enter the video setting on-screen display (OSD) MENU.



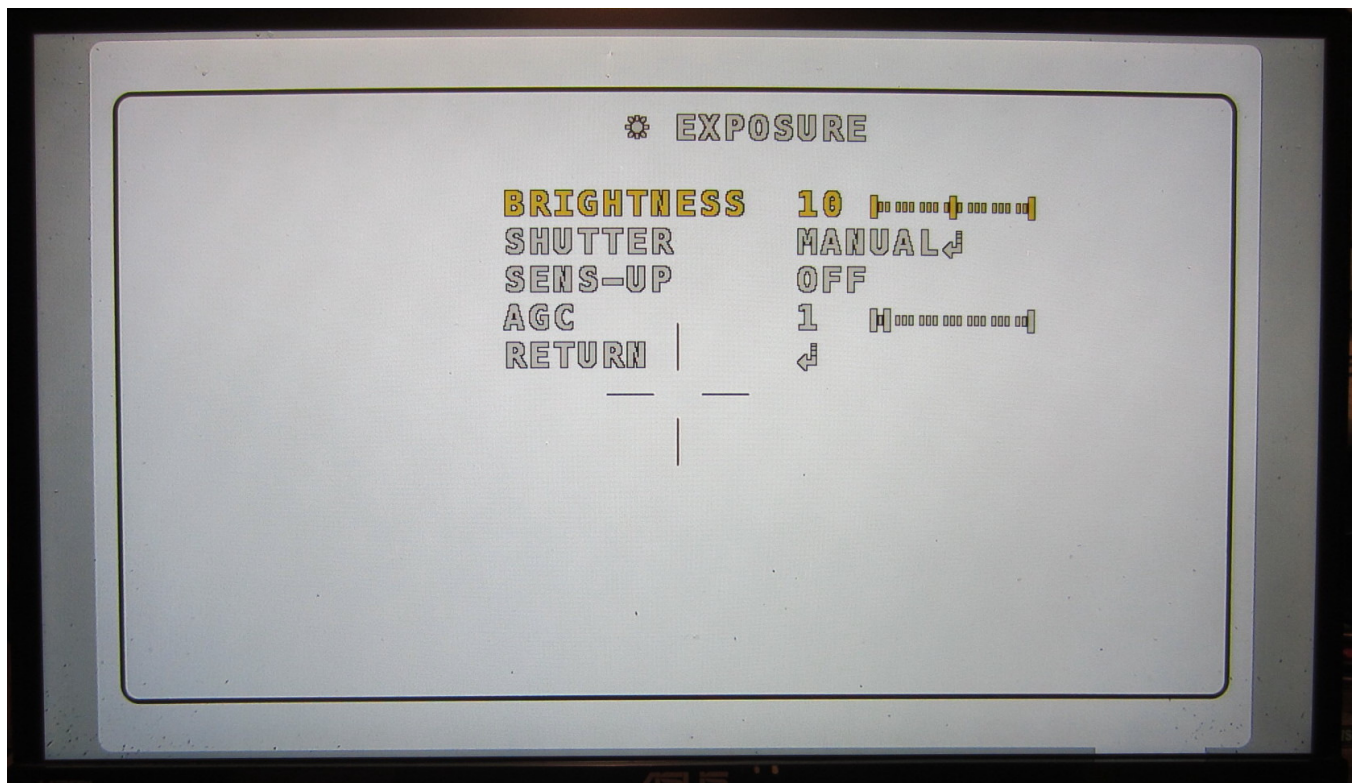
The right-angled arrow  displayed in the MENU indicates to press the ENTER/INSERT key to get to the next level of settings.

COLOR function - white balance can be set in several ways: PRESET, MANUAL (3000K, 5000K, 8000K) and AUTO.

