

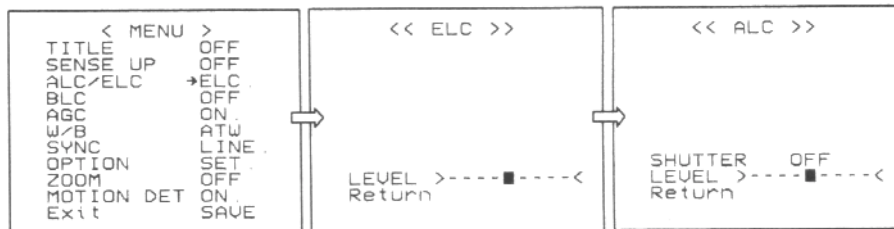
Image Sensor: 1/2 inch Sony ExView HAD CCD (795(H) x 596(V) pixels)
Sensor Pixels: 8.6um(H) x (8.3um(V)
Resolution: Hi-res 600TVL (better than SVHS)
Capture Size: 768 x 576 pixels (max frame capture size - depends on video capture card used)
Standard: CCIR or EIA - Monochrome (Black and White)
Sensitivity: 0.0001 LUX
Shutter Speeds: 1/50 or 1/60 sec to 1/12,000 second (16 steps) - Automatic and Manual control
Integration Mode: Deep Sky Mode - X2 to X128 (max integration) (11 steps)
Signal Gain AGC: Automatic and Manual control
Signal Processing: A/D converter 10 bit AGC/AD converter (8 bit output)
Video Outputs: 1x Composite (BNC) and S-Video - 1Vp-p
Communication: RS232
Gamma Adjust: For deeper contrast of the planets and Moon
Digital Zoom: Multi-step from 1x to 2 x internal image rescaling (useful where optical magnification is limited)
Picture Enhance: via On Screen Display menu
Mirror Function: A handy function for use with refractors
Operating Temp: -20° to +50°C
Interface: 5 buttons for OSD control on back panel plus RS-232 interface for computer control
Power: 12VDC regulated 200mA (centre positive)

Quick Reference Guide

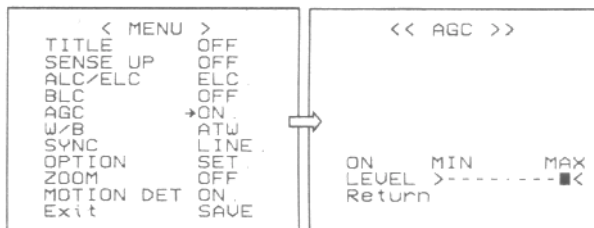
GSTAR-EX Quick Start User Guide



3. ALC/ELC



5. AGC



For more information visit – <http://gstarex.MyAstroShop.com.au/>





Video Out - BNC connector
Lens switch - Set to VIDEO
S-VHS Out (preferred)

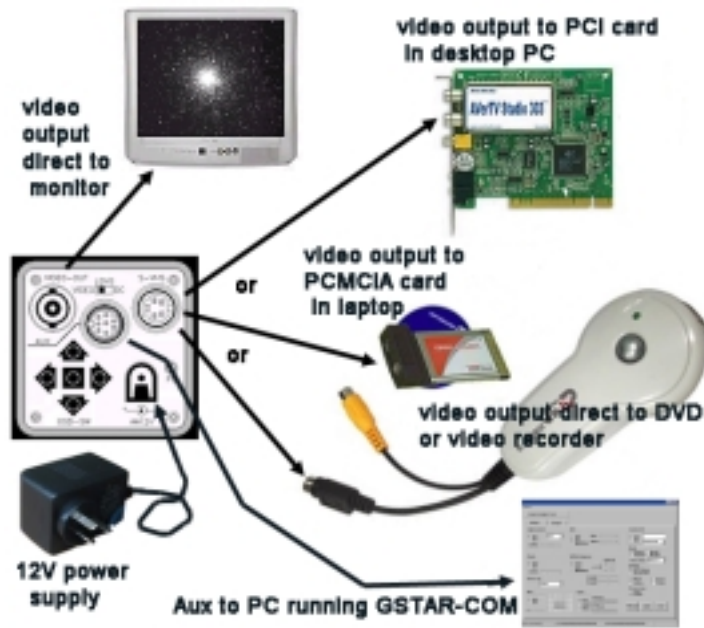
Auxiliary for GSTAR-COM controller

OSD 5-way buttons

* Press and hold centre button to activate display.

12VDC input power socket

Plug in and switch on the regulated 12VDC Plug Pack before connecting to the camera 12V socket, this will prevent power surges when switching on the mains.



Use the most direct connection possible from the camera's video output to the input of the recording device and keep signal cable as clear as possible away from mains power extension leads and other AC appliances to avoid induced noise in the image.

Once connected and switched on, adjust the monitor to see the widest dynamic range – not too dark, not too bright. Computer software can adjust this further, increasing contrast for example.

Always attach fittings with the camera's CCD pointing downwards to avoid dust and other foreign object falling on the CCD chip.

Optimal camera settings for deep sky viewing and imaging

TITLE	OFF
SENSE UP	x128
ALC/ELC	ALC - shutter to off
BLC	OFF
AGC	MANU - level set to maximum
W/B	ATW
SYNC	INT
OPTION	SET - GAMMA to 0.45
ZOOM	OFF (ON and maximum for focusing)
MOTION DET	OFF
EXIT	SAVE

Focusing the camera:

Set SENSE UP from OFF to X6 or X8 depending on how bright or faint the stars are in the field

This gives a rapid feed back on the screen

Using the Zoom set to maximum helps to fine focus

When focused set SENSE UP to X128

Set ALC/ECL to ALC – Shutter to OFF

Setting the AGC (Auto Gain Control) to manual will prevent any bright object (star) from auto adjusting the contrast

Once the GAMMA is set to 0.45 you don't have to worry about it again

Some very bright objects may require the SENSE UP to be set lower than X128 to prevent over-exposing, eg cores of bright globular cluster

When settings are OK go to EXIT and SAVE

Camera settings for planetary viewing and imaging

TITLE	OFF
SENSE UP	OFF
ALC/ELC	ALC - shutter speed to suit target
BLC	OFF
AGC	OFF or (MANUAL if some gain needed)
W/B	ATW
SYNC	INT
OPTION	SET - GAMMA to 0.45
ZOOM	OFF
MOTION DET	OFF
EXIT	SAVE

Setting SENSE UP to OFF will give you the fastest capture rate

Set the AGC (Auto Gain Control) to OFF for minimum visible background noise.

If the object is still over-exposed, increase the shutter speed to obtain the best exposure