

HD-SDI 1080P conversion for the Arriflex 235 IVS



The converted IVS unit produces a near flicker-free image for a camera speed of 24fps, and a flicker-free image for camera speeds of 25fps and 30fps. It has two video outputs:


- 1) HD SDI output, resolution 1920x1080 pixels, right BNC connector,
- 2) NTSC/PAL composite, resolution 980x490 pixels, left BNC connector and 4pin Fischer accessory connector.

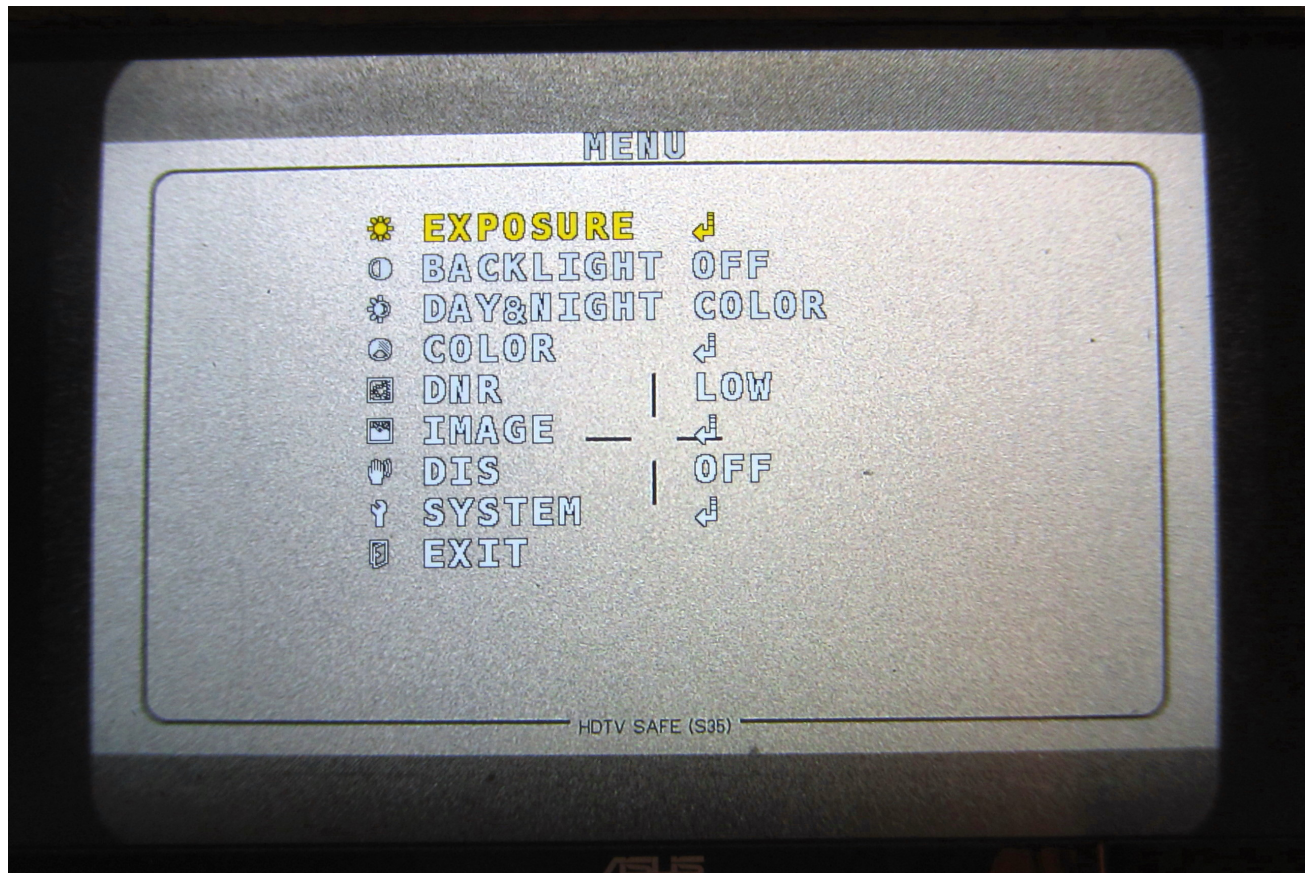
The HD image parameters are controlled by MENU/INSERT, WB, UP, DOWN, LEFT, RIGHT keys on the IVS.

From the 4pin Fischer output we can take 12VDC to power the monitor (pin configuration is given in the ARRI 235 manual).