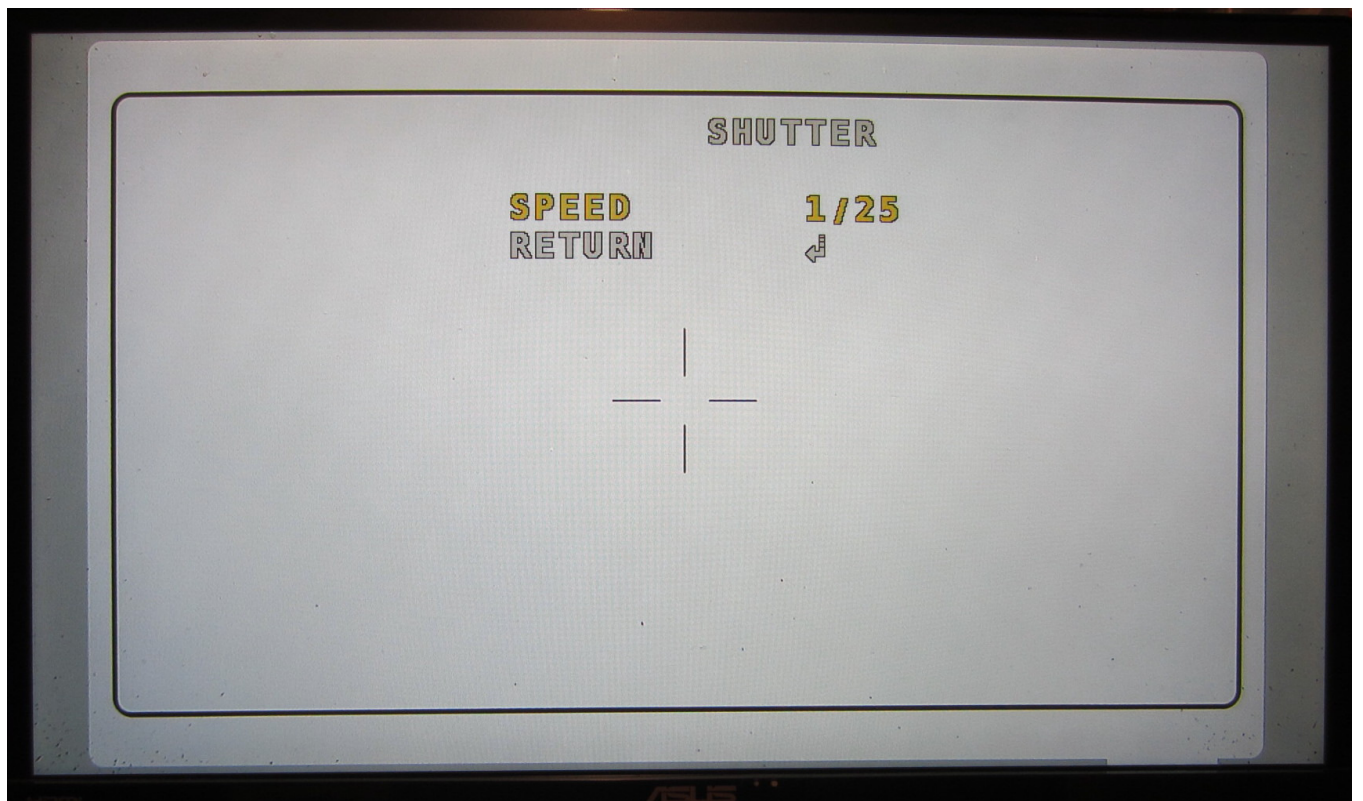
DNR function - dynamic noise reduction for good lighting can be set to LOW or turned off.

To minimize image flickering on the monitor when the camera is operating 24 fps, keep the SYSTEM/OUTPUT/FREQ at 50Hz and FRAME RATE at 1080P 25 as well EXPOSURE/MANUAL/SHUTTER SPEED at the 1/25 settings. In this setting, 1/25 the monitor image does not flicker when the camera is operating at 25 frames per second. To get a flicker-free image on the monitor for 29.97fps or 30 fps camera speed, set SYSTEM/OUTPUT/ FREQ at 60Hz and CONFIRM YES by pressing for 2 seconds the MENU/STORE knob and also setting the EXPOSURE/MANUAL/SHUTTER SPEED to 1/30.

