

eXflicker ESM601

Operating Instructions 2.02



www.easylooksystem.de

CONTENTS

1	Introduction	3
2	Getting Started	3
2.1	Quick Start	3
3	Overview	3
4	Your ESM 601 eXflicker unit	4
5	Operating the ESM 601	5
6	Settings menu	5
6.1	Video mode	5
6.2	Status imaging processor	5
6.3	Object speed	5
6.4	Camera framerate	6
6.5	Status setup	6
7	Setup menu	6
8	External remote	6
9	Algorhythm enhancement	6
10	Warranty	7
11	Contact	8

Document version 20150210 1.0

1 Introduction

Thank you for purchasing the EASYLOOK eXflicker HD-SDI processor, which is the ideal solution to get rid of flicker artefacts in a slow motion playback video stream.

All slow-motion cameras showing flickering artefacts in the slow-motion playback, if you don't have flickerfree light sources. Just because of the interference between the flickering of most artificial lights and the frame-rate of the camera. This is a physical effect which you cannot avoid if you depend on already installed light-sources as you have it for example in sport stadiums.

The unit takes your HDSDI signal and DEFLICKERS the slow-motion video signal with our own patent pending algorithm in REAL-TIME without visible artifacts. This is done in FPGA based hardware.

2 Getting started

We recommend that you:

- unpack the equipment carefully
- review the content of this user manual

2.1 Quick start

- connect the HDSDI input to your flickering signal
- connect the output to out 1 (processed out)
- connect the powercord or if available 12 Volt via 4 pin XLR
- turn the power on
- set your framerate via the front panel 5 button cross
- adjust your settings
- save your settings

3 Overview

The EASYLOOK eXflicker ESM 601 is a broadcast-quality video processor. The unit reduces or eliminates all visible flicker depending light changes in a slow-mo replay stream.

The **ESM 601** HD-SDI deflicker processor features the following:

- **Inputs:** one channel HD-SDI 1.5gbit
- **Outputs:** one channel HD-SDI 1.5gbit processed, one channel HD-SDI 1.5gbit bypass
- **Video Standards:** 720p/50, 720/59.94, 720p/60, 1080p/23.98, 1080p/24, 1080p/25, 1080p/24.97, 1080p/30, 1080i/50, 1080i/59.94, 1080i/60, 1080psf/24, 1080psf/25, 1080psf/30
- full 10bit digital processing throughout, for the highest possible video quality
- **Local control:** front panel display and buttons
- **Remote control:** via RS 485, serial commands, PC GUI or remote controller

To achieve the best performance:

- Use only high quality connection cable to avoid interference, deterioration in signal quality due to poor matching and elevated noise levels.
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your ESM 601 away from moisture, excessive sunlight and dust.

4 Your ESM 601 eXflicker unit



#	Feature	Function
1	ON OFF switch	power on/off
2	USB connector	firmware upgrade via USB
3	display	show actual settings and menue
4	left and right arrow	navigate through menue
5	up and down arrow	select setting
6	middle button	press long = change menue and confirm command
7	BNC SDI IN	HDSDI input
8	BNC SDI out 1	HDSDI proccesed out
9	BNC SDI out 2	HDSDI bypass out
10	XLR 3pin RS 485 remote	RS 485 serial input for remote controll
11	XLR 4pin power in	12Volt 2 A input pin 1 ground pin 4 12 Volt
12	power connector	100 – 240 Volt power in

5 Operating the ESM 601 local

- turn on the power
- navigate with up down arrows to video mode and set your video mode with left and right arrows
- adjust your settings description in chapter below
- store your settings long push on middle button display change to SETUP menue navigate to save and push the middle button
- back to the settings menue with exit and middle button

6 Settings menu

different cameras and scenes require different settings, please test the best settings for your shots. Balance between motion blur, speed, flickering etc. If you have a scene with special lights and there are only poor results, please dont hesitate to contact us and send us a sample clip and we will improve our algorithym.

6.1 - Video mode

720p/50, 720/59.94, 720p/60, 1080p/23.98, 1080p/24, 1080p/25, 1080p/24.97, 1080p/30, 1080i/50, 1080i/59.94, 1080i/60, 1080psf/24, 1080psf/25, 1080psf/30

sets the right video mode

“this is mandatory, there is no auto detection yet”

6.2 - Status imaging processor

processing deflicker engine activated
bypass deflicker engine deactivated

to test and see the different between deflickered and original video stream

6.3 - Object speed

very fast main object in camera is moving really fast
fast main object in camera is moving fast
normal normal movement from object in camera
slow sloe movement from object
custom external remote activated

Set the deflicker filter algorithm depending of scene. This setting balances the processed image between deflicker strength and motion blur.

6.4 - Camera framerate

70 – 170 fps camera framerate
170 – 400 fps camera framerate
400 – 700 fps camera framerate
custom external remote activated

sets the used camera speed

6.5 - Status setup

internal processor temperature
batterie/power supply voltage
fan on or off

the status is only monitoring these three points, you cannot change any settings

7 Setup Menu

long push on the middle button

exit	back to setting menu – push middle button
save	save settings - push middle button
fan speed	select between auto/on with left and right arrows
beep	signal boot ready or error warning on/off select with left and right arrows
reboot	reboots unit – push middle button takes 5 – 10 seconds

8 External Remote

The UNIT is remote controlable via RS 485 , we will shortly deliver a PC GUI to control the unit. If you want to write your personal GUI please contact us to get the command list and data structure.

contact: development@easylooksystem.de

9 Algorith Enhancement

We really appreciate, if you give us feedback or send us flickering test-footage. We are continuously improving our system. We need your feedback and your experience.

10 Limited Warranties

EASYLOOKSYSTEM / Second Floor Left GmbH (hereafter EASYLOOK) warrants this product free from defects in material and workmanship under the following terms. Labor and parts are warranted for two years from the date of the first customer purchase. Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by EASYLOOK, or which is not purchased from an authorized EASYLOOK dealer. If you are uncertain as to whether a dealer is authorized, please contact EASYLOOK at one of the agents listed in the Web site : www.easylooksystem.de
2. Any product, on which the serial number has been defaced, modified or removed, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by EASYLOOK
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the EASYLOOK dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to the headquarter Germany or contact us for special assist.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of EASYLOOK for any effective products is limited to the repair or replacement of the product at our option. EASYLOOK shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place. NOTE: All products returned to EASYLOOK for service must have prior approval. This may be obtained from your dealer. This equipment complies the requirements of:

EN-50081: "Electromagnetic compatibility (EMC); generic emission standard.
Part 1: Residential, commercial and light industry"

EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard.
Part 1: Residential, commercial and light industry environment".

CFR-47: FCC* Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B Unintentional radiators"

CAUTION!

Servicing the machines can only be done by an authorized EASYLOOK technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.

Please use recommended interconnection cables to connect the machine to other components.

* FCC and CE approved using STP cable (for twisted pair products)

11 Contact

EASYLOOKSYSTEM
Second Floor Left GmbH
Wragekamp 1
22397 Hamburg
GERMANY
www.easylooksystem.de

Hamburg, 10.02.2015

info@easylooksystem.de