Specifications:

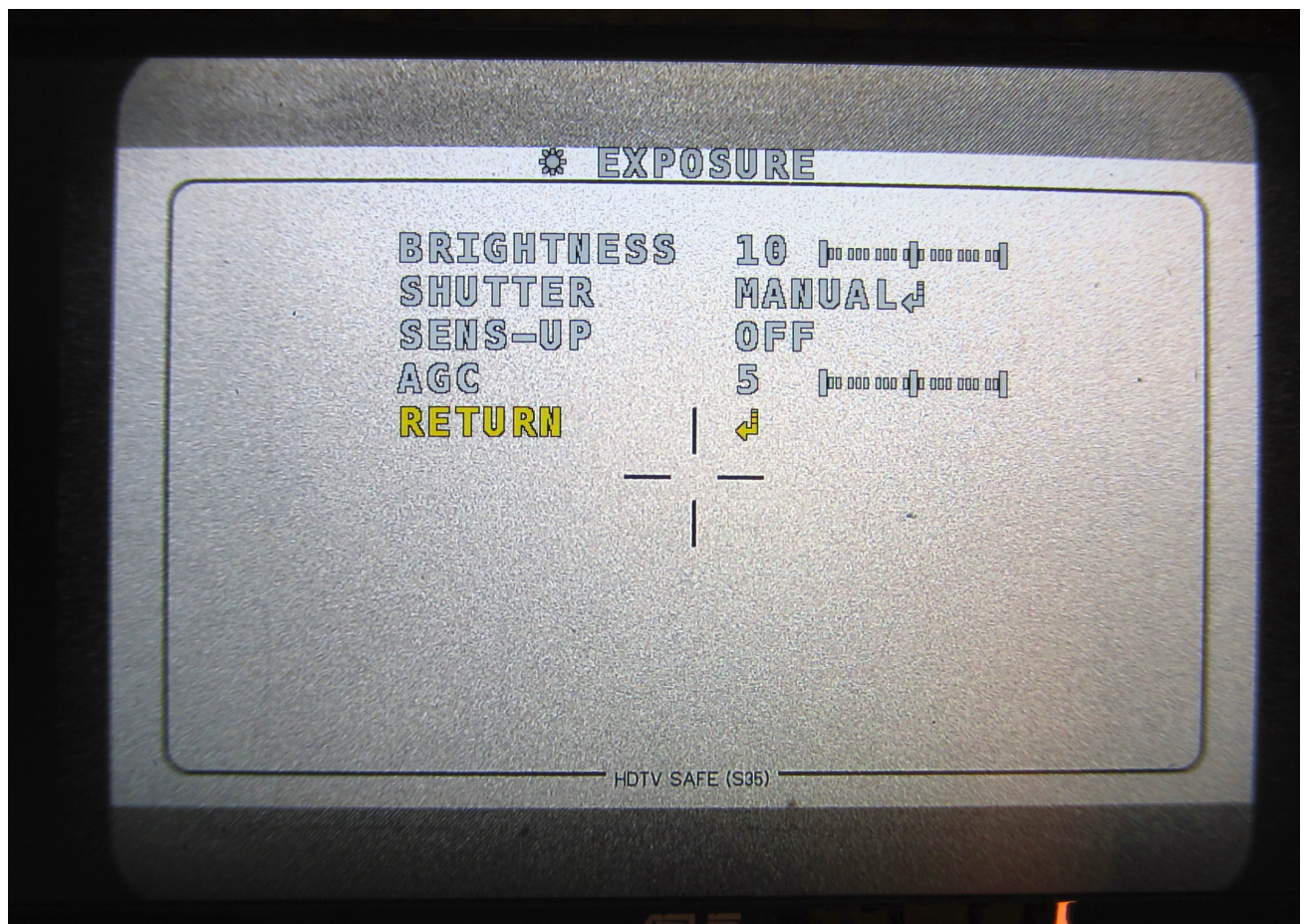
- HD Sony 1/2" image sensor - active picture elements: 1920 (H) x 1080 (V)
- Digital video HD-SDI formats: 1080P 60/50, 1080i 60/50, 1080P 30/25, 720P 60/50
- Analog video formats: PAL, NTSC
- Minimum illumination: 0.1 Lux
- Sync. system: internal
- Mode: color or b&w
- Electronic shutter: auto or manual
- White balance: auto or manual
- Auto gain control on/off
- Gamma: selectable gamma
- Dynamic noise reduction
- Control the image sharpness
- The image enhancement for low contrast
- Power consumption: 2.5 W

After pressing the MENU/INSERT key, you enter the video setting on-screen display (OSD) MENU. The right-angled arrow  displayed in the MENU indicates to press the MENU/INSERT key to get next level off settings. To minimize image flickering on the monitor when the camera is operating 24fps we should set SYSTEM/FREQ 50Hz, FRAME RATE 1080P 25 and EXPOSURE/MANUAL/SHUTTER SPEED 1/25. 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 29.97 or 30fps camera speed, set SYSTEM/ FREQ-60Hz, FRAME RATE 1080P 30 and set EXPOSURE/MANUAL/SHUTTER SPEED to 1/30.