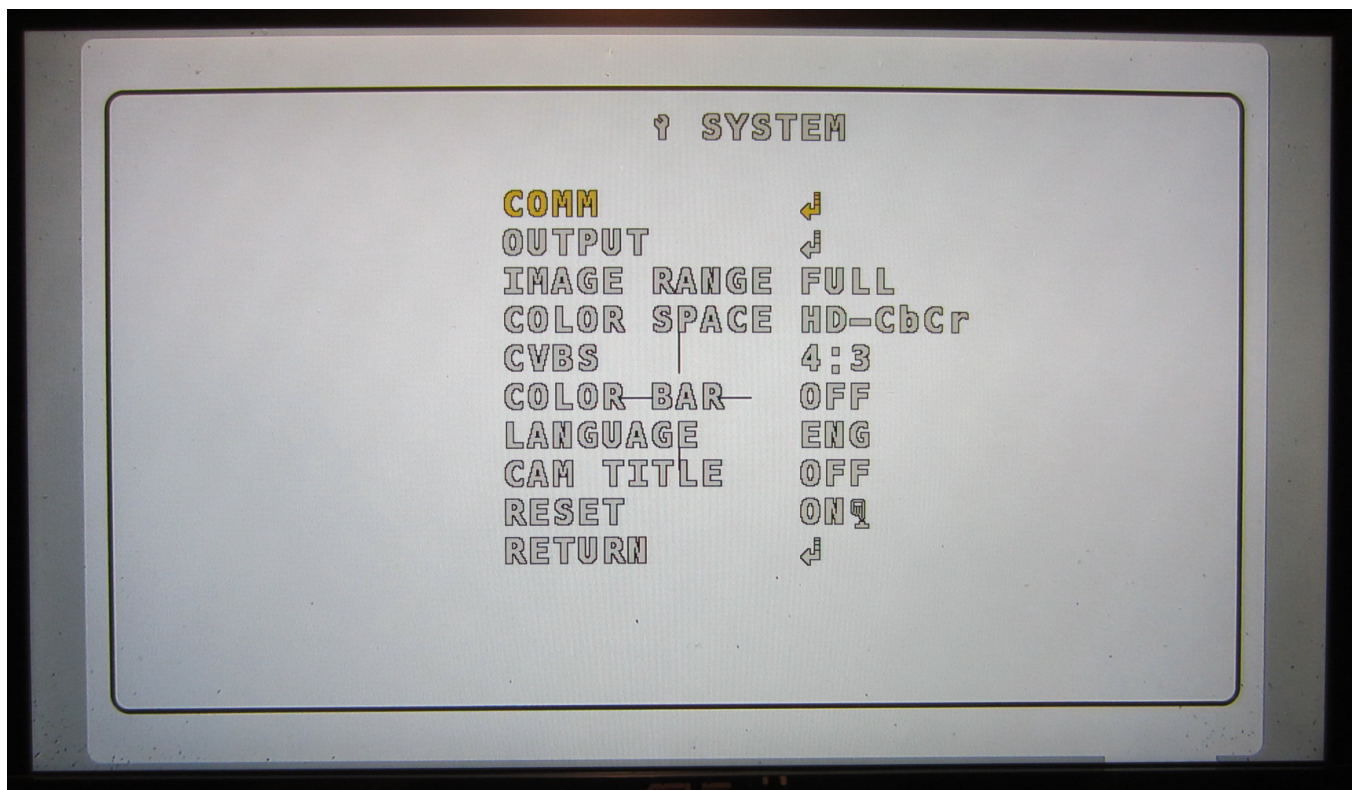




In very low light you can set SHUTTER to AUTO and SENS-UP to X2 to get the image double exposed.

