LDX 86 XS (6X) Quick Start Guide

This Quick Start Guide is intended for video shaders who need to quickly set up the video settings of the Grass Valley LDX 86 XS (6X) camera system.

Standard Recall_
In general, the factory (or standard) values give the best all-round performance. Use the factory settings as a starting point to further tweak the settings for your situation.

Press the RECALL STD button and select the RECALL item to reset the camera system to its Factory or Customer defaults.

Check the list below to see if the default factory values for these important video functions match your requirements and/or preferences:

Setting:	Factory Default:
Color Temperature	Tint	3200 K	0
Color Saturation	100%
ND Filter	FX Filter	Clear	Clear
Exposure	Nominal
Gain	0 dB
Gamma	Matrix	ITU709	XGL
Knee	Off
AnyLightXtreme	Off
Detail	Texture	50	50
Vertical Detail	Coarse/Fine	25	90
Noise Slicer	10

Many other values are set with Standard Recall. The menu reference section of the User's Guide lists the factory default values for all functions.

For more information about all video functions and settings refer to the camera's User's Guide at:

www.grassvalley.com/products/ldx_high_speed

Color Temperature_
For true color reproduction the ambient lighting conditions must be compensated for by selecting a preset value for the color temperature.

Press the COLOR button and use the COL TEMP item to select a color temperature preset or use VAR CTEMP to set a variable color temperature:

Preset:	Conditions:
3200 K	for indoor and studio lighting conditions
5600 K	for outdoors, clouded conditions

Preset:	Conditions:
7500 K	for outdoors, clear blue skies (very bright)
AW1/AW2	memory positions for Auto White Balance
FL50/FL60	memory positions for fluorescent light
AWC	Auto White Continuous measurement

Note: An alternative method of setting the camera's color temperature is running the Auto White Balance procedure.

Color Tint_
In some cases, Color Temperature is not enough to fully compensate for color cast so an additional tint adjustment is needed.

In the Color menu use the TINT item to shift hue from -150 (more Magenta) to +150 (more Green) along the magenta/green axis. Default value is 0.

Color Saturation_
Adjust the saturation level to increase or decrease color of the picture.

In the COLOR menu adjust the SATURATION item from 0% (fully desaturated) to 200% (maximum). Default value is 100%.

Optical Filters_
Use the optical neutral density (ND) filters to reduce the incoming light and to control the depth of field (or exposure levels).

Press the FILTERS button and use ND UP and ND DOWN to step through the Neutral Density filters:

Preset	ND-filter:
Clear	No filter
ND1/4	Neutral Density 2 stops down
ND1/16	Neutral Density 4 stops down
ND1/64	Neutral Density 6 stops down

A second filter wheel with Special Effects (FX) filters is also available. Use FX UP and FX DOWN to select either Clear, Star 4P or Sft Fcs.

Gain_
Depending on the available light level it may be necessary to adjust the video Gain settings of the camera. Make sure that the ND filter is set to Clear before increasing Gain.

Press the GAIN button and use GAIN+ or GAIN- to select the Gain presets:

Preset:	Gain:	When to use:
-	-3 dB	for ideal light situations
0	0 dB	No video gain
+	+ 3dB	for lower light situations
++	+ 6dB	for low light situations
+++	+ 12dB	for very low light situations

Use the VAR GAIN item in the Gain menu to fine-tune Gain between -3 dB and +12 dB.

For very low noise operation try the -3 dB Gain preset. Note: this reduces the dynamic range.

Knee_

The Knee function compresses the wide dynamic range of the video signal coming from the imager into the more limited video output range.

Press the KNEE button and use the KNEE SEL item to select Var (default is Off) for Variable Knee. Set up Variable Knee with the following parameters:

- Knee Point (KN POINT)—the video input level from which Knee starts compressing. Default value is 35%.
- Knee Max Input (KN MAX IN)—the maximum allowed video input level. Default value is 200%.
- Knee OutLimit (KN OUTLIM)—the maximum video level that is produced at the video output. Default value is 100%.

Black Stretch_

Black Stretch changes the level of tones in the shadow areas of the picture without affecting the rest of the picture.

Press the BLACK button and switch on the BLACK STR item. Use the BLACK LVL item to adjust the Black Stretch level from 0 to 99. Values below 50 are Black Press, values higher than 50 are Black Stretch.

Note: Only use when needed for specific scenes.

AnyLightXtreme^TM_

Due to the camera's high speed scanning frequency and the alternating amplitude of many artificial light sources flicker reduction may be necessary. This is especially the case when unbalanced three phase lighting is used.

Press the EXP. TIME button, go to the LIGHTING item and select the preset to use for flicker reduction, depending on the lighting conditions. Default is off.

To find the best preset for your situation do a test recording and then evaluate the results at slow motion playback (17% speed rate in Dyno).

Start with Optimal (no flicker reduction) and when flicker is noticeable, select Good. When there is still flicker visible, try Fair or Poor (strong flicker reduction, may introduce artifacts) presets.

Preset	Lighting conditions:
Off	AnyLightXtreme is switched off.
Optimal	Daylight and non-alternating or high-frequency artificial lighted environments. Each field has the same video level and flicker reduction is not needed.
Good	Artificial lighting with minor amplitude changes, for example incandescent or well-balanced three-phase lighting. Use this preset also when daylight and artificial light with alternating effects are combined.
Fair	Artificial lighting with significant amplitude changes, for example fluorescent lighted environments.
Poor	For artificial lighting with major amplitude changes; HMI, MHD, gas discharge lamps or neon light.
Extreme	For extreme lighting conditions. Results in a completely flicker free picture but increases motion blur.

Note: Use Optimal or Good if there is no flicker and try to avoid using higher than Fair unless flicker is substantial.

Detail_

Detail is an image enhancement used to improve sharpness perception.

Press the DETAIL button and use DTL LEVEL to adjust the amount of detail added to the picture. Default value is 50.

Texture_

Texture adds subtle sharpness to very fine textures (fabrics, leaves and stone surfaces).

Press the DETAIL button and use TEXTURE to adjust the amount of texture added to the picture. Default value is 50.

Advanced Detail Settings_

Coarse/Fine (C/FINE)—sets Detail balance between coarse and fine structures in the image (0 = coarse structures get more Detail, 99 = fine structures get more Detail). Default value is 90.

Level Dependency (LEVEL DEP)—sets how much Detail is reduced for dark areas (0 = no reduction, 99 = maximum reduction). Default value is 30.

Note: Try a higher value when Detail produces too much noise in dark/grey areas.

Detail Noise Slicer (NOISE SL)—reduces Noise generated by the Detail circuit. Lower values leave more Noise in Detail (crispy picture), higher values reduce Noise in Detail (softer picture). Default value is 10.