

MorphCol supplement #16 – Camera settings for AMOR 3.5

From Michael Knappertsbusch, 25.9.2009

AMOR (current version 3.5) uses a Sony DXC-390P color video camera, the settings of which can be adapted to the various needs and conditions. In the table below the camera settings are reported and modified where necessary in order to get a better signal to noise ratio of the image and for more enhanced image quality.

<u>Menu</u>	<u>Old settings</u>	<u>New Settings</u>	<u>Effect in new setting</u>
Menu lock	On	Off	Shows menu on monitor.
EXPOSURE	Gain=STEP Shutter=CCD-Iris. Limit for shutter was 1/10'000. If 1/250 there is less focus because of vibrations, but more image integration. Lens=REMOTE Iris=AUTO AE Level=0 AE Area=MID AE Speet=MID AE detect=AVERAGE	Gain=AGC, LIMIT=24 Shutter=OFF Lens=REMOTE Iris=AUTO AE Level=0 AE Area=MID AE Speet= FAST AE detect= PEAK	Automatic gain setting on brightness of monitor. Recommended when light illumination changes. AE Detect: Method for Recognition of luminance fort he selected AE area (AVERAGE or PEAK).
CONTRAST	Effect=Dynalatitude, Level=0 Gamma=ON, Level=0 Master Pedestal=+5 Red Pedestal=0 Blue Pedestal=0	Effect=Dynalatitude, Level=0 Gamma= OFF Master Pedestal= 0 Red Pedestal=0 Blue Pedestal=0	Setting if there is a mixture of dark and bright spots. Gamma OFF returns videosignal linearly without gamma correction. Recommended for image analysis. 0's are normal pedestal settings
WHITE BALANCE	Mode=ATW normal R. Point=0 B. Point=0 Area=NORMAL Speed=MID	Mode=ATW normal R. Point=0 B. Point=0 Area=NORMAL Speed= FAST	
ENHANCER	Detail=ON Level=+40 Frequency=MID Linear matrix=ON Target color=ALL	Detail=ON Level= +127 Frequency= HIGH Linear matrix= OFF Target color=ALL	If Detail=OFF the image is more blurred. Linear matrix=OFF is recommended for image processing.
GENERAL	CCD Mode=FRAME Shading compensation=ON Trigger=OFF NEGA=OFF Flicker canceller=ON	CCD Mode=FRAME Shading compensation=ON Trigger=OFF NEGA=OFF Flicker canceller=ON	
SYSTEM	Baud rate=19200 D-Sub video=VBS D-Sub sync=WEN Polarity=down RGB Sync=RGB 12 P Connector=OUT	Baud rate=19200 D-Sub video=VBS D-Sub sync=WEN Polarity=down RGB Sync=RGB 12 P Connector=OUT	

Recommendation for setting the illumination and the diaphragm at the microscope:

Use a slide where the numerals do NOT touch the border of the field. Set the illumination and diaphragm in such a way, that the borderline and the numeral remain separated (they become connected if there is too much light so that blooming occurs).