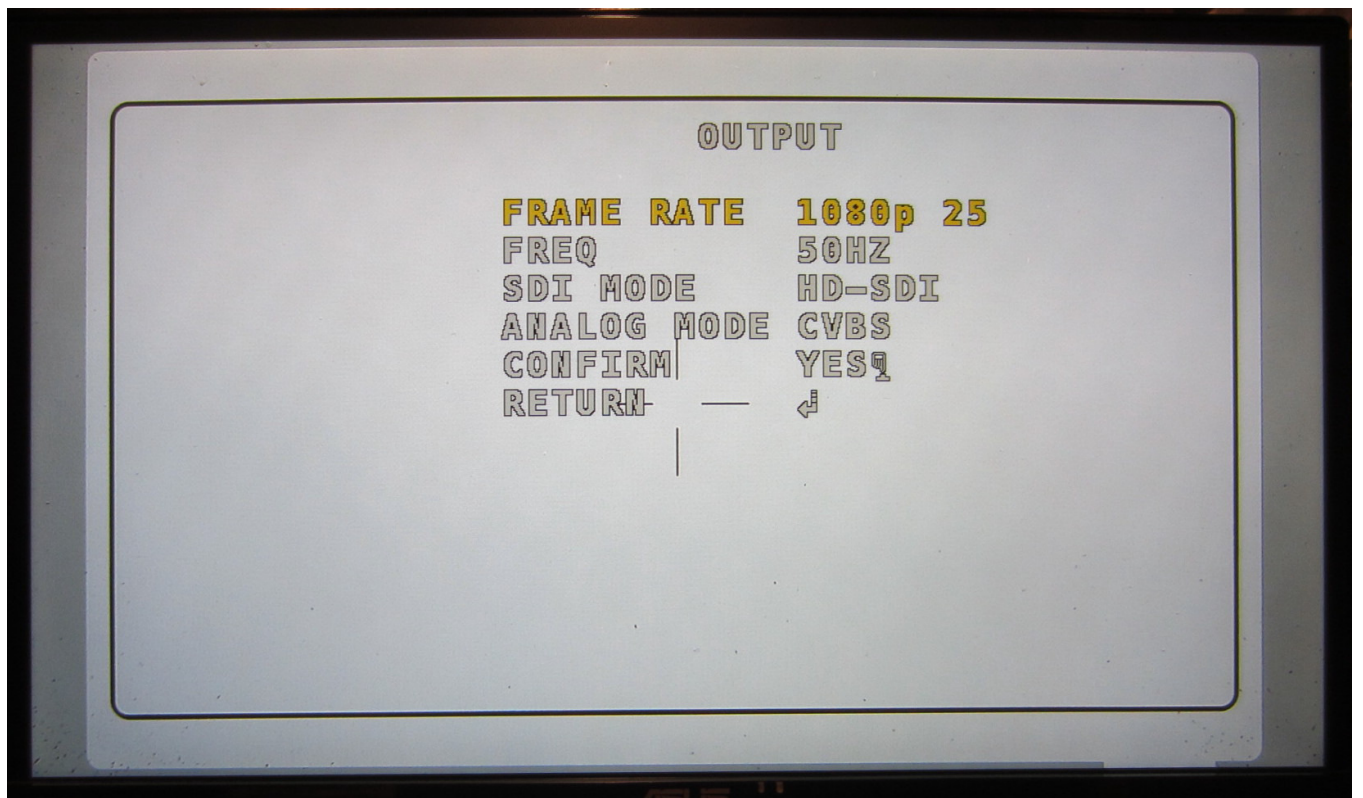






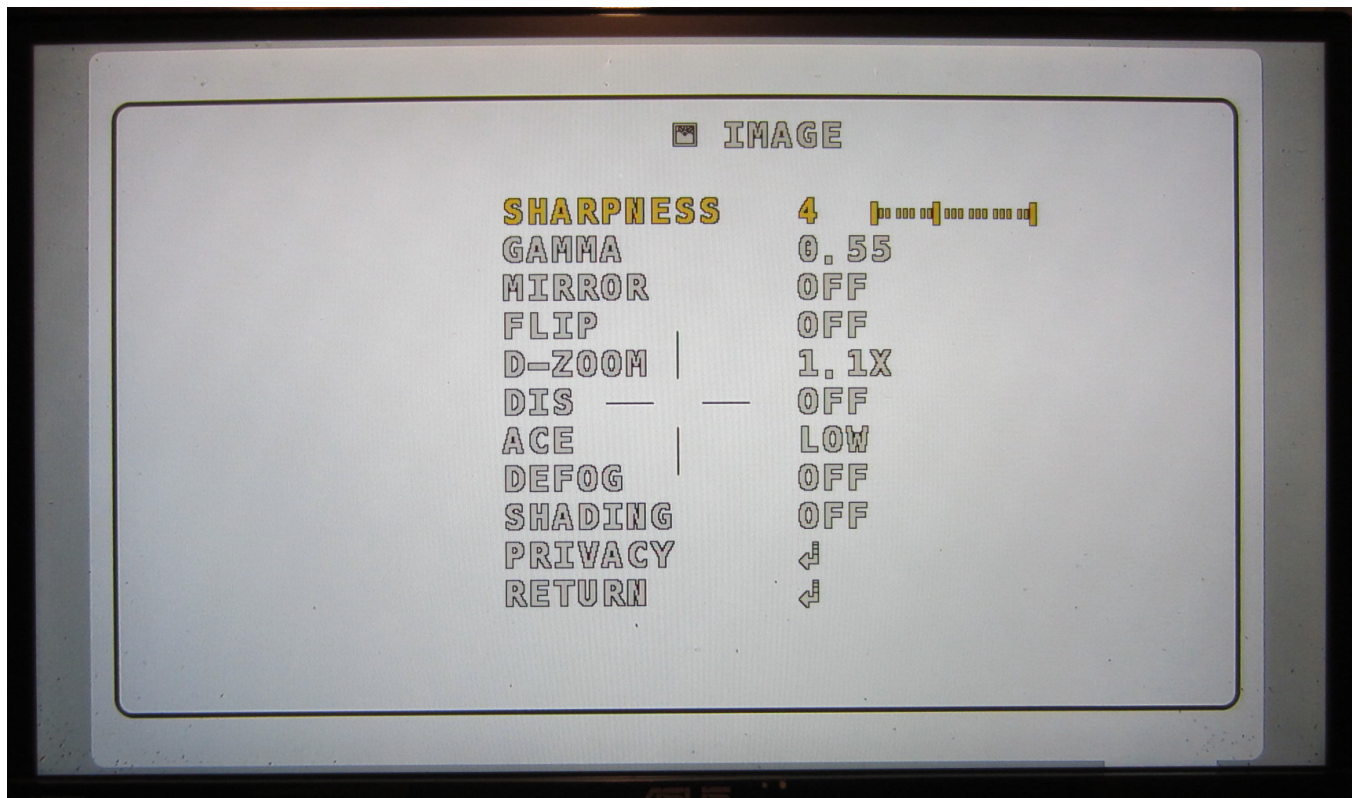
By keeping the 4:3 CVBS frame ratio for SD PAL/NTSC signal and setting the ratio at 16:9 on the SD monitor the frame will be similar to that one on the HD monitor.

The SYSTEM/RESET function clears the current MENU setting and introduces the default setting in which the HD system will automatically change the setting to 60Hz and SD to NTSC. The electronic frame markers (IMAGE/PRIVACY) and text will be deleted and you will have to set these options again. **We do not recommend using the RESET function when the IVS is working well.**



