



Introduction

Welcome to the world of LUMAHAWK LCD On-Camera Monitors. The LMM-PRO600 is designed for composing and focusing images directly from your DSLR or DV camera as well as viewing images and video clips from it. It's simple to use and accepts a variety of popular input formats. To take advantage of all the features and to ensure safe operation, please read through this instruction manual.

Front



1. Sun hood slot
2. Speaker
3. Headphone jack
4. Function Key
5. Input Signal Select
6. Volume / Parameter adjust
7. OSD Menu / Parameter select

Back



8. HDMI output
9. HDMI input
10. SDI output
11. SDI input
12. Battery plate
13. Firmware port
14. Power switch
15. DC power input
16. XLR power input

Included Accessories

- 7" LCD HD Camera Monitor
- F Style DV Battery Plate
- Shoe Mount Ball Head
- AC/DC Adapter
- XLR Power Input Socket
- Folding Sun Hood
- Mini HDMI to HDMI Cable

Powering the LMM-PRO600

The LMM-PRO600 can be powered in the following ways:

- With the supplied AC adapter.
 - A 12V DC power supply fitted with an XLR plug.
 - An F-style DV battery such as the LUMAHAWK F-550 Li Ion Battery.
- NOTE: Remove the battery from the monitor when not in use to ensure maximum battery life.

Attaching the sun hood

Always close the sun hood before attaching it to or removing it from the monitor.

- To attach the sun hood to the monitor insert the two teeth towards the bottom on the hood's frame into the two slots on the front of the monitor, just above the control buttons. With the teeth inserted all the way in, apply firm pressure on the top of the hood's frame and slide it down into the slot.
- To open the hood, lift the top panel up followed by the left panel out and then the right panel out (i.e starting with the top panel, open in a counter-clockwise order.)
- To close the hood, start with the right panel going in, then the left and finally the top (i.e opposite order from opening)
- To remove the hood, first close it. Then push the hood frame upwards towards the top of the monitor and lift away from the monitor face.

Instructions for Set-up of the LMM-PRO600 On-Camera LCD Monitor

Turning the monitor on and selecting a signal source

The power switch is located on the back of the monitor. Once the monitor is turned on, the screen will turn blue and display the LUMAHAWK logo. Push F6 to select the signal source. The LMM-PRO600 will display signals from HDMI and SDI-HD video.

Front Panel Controls

The most frequently used monitor controls are directly accessed with the front panel buttons. These are:

- **F1/F2/F3/F4/F5**
User assignable function keys
- **F6**
Toggle between HDMI and SDI inputs. When the monitor switches from one input to the other, it will briefly display the input type and resolution in the top right corner of the screen.
- **Volume**
Rotate the Volume knob to adjust the speaker or headphone volume. Push the knob to access Brightness, Contrast, Saturation and Sharpness. Rotate the volume knob to adjust the selected parameter. When the OSD menu is visible, push the knob to hide it.
- **MENU**
Push the MENU knob to display the OSD menu. Rotate the knob to navigate through the menu items.

HDMI / SDI Pass-through

The LMM-PRO600 features HDMI and SDI-HD output ports that allow for unmodified signal pass-through.

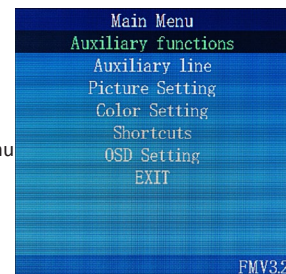
This means that additional monitors can be attached to the PRO600 via these output ports. These additional monitors will receive the unmodified image (e.g. no centre markers or check field display) from the original source (i.e. the source attached to the HDMI or SDI input ports).

Using OSD to adjust monitor settings

Push the MENU knob to display the OSD (On Screen Display) menu.

From this menu you can access and make adjustments to all the monitor's parameters.