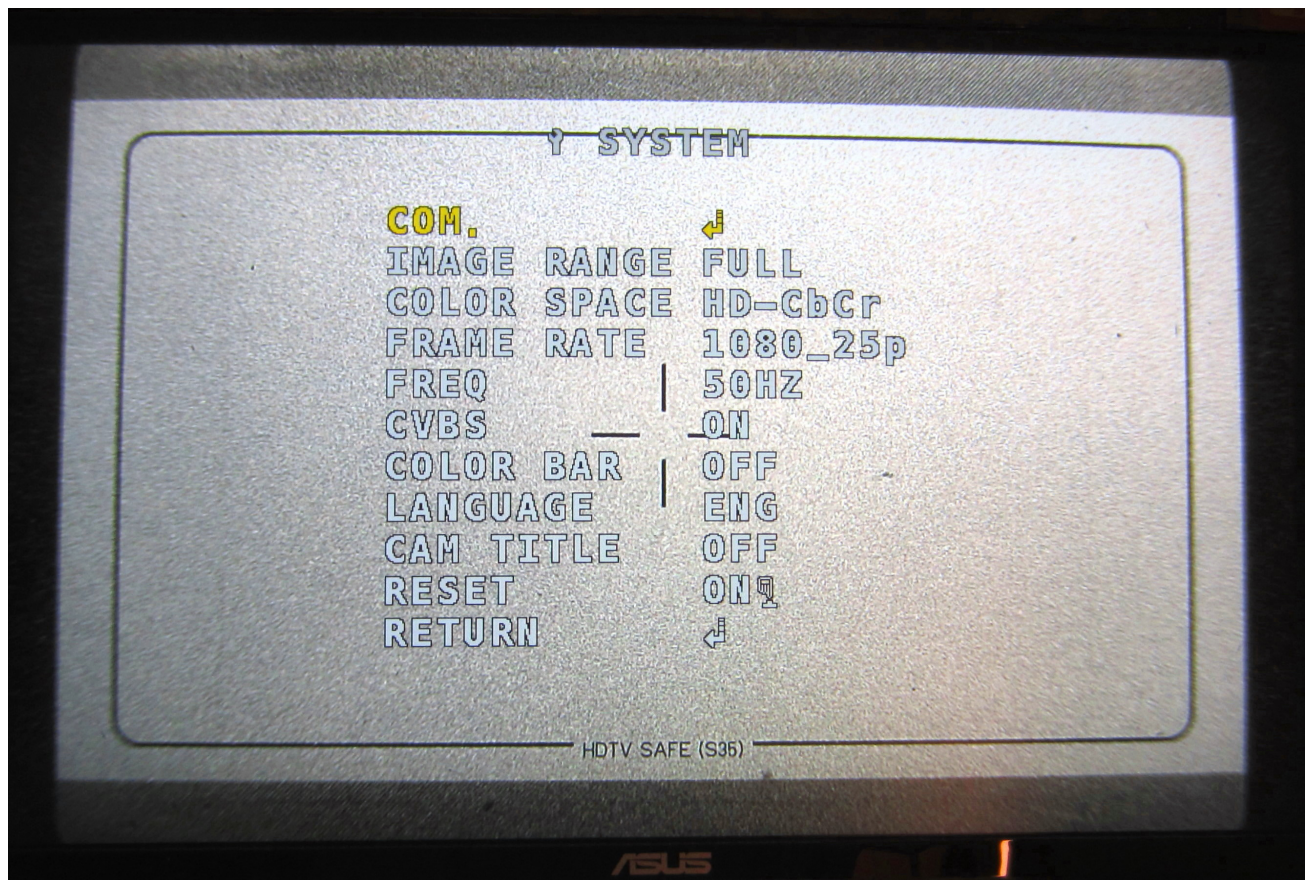


COLOR - white balance can be set in several ways: PRESET, MANUAL (3000K, 5000K, 8000K) and AUTO.