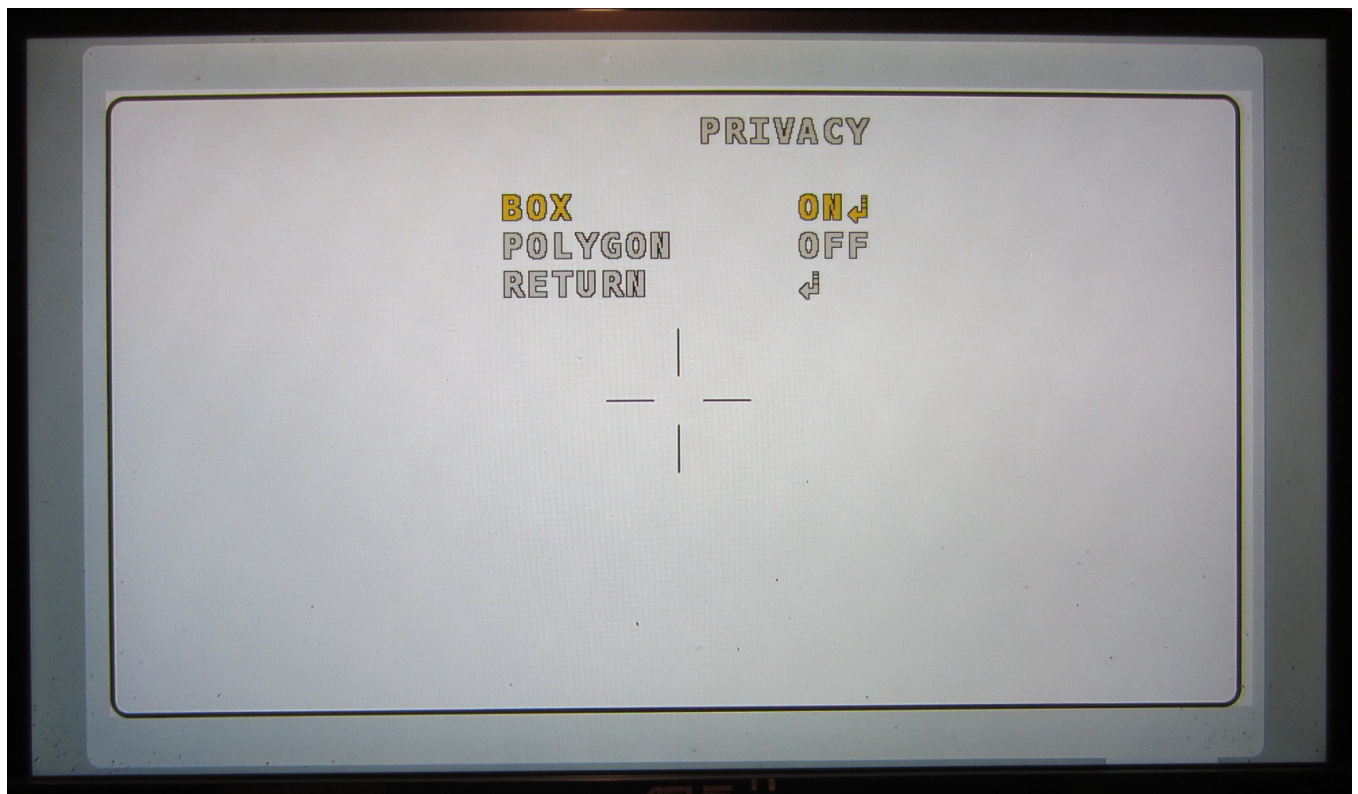


Features that improve image quality: SHARPNESS, GAMMA, ACE-Adaptive Contrast Enhancement, DEFOG, SHADING.