- Rotate the MENU knob to scroll through the main menu sections and push again to enter a section. Within a section, rotate the menu knob to highlight the desired parameter or function.
- Once highlighted, rotate the VOLUME knob to cycle through the function's options.
- After the function has been adjusted, rotate the MENU knob to move to another function or push the VOLUME knob to hide the OSD.



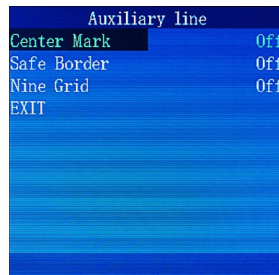
Auxiliary Functions

- **Single Color**
Use the Volume knob to select Off, Red, Green, Blue or Grayscale.
- **Pseudo Color**
Pseudo Color displays the luminance of the image using the industry-standard IRE scale.
- **Zebra Crossing**
The Zebra Crossing filter highlights over exposed regions of the image with a red zebra pattern.
- **Assist in Focus**
The Assist in Focus filter highlights the in-focus regions of the image in Red, Blue or Yellow, as selected in the 'Focus Color' setting. Use the Volume knob to choose between:
-Color image with focus highlighted
-Grey scale image with focus indicated
-Off
- **Focus Color**
Set 'Assist to Focus' color to Red, Blue or Yellow.
- **Histogram**
Display a Histogram of the image on the screen.
- **Audio Column**
Display Audio level meters for the image source displayed on the screen.
- **Pattern Generator**
Display an industry-standard set of color bars, continuous tone grey scale and stepped grey scale image.
- **SD2 Camera**
Turn the signal from the selected source camera Off and On.



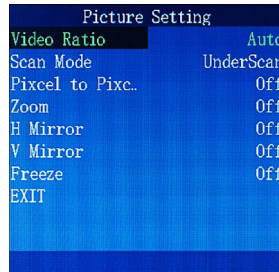
Auxiliary Line

- **Center Mark**
Toggle center cross hairs Off and On.
- **Safe Border**
Adjust Viewfinder perimeter indicator from 80%,85%,90%,93%,96%, 2.35:1 and Off
- **Nine Grid**
Display or hide a 3x3 grid superimposed on the screen. The region that's highlighted in red can be zoomed in on by clicking the volume knob. Turn the volume knob to scroll through the regions.



Picture Setting

- **Video Ratio**
Select 16:9, 4:3 and Auto image aspect ratio.
- **Scan Mode**
Select between Underscan and Overscan of the image on the screen.
- **Pixel to Pixel**
Toggle Pixel to Pixel display Off and On.
- **Zoom**
Zoom into the image 1.4X, 5X, 10X and Off.
- **H Mirror**
Flip the image horizontally.
- **V Mirror**
Flip the image vertically.
- **Freeze**
Toggle On to freeze image. Toggle Off to return to the live source image.



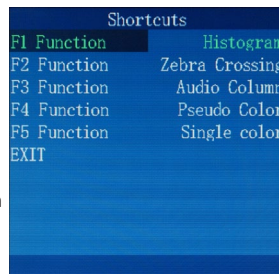
Color Setting

- **Brightness**
Adjust image brightness.
- **Contrast**
Adjust image contrast.
- **Saturation**
Adjust image saturation.
- **Color Temperature**
Adjust the color temperature of the monitor image.
Use the volume knob to select 9300K, 7500K, 6500K or USER.
If USER color is selected, use the MENU knob to scroll through Red, Green and Blue settings and use the VOLUME knob to increase or decrease specific values.



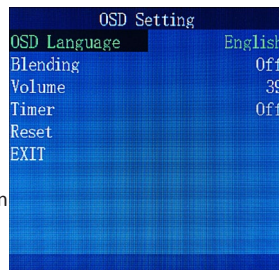
Shortcuts

- **F1/F2/F3/F4/F5**
The F Buttons 1 through 5 can be assigned to the following parameters:
Assist in Focus, Zebra Crossing, Pseudo Color, Single Color, Camera Mode, Freeze, V Mirror, H Mirror, Zoom, Pixel to Pixel, Scan Mode, Video Ratio, Nine Grid, Safe Border, Center Mark, Pattern Generator, Audio Column, Histogram.
Use the Volume knob to scroll through and assign the desired function to the highlighted Function key.