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



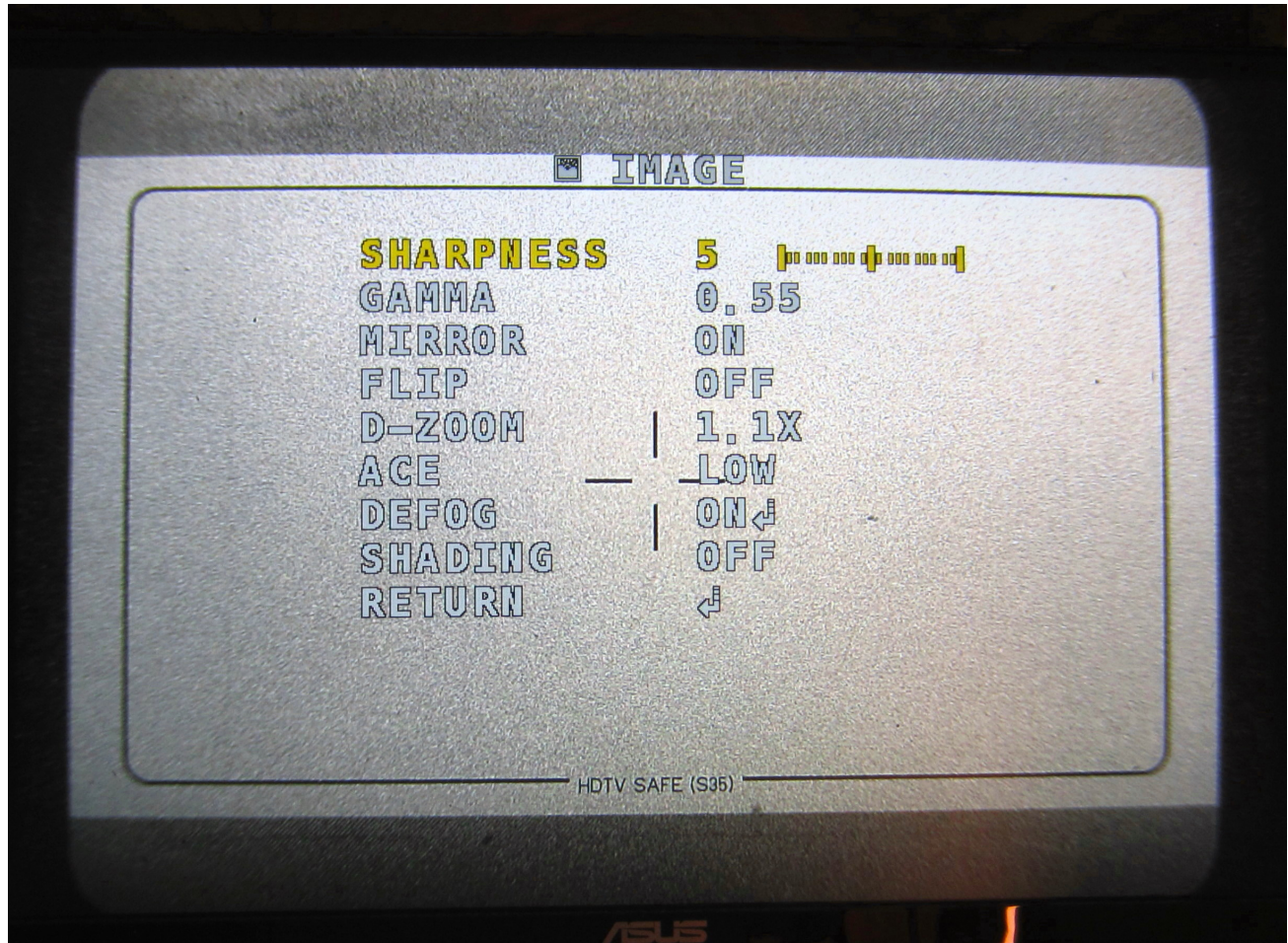
In very low light, you can switch SHUTTER to AUTO and set the X2 - double exposure image.



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.

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.



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

- UP or WB momentary keys are setting AWB
- DOWN key is FREEZE ON/OFF
- LEFT key is DZOOM-
- RIGHT key is DZOOM+

Troubleshooting

1. No image after putting on the power.
 - a) Check if camera's battery is charged.
 - 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.
2. The SDI image on the monitor is only partially displayed.
Turn the IVS power switch to off and then to on.
3. The monitor image freezes when IVS is powered on.
Press the DOWN key.
4. No NTSC/PAL image from left BNC and 4pin Fischer connectors.
Check if MENU/SYSTEM/CVBS is ON.