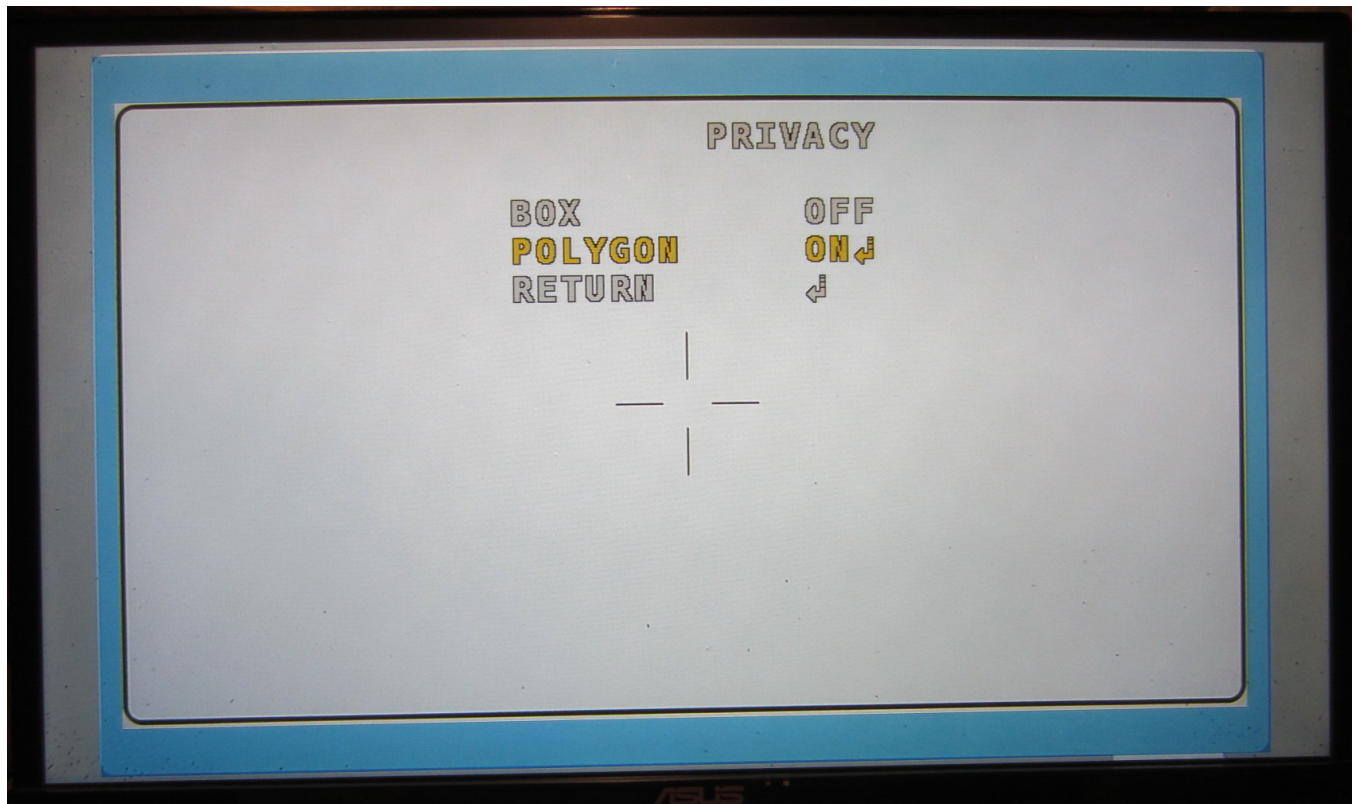


PRIVACY - generators:

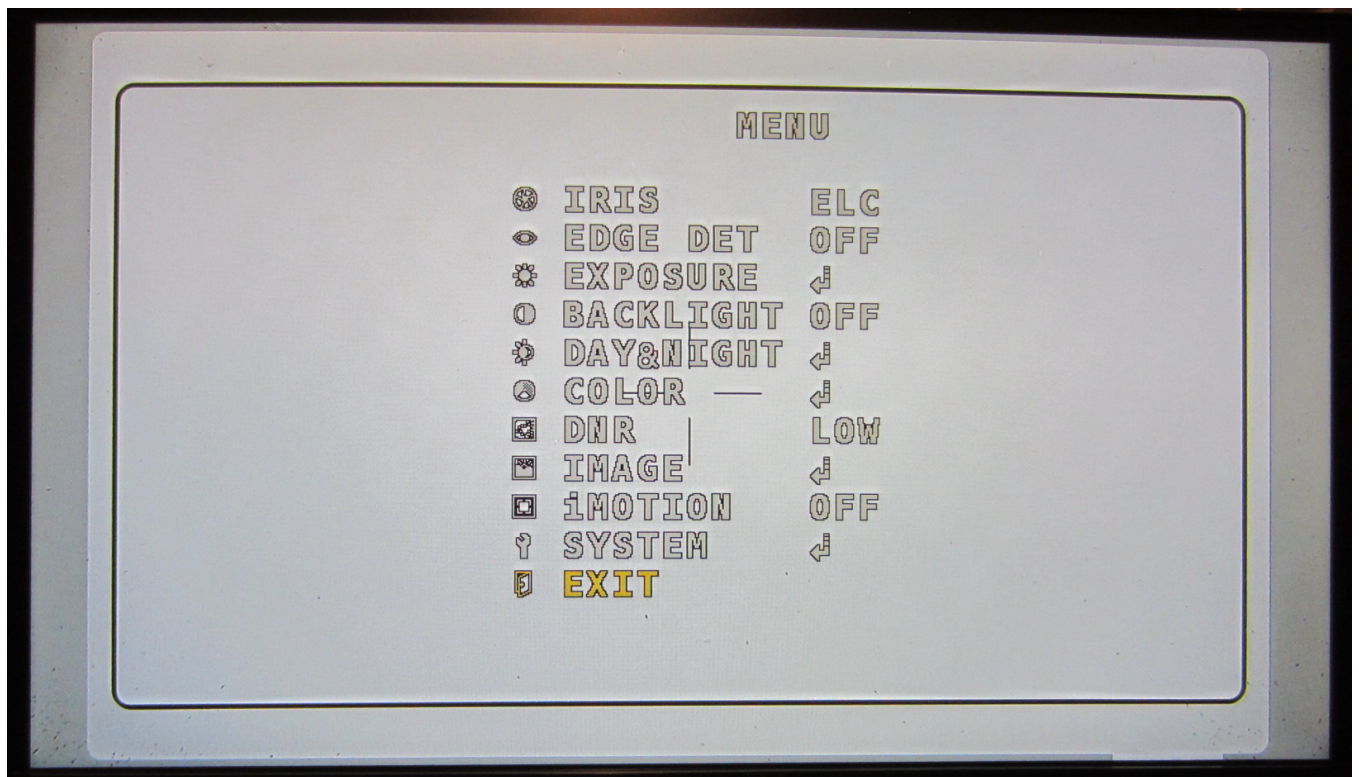
- BOX - both horizontal and vertical lines or shading rectangles. The generator can display 16 lines or shading rectangles on the monitor (0-15 ZONE NUM). To get horizontal lines set V-SIZE to 0. To get vertical lines set H-SIZE to 0.



- POLYGON - you can use the polygons as frame markers or as a shading polygons. The generator creates 8 shading polygons (0-7 ZONE NUM). You can set the level of transparency. The vertices for each polygons are set according to the key: (POS0-X, POS0-Y) - upper left vertex, (POS1-X, POS1-Y) - upper right vertex, (POS2-X, POS2-Y) - lower right vertex, (POS3-X, POS3-Y) - lower left vertex.



Your setting will be saved on MENU/EXIT.





If the ENTER/INSERT key was not pressed and MENU is not displayed, then:

- The UP or WB momentary keys are setting AWB (WB key works as UP key)
- The LEFT key or MGC key is DZOOM-
- The RIGHT key is DZOOM+
- The DOWN key is FREEZE ON/OFF

## Troubleshooting

1. No image after putting on the power.

- a. Check the video cable and connections.
- b. Check if camera's battery is charged.

2. No image from HD-SDI output.

a. No image on the HD-SDI monitor may indicate that the IVS has been accidentally switched to EX-SDI mode. The EX-SDI switching sequence was achieved by pressing three times the LEFT key (for example, calling DZOOM- three times) and then immediately pressing the ENTER/INSERT key. To see HD image in EX-SDI format, you need an EX-SDI compatible monitor with 135M (V2.0) or 135M+ (V2.1) or 270M (V1.0) mode. **To return to HD-SDI mode, turn the IVS power switch off and then on. Press the RIGHT key 3 times and then press the ENTER/INSERT key. After 3 seconds, the IVS will switch to HD-SDI mode.**

b. Check the video cable and connections. Not every coaxial cable that is good for PAL/NTSC analog signal is good for SDI digital signal. It is the nature of digital signals to work perfectly for various lengths of coaxial cable, until a certain length of cable is reached, and then to fail to transmit the SDI signal at any greater loss in the cable. Connect only SDI cables to the SDI output.

3. The SDI image on the monitor is only partially displayed.  
Turn the IVS power to off and then to on.

4. The monitor image freezes when IVS is powered on.  
Press the DOWN key.

5. No SD NTSC/PAL image form left BNC connector and upper 4-pin Fischer connector.  
Check if MENU/SYSTEM/CVBS is set.