OSD Setting

- **OSD Language**
Select OSD language. Choose between English and Chinese.
- **Blending**
Adjust the transparency of the OSD background
- **Timer**
Display a timer in the top right corner of the screen when the OSD is not showing. Turn off the timer to reset it.
- **Reset**
Return the monitor to its factory default settings.



Caution

- Only use the supplied power supply when not powering the monitor with a battery.
- Remove the battery when not using the monitor.
- Do not expose the monitor to extreme heat or humidity.
- Do not use harsh chemicals to clean the monitor. Gently wipe the screen with a clean cloth to remove smudges and fingerprints.
- This monitor does not contain any user-serviceable parts inside. Do not attempt to open the casing, as this will void your warranty. If service is required, please contact the LUMAHAWK offices directly.

Troubleshooting

It's normal for the screen to go dark for a few seconds when turning the camera or signal source on or when toggling between different sources. It's also normal for bright lines to briefly appear on the screen when the monitor is turned on.

Image displayed is black and white

- Check that the hue and saturation levels are properly set.
- Set the Single Color to None.
- Ensure that cables running from the camera to the monitor are securely and properly connected.

Image displayed is an abnormal or distorted color

- Check that the hue and saturation levels are properly set.
- Set the Single Color to None.
- Ensure that cables running from the camera to the monitor are securely and properly connected.

No image being displayed

- Check that both monitor and camera are turned on.
- Ensure that cables running from the camera to the monitor are securely and properly connected.
- Check that correct signal source is selected with the F6 button.

No Sound

- Check that the volume on monitor is turned up.
- Ensure that cables running from the camera to the monitor are securely and properly connected.
- Check that correct signal source is selected with the F6 button.

Specifications

LCD Panel	TFT LCD 7" / 1843200 pixels
Resolution	1024x600
Brightness	250 cd/m ²
Contrast ratio	700:1
Response time	10ms
Dot pitch	0.05(W) x 0.15 (H)
Viewing angle	75°/75 (L/R), 70°/75° (U/D)
Supported formats	480i, 480p, 576i, 576p, 720/ 50p /60p, 1080/ 24p/ 24psf/ 25p/ 50i/ 60i/ 50p/ 60p
Backlight	LED
Signal input	HDMI / 3GHD-SDI
Signal output	HDMI / 3GHD-SDI
Input power voltage range	DC 6V-24V
Power consumption	≤10 W
Working temperature	-20~50°C
Storage temperature	-30~65°C
Dimensions	196mm X 156mm X 52mm
Weight	.5kg

Warranty

This product is warranted against poor workmanship and defective materials for a period of one (1) year from the date of purchase. This warranty does not include abuse, careless handling, collateral damage and / or normal wear and tear. It is considered normal for a minimal amount of pixels, to a maximum of three (3), to fail on the display active viewing area. Nadel Enterprises Inc. reserves the option to refuse service for display pixel failure if deemed unobtrusive to effective use of the monitor by our technicians.

It is Nadel Enterprises Inc.'s option and discretion whether to repair or replace or reject the warranty claim.

To apply for a warranty claim, return your product with proof of purchase to your dealer. You can also contact us at 416.745.2622, 9 a.m. to 5 p.m. EST or via e-mail at info@lumahawk.com.

We reserve the right to change warranty terms without notice.

About Nadel Enterprises and Lumahawk

Nadel Enterprises and the Lumahawk brand are recognized worldwide as the leading brand of high quality equipment for both professional and amateur photographers. Using the most innovative photo-electronic technology coupled with simplicity of use, Lumahawk products are specifically designed for today's digital studio and on-location photography.

When it comes to capturing the image, Lumahawk exceeds the photographer's demands for reliability and